

DEVELOPMENT OF EDUCATION : 1988-1990
National Report of India



**NATIONAL INSTITUTE OF EDUCATIONAL PLANNING
AND ADMINISTRATION**

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SECTION I

EDUCATIONAL DEVELOPMENT IN INDIA

The development of education in India since its independence forty-three years ago has been guided by national aspirations as embodied in Indian Constitution as also the social, economic and political challenges that it has faced. The broad principles and objectives of education have remained focussed towards achieving the basic goals of education relating to productivity, modernization, development of social, moral and spiritual values and above all to the life, needs and aspirations of the people. The National Policy on Education adopted in 1968, was based on the recommendations of the Education Commission (1964-66).

The adoption of the 1968 policy led to considerable expansion of the educational facilities all over the country at all levels. While several prominent educational institutions were established in different parts of the country, attention was also paid to the creation of basic educational facilities in rural areas. Efforts were also initiated to adopt a common structure of education having a common scheme of studies particularly at the school level.

While these achievements were impressive by themselves, the general formulation incorporated in the 1968 Policy did not, however, get translated into a detailed strategy of implementation, accompanied by the assignment of specific responsibilities and financial and organizational support. Problems of access, quality, quantity, relevance and financial outlay accumulated over the years.

It was in response to this that the new National Policy on Education (NPE) was adopted by the Government of India in May 1986. The policy laid great emphasis on the elimination of disparities in the educational system and provision of greater facilities through qualitative interventions. It proposed to decentralize educational administration with the objective of making it more responsive to the needs of the people. In this context it called for the estab-

lishment of new local educational bodies at the village, district and state levels that would elicit people's participation at each level of planning, implementation and monitoring.

The new policy also provided guidelines for, the empowerment of women, access of education to backward classes, minorities and the disabled. The policy gave added impetus to the launching of a large-scale programme of nonformal education and provided incentive to voluntary agencies for running of the centres. In this context, it resolved to achieve universalization of elementary education and the eradication of illiteracy by 1995. In order to nurture rural talent, the establishment of Navodaya Vidyalaya Schools (model schools) with residential facilities, was also a part of the New Education Policy. At the same time it called for greater rigour and discipline in academic pursuits, accountability, experimentation and innovation, nurturance of excellence and modernization of processes at different levels of education.

As in the earlier policy, the 1986 policy also proposed that the implementation of its various parameters be reviewed every five years. It also called for appraisals at short intervals to "ascertain the progress of implementation and the trends emerging from time to time." On the basis of periodic implementation reports from the field and in view of the perceptions of the new leadership, a Review Committee was set up in May 1990 to assess and take cognizance of the developments since the enunciation of the last policy; monitor the progress of the programmes and accordingly prioritize the goals and strategies of the national system of education.

1.1 THE EDUCATION SYSTEM IN INDIA

India being a Union of States, education in the Indian Constitution has mainly been a State responsibility except for certain specified items like determination of standards in institutions for higher education or research, establishment and maintenance of Central Universities as well as specified institutions for scientific or technical education and research. It recognizes the need for providing "adequate facilities for instruction in the mother tongue at the primary stage and the right of religious and linguistic minorities to establish and administer educational institutions. For the cause of secularism, however, it directs that these institutions will not impart religious instruction if they receive state funds. Similarly, special provisions are made to protect the educational interests of the under-privileged sections particularly women and statutorily recognized weaker sections of the population like the Scheduled Castes (SC) and the Scheduled Tribes (ST).

The Constitution also specifically directs the State to make every effort to provide free and compulsory education for all children up to fourteen years along with many other provisions with regard to the spread of education and equalisation of opportunity in education.

It is necessary to mention here that although education basically remained a State Subject, the 42nd amendment to the Constitution effected in 1976, made education a Concurrent Subject, thereby empowering the Parliament with the authority to legislate on education. The Centre, however, continued to play the role of a co-ordinator and monitor of educational progress and an initiator of innovative programmes. The approach, thus, was to evolve meaningful ways for sharing the responsibility between the Central and the State governments.

Educational planning in the country is essentially the joint endeavour of the Central and the State governments. The Planning Commission at the Centre and the State Planning Departments decide the policy and approach to be adopted. At the Central level a planning and monitoring division in the Ministry of Education works in close liaison with the education division of the Planning Commission.

Actions related to education at the national level including planning and policy-making are guided and coordinated by the Central Advisory Board of Education, the members of which include Ministers of Education of different States and Union Territories and leading educationists of the country. A few national level institutions specialising in particular aspects of education, assist and advise the Central and State governments in the formulation and implementation of policies and programmes in the respective areas. Special mention may be made in this regard, of organizations such as the National Institute of Educational Planning and Administration, the National Council of Educational Research and Training and the University Grants Commission.

1.1(a) Early Childhood Education

The development of pre-primary education in India has been of comparatively recent origin. The early sporadic efforts by voluntary organizations came to be gradually accepted and recognized especially after the recommendations of the Central Advisory Board of Education (CABE) in 1944. This led to the expansion of pre-primary education as a necessary adjunct to elementary education.

By far, the most widespread model is that of the Integrated Child Development Services (ICDS) with the single largest outreach programme, having a comprehensive package of services for meeting the total development

needs of children in the 0-6 age group. The coverage under ICDS when combined with various other Early Childhood Care and Education (ECCE) facilities, such as *Balwadis* (creche/day care centres) run by voluntary agencies and pre-primary schools run by state governments, municipal corporations and other agencies, adds up to a total of about 62,24,000 children. This coverage, though impressive in terms of total numbers, is minimal and constitutes less than 12 per cent of the corresponding age group who require these services.

