

5th Anniversary of Independence Series

EDUCATION

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THE HERITAGE OF THE PAST

The high value attached to education through the whole span of life and the deep respect for learning were firmly enshrined in the traditional cultures of India. The Brahmanic, Buddhistic and Islamic systems of education had much in common; learning was based upon the religious texts and the authority of tradition was overriding.

These traditional systems were mainly designed to transmit culture from one generation to another and to preserve the hierarchical character of society. They did, however, emphasise the value of education for enrichment of personality and the quality of life, especially for the upper classes, and maintained an established order of institutions and beliefs in society. Down the centuries the ancient knowledge and the basic moral and spiritual values were kept alive by the traditional systems which have permeated the living cultures of the masses of people to the present time.

The Great Divide

The great divide between the education of the elite and the culture of the masses came under British rule in the early decades of the Nineteenth Century. For many years the protagonists of Oriental learning and Western science argued their respective points of view in the deliberations of the policy-makers of the East India Company. The well-known minute of Lord Macaulay put the seal in favour of Western learning through the medium of English which was made inevitable by the historical forces that held sway over the minds of men, both English and Indian, at

that time. Liberalism, missionary zeal, notions of progress and utilitarianism, all contributed to this fateful decision.

Its most important aspect was, however, the political fact of foreign domination of a subject people whose culture was rejected in favour of an alien system to preserve and promote imperial rule. The sense of superiority and the attitude of arrogance marking the decision in favour of Western learning through the medium of English language imposed a character on the new system of education from which it continued to suffer during the period of the British rule.

The Colonial System

The colonial system of education developed in minor details, but remained basically what it was originally intended to be—an alien system of imparting literacy to a few and useful knowledge to the elite in a foreign tongue for creating a class of people who could be relied upon to maintain and strengthen the might of the British *raj* in India. This system suffered from many defects which paralysed the originality of thinking and the urge to creativity among the Indians. It made a sharp break with the past, and remained for more than a century a foreign implantation without any relationship with the roots of the Indian culture and the traditional values of the people. The colonial system was alien in concept, limited in scope and rigid in character.

In course of time some small concessions were made in favour of native learning and the spread of literacy contributed inevitably to the growth of Indian languages. But the content of education from the elementary stage of mere literacy to higher education comprising largely the cramming of English literature and Western sciences remained unaltered, nurturing an elite of

feeble mind but sharp memory, of little freedom and boldness of thinking while manifesting high degree of sheer imitation, crippling conformity, and effete obedience. The elite served the *raj*, and served themselves. A new class structure, worse than the old caste hierarchy, gave rise to divisions and inequalities in society.

There were, however, some notable exceptions among sensitive individuals who tasted the essence or new knowledge and liberalism, and regretted the emasculation of the Indian intellect by an alien system. They felt deeply the grave limitations which a foreign implantation had placed on the intellectual life of the people, thwarting progress and national unity.

Commissions and Committees

These limitations were noticed early by educationists and reformers and several Commissions and Committees set out to rectify the situation. A well-known statement of the Board of Directors of the East India Company, popularly known as the Wood's Education Despatch of July 19, 1854, contained some genuinely liberal ideas. The Indian Education Commission of 1882, under the chairmanship of Sir William Hunter, produced a classic document which made several useful recommendations. In particular, the report laid the foundation of a liberal grant-in-aid system as a result of which private enterprise developed rapidly and brought about a large expansion of secondary and collegiate education. Other areas in which it made a significant contribution were the education of girls, the reorganisation of the Provincial Education Departments, and the education of the backward classes.

The Indian Universities Commission of 1902, under the chairmanship of Mr Raleigh, carried out a comprehensive

review of the first five Indian universities of Bombay, Madras, Calcutta, Punjab and Allahabad. The Report of this Commission led to the Indian Universities Act of 1904 which made an endeavour to raise standards of attainment.

The Report of the Calcutta University Commission of 1917 under the chairmanship of Sir Michael Sadler was a brilliant document which dealt with university education in general, and also touched upon the content and quality of secondary education. The Report of the Commission remained largely unimplemented, but its findings and recommendations exercised great influence on the development of higher education in the 'twenties and 'thirties. These early enquiries and reviews of education did not place sufficient stress on mass education and overlooked the importance of the elementary and secondary stages of education.

Nationalist Movement

It was the nationalist movement of the late Nineteenth Century which generated strong criticism of the colonial system. Both the nationalist leadership and the educationists condemned this system. There emerged several constructive solutions and experiments which made some original contribution to educational thought and practice. These were noble efforts and commendable portents of the future, but their influence was limited and the colonial system dominated the scene until the advent of Independence.

The Advent of Independence

Independence brought new problems and formidable tasks, among which education figured prominently. The dissatisfaction with the system inherited from the past was universal, and in the first flush of triumphant nationalism even the few gains from past experience were rejected. Apart from its irrelevance to new

conditions and objectives, the educational system had not achieved sufficient quantitative expansion or any appreciable equality of educational opportunity, and the wastage and stagnation at all levels was colossal. It was evident that a drastic reconstruction of the entire system was necessary if education was to contribute effectively to the achievement of the goals of national development.

The Constitution of India adopted a democratic form of government and adult franchise necessitating mass education and the liquidation of illiteracy. The over-riding goal of better standards of living implied the linking of education with productivity, the need for science, vocational and professional education and the nurturing of talent at all levels. The launching of a secular democracy based on the protection of the rights of minorities and the acceptance of a composite culture highlighted the importance of social and national integration to which education was expected to make a major contribution.

NATIONAL POLICY ON EDUCATION

The concept of national planning was accepted soon but within its predominantly economic role, borrowed largely from Western thought and practices, educational planning took some time to establish itself as a normal, continuing activity. India's first attempts at the planning of education were sporadic and inadequate. Some notable efforts made during the war by governmental authorities as well as the Nationalists highlighted the urgency of educational reform but did not influence events after Independence. The University Education Commission (1948-49) and the Secondary Education Commission (1952-53) were important landmarks, and several committees and working groups studied specific problems.

In 1951 India started National Planning and Five-Year Plans were launched in which education figured as an important national activity. During the course of the three Five-Year Plans (1951-66) considerable progress was made, but educational planning suffered from the fact that there was no long-term comprehensive plan integrated into the overall national plan. Planning was largely confined to financial and quantitative projections.

A new era in educational planning started with the appointment of the Indian Education Commission to examine all levels and aspects of education and to recommend suitable measures for a long-term national policy in the field of education. The Commission made an unprecedented attempt to mobilize international thinking and experience for the planning of a national system; its sixteen members included five distinguished educationists from the United

Kingdom, Japan, the United States, the USSR, and France, whose services were made available by UNESCO. In addition, numerous leaders in different fields of education from many other countries, regions and cultures collaborated with the Commission as consultants. The report of the Commission turned out to be a comprehensive document dealing with problems of educational planning and development relevant to all developing countries.

Seventeen Principles

The recommendations of the Commission were discussed widely in India and received the attention of educational planners in other developing countries. Resulting from discussions at State and Union levels a Resolution on National Policy on Education was formally issued by the Government of India in 1968. The Resolution states seventeen principles that should guide the development of education in the years ahead. These principles on which educational planning is now based in India sum up the important trends towards qualitative improvement :—

1) *Free and Compulsory Education* : Free and compulsory education for all children up to the age of 14 should be provided by the earliest possible date and suitable programmes should be developed to reduce the prevailing wastage and stagnation in schools.

2) *Status, Emoluments and Education of Teachers* : Teacher education, particularly in-service education, should receive high priority. Teachers must be accorded an honoured place in society, their emoluments and other service conditions should be adequate, and their academic freedom should be guaranteed.

3) *Development of Languages* : “The energetic development of Indian languages and literature is a *sine qua non* for educational

and cultural development. Unless this is done, the creative energies of the people will not be released : standards of education will not improve; knowledge will not spread to the people; and the gulf between the intelligentsia and the masses will remain, if not widen further." The regional languages, already used as media of education at the primary and secondary stages, should be urgently adopted at the university stage. At the secondary stage every child should learn three languages : the language of his region, Hindi (or another Indian language if the language of his region is Hindi), and English. Hindi should become the link language, a medium of expression for all the elements of the composite culture of India. For its cultural value the study of Sanskrit should be specially encouraged. "Special emphasis needs to be laid on the study of English and other international languages. World knowledge is growing at a tremendous pace, especially in science and technology. India must not only keep up this growth but should also make her own significant contribution to it."

4) *Equalisation of Educational Opportunity* : Regional imbalances should be corrected and good educational facilities should be provided in rural and other backward areas. To promote social cohesion and national integration a common school system should be adopted; this should not, however, affect the minority rights guaranteed by the Constitution. The education of girls should receive emphasis, as should education among the backward classes.

5) *Identification of Talent* : "For the cultivation of excellence, it is necessary that talent in diverse fields should be identified at as early an age as possible, and every stimulus and opportunity given for its full development."

6) *Work-Experience and National Service* : "The school and the community should be brought closer through suitable

programmes of mutual service and support. Work-experience and national service including participation in meaningful and challenging programmes of community service and national reconstruction should accordingly become an integral part of education."

(7) *Science Education and Research* : These should receive high priority, and science and mathematics should be an integral part of general education till the end of the school stage.

8) *Education for Agriculture and Industry* : This requires special emphasis. There should be at least one agricultural university in every state and at other universities selected departments may be strengthened for the study of one or more aspects of agriculture. Technical education and research should be related closely to industry. There should be a continuous review of the agricultural, industrial, and other technical manpower needs and a proper balance should be maintained between the output of the educational institutions and employment opportunities.

9) *Production of Books* : The quality of books should be improved and immediate steps should be taken for the production of high quality text-books for schools and universities. Efforts should be made to have a few basic textbooks throughout the country. Special attention should be given to books for children and to university level books in Indian languages.

10) *Examinations* : A major goal of examination reform should be to improve the reliability and validity of examinations and to make evaluation a continuous process.

11) *Secondary Education* : Facilities for secondary education should be extended expeditiously to areas and classes which have

been denied these in the past. Facilities for technical and vocational education need to be increased, diversified and related closely to employment opportunities.

12) *University Education* : (a) "The number of whole-time students admitted to a college or university department should be determined with reference to the laboratory, library and other facilities and to the strength of the staff." (b) New universities should be established only in case of proved necessity after adequate provision of funds and with due care for ensuring proper standards. (c) The organisation of postgraduate courses and their standards of training and research need to be improved. (d) "Centres of advanced study should be strengthened and a small number of 'clusters of centres' aiming at the highest possible standards in research and training should be established." (e) Research in universities requires increased support, and the research institutions should, as far as possible, function within the fold of universities or in intimate association with them.

13) *Part-time Education and Correspondence Courses* : These should be developed on a large scale at the university stage, and also be provided for secondary school students, teachers, and agricultural industrial and other workers.

14) *Spread of Literacy and Adult Education* : (a) "The liquidation of mass illiteracy is necessary not only for promoting people's participation in the working of democratic institutions and for accelerating programmes of production, especially in agriculture, but also for quickening the tempo of national development in general. Employees in large commercial, industrial and other concerns should be made functionally literate as early as possible... Teachers and students should be actively involved in organising literacy campaigns, especially as part of the Social and National

Service Programme.” (b) The education of young farmers and the training of youth for self-employment should have high priority.

15) *Games and Sports* : Playing fields and other facilities for developing a nationwide programme of physical education should be provided on a priority basis.

16) *Education of Minorities* : Every effort should be made not only to protect the rights of minorities but actively to promote their educational interests.

17) *The Educational Structure* : A broadly uniform educational structure of ten years' general education in schools, followed by two years of higher secondary stage and three years' course for the first degree should be adopted in all parts of the country.

This statement of the seventeen principles for planning education was accompanied by an important declaration of policy. “The reconstruction of education on these lines will need additional outlay. The aim should be gradually to increase the investment in education so as to reach a level of expenditure of six per cent of the national income as early as possible.” This will require a doubling of the roughly three per cent of national income now devoted to education—a rather ambitious target in the light of the past when education was always starved of even minimum resources and the increase of educational expenditure failed to keep pace with mounting enrolments, resulting inevitably in the dilution of standards and the unfortunate shelving of programmes of qualitative improvement.

SCHOOL EDUCATION

On the eve of Independence educational conditions in schools were deplorable, both in quantity and quality. Only a small fraction of the age group 6-14 went to school, and of these the percentage of girls and of those belonging to backward classes and areas was insignificant. Educational facilities in rural areas were specially deficient and there was colossal stagnation and wastage, specially at the primary stage.

After Independence, India was confronted simultaneously with two major tasks of educational reconstruction : it was necessary to expand rapidly the existing system of education and specially to provide free and compulsory education for all children up to the age of 14; and there was an urgent need to improve the content of education at the elementary as well as the secondary level. On the eve of Independence compulsion at the primary stage was enforced only in 194 urban areas and 3,280 rural localities in "British" India, and of these, 66 urban and 2,910 rural areas were in Punjab alone. Educational development in the country was glaringly unequal.

Elementary Education

The Report of the Central Advisory Board for Education (1944) entitled "The Post War Educational Development in India" (popularly known as the Sargent Report) formulated a scheme for the provision of universal, free and compulsory elementary education within a period of 40 years. On the attainment of Independence the National Government considered this period to be unduly

long and decided to give urgent priorities to the problem of expansion and reorganisation of elementary education.

In 1948 an All-India Educational Conference was convened which recommended that the pace of introducing free and compulsory elementary education should be accelerated and the task completed in a period of 16 years. This recommendation was further modified, and Article 45 of the Constitution directed the State to endeavour to provide within a period of 10 years of the commencement of the Constitution free and compulsory elementary education to all children up to the age of 14 years.

This genuine and idealistic resolve was, however, severely hampered by almost insuperable problems, such as the influx of millions of refugees after partition and the difficult position of resources, both financial and human. In spite of these difficulties the pace of progress in post-Independence period was fairly rapid.

The Compulsory Primary Education Act has been passed by all the States except Nagaland and Himachal Pradesh.

There has also been phenomenal growth in enrolment since Independence as indicated below :

<i>Age-group</i>	<i>1951</i>	<i>1971</i>
6-11	About 192 lakhs or about 43% of the age group	About 593 lakhs or 80% of the age group
11-14	About 31 lakhs or about 13% of the age group	About 134 lakhs or 34% of the age group

The number of primary schools increased from 1,40,794 in 1947-48 to 4,04,418 in 1970-71; and middle schools from 8,823 in 1947-48 to 88,567 in 1970-71.

This rate of expansion has no parallel in the earlier educational history of our country and only a few in the contemporary educational histories of other developing countries.

Secondary Education

The expansion of Secondary Education since Independence has also been phenomenal, surpassing considerably the targets of development set by the Five-Year plans. In 1949-50, the total enrolment in classes 9 to 11 was only 1.05 million. It rose to 3.14 million in 1960-61 and to 7.17 million in 1970-71. In the same period, the number of secondary schools rose from 6,682 in 1949-50 to 17,226 in 1960-61 and about 36,000 in 1970-71.

The impressive expansion of secondary education was due mainly to the extension of facilities for elementary education in the rural areas and the general awakening among the masses of people who began to value education for the improvement of their conditions of life. The authorities responded to these popular urges by opening new secondary schools in rural areas and affording liberal concessions to girls and pupils belonging to socially and economically backward communities. Several States decided to provide free education even at the secondary stage.

The pace and pattern of the expansion of facilities for school education were facilitated by an Educational Survey completed for the whole country in 1958-59. The survey undertook the immense task of locating existing primary, middle and secondary schools in order to form a reliable basis for the location of new institutions. The survey proved to be of immense value to the planning of school education and was subsequently brought up to date in the 'sixties.