1.1(b) Primary Education

The need for a literate population and universal education for all children in the age group 6-14 was recognized as a crucial input for nation building and was given due consideration in the Constitution as well as in various five-year plans. In respect of primary education, the endeavour has been to ensure universal provision of schools, universal enrolment of the concerned age group, universal retention and achievement. While it may be said that the first condition is substantially achieved with respect to primary stage (classes I-V), the same at the upper primary stage (classes VI-VIII) is yet to be fully met. There has been an upswing in enrolment in the eighties as compared to the earlier period. For instance, after the initial spurt of decadal growth rates of 5.5 per cent during the fifties, it declined to 4.2 and 2.5 per cent during the sixties and seventies respectively but increased to 4.2 per cent in the eighties (for details on enrolment [see section 1.2(c)].

The National Policy on Education (1986) reinforced the time-bound strategy of resolving to provide free and compulsory education up to 14 years of age to all children by 1995, which in keeping with the trends in educational development seems unrealistic. Moreover, in spite of the massive increase in the outreach and coverage, the Indian education system is characterised by the persistence of high dropouts. It thus appears that reaching the intended target of universal enrolment and retention, even at the primary stage, has been extremely difficult in the present system because those not yet enrolled belong to the weakest and most deprived social segments. Incentives such as free supply of books and materials and mid-day meals have not had a long-term impact.

The National Policy on Education (1986) had reiterated that there should be a common structure for the elementary stage consisting of 5 years of primary schooling followed by 3 years of upper primary/middle school education. But at the State level variations continue to exist in the educational structure within the school stage. There have been consistent efforts to improve the quality of teachers by way of raising their educational qualifications. Curricula and

textbooks have also undergone commendable changes. The scheme of Operation Blackboard launched during 1987-88 (see section 2.5 for details), was formulated to bring about a qualitative improvement in the primary school system. It aimed to provide at least two all weather rooms to schools; a second teacher, preferably a woman in single teacher schools and essential teaching and learning equipment in all primary schools in the country in a phased manner.

1.1(c) Secondary Education

The system of secondary education inherited at the time of independence was extremely unsatisfactory in fulfilling the twin objectives of serving as a vital link between primary and higher education on the one hand, and being an outlet to the world of work on the other. In 1968, a new 10+2+3 structure was envisaged for providing a broad based general education during the first ten years of school followed by two years of higher secondary and three years of collegiate education for obtaining the first degree. Nevertheless, many of the States continued to follow either 10+2+2 or 10+1+3 pattern of education.

The curriculum at the higher secondary stage is designed to equip the children either to take up higher level courses of study to prepare for entrance into the first degree in a college, or for vocational instruction to prepare for entry into the world of work. The scheme of studies in the first ten years, is undifferentiated and consists of two or three languages, science, social sciences, work experience, art education, health and physical education. The +2 or higher secondary course includes the vocational stream as well. Despite substantial difficulties in the implementation of this pattern it has been observed that along with the increase in the number of secondary schools, the enrolment at secondary stage increased by 63 per cent and at higher secondary stage by 87 per cent during 1978-86.

1.1(d) Higher Education

The Government of India, in the years immediately after independence, attached considerable importance to higher education including research. Since then, there has been a tremendous growth in higher education. While enrolments increased from 1,566 thousand in 1968-69 to 3,814 thousand in 1987-88, the number of colleges increased for instance, from 5,246 to 6,597 in just 5 years from 1983 to 1988. Further, the Scientific Policy Resolution (1958) led to the establishment of a number of national and high level institutions of science and technology taking Indian higher education and research into a new era of advances in science and technology.

1.1(e) Nonformal Education

Given the large number of children who continue to drop out of the school system and also the vast number of those who do not enter school at all, it was imperative to make basic learning opportunities accessible to them through a flexible approach.

The nonformal education (NFE) programme was initiated in 1978 and was expected to play an important role in extending the outreach of education. It focussed on pupils in the age group 9-14, who, either could not join regular schools or dropped out prematurely. Initially the programme was confined to the educationally backward States, but from 1987 onwards it was extended to all States and Union Territories in the country.

While implementing the programme, many inadequacies and limitations were recognized. It was found that the enrolment of girls in the NFE centres was extremely low. Consequently, it was decided to open separate centres for girls. During the period under consideration, the share of girls' centres to the total number of centres increased from about 9 per cent to 30 per cent. The scheme has been revised and an integrated, area-based approach has been adopted. Considering the vital role of voluntary agencies in this sector, efforts are being made to involve them in a big way to extend the outreach of education to hitherto unexplored areas. A comprehensive monitoring system is being developed now to assess the effectiveness of the programme.

1.1(f) Adult Education

Keeping in view the magnitude of the problem of illiteracy, adult education programmes have received special attention in the past ten years. The National Adult Education Programme was formally launched in 1978. Later, eradication of illiteracy was identified as one of the six National Technology Missions and led to the establishment of the National Literacy Mission in 1988, with a view to applying technology and scientific research for the benefit of the deprived sections of the society. In quantitative terms, the Mission seeks to impart functional literacy to 80 million illiterates in the 15-35 age group by 1995.

The programmes for imparting literacy skills are : Rural Functional Literacy Programme (RFLP), State Adult Education Programme (SAEP), Literacy Programmes by Voluntary Agencies, *Nehru Yuvak Kendras* (Youth Centres), universities and colleges, and Mass Programmes for Functional Literacy (MPFL). The total number of adult education centres was more than 278 thousand in 1989 with an enrolment of about 9 million. The program-

mewise position in different parts of the country shows that more than 65 per cent of the centres are in three of the educationally backward states.

The progress of RFLP in terms of enrolment and numbers made literate since the initiation of the project leaves much to be desired. It has been estimated that only 40 per cent of those enrolled have been made literate so far. It is also reported that about 40 per cent of those enrolled drop annually, without completing the programme and another 20 per cent relapse into illiteracy. Most adult education programmes suffer from the absence of any linkage between basic literacy, post-literacy and continuing education (see also section 2.8).

1.2 EDUCATIONAL TRENDS IN RECENT YEARS

1.2(a) Demographic Composition

There has been considerable expansion of education in the post-independence period, in the system as a whole and in all its stages and specializations. A major cause of this expansion is undoubtedly the growth of population during the four decades. The estimated population in 1986, as presented by the *Fifth All India Educational Survey*, was 784 million of which 75.70 per cent were in the rural areas. The estimated total population in the 6-14 agegroup in 1987 was 147 million, constituting about 19 per cent of the total population. Of this 51.4 per cent were boys and 48.6 per cent girls.

1.2(b) Literacy

The overall literacy rates (percentage), as per the Indian Census, for the total population in the decades beginning from 1951 are: 1951:16.6; 1961:24.0; 1971:29.8; and 1981:36.2. The sex-wise literacy rates shows an increase from 39.45 to 46.89 for males and 18.69 to 24.82 for females, during the period from 1971 to 1981.

The literacy rate (all ages) during the post-independence period has risen from 16.6 per cent in 1951 to 36.24 per cent in 1981. Although, since independence, the number of literate persons increased fourfold from 60 million to 247 million, the number of illiterates also increased from 300 million to 437 million. Glaring disparities are evident between male and female literacy rates. The male literacy rate is 46.89 per cent while that of female is only 24.82 per cent, with a greater concentration of illiterates in rural areas and amongst the Scheduled Castes and Scheduled Tribes.

1.2(c) Enrolment and Retention

In terms of enrolment growth, the whole period could be divided into two phases. The first phase corresponds to the period beginning with the fifties and ending with the seventies. It was characterised by the gradual slowing down of growth rates. The second phase corresponds to the eighties, characterised by an upswing in enrolment coverage.

For primary education, the decadal growth rate for the fifties was 5.5 per cent which declined to 4.2 per cent in the sixties and 2.5 per cent in the seventies. This rate of 2.5 per cent was almost the same as the population growth rate. This meant that the enrolment percentage to the concerned age-group had stagnated.

In the eighties however, the enrolment growth rates increased to 4.2 per cent. Beginning with 1980-81 and up to 1987-88 the data indicate a significant increase in enrolments at all levels. This is more pronounced at the secondary level, followed by upper primary and primary levels respectively, indicative of the intensity of the thrust, which is the result of the expanding base of the educational hierarchy.

It is observed that the participation of girls in school education has been increasing over time, the major reason being the much lower base from which it started in 1950-51. However, for the last ten years, the proportion of girls to total enrolment has been fluctuating around 38-40 per cent (Table 1).

Table 1
GIRLS' ENROLMENT BY STAGES

Stage	(percentage)				
	1950-51	1960-61	1970-71	1980-81	1986-87
Primary (I-V)	28.1	32.6	37.4	38.6	40.1
Middle (VI-VIII)	16.1	23.9	29.3	32.9	35.4
Secondary/Higher	14.3	18.2	25.0	29.4	30.7
Secondary/10+2/ Intermediate (IX and above)					
Higher Education (Degree and above level)	10.0	16.7	20.0	26.7	29.4

Source: Ministry of Human Resource Development, *Annual Report, 1988-89, Part-I*, Government of India, New Delhi, 1989.

The stagnation of this proportion suggests the constraints from which the further promotion of girls' education is suffering. In the case of upper primary education, the proportion of girls to total enrolment increased from 17.11 per cent in 1950-51 to 35.8 per cent in 1987-88. As long as this ratio does not increase to about 50 per cent, disparities in access to education owing to sex difference would continue to persist. Table 1 shows the growth of girls' enrolment by stages, over the period 1950-87.

There has been a marked progress in terms of enrolment of children belonging to Scheduled Castes and Scheduled Tribes. The share of SC students to the total of enrolled children improved from 11.4 per cent in 1971 to 15.0 per cent in 1987-88. Similarly, the share of ST enrolment to the total enrolment is about 7 per cent. The percentage increase in enrolment between 1978 and 1986 as revealed by the *Fifth All India Educational Survey* is shown in Table 2.

Table 2

PERCENTAGE INCREASE IN ENROLMENT DURING 1978-1986

<i>Increase in Enrolment 1978-1986</i>	<i>In All Areas</i>	<i>In Rural Areas</i>	<i>Amongst Scheduled Castes</i>	<i>Amongst Scheduled Tribes</i>
Primary	26.36	28.63	48.81	62.35
Upper Primary	51.46	62.36	101.97	126.21
Secondary	63.03	80.81	120.73	124.40
Higher Secondary	87.66	127.49	132.00	185.19

Source: NCERT, *Fifth All India Educational Survey*, New Delhi, 1989, p.10.