Improvement of School Education

The most significant effort to improve the content of school education was the introduction of the principles of basic education

propounded by Mahatma Gandhi. Basic education aimed at the transformation of the traditional pattern by correlating learning with physical and social environments of the child and craft activity. The programme of work in the school was reorganised to promote right habits of work, spirit of cooperation, self-help, dignity of labour and other desirable qualities to make the growing child a useful member of the society. Basic education was accepted as the national pattern of education at the elementary stage.

During the First Five-Year Plan a large number of basic institutions were developed and in 1956 the Union Government set up a National Institute of Basic Education at New Delhi. The Institute conducted research studies and investigations of various aspects of basic education and started a number of Extension Service Centres in several teacher training institutions. Gradually, the Government adopted the policy of introducing the principles of basic education in all elementary schools instead of keeping a distinction between traditional schools of the old type and the new basic schools.

The Secondary Education Commission of 1952 recommended a new pattern according to which secondary education should commence after four or five years of primary or junior basic education and should include the middle or senior basic or junior secondary stage of three years and the higher secondary stage of four years comprising a total span of secondary education of 11 or 12 years. In consequence, the first degree course in the universities was to be of three years' duration. The new pattern was accepted by the Union Government and most of the State Governments reorganised their school systems in accordance with the new pattern.

The pace of implementing this important reform had to be slowed down in some parts of the country on account of the shortage

of qualified postgraduate teachers, especially in science, mathematics and English, and inadequate financial resources to provide for additional buildings, science equipment, libraries and higher salaries of teachers with postgraduate qualifications. However, the new pattern was generally adopted everywhere and some progress was made in starting vocational training in secondary schools.

Another reform resulting from the recommendations of the Secondary Education Commission was the diversification of secondary education leading to the establishment of multi-purpose schools. In addition to core subjects, such as languages, social studies, general science, craft and physical education, the new schools provided for the teaching of two or more of the following groups of subjects: humanities, science, agriculture, commerce, home science, fine arts and technical subjects.

Following the principle of diversification, junior technical schools were also started on an experimental basis. These schools were intended to divert to practical work such students as do not possess the aptitude for higher education.

Teaching of Science

Since Independence, serious efforts have been made to improve the teaching of science in schools. The aim is to provide facilities for teaching of science as an elective subject in as many schools as possible and general science to all students who do not offer elective science as one of their subjects.

A department of science education was set up in the National Council of Educational Research and Training (NCERT). Through the agency of this department steps were taken to revise science curricula, prepare new text-books, train teachers

and prepare science apparatus and equipment for general use in all schools. Summer institutes to impart to science teachers the latest advances in various branches of science and the latest techniques in science teaching were organised by the NCERT.

The Union Government gave substantial assistance to the State Governments for equipment of science laboratories and for strengthening library services in schools. The UNESCO team of experts made a survey of science education and their report was utilised in preparing a comprehensive plan for the development of science education in the country during the Fourth Five-Year Plan period.

Improvements have been initiated for the reform of the examination system. A Central Evaluation Unit was set up for this purpose and in course of time State Evaluation Units were established to implement the reform of the examination system.

Audio-Visual Aids

Audio-visual aids and methods have played an impressively important role in school education. All India Radio broadcasts special programmes for schools and has also started a television programme for the Delhi area. The National Institute of Audio-Visual Education established by the Union Government organises training courses for teachers and maintains a large film library for service to the schools.

Several measures have been taken to improve the supply and quality of text-books. Before Independence, school text-books were generally produced by private publishers. Often they were inadequate and expensive. Gradually the Government began to nationalise the production and distribution of school text-books, beginning with the primary stage. The measure has resulted in cheaper and better-produced text-books although certain difficulties were encountered at the initial stages. State Governments have also set up text-book bureaus and committees.

Central and State Institutes

A number of central institutes were established for improving the quality of school education immediately after Independence. The important ones are the Central Institute of Education (1947), the Central Bureau of Text-books Research (1954), the Central Bureau of Educational and Vocational Guidance (1954), the All India Council for Secondary Education (1955), the Directorate of Extension Programmes for Secondary Education (1955-1959), the National Institute of Basic Education (1956), the National Fundamental Education Centre (1956) and the National Institute of Audio-Visual Education (1959). In September 1961 all these central institutes were brought together under an autonomous organisation known as the National Council of Educational Research and Training (NCERT) with greater resources of personnel and expertise.

The Council set up several institutions for organising training and extension programmes and for carrying out and promoting research activities. It maintains a close liaison with all the State Governments through its Field Advisers. The constituent units of the Council are the National Institute of Education, the Central Institute of Education at Delhi and the four Regional Colleges of Education at Ajmer, Bhopal, Bhubaneswar and Mysore.

The Council has already made a significant impact on school education and teacher education. In secondary education, it has implemented most of the recommendations of the Mudaliar Commission (1952-53). The most important recommendation of the Commission was about the reconstruction and reorganisation of secondary education which suggested diversified courses to meet the diverse needs, interests and abilities of students.

The Council has also implemented some of the significant recommendations of the Kothari Commission (1964-66) and the Government of India Educational Policy Resolution of 1968. It has been engaged in the modernisation of school curriculum, production of model textbooks in various school subjects, teachers' guides, supplementary reading material and other instructional material. The model text-books produced by the Council have been used by most of the States and other educational organisations.

Teacher Education

With the acceptance of the objective of universal, free, compulsory elementary education, the task of obtaining an adequate supply of suitable teachers assumed enormous proportions. The position in 1947 was depressing. As against the requirement of 2.8 million teachers for universal elementary education only about 561,000 were available. In 1949-50 there were 517,890 primary, 78,865 middle and 116,157 high/higher secondary teachers. Of these 302,050 primary, 41,478 middle and 62,247 high school teachers were trained. In other words, 41.7 per cent teachers in primary, 47.4 per cent in middle and 46.4 per cent in high schools had received no professional preparation. As against this bleak picture, the position in 1970-71 shows a total number of 22.99 lakh school teachers, the percentage of women teachers being 23.8 and that of trained teachers 82.1.

Girls' Education

Owing to the special socio-economic situation in the country and the policies inherited from the British period, the education of girls and women lagged far behind that of the boys. Concerted efforts were made after Independence to advance the education of girls and women. In the first decade after Independence the enrolment of girls almost doubled itself. Special programmes for

expanding and improving the education of girls were launched in the Third Plan period. These special programmes included measures such as the appointment of school mothers, grants of scholarships and stipends, special prizes to girls, and free education to certain categories. In secondary schools provision was made for girls' hostels and better transport.

The following table indicates the progress made in the education of girls since Independence :

<i>Classes</i>	<i>Age-group</i>	<i>Percentage to population in the age-group</i>		
		<i>1950-51</i>	<i>1969-70</i>	<i>1970-71</i>
A. I-V	6-11	1950-51	1969-70	1970-71
Boys		59.8	96.8	97.6
girls		24.6	60.5	62.4
B. VI-VIII	11-14			
Boys		20.7	47.5	47.3
Girls		4.5	20.2	20.7
C. IX-X/XI	14-17			
Boys		8.7	29.8	30.1
Girls		1.8	10.3	10.9

Mid-day Meals Programme

In pursuance of the recommendations of the School Health Committee, a centrally sponsored scheme of Mid-day Meals was formulated and given effect from 1962-63. The programme is now in operation in all States except Assam, Bihar, Arunachal Pradesh, Himachal Pradesh, Jammu and Kashmir, Manipur, Tripura, Nagaland and Meghalaya. Bihar, where the programme was being implemented till recently has, however, opted out of the scheme from the first January 1971. Some Union Territories like Delhi, Dadra and Nagar Haveli, Goa, Daman & Diu are also having school meals programme. The number of beneficiaries is

approximately 119.48 lakhs, both under the school-going and pre-school categories.

Total Expenditure

The whole effort involving quantitative expansion and qualitative improvement of school education during the last 25 years has involved huge expenditure. The educational expenditure from public and private sources was Rs. 674.26 crores in the First Plan, Rs. 1,357.78 crores in the Second Plan and Rs. 2,478.86 crores in the Third Plan. In terms of the share of national income, expenditure on education has increased from 1.2 per cent in 1950-51 to 3.4 per cent in 1970-71. It is interesting to point out that the growth in expenditure on education has been faster than the growth in population and national income. Besides, the State Governments have also been devoting an increasing share of their revenue budget to education since 1947 which now ranges between 25 and 40 per cent.