An analysis of data reveals (Table 3) that the proportion of children moving up from the primary to the upper primary level has been increasing. This interstage transition was 16.28 per cent in 1950-51; 19.15 per cent in 1960-61; 23.34 per cent in 1970-71; 28.83 per cent in 1982-83 and in 1987-88, it reached 32.2 per cent. However, in spite of the increasing value of interstage transition ratio, the absolute number of dropouts, or those not continuing in the system, is much larger, as compared to those joining the upper primary level. Consequently, the current backlog continues to increase. This is clearly indicated by the divergence between primary and upper primary enrolment trends in the data

Table 3

ENROLMENT AT VARIOUS STAGES OF EDUCATION

Sl.No.	Stage	1985-86	1986-87
1.	Pre-Primary	12,35,750	12,71,584
2.	Primary (Class I-V)	8,64,65,189	8,99,93,046
3.	Middle/Upper Primary (Class VI-VIII)	2,81,24,756	2,87,80,099
4.	High/Secondary (Class IX-X)	1,16,17,262	1,24,72,932
5.	Higher/Secondary (Old Pattern)	16,18,917	1,60,882
6.	Higher Secondary (New Pattern) (Class XI-XII)	18,69,755	28,67,385
7.	Pre-University/Pre-degree/Inter/Junior College	18,64,326	20,67,497
8.	Arts, Science & Commerce (B.A., B.Sc. and B.Com.)	26,86,749	28,47,526
9.	Engineering and Technology degree (B.E/B.Sc)	1,43,420	1,82,421
10.	M.B.B.S.	80,090	78,767
11.	Post-Graduate Degree (M.A./M.Sc./M.Com.)	3,27,437	3,32,199
12.	Research Degrees (Ph.D./D.Sc./D.Phil.)	28,601	31,533
13.	Teacher Training Schools	97,559	92,885
14.	B.Ed./B.T.	85,218	89,152
15.	Polytechnic Institutions	1,27,525	1,98,542
16.	Technical/Industrial Arts and Craft Schools	2,82,610	3,08,279

Sources: a) Department of Education, *Selected Educational Statistics: 1985-86*, Govt. of India, pp.16-30.

b) Department of Education, *Selected Educational Statistics: 1986-87*, Govt. of India, pp.16-26.

It may be noted that enrolment figures as discussed above are based on gross enrolment, which includes underage and overage children. It is expected that as the size of enrolment increases, the share of underage and overage children in the total enrolment which is estimated to be around 25 per cent will decrease and consequently the enrolment figures will become more accurate.

The efficiency of an education system is determined not only by enrolling more and more children but also by ensuring their retention in the system. Cohortwise analysis shows that out of 100 students enrolled in Class I in 1951, only 33 could be retained up to Class V. However, the retention rates have tended to improve with time. From the latest information obtained from the *Fifth All India Educational Survey*, it has been estimated that enrolment in Grade V is now half of the enrolment in Grade I. Similarly, at the upper primary level, out of a cohort of 100 students in Class VI in 1950-51 only 75 could reach Class VIII. The retention rate increased to 83 per cent for the 1981-82 cohort.

1.2(d) Institutions and Coverage

During the period from 1950-51 to 1987-88, the number of primary and upper primary level institutions grew from 225 thousand to about 685 thousand, registering more than a three-fold increase (Table 4). In terms of the overall growth rate, the increase was to the tune of 2.6 per cent for primary and 6.5 per cent for upper primary institutions.

There has been a gradual spread of the educational facilities at the primary stage. In 1978, out of the total habitations, 46.80 per cent habitations covering 78.53 per cent rural population had primary schools/sections. The corresponding percentages in 1986 were 51.36 and 80.34. For upper primary stage, 85.39 per cent rural population had the facility either within the habitation of residence or within 3 km. in 1986 as against 78.83 per cent population in 1978.

Table 4

GROWTH OF RECOGNISED EDUCATIONAL INSTITUTIONS SINCE 1951

Institutions	Years				
	1950-51	1960-61	1970-71	1980-81	1987-88
Primary	209671	330399	408378	485538	543677
Upper Primary	13596	49663	90621	116447	141014
High/Hr.Sec.	7288	17257	36738	51594	66857
College for General Edn. (Degree and Post-graduate Standard)	498	1043	2598	3425	4329
Colleges for Professional Education*	155	696	2398	727 ⁺	876 ⁺
Universities	27	45	82	110	142

Source: NIEPA, *Education for All by 2000: An Indian Perspective*, New Delhi, 1990, p.7.

* Includes Engineering, Technology, Architecture, Medicine, Agriculture and Forestry, Veterinary Science and Teacher Training Institutes.

+ Includes only Engineering, Technology, Medicine and Teacher Training.

For the decade of the eighties, (up to 1987-88) the growth rates of primary and upper primary level institutions are 1.6 per cent and 2.8 per cent, respectively. Educational institutions at all levels except the primary level, registered higher growth rates in the eighties than in the immediate previous decade. The slow growth of primary institutions can possibly be attributed to the fact that a significant level of coverage of population had already been achieved by 1980.

In the case of upper primary schools, only 13 per cent of habitations covering 37 per cent of the rural population have a school within their own habitation. The coverage increases to about 52 per cent when the location of an upper primary school or section is considered within a distance of 1 km. The coverage increases to about 85 per cent when a distance of 3 km is considered.

Some habitations not covered by a formal school, have other modes of imparting education (NFE and the Open School System). The number of non-formal centres in 1988-89 was 241 thousand. Each centre is expected to operate with an enrolment of about 30 children.

1.2(e) Teachers

In terms of the number of teachers, a substantial increase has been registered from 1950-51 to 1987-88. The increase in the number of teachers took place across all levels of education.

In the primary stage, their number grew from about 0.54 million to about 1.6 million (a growth of 3 per cent per annum). However, since the beginning of the eighties there is a slowing down of the growth (2.5 per cent). It may be recalled that this is in spite of the fact that enrolments had picked up substantially during this period.

From 1950-51 to 1987-88, the number of teachers at the upper primary level increased, and their number in 1987-88 was 1.01 million. Notwithstanding this, a decline in their growth is noticed during the eighties (2.9 per cent as compared to the overall growth rate of 6.9 per cent per annum).