CO-CURRICULAR ACTIVITIES AND PHYSICAL EDUCATION

During the post-Independence period efforts were made to provide numerous facilities for students and young people to enrich their educational experience. The educational authorities aimed at the improvement of the quality of education by launching many co-curricular and extra-curricular activities designed to achieve the objectives of character-building and national integration.

Physical Education

Before Independence little had been done to incorporate the essentials of physical education as part of general education. After the attainment of Independence the Government of India took several measures to promote physical education in the country.

In 1950 a Central Advisory Board of Physical Education and Recreation was set up. The Board prepared a national plan which was published in 1956. The national plan included model syllabuses for all stages of physical education, including a programme for the introduction of *yogic* exercises.

Systematic programmes were also devised for the Auxiliary Cadet Corps and the National Discipline Scheme. Another step taken by the Union Government was to launch an integrated programme of physical education named the National Fitness Corps for all the middle, high and higher secondary schools. This new integrated programme replaced the old piecemeal activities from 1965-66. In this way, physical education has been introduced as

one of the compulsory curricular activities for all schools from standard V or VI with a weekly allotment of three to five periods per class.

The development of physical education required teachers specially trained for carrying out the school programmes. An important step in the field of training teachers for physical education was the establishment of the Laxmibai College of Physical Education at Gwalior in 1957. For the first time, the college offered a three-year training programme at the under-graduate level leading to a degree in Physical Education. Soon it developed a two-year post-graduate course leading to a Master's degree.

Physical Efficiency Drive

In 1959-60, the Union Government launched the National Physical Efficiency Drive in order to make the country conscious of physical fitness and to arouse in the people, including specially the school population, a desire to attain higher standards of physical efficiency and achievement. The drive was based on carefully graded physical fitness tests on the basis of which the winners were awarded certificates of merit. The scheme also provided for national awards which were given to persons achieving efficiency of a very high order in the prescribed test items. The drive achieved increasing popularity, and in 1964-65 more than a million persons participated and over 3,00,000 were declared winners.

Social Service Camps

The scheme of Labour and Social Service Camps was intended to bring to the students an awareness of the problems of social and economic re-construction in the rural areas and to link the countryside with the urban centres. The scheme operated largely through colleges and universities and its leadership was

entrusted to the teachers. In the first decade of its operation more than 12,000 Labour and Social Service Camps were held in which over one million students participated. The responsibility for organising these camps was mainly undertaken by the Bharat Sevak Samaj and the NCC Directorate. In order to make the camps more effective the scheme was subjected to constant evaluation by the Planning Commission and the Union Ministry of Education.

Campus Work Projects

The Union Government introduced a scheme to give liberal grants to educational institutions for organising the voluntary labour of students to construct much needed facilities in educational institutions such as swimming pools, gymnasia, recreation halls, open-air theatres, stadia, pavilions, etc. The scheme generated a great deal of enthusiasm and numerous projects were completed.

Youth Festivals

Under the auspices of the Union Government an Inter-University Youth Festival was organised annually to promote emotional integration and to provide university students with opportunity for creative expression through discussions, debates, dance, drama, music and painting etc. This led to the organisation of inter-collegiate youth festivals by the universities with the assistance of Central grants. Several youth leadership and dramatic training camps were organised to give training to teachers in organising co-curricular activities and dramas.

A movement was started for setting up youth hostels in the country to provide cheap board and lodging facilities to young people. Financial assistance was given to educational institutions

and several concessions were offered to students desirous of undertaking tours to places of historical, cultural and national importance within the country.

National Cadet Corps

Launched by an Act of Parliament in 1948, the National Cadet Corps gained increasing popularity as a national youth movement. To begin with, the Corps consisted of a Senior Division comprising army, navy and air wings confined to universities and colleges, a Junior Division confined to schools and a Girls' Division comprising both Senior and Junior Divisions. Soon afterwards an Auxiliary Cadet Corps was set up within the NCC as an inexpensive complement of the Junior Division NCC. In 1960 NCC Rifles was formed to offer NCC training to a large number of college students. The officers of the Corps are drawn from the teaching staff of educational institutions. In addition to military training, the officers and cadets are required to attend Social Service Camps throughout the period of their training. The strength of the NCC extended rapidly and today their total strength is 13,59,000.

All-India Council of Sports

In the pre-Independence period the improvement of standards of sports in the country was left mainly to the patronage of the ruling princes. In 1954, the Union Government established the All-India Council of Sports to provide leadership in the field of sports and to coordinate various programmes and activities. Consequently, considerable improvements were effected in the organisation of sports. To improve the standards of performance, the Union Government established the National Institute of Sports at Patiala in 1961. The Institute trains coaches for various games and sports. Sports and games in the universities received

impetus from the inter-university tournaments and meets organised annually.

The Union Government offered financial assistance to the States to enable educational institutions to acquire play-fields and sports equipment. The Government also extended financial grants for the construction of sports stadia.

For the first time, mountaineering was encouraged on a wide scale as a sport of adventure. The Himalayan Mountaineering Institute was set up at Darjeeling and similar institutions were planned for training people in mountaineering. Liberal grants were given to universities for organising coaching camps in mountaineering.

In 1961, the Union Government instituted Arjuna Awards to honour sportsmen of the year in recognition of their outstanding contribution to different games and sports.

Health Education

In 1955, the Union Government set up a committee to work out model syllabi of health education for primary and secondary schools and teacher training institutions. The new syllabi were recommended to the States for adoption. Steps were taken to introduce school health services, especially to the 6 to 11 age groups.

Moral and Spiritual Instruction

A special committee of the Central Advisory Board of Education examined the ways and means of introducing moral and spiritual instruction in schools and colleges and made valuable recommendations. These recommendations were generally adopted by the State authorities and steps were taken to select suitable literature on moral and spiritual values at various stages

of education. Gradually, a new dimension was introduced into the content of school programmes which aimed increasingly at character building and training of personality.

Education of the Handicapped

There was very little interest in education of the handicapped before Independence and very few facilities existed for the education and welfare of the blind, the deaf and the orthopaedically handicapped persons.

The most outstanding achievement in the education of the blind since Independence has been the adoption of the Bharati Braille, a common Braille Code for all Indian languages. The code was framed in the light of the recommendations of three International Conferences convened by UNESCO at the suggestion of the Government of India. All schools for the blind in India are now using a common code. Before Independence eight different codes were in use. In 1947, India had about 50 schools and other establishments for the blind. During the past 25 years this number has arisen to 140.

A national centre for the blind was developed by the Union Government at Dehra Dun. In 1951, the Union Ministry of Education established a central Braille press at Dehra Dun to undertake the publication of Braille literature in Indian languages. Following this initiative several regional Braille presses were established in different parts of the country. A national library for the blind was added to the institution at Dehra Dun.

To extend facilities for the care of the handicapped the Union Government gave liberal assistance to voluntary organisations. Efforts were made to explore facilities for the employment of the handicapped and a number of special employment exchanges for them were established at different centres. The

most important trend in the education and training of the handicapped was to integrate the handicapped wherever possible into the normal community.

International Understanding

A significant example of the enrichment of school programmes and the curricular materials is provided by the rapid development of education for international understanding. Deriving inspiration and assistance from the work of UNESCO in this field the Ministry of Education and the Indian National Commission participated in the world programme of the Associated Schools for Experimentation in Education for International Understanding. The aim of this project is to re-orient established systems of education in order that the young children who are citizens of tomorrow may learn to have sympathy and understanding for the cultures of countries other than their own. They are taught to respect and work for Human Rights and fundamental freedoms, and also learn about the activities of the U.N. and its specialised agencies, including UNESCO.

About, 1,000 schools and teacher training institutions throughout India are participating in this programme. The Indian National Commission has enlisted about 30 to 40 secondary schools and teacher training institutions and about 10 primary schools from each State to participate in the programme besides all the Central Schools in the country. The programme hinges round three main themes, viz. (i) teaching about the UN and its specialized agencies; (ii) teaching about other countries and cultures; (iii) teaching about human rights and fundamental freedoms.

The Commission regularly supplies to participating schools printed and pictorial material received from UNESCO and brought

out by the Commission to help them to carry out projects on the theme of international understanding. A quarterly journal entitled "World in the Classroom" is being published to service this programme.

To orient the teachers of participating institutions in the development of curricular and co-curricular activities under the project, the Commission has been organising workshops from time to time. These workshops enable the teachers to examine teaching methods and materials suited for experimental and curricular activities in education for international understanding, to exchange ideas and experiences on the operation of the project in the classroom, and to consider ways and means for integrating the teaching of international understanding with the core subjects in the normal school curriculum. Apart from these workshops, the Commission has organised a few national seminars to assess and review the impact of the programme and to consider its future development.

HIGHER EDUCATION

The need for a radical reform of higher education in the context of emerging national tasks and objectives has been expressed in the Resolution of the Government of India setting up the Education Commission in July 1964. The Education Commission has identified some special responsibilities in the present state of India's social and educational development. The universities are exhorted to encourage individuality, variety and dissent, within a climate of tolerance, and to learn to serve as the conscience of the nation; they are invited to assist the schools in their attempts at qualitative improvements and to develop programmes of adult education in a big way, specially through the network of part-time and correspondence courses; they are asked to shake off the heavy load of their early tradition which gives a prominent place to examinations and to strive to improve standards all round by a symbiotic development of teaching and reasearch; and they are expected to create at least a few centres of excellence which would be comparable to those of their type in any other part of the world.

To realize these special objectives and other broad functions shared in common with all universities, the Education Commission visualized a well-conceived and comprehensive plan for the development of higher education, spead over the next twenty years. It directed, among other things, to the following three programmes of high priority : a radical improvement in the quality and standard of higher education and research; expansion of higher education to meet the manpower needs of national development and, to some extent, the rising social

ambitions and expectations of the people; and improvement of university organization and administration.

In the twentythree years since Independence the number of universities in India has increased from 19 to 83. Besides, there are 14 institutions having the status of university under special Acts of Parliament. Regional and political pressures as well as the expansion of enrolment tend to increase the number constantly. Institutions multiply faster than the availability of adequately qualified teachers and necessary financial resources. The inevitable shortage of amenities and dilution of standards militate against qualitative improvement. In such a situation new strategies of development are required to establish and nurture some centres of excellence within a rapidly expanding system.

Centres of Advanced Study

The Education Commission thought that the most important reform in higher education was the development of a few 'major universities' where first-class postgraduate work and research would be possible and whose standards would be comparable to the best institutions of their type in any part of the world. The concept of 'major universities' was seriously considered and debated upon, but finally abandoned in favour of the more broad-based and egalitarian approach of establishing Centres of Advanced Study in selected departments where the conditions of staffing and postgraduate research were favourable. It was feared that the 'major university' approach would relegate a large number of universities to a second and inferior rank, depleting them of talented staff who would inevitably migrate to the major universities. A larger diffusion of departments as centres of excellence at as many university centres as feasible was preferred.

By 1968, thirty university departments—17 in science subjects and 13 in humanities and social sciences—were selected on the basis of their work, existing facilities and potentialities for further development to function as Centres of Advanced Study in specific fields. These Centres were intended to encourage the pursuit of excellence and to provide suitable conditions and facilities for advanced studies and research which could be utilized by talented students from other universities through a liberal system of grants and scholarships. With six advanced centres in Botany, Chemistry, Physics, Zoology, Economics and Sociology, the University of Delhi functioned virtually as a major university, followed by Madras, Bombay, Calcutta and Chandigarh with more than one Centre.

The development of Centres of Advanced Study had some wholesome effects. Apart from raising the standards of teaching and research, they have reduced the need for sending students for study abroad and tended to check the so-called 'brain drain', or flight of talent to foreign countries. Their number is, however, still very small as compared to the size of higher education and its rapid tempo of expansion. It is too early to assess the extent of their beneficial influence on other departments and universities; too often they seem to work in comparative isolation, without sufficient relationship with other departments in their own and related fields. A start on the right path has, however, been made and the experiment holds good promise for building up strong and lasting centres of excellence, permeating their influence widely and developing relations on a continuing basis with similar centres in other countries.

Collegiate Education

An attempt was also made to upgrade higher education at the collegiate level. Approximately 3,500 colleges affiliated to

universities cater for over 85 per cent of the student population in the field of higher education. With a few notable exceptions most of these institutions are a little better than schools, providing dull and mechanical teaching of what is often out-of-date information and rarely offering any stimulation of mind and independent thinking. The main defect of the collegiate system was that it held the affiliated colleges in a uniform mould of mediocrity, ridden by examination and fearful of experimentation and change.

The Education Commission recommended that where there is an outstanding college (or a small cluster of very good colleges) within a large university, it should be granted an 'autonomous' status. This would reduce the parent university's role to that of general supervision and conferment of degrees, conceding to the autonomous college the power to frame its own rules of admissions, to prescribe its courses of study and to conduct examinations. The Commission thought that it should be possible to bring at least fifty of the best colleges under this category before 1974. So far there has been little progress in this direction and the affiliated colleges continue to languish in the traditional grooves denying to the mass of students enrolled the benefits of better and more relevant education.

Some improvements were effected in teaching and education by the use of better libraries and laboratories, encouragement of independent study, and reform of the examination system. The Education Commission underlined the need for experimentation, especially in the way of handling larger numbers of students without proportionate increase in educational expenditure or the number of faculty members, and by entrusting a certain amount of teaching to research students and selected postgraduate students after their first year. This too has remained largely a pious hope, without generating much experimentation.

Greater success was, however, achieved in the organization of student services, including orientation for new students, health services, residential facilities, guidance and counselling, especially vocational placement, student activities and financial aid. Deans of Student Welfare were appointed to administer these services. The working of Students Unions was improved and assisted and attention was given to problems of student unrest and indiscipline. The University Grants Commission has given financial assistance for such activities. Many universities have improved facilities for games and sports and Government have launched a programme of Social Service which requires from students disciplined service in rural areas and town slums. Emphasis on character-building, patriotism and moral and spiritual values is loudly proclaimed even though concrete action to promote these objectives lags behind.

Medium of Instruction

The question of medium of instruction in the universities has aroused heated controversy. The switchover from English to the regional languages was recommended by the Radhakrishna Commission in 1948-49, but little progress was made in this direction. Lack of textbooks and reading materials in the regional languages, the rapid growth of knowledge, especially in science and technology, and the deficiencies of language teaching retarded the progress. The use of Hindi as the all-India language met with serious opposition from non-Hindi speaking States.

The adoption of regional languages as media of instruction in universities poses formidable problems. Universities are encouraged to produce textbooks of good quality in regional languages and considerable financial grants are available for this task. Progress, however, is necessarily slow and everywhere a bilingual situation, in which both the regional language and

English are used, is developing at the first degree stage. Postgraduate work continues to be done in the English medium. National institutions for development of languages have been established, notably one in Hyderabad for the English language teaching and another in Mysore for regional languages, in addition to several university departments and a few centres for Hindi and Sanskrit.

Complementary to the measures for developing Indian languages is a large programme for production of books on all subjects, including translations of standard works from English and other European languages. Facilities are provided for learning important international languages in addition to English ; many universities provide teaching in Russian, French and German. Area studies at selected centres have been organized to provide facilities for the study of languages and civilizations of important cultural areas of the world.

Research and Development

Attempts to improve the range and quality of higher education are reflected in the creation of new institutions. To rectify the balance in favour of Social Sciences and Humanities which were neglected owing to a major deployment of resources to Natural Sciences and Technology, the Government of India established the Indian Institute of Advanced Study at Simla in October 1965. It conducts advanced study and research in social sciences, historical sciences, philosophy and literature. The Institute receives various categories of academic personnel—visiting professors, lecturers and guest Fellows—and offers facilities for research, group discussions and writing. To strengthen the social sciences, the Government has also established an Indian Council of Social Sciences which gives grants to institutions and individuals.