The national average of pupil-teacher ratio at the primary level increased from 39 in 1971-72 to 42 in 1987-88. A similar increase was also witnessed in the case of the upper primary level pupil-teacher ratio. The growth in the number of secondary teachers was modest as compared to the increase in enrolments at that level.

The distribution of primary schools according to the number of teachers in position shows that three out of every ten schools have at the most a single teacher in position. The newly launched scheme of Operation Blackboard, envisages overcoming the infrastructural deficiencies, including that of teachers, in a phased manner.

1.3 FINANCING OF EDUCATION

A quick glance at the trends in public expenditure on education shows that over the years, the percentage of GNP spent on education has been increasing. At the inception of planning (1950-51) India was spending 1.2 per cent of GNP on education, and this increased approximately to 4 per cent (1986-87) (see Table 5). While the increase is significant, the actual requirements of the system exceed the present provisions. The total expenditure as a proportion of GNP is far below the general target of 6 per cent.

Table 5
SHARE OF EDUCATION IN GNP

<i>Years</i>	<i>Share of Education</i>
1950-51	1.2
1960-61	2.5
1970-71	3.1
1980-81	3.1
1984-85	3.7
1985-86	4.0
1986-87	3.9

Source: NIEPA, *Education for All by 2000*, New Delhi, 1990, p. 105.

While universalization of elementary education has become an increasingly tough task, causing repeated postponement of the goal, the relative priority given to elementary education vis-a-vis secondary and higher, has been gradually declining over the successive five year plans (see Table 6). It was only during the First Five Year Plan that elementary education was allocated a sizeable proportion of the total educational outlay – 56 per cent. During the subsequent five year plans this proportion has been constantly declining. In the Seventh Five Year Plan, only 29 per cent of the central educational outlay was allocated for elementary education. Governmental source accounts for 80 per cent of the funding for education, the balance being shared between private sources (15 per cent) and local bodies (5 per cent). The non-plan expenditure is of the order of 87 per cent of the total expenditure.

Table 6

SHARE OF EDUCATION IN FIVE YEAR PLAN OUTLAYS/EXPENDITURES

(percentage)

<i>Five Year Plan</i>	<i>Expenditure</i>
First Five Year Plan	7.86
Second Five Year Plan	5.83
Third Five Year Plan	6.87
Annual Plan	4.86
Fourth Five Year Plan	5.04
Fifth Five Year Plan	3.27
Sixth Five Year Plan	2.70
Seventh Five Year Plan	3.55

Source: NIEPA, *Education for All by 2000*, New Delhi, 1990, p. 105.

While over the years, the share of Central Government has increased from 25 per cent to 37 per cent on the plan side, it has come down to 6 per cent from 16 per cent on the non-plan side. Much of the growth in expenditure on education, has been offset by an increase in prices and a rapid increase in population, in particular the student numbers. Even so, while expenditure on other sectors of education (secondary and higher and technical) has increased, increase in elementary education in real prices has been quite modest. Intra-sectoral resource allocation over the years can be seen from the figures presented in Table 7.

Table 7

INTRASECTORAL RESOURCE ALLOCATION

(percentage)

<i>Sector</i>	<i>First Plan</i>	<i>Seventh Plan</i>
Elementary	56	29
Secondary	13	16
University and General	18	44
Technical	13	11

Source: Department of Education, *Implementation of NPE-1986: A Progress Report as on 30th November, 1988*, Govt. of India, p. 37.

One view is that there is a serious mismatch in the allocation of resources to different sectors. This has resulted among other things, in wastage of infrastructural resources and at the same time alienation of the people from the school system.

SECTION II

SIGNIFICANT CHANGES AND INNOVATIONS

The period 1988-90 consists of two significant facets in the development of education in India. The first concerns the implementation of the directives of the National Policy on Education, 1986. The second relates to the setting up of a committee in May 1990 to review the developments since the enunciation of the last policy and re-define the priorities in respect of goals and strategies of the national system of education. The policy document also called for appraisals at short intervals to ascertain the progress of implementation of its various parameters from time to time as also a five-yearly review.

2.1 NEW DIRECTIONS OF EDUCATION POLICY : PRIORITIES, OBJECTIVES AND GOALS

The new directions of education policy in India can be ascertained in the light of the Review Committee mentioned above. Recognizing education as one of the basic needs for human development, the Resolution appointing the Committee, expresses concern over India comprising fifty percent of the world's illiterates with large sections of children going without an acceptable level of primary education. The Government of India views education "both as a human right and as the means for bringing about a transformation towards a more humane and enlightened society." More specifically, the objectives of educational development in the present context are, to:

- make education an effective instrument for securing a status of equality for women and persons belonging to the backward classes and minorities
- give a work and employment orientation to education
- exclude "elitist aberrations"

eliminate casteism, communalism and obscurantism from educational institutions

move towards a genuinely egalitarian and secular social order.

The National Policy on Education is being reviewed with the three-fold objectives of employment, reduction of disparities and national integration. The Review Committee has set up six groups that will be making suggestions for changes, within a time frame, for the implementation of a revised policy. These groups relate to:

Access, Equity and Universal Education

Education and Right to Work

Quality and Standard of Education

Education and National Unity

Educational Resource and Management

Rural Education

The first group, concerning Access, Equity and Universal Education will deal with, among other things, elementary education, nonformal and adult education and education of women, the Scheduled Castes, Scheduled Tribes, minorities and the handicapped. It will also study regional imbalances in education. The task of the second group on Education and Right to Work will primarily be to study vocationalization and skill training. The group will also examine the possibilities of forging linkages between schools and productive establishments outside, such as agriculture and industry. The group on Quality and Standard will cover education beginning from the primary to higher levels, and make recommendations with regard to teacher training, examination reforms and research.

Value based education, character building and goals for the sustenance of nation state will be the areas of concern for the group on National Unity. The group will also deal with the teaching of languages in education. The Resource and Management group will study ways of decentralization in the administration of education, the role of voluntary organizations and the problems of students and teachers. It will also deal with the issues pertaining to resource allocation to the educational sector and its further distribution among various sub-sectors of education. Establishment of rural Universities and imparting knowledge for the promotion and success of village administrative bodies such as the *Panchayati Raj* institutions will form the area of investigation of the group on Rural Education.

The renewal of goals and priorities of education in the country in the years to come and as identified in the *Approach Paper to the Eighth Five Year Plan* are:

- (a) priority to mass literacy, elementary and secondary education
- (b) emphasis on technical and vocational education
- (c) maintaining a balance between the supply and demand for educational resources
- (d) emphasis on the relevance and quality of education
- (e) locating education in the larger agenda of social transformation.

2.1(a) Mass Literacy, Elementary and Secondary Education

There is a renewed determination to make education an instrument of enhancing the capabilities of people not only as citizens but also as producers. This has called for an emphasis in the drive for mass literacy and universalization of elementary education. All efforts will be in the direction of achieving UEE by 1995. Attempt will also be to bring down the drop-out rate of children from 55 to less than 20 per cent. All children will be imparted elementary education in their mother tongue.

2.1(b) Work and Education

It is evident that, the present accent on general education has pushed the educated from rural areas to migrate to the cities. The new directions in the education policy will therefore, focus on relating education with work, thus catering to emerging demands and needs. In this process requirements of rural areas particularly, will be kept in view. There will also be a restructuring of vocational education at the secondary stage to forge interactive linkages with productive establishments outside schools. Through this effort, dignity of labour will be emphasized and avenues for employment and self-employment will be opened.

2.1(c) Supply and Demand for Educational Facilities

There is at present, a serious mismatch between the supply of educational resources and institutions and the demand for them, particularly in rural areas where the rates of absenteeism and dropout are very high. This has resulted in a lot of wastage of resources. While a considerable amount of investment is still needed to power infrastructural deficiencies, it is also observed that in a

number of cases existing facilities are being underutilized. The immediate task therefore, is to generate demand so that scarce resources are properly utilized. All support will be continued to existing schools particularly, schools where educational facilities are still poor and the demand for new schools will be balanced with the supply, making the former a pressure for more and better education, relevant to people's needs and of requisite quality.

2.1(d) Relevance and Quality

Improvement of relevance and quality in education is a continuous phenomenon. A greater shift is now being emphasized in favour of lower tiers of education particularly elementary education. It is felt that quality and relevance, rather than quantitative targets, have to be the hallmark of educational development. In the same vein, merit cannot be debated in isolation, but has to be examined in the context of the total development of human personality. Efforts will be geared to the development of the total human being, right from birth through the impressionable and formative years so that the child's mental make-up is not distorted.

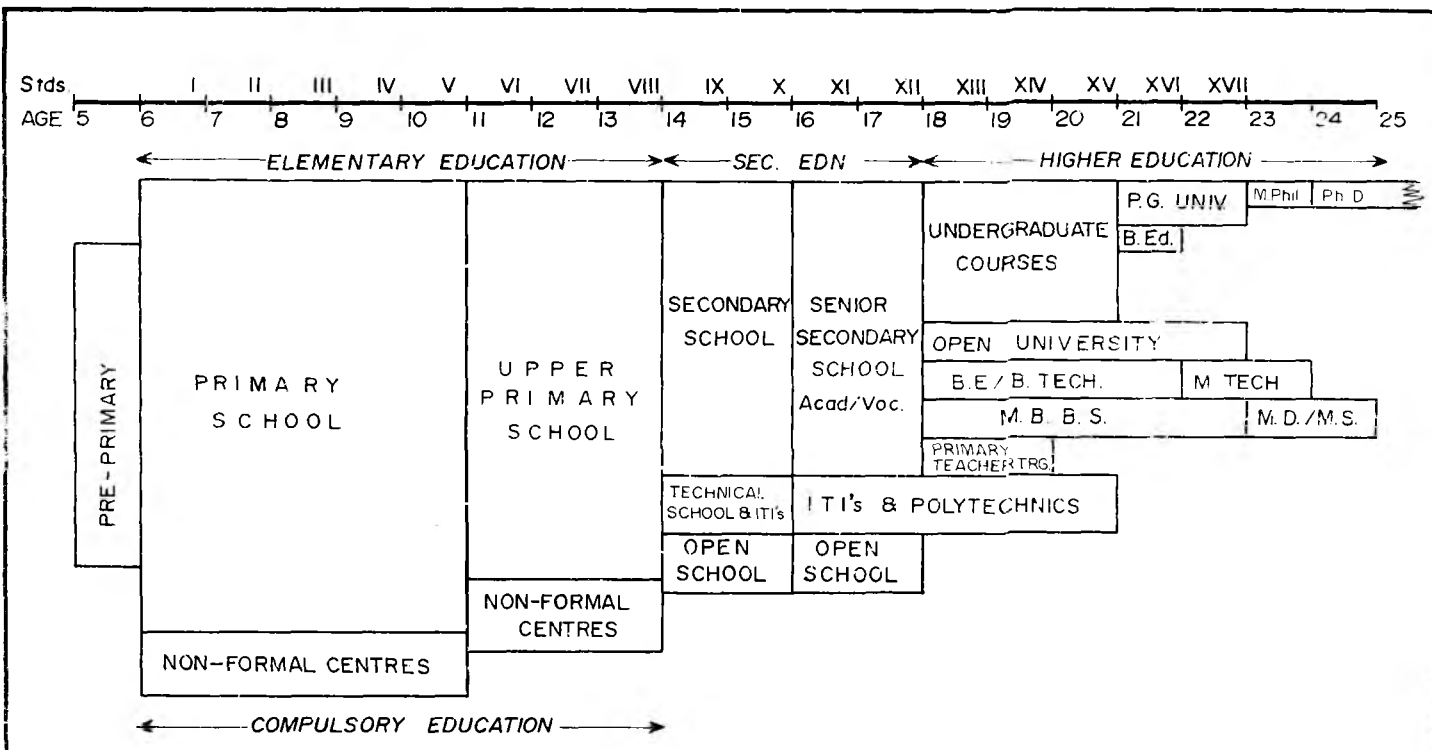
2.1(e) Education and Social Transformation