Along with some Centres of Advanced Study at universities these new institutions have developed greater interest in social

sciences and humanities. In general, however, humanistic studies have not developed to the same extent as natural sciences and technological education. There are very few centres of excellence for the study of Indian culture and civilization and the interest in Social Sciences and Humanities lags behind more practical and utilitarian fields.

Rural Higher Education

The problems of rural India and its main occupation of agriculture have given rise to some interesting innovations in higher education. The University Education Commission had in 1949 recommended the establishment of rural colleges and rural universities to promote the advancement of rural India. A National Committee appointed for this purpose in 1954 evolved a pattern of education suited to the needs and resources of the countryside. Consequently, fourteen Rural Institutes of High Education were organized to offer facilities to the rural youth to acquire that training and skill which would make them effective leaders of the community.

In 1966, a National Council for Rural Higher Education was constituted to advise the Government of India and the State Governments on all matters concerning the development of rural higher education and to conduct examinations for the various courses approved by it. Eight different diploma, post-diploma and certificate courses of one to three years' duration were developed in subjects like rural economics, rural sociology, civil and rural engineering, agricultural sciences, etc. The curricula and the courses in the Rural Institutes were designed as an integrated whole comprising study, research and extension.

The programme of rural higher education, which was in the nature of pilot projects, soon ran into serious difficulties. The

students demanded equivalence with university courses and degrees which the traditional universities denied them, and on completion of their courses all of them did not find work and employment for which they were trained. Consequently, some of the rural institutes reverted to the traditional pattern and became part of universities.

The eight new Agricultural Universities established after Independence were more successful and followed the new pattern of integrating teaching with research and extension on the lines of the Land Grant Colleges of the USA. Postgraduate work became a distinctive feature of the Agricultural Universities which were co-ordinated by the Indian Agricultural Research Institute. The new Agricultural Universities are less conservative and tradition-bound than other universities and have already shown a capacity to change and innovate.

Some of these universities have broadened their courses and range of subjects. They have taken up several research and training programmes directly related to agricultural production. Their contribution to 'Green Revolution' has been considerable, and they have influenced the growth of agricultural institutions at the university level in other countries of Asia. In this sector India received valuable assistance from the Government and some specialized Institutions of the USA.

Nehru University

Perhaps the most innovative event in Indian higher education in recent years was the establishment in 1968 of the Jawaharlal Nehru University in New Delhi. The University is developing its programmes on the basis of five broad principles; (i) With its nation-wide jurisdiction, the University should have a national character. While developing the institutions and centres on its campus at Delhi, it should develop some

programmes and institutions in other parts of the country also. (ii) It should function mostly at the postgraduate and research level. (iii) It should develop studies centred round major problems of national significance and emphasise an interdisciplinary approach to their pursuit in preference to the traditional approach of discipline-oriented departments and programmes. These important problems could include secularism and national integration. (iv) It should concentrate on the development of those disciplines and programmes which are not adequately developed at present and avoid repeating the set-up common to other universities. And (v) it should strive to maintain the highest standards possible and aim at producing the highest quality of trained manpower.

To implement these principles in terms of concrete programmes, seven Working Groups in the areas of Social Sciences have planned for the organisation of the following Centres : (1) for Historical Studies; (2) for the Study of Social Systems; (3) for the Study of Political Development; (4) for the Study of Regional Development; (5) for Education Studies; (6) for Social Medicine and Community Health; and (7) for the Study of Interactions of Science and Society.

In addition, two other Centres for Disarmament Studies and for Studies in Diplomacy have been planned. In the area of Natural Sciences a great deal of thought has been given to the development of a school of Life Sciences and a School of Environmental Sciences.

It is expected that some existing institutions in Delhi and elsewhere would be admitted to the complex of the Nehru University and developed in accordance with its new principles and approaches. The first institution to join the University in 1969 was the Institute of Russian Studies, set up a few years earlier.

Soon afterwards the Indian School of International Studies joined the University. The University is a daring concept of combining different disciplines and areas of study for undertaking concrete projects and programmes required for the service of man.

Threat of Numbers

All our efforts to improve the quality of higher education are threatened by the pressure of mounting enrolments. During 1960-69, the biggest enrolment increase in India was in the sector of higher education (128 per cent) and added nearly one million students. In 1969-70 the enrolment in the University of Calcutta alone was 210,000 with 190 affiliated colleges. The tempo of increase continues unabated. With 62 per cent of its population under 25 years of age, and the pattern continuing to alter in favour of the younger age groups, the explosion of numbers at all levels of education and especially at the tertiary level in the coming decades appears truly frightening.

The educational expenditure as a percentage of national income increased from 2.4 in 1960-61 to 2.9 in 1968-69; but a major part of it goes to meet the cost of higher education, starving the crucial sectors of elementary and mass education. In recent years India has spent proportionately more on university education than perhaps any other country in the world. With the growing need of mass education for economic and social developments this high allocation of resources to higher education can no longer be sustained. At the same time, the limitation of enrolments through selective admissions is not practicable; the demand for higher education is insatiable and students from backward areas and classes, especially from the rural areas, must catch up with the more fortunate urban youth.

Correspondence Courses

To meet this situation of expanding enrolments and shrinking resources, the Ministry of Education decided upon the introduction of correspondence and part-time courses. The innovation met with stubborn resistance from university vice-chancellors and academicians who feared that the standard of education will fall. After some difficulty, a department of correspondence education was started at Delhi University on an experimental basis. The department attracted large numbers and soon it swelled into a massive undertaking. The experiment revealed that the performance of a slightly older age group in correspondence and part-time education compared favourably with regular whole-time students, and it reduced considerably the pressure upon the university and affiliated colleges. The Delhi Institute of Correspondence Education led the way to a large expansion of similar facilities at other universities.

The Education Commission recommended that opportunities for part-time education should be extended widely and should include courses in science and technology. The Commission estimated that by 1986 about a third of the total enrolment in higher education could be provided through a system of correspondence courses and evening colleges. The Resolution on National Policy on Education (July 24, 1968) declared that education through part-time and correspondence courses should be given the same status as full-time education. The new system has justified itself and is expected to expand rapidly.

More recently a plan to start a University of the Air, based largely upon the educational programmes of All India Radio and the new medium of television has been evolved in consultation with specialists from Britain and the USA. The use of broadcasting and television for strengthening education at all levels is now

fully accepted and efforts to extend facilities are being made. To develop the new educational technologies and programmes the involvement and participation of educationists should be greater than has been the case so far.

Higher Technical Education

A reference must be made here to the phenomenal expansion of technical education at university level and the establishment of new institutions and programmes of study and training in this important field. In 1945 the Federal Government appointed the Sarkar Committee to consider whether India should have several regional technical institutions or one central all-India technological institution with affiliated colleges. The Sarkar Committee recommended that at least four regional institutions should be established — one each in the North, East, South and West. In 1950 the first regional technological institution, the Indian Institute of Technology at Kharagpur, was founded; and in 1956 Parliament declared it a degree-granting institution 'of national importance'. Soon afterwards came the Indian Institute of Technology at Bombay in 1958, at Kanpur and at Madras in 1959, and at Delhi in 1961. All the five institutes were incorporated as institutions 'of national importance' under the Institutes of Technology Act of 1961.

Each Institute is expected to provide residence and courses of study for 1,600 undergraduate and 400 postgraduate and research students. The education offered is not only theoretical but practical, because Indian industry does not provide practical training programmes such as are given by industries in the United States and Britain. As the Institutes, working in close collaboration with industry, develop engineering and technical courses based on the most modern technologies, they are helping to lay the basis for an industrial economy. Each of the five Institutes receives some international aid: the Bombay Institute from the

Soviet Union, the Kanpur Institute from the United States, the Kharagpur Institute from several international agencies, the Madras Institute from West Germany and the Delhi Institute from Britain.

Although not patterned after the Indian Institutes of Technology, the Indian Institute of Science at Bangalore was designated after Independence by the Federal Government for major development grants for advanced study and research in Technology.

A two-year postgraduate course leading to the master's degree recommended for various technical fields by a Special Committee on Postgraduate Engineering Education and Research has been introduced in 10 universities.

India's experience clearly proves the axiom that the development of technical education should be correlated to industrial and economic growth. It also shows that in a developing country, the planning of technical manpower is not a foolproof process and that technical manpower planning needs continuous review and correction at appropriate intervals.

The rapid development of higher education in India has undoubtedly resulted in many innovations and some qualitative improvement. The paucity of financial resources and the poverty of management continue to be the main obstacles. But in spite of these difficulties Indian universities have reared talent which has often blossomed in the more congenial academic climate of foreign universities, trained high level personnel which has not been used effectively at home, and offered facilities to classes of population who were denied equal opportunities in the past. Educated unemployment looms as a great social danger, but for this the educationist is only marginally responsible. Despite the lowest per capita expenditure on education in India, educational achievements have surpassed the performance of the economy and the effectiveness of planning and management.

A QUICK SURVEY

The foregoing pages reflect some of the highlights of progress achieved and problems experienced in the field of education during the quarter century after Independence. A balanced appraisal of educational developments reveals considerable gains and advances in spite of several failures and set-backs.

Five Major Difficulties

There were at least five major difficulties which stood in the way of educational reform and expansion. In the first place, the partition of the Indian sub-continent in 1947 resulted in unprecedented movements of population, often accompanied by violence and emotional frenzy. In this tragic drama education suffered along with other nation-building activities.

Secondly, the resettlement of new population led to diversion of financial resources from education to other sectors of national activity. Over the years, education continued to be straved of adequate financial resources. In terms of the percentage of the gross national product expended on education and the per capita cost of students at all levels India has spent less on education than almost any other country in the world. It is indeed surprising that so much expansion took place with such small resources.

Thirdly, to the continuing financial difficulties were added the complexities of evolving national policies and more than that the requisite determination and managerial capacity to improve the state of affairs. After Independence education remained, by

and large, a subject allocated to the States. The absence of a national authority to decide upon policies and implement reforms was a great handicap. The management structure of education continued unchanged and proved inadequate to bring about radical changes.

Another difficulty arose from the very nature of educational change which has to be a long and slow process of adjusting numerous forces and competing interests. There is in every educational system an in-built resistance to change and reform and this was particularly strong in the set-up inherited from the colonial period.

Lastly, the size of the problem itself would be baffling in any society. The immense variety of conditions prevailing among different groups and areas of the country created confusion and stood in the way of finding neat solutions and uniform national policies.

Achievements

During the 25 years of Independence India has indeed achieved a phenomenal expansion of educational facilities at all levels and new fields of study and research have been opened to create a first-rate infrastructure of trained man-power needed for economic and social development. Figures tell their own tale and a few given below are significant.

In 1946-47, the total expenditure on education was Rs. 576 million; this rose to Rs. 6,000 million in 1965-66. The number of primary schools which was only 1.72 lakhs in 1947 has now increased to about 5 lakhs. Enrolment at the primary stage which was 141.1 lakhs or 35 per cent of the age group 6-11 now stands at 600 lakhs or 80 per cent of this age group. The number of middle schools has increased from eleven thousand to about one

lakh; the enrolment at the middle stage which was 20.4 lakhs or only 9 per cent of the age group 11-14 in 1947, has gone up to 145 lakhs or 35 per cent of the age group 11-14.

At the secondary stage, the total enrolment of 8.7 lakhs or 4 per cent of the age group 14-17 in about 5,000 schools in 1947 has now risen to 75 lakhs or 22 per cent of this age group in a total of 40,000 schools.

After Independence there were only 19 universities and 400 colleges with a total enrolment of 2,50,000 at the university stage; we now have nearly 100 universities or institutions of similar status and about 3,500 colleges. The total university enrolment has increased to about 24 lakhs.

Although due to the increase in population, the number of illiterates in 1971 was 386 million as against 338 million in 1961, the percentage of literacy has actually risen, and according to the 1971 Census it is 29.35 per cent as against 24.05 per cent in 1961 and only 14 per cent in 1947.

Technical Field

The unprecedented expansion in technical education as in the field of science and research is largely a post-Independence phenomenon. There were only 38 Engineering colleges in 1947, which could take in 2,940 students for the degree courses. Now we have 120 Engineering institutions at the first degree level with an admission capacity of 25,000 students every year. The number of polytechnics now is as large as 300, with a capacity to take in 50,000 students each year. We are turning out 17,000 graduate engineers and over 22,000 diploma holders. In addition, training facilities have been organised over a wide range of fields related to our industrial advance, like metallurgy, aeronautical and chemical engineering, architecture, town planning, electronics, etc.

At the postgraduate stage, five higher technological institutes (the Institutes of Technology at Kharagpur, Bombay, Madras, Kanpur and Delhi) were established for the most advanced stages of engineering education and research. In addition, there are post-graduate courses at the Master's degree level in about 60 institutions with a capacity of over 4,000 places. Business and industrial administration courses are run at 24 university centres to train managerial personnel, both for the public and private sectors, and industrial and commercial organisations. There are, besides, two full-fledged All-India Institutes of Management at Calcutta and Ahmedabad. Specialised institutions in collaboration with industry have been set up to train candidates in industrial engineering, foundry and forge technology.

Over 5,00,000 engineers and technicians are now employed in industry and other sectors of our economic life, contributing to productive activities. With these engineers and technicians we have been able to launch various multi-purpose projects for power generation, irrigation and flood control and industrial complexes like steel plants, fertilizer plants, oil refineries machine-building plants, etc.

The expansion of scientific research is entirely a post-Independence phenomenon. Under the Council of Scientific and Industrial Research, there are at present over 44 scientific and technical establishments, including 30 national laboratories and institutes. There are 13 cooperative research associations which are financed in part by the CSIR. The annual budget of the CSIR has increased from about Rs. 1.5 crore in 1950-51 to Rs 21.1 crore in 1970-71.

Qualitative Improvements

Considering the lack of financial resources and the problems created by massive expansion of numbers it is surprising that a

number of qualitative improvements took place during the last quarter of a century. The deficiencies of quality and standards are many and are frequently deplored. It must not, however, be forgotten that a careful scrutiny of the educational system was conducted in depth by a number of commissions and committees and not all their recommendations remained unimplemented. The introduction of techniques and methods of basic education at the primary level, the diversification of courses at the secondary level, the improvements effected in the content and teaching of science at all levels and the spread of engineering colleges with modern equipment and curricula are some of the examples of qualitative improvements.

Teacher training improved slowly but appreciably, and at the level of higher education centres of advanced study were developed so that Indian students might receive training of the highest quality at home instead of going abroad for advanced study.

It is true that all that was foreseen could not be accomplished and many deficiencies which might have been removed continue to exist. For example, little improvement has been effected in the examination system and the changes in curricula and methods of teaching are not sufficient. These deficiencies are partly due to the fact that sufficient funds and efforts were not available for research and planning in education and the administrative structures remained almost unchanged. One tangible gain was the formulation of educational priorities for evolving right policies for the future. The increase of enrolments itself was a beneficial achievement for the spread of enlightenment among areas of populations which had been neglected in the past and for the uplift of peoples held in servitude for countless generations.

The Question of Standards

Criticism is often levelled at the low standards of education in both schools and colleges. In view of the rapidity of expansion it was natural that a fairly large number of sub-standard institutions should come into existence. Students going to new schools were also handicapped by the illiteracy of their parents and the living conditions at home. The standards of some of the new institutions and the new groups of school-goers were indeed low; but the very fact that the facilities for schooling were provided where none had existed before was a tangible gain.

It would be true to say that the number of better and brighter students is larger today than ever before and this fact is borne out by the creditable performance of Indian students who have had the opportunity of studying in foreign universities. Along with a number of sub-standard institutions there has been definite improvement in the working of better type of schools and colleges.