The need to move away from thinking of education as an autonomous sector and instead locating it in the larger agenda of social transformation has been stressed while providing the framework of the policy review. It is resolved that financial allocations and quantitative expansion will be supplemented by active involvement of the people and the community. The new directions of the education policy state unequivocally that education for all can be achieved by giving it the necessary political backing and making it an integral part of the larger social movement in which all citizens and all major institutions are involved.

2.2 ORGANIZATION AND STRUCTURE OF THE EDUCATION SYSTEM

Decisions regarding the organization and structure of education are largely the concern of the States/Union Territories. Within the overall policy framework, each State/Union Territory independently determines the educational structure to be adopted, particularly at the school stage.

Some variations can be found in the educational structure within the school stage. The primary and upper primary or middle stages together constitute the



EDUCATIONAL STRUCTURE IN INDIA

Diagram - I

elementary stage. It has been envisaged that there should be a common structure for the elementary stage consisting of 5 years of primary schooling followed by 3 years of upper primary/middle school education. It is visualised that the States where the first ten years are divided into four years of primary, three years of upper primary and three years of secondary schooling, will attempt to switch over to 5+3+2 pattern by 1995. At present, corresponding to the number of years spent at the elementary stage, the secondary stage consists of 2 or 3 years of schooling which marks the completion of the ten years of general education programme.

After the age of 14 years, a child can either join the secondary school providing general education programmes or alternatively a vocational school or an Industrial Training Institute which equips her/him with specialized vocational skills. A person who completes 10 years of general education has similar choice either to take up academic courses at the higher secondary level preparing to joining collegiate education or opt for vocational stream within the higher secondary programme or through specialized institutions such as polytechnics and Industrial Training Institutes. Completion of higher secondary education qualifies the individual for entering first degree programmes. Admission to professional courses at this stage such as engineering and medicine, is highly competitive. Even demand for admission to different programmes in arts, science and commerce fields varies considerably.

2.3 ADMINISTRATION AND MANAGEMENT

For all practical purposes, the State governments have the complete responsibility for administration of school education. In the area of school education, the Central Government, also establishes and maintains, through autonomous organizations like the Kendriya Vidyalaya Sangathan (Central Schools Organization) and the Navodaya Vidyalaya Samiti (Model Schools Organization), a network of schools.

Administrative arrangement at the Central level is carried out through the Department of Education (DOE) and its agencies which operate as part of the Ministry of Human Resource Development (MHRD). The DOE is directly responsible for the administration and financing of certain national and regional institutions which are established by the Central Government through an act of the Parliament or otherwise. It is also responsible for providing direction and guidance to authorities dealing with education in the various State governments and union territories with regard to formulation and implementation of education plans and programmes. The DOE also initiates and imple-

ments programmes at various levels and monitors their progress. In addition, it brings out periodic publications containing statistical and such other information as are related to educational programmes and progress.

At the state level, each State government has its own machinery. The Education Department of a State performs three main functions at all levels of education, namely, regulatory, operational and directive, through three organs — the Secretariat, Directorate and the Inspectorate respectively. Within a State, there are different levels of administration, depending upon the size and number of institutions which perform supervisory functions. In general, there is also a functional relationship between levels of administration and types of institutions, though the system varies from state to state. For administrative purposes each State/Union Territory is divided into a number of districts which are further divided into blocks/mandals. The district is the most important unit of educational administration in every State. The District Education Officer (DEO) in most States is generally in overall charge of elementary as well as secondary education. The DEO is assisted by a number of officers who directly deal with secondary education in the district. At each block level a Block Education Officer is in charge of elementary and nonformal education programmes. The Block Education Officers function under the overall guidance and directives of the District Education Officer for administrative purposes. The system, however, is not uniform in all the States and Union Territories. In some of the states, local self-government bodies such as Zila Parishad, Municipal Corporation, Panchayat Samiti and Mandal Parishad are also involved in planning and administration of education at the school level.

The education policy of 1986 re-endorsed a proposal made by the Education Commission (1964-66) for a decentralized system of educational management accompanied by certain basic management principles and processes namely participation, autonomy and accountability. This is to be initiated through the creation of new managerial structures in the administrative set up at various levels, from national to local. In this exercise, a sub-committee of the C.A.B.E. has evolved guidelines and drawn up a framework for the establishment of State Advisory Boards of Education.

The current trend of administration in India is towards decentralization and integrated area planning in the economic as well as in the social development programmes of which the education sector is a part. Whereas earlier, different sectors of the country had been working independent of each other, the attempt now is to co-ordinate their programme so as to make them part of the larger agenda of social transformation. It is envisaged that a substantial part of the responsibility for planning and implementation of education, as with other social development programmes, would be transferred to elected, repre-

sentative institutions of the local governments bringing under their jurisdiction the necessary financial resources and staff. Each village or block panchayat and district-level organisation will then have direct command over a sizeable volume of finance and the freedom and flexibility to decide how best it can be used for local development. This, it is contended, would release development programmes from the stranglehold of standardized, "schematic" projects conceived centrally, as well as from the waste and duplication inherent in the present highly fragmented scheme-wise approach. The people of each local area, particularly women, will be encouraged to participate in the determination of priorities, to keep a check on the implementation of programmes and maintain and manage the assets created.

Local area planning will also call for the active involvement of grassroot activists and voluntary groups who are constantly in touch with particularly the marginalised and deprived sections, so that the relevant institutions remain accountable and responsive. This will also entail a drastic reduction in the involvement of higher level (State and Central Governments) agencies in formulating and implementing local development plans (for instance regarding elementary and secondary education) while at the same time, providing the necessary expertise and infrastructural and technical support in a coordinated manner.

2.4 FINANCING OF EDUCATION

Budget provision for education in India as a whole has to be seen as the aggregate of the budget provisions made by the Central Government and the various states and union territories. It has also to be seen in terms of provisions made under plan as well as non-plan heads.

2.4(a) Total Education Budget

The total budget provision made for education by the Education Departments of various States and the Union Ministry of Human Resource Development (Table 8) amounted to 136196.4 million rupees for the year 1989-90, of which 120419.8 million rupees is to be spent by states/union territories and 15776.6 million by the Centre. This is larger than the Revised Estimates for 1988-89 in which the total allocation was Rs. 122981.8 (Rs. 106977.7 million in the States sector and Rs. 16004.1 million in the Central Sector) as against the Actual Expenditure of Rs. 104301.9 million for 1987-88 (Rs. 92284.4 million in the States Sector and Rs. 12017.5 million in the Central Sector). The plan and

non-plan estimates and expenditure by the States and Central Departments of Education during 1985-1990 are shown in Table 9.

Table 8

SECTOR-WISE EXPENDITURE ON EDUCATION DEPARTMENT OF STATES/UTs
AND CENTRE (REVENUE ACCOUNT) FROM 1987-88 TO 1989-90

(Rs. in millions)

Sector	1987-88 (Actual)		1988-89 (R.E.)		1989-90 (B.E.)	
	Centre	States	Centre	States	Centre	States
Primary Education	2133.6	46433.6	2326.9	51859.7	2444.5	57319.7
Secondary Education	2445.3	29751.0	3129.5	35613.9	3347.9	38787.2
Special Education	747.0	1226.6	1046.3	1472.2	1012.3	1833.4
Universities and Higher Education	3299.0	11149.1	5457.0	12752.9	4766.0	15415.8
Technical Education	2634.8	2658.2	2993.0	3125.4	3083.4	3394.7
Other Educational Programmes	757.8	1065.9	1051.4	2153.6	1122.5	3669.0
Total	12017.5	92284.4	16004.1	106977.7	15776.6	120419.8

Source : Department of Education, MHRD, 1990.

RE = Revised Estimates; BE = Budget Estimates

Table 9

BUDGETED EXPENDITURE BY CENTRAL AND STATE GOVERNMENTS (PLAN
AND NON PLAN)

(Rs. in millions)

1985-86	74569.8 (Actual Expenditure)
1986-87	88513.1 (Revised Estimates)
1987-88	104301.9 (Actual Expenditure)
1988-89	122981.8 (Revised Estimates)
1989-90	136196.4 (Budget Estimates)

Source : Analysis of budgeted Expenditure on Education, Various Years.

During the year 1987-88, the total budget allocation given for the Department of Education was Rs. 12,110 million (plan and non-plan). Almost the entire allocation was spent. Allocation of funds for the year 1988-89 was Rs. 15,950 million. The priority sectors that received the lion's share of the budget were Operation Blackboard, Non Formal Education, restructuring and reorganization of Teacher Education, vocationalization of education, Navodaya

Vidyalayas (Model Schools), educational technology, science teaching in schools, adult education, distance education and modernization and removal of obsolescence in technical education.

2.4(b) Sectorwise Allocation of Educational Budget

The sectorwise distribution of education budget among various levels and sectors of education during 1987-88, 1988-89 and 1989-90 has been consistent with the perspective and strategies envisaged in the Seventh Five Year Plan and the National Policy on Education (1986). Elementary education continues to be given high priority followed by secondary and higher education in that order (See Table 8 above). In relative terms however, the expenditure on primary education, has declined in effect from 46.6 per cent in 1987-88 to 44.1 percent in 1988-89 to an allocated share of 43.9 per cent in 1989-90. There has not been much change in the expenditure on secondary and higher education in the same years.

2.5 EDUCATION CURRICULA, CONTENT AND METHODS PARTICULARLY CONCERNING THE USE OF NEW TECHNOLOGIES

The content and process of school education in the last few years has focused on :

- (a) access to education of comparable quality for all irrespective of caste, creed, location or sex
- (b) introduction of the norms of Minimum Levels of Learning for each stage of education
- (c) provision of minimum essential facilities under the Operation Black Board Scheme
- (d) articulation of a National System of Education with common structure and a National Curricular Framework containing common core components with ample flexibility to states for making the curriculum local specific
- (e) development of child-centred learning strategies and playway/ activity-centred teaching methods
- (f) examination reform and introduction of continuous and comprehensive evaluation to improve the teaching-learning process.

In this context the following notable measures have been undertaken.

- (i) States have been advised to ensure that all the school-less habitations