The picture of educational standards remains somewhat mixed and the natural dissatisfaction at the existence of low standard institutions leads to wholesale condemnation of the performance of the educational institutions as a whole. A clear and more realistic appraisal of the situation, however, would not lead to undue pessimism.

The Democratic Way

The most significant achievement of educational progress as indeed of other social advances since Independence has been the application of the democratic method to educational change directed towards the attainment of democratic principles such as equality of opportunity, freedom and diversity. While there has

been a continuing search for evolving national policies and devising national instruments of action, a great deal of initiative for planning and implementation has been conceded to local authorities. The principle of decentralisation was thus followed in planning and administration.

The principle of equality of opportunity was applied in such policies as discriminatory action in favour of the backward classes and special measures for the improvement of educational facilities for women and the rural population. The participation of important sections of population was secured in the launching of educational reforms. In recent years, the young people have participated increasingly in the functioning of educational institutions.

Experimentation and diversity are encouraged at all levels and the educational system is far from a monolithic structure aiming at uniformity and central control. The pursuit of socialistic policies has resulted in the expansion of State action and consequently private and voluntary action has decreased in quantity. In spite of this trend, an appreciable sector of the educational system is still supported by private and voluntary action and some of the best institutions are run by non-governmental organisations.

In this context, a great gain has been the spread of the secular spirit in education. Before Independence communal institutions were operated by religious and sectarian organisations. This tendency undermined the spirit of national unity and accentuated religious and communal differences. In the period after Independence new institutions were established by the State and also increasingly by secular organisations. Even the institutions based on religious and communal affiliations became more and more secular in character and outlook.

Modernisation of Education

Another advance in the field of education was reflected in the process of modernisation which resulted in the development of new types of institutions, the launching of new programmes of study and training and improvement in the content of education..

More Scholarships

A note-worthy feature of expanding facilities since Independence is the programme of scholarships at all levels of education which has received increasing momentum. The programme lays special emphasis on assistance to the backward classes of the country.

The critics of the educational system have often deplored the persistence of its colonial character. Such a criticism is only partially valid because the pace of reform was often slow and inadequate. It is, however, not correct to say that the Indian educational system after 25 years of Independence is still colonial in character and outlook. Indeed it is now one of the largest educational systems in the world aiming at the achievement of new goals of nationalism, democracy, scientific progress, economic and social developments and modern values.

LOOKING AHEAD

The Report of the International Commission on the Development of Education published recently by UNESCO makes the following observation :

“Education follows the laws of every human undertaking, growing old and gathering deadwood. To remain a living organism, capable of satisfying with intelligence and vigour the requirements of individuals and developing societies, it must avoid complacency and routine. It must constantly question its objectives, its content and its methods.”

Six Objectives

This spirit of change and renovation has been reflected in the educational experience of free India and new goals and objectives for the future have been identified. The supreme importance and urgency of educational reform is now accepted by all and this itself is a great gain if we can match this spirit of urgency with sufficient will and capacity for adequate action. A recent document prepared by the Ministry of Education and Social Welfare for the consideration of educational developments in the Fifth Five Year Plan states the following objectives for the transformation of the educational system :

- i) To cultivate the basic values of humanism, democracy, socialism and secularism;
- ii) To inculcate the love of Motherland, and a proper pride in our cultural heritage and achievements ;

iii) To strengthen national integration which implies the development of proper non-communal attitudes, the subordination of all narrower loyalties to the supreme loyalty to the nation, and, in a plural society like ours, the development of capability for tolerating difference and a readiness to collaborate with others in pursuit of shared goals;

iv) To accelerate the process of modernization and the development of a scientific temper and outlook;

v) To promote productivity through the teaching of technical and technological skills, inculcation of the dignity of manual labour, willingness to work hard, cost-consciousness and entrepreneurship; and

vi) To bring the elite and the masses closer together so that the former retain their roots deep in all sectors of society and become committed to the service of the people.

Content of Education

These are the same principles emphasised by a number of commissions and committees during the past and especially highlighted in the Report of the Indian Education Commission. But a simple proclamation of objectives and principles is of little value unless they can be translated into concrete programmes of action. The most important need is the improvement of curricula which determine the content of education. The main programmes for the modernisation of curricula are outlined as follows in the Government policy paper :

(1) The inculcation of values should be emphasised at all stages.

(2) The cultural content of education needs much greater emphasis.

(3) The story of our struggle against British imperialism, the achievements of the post-Independence period, our national objectives and programmes of development with special emphasis on popular participation, and the national problems that face us in different fields, should be taught at all stages as a part of 'education for citizenship', the courses being graded to suit the age and maturity of the students.

(4) At the primary stage, the curricula should be closely related to the environment so that they appear relevant and significant to the children. In addition to the three R's, programmes of work experience related to local programmes of development and of social service related to the welfare of the local community and its needs will have to be included. The improved teaching of languages, science and mathematics should be emphasised.

(5) The alienation from manual labour takes place most conspicuously at the secondary stage. It is also at this stage that the white-collar attitudes are strongly developed. Some steps to counteract these trends would have been taken by the introduction of work experience and social service in the curricula of classes I-VIII. In addition, it is absolutely essential that the teaching of a craft or a trade is made obligatory on all students in classes IX and X so that they engage themselves meaningfully in production and socially useful work.

(6) At the higher secondary stage, the curriculum should broadly follow the lines recommended by the Education Commission. There would be two main streams at this stage. The first would prepare students for the university and include a number of elective courses covering mathematics, natural and social sciences and humanities. A fairly wide combination of courses, cutting across traditional boundaries, should be permissible. The other stream should be vocational and would prepare students for careers

in agricultural, industrial and services sectors as well as for various programmes of self-employment.

(7) At the university stage, there is an even greater need to restructure and improve the existing courses on the principles of relevance, flexibility, diversification and modernization. Several of our courses are out-dated, in some cases by as long as 30 to 50 years. It is essential that these are all updated and brought in line with the latest developments in the field.

(8) Most of our courses are still discipline-oriented and traditional so that they tend to ignore the inter-disciplinary fields and problem-oriented studies which are now assuming increasing significance. It would, therefore, be a great improvement if a flexible system of courses is designed so that a student can choose, within a broad framework, such courses as will be in keeping with his needs and capacities. Perhaps the introduction of short semester length courses will offer each student a greater possibility of devising a combination of studies that is most suited to his needs and abilities.

(9) Special attention will have to be given to the restructuring of courses at the under-graduate stage. The first degree should provide a broad general education with three components. The first component is an awareness of the world around, a sense of values, and a commitment to the ideals and practical goals which the country has placed before itself. This implies a knowledge of human affairs at the level of individual, of society and of history, the main elements of the social and economic struggle, our Constitution and our plans, field work and social service, and elements of philosophy, fine arts and literature. The second component is the promotion of communication skills which implies training in language, speech and writing. And the third component is an academically-oriented study of some selected subjects.

(10) At the postgraduate stage, greater emphasis will have to be placed on promotion of research and on a symbiotic combination of teaching and research.

Programme of Life-long Education

The policy paper continues to observe that the modernisation of curricula should be accompanied by the introduction of new teaching methods, reform of the examination system, improvement of production and supply of textbooks and the strengthening of the professional training and involvement of teachers. Such a transformation in the educational system based realistically on the experience of the 25 years after Independence would go a long way towards bringing education into line with social, economic, scientific and technological developments in society.

We have to aim at a programme of life-long education with the use of all the means now available, especially the new technologies and the mass media. This will require immense effort of planning and management and the deployment of adequate resources, both material and intellectual. In particular, research into educational problems should be directed to innovations which are essential to change the present state of affairs.

In short, the Indian society is now poised for further stupendous effort directed to the better planning and management of the educational system, a deeper participation of all in the process of change and reform and development of a more relevant institutional infrastructure reflecting a larger variety of institutions, experimentation and flexibility of action and meaningful linkages of education with other sectors of economy and social life.

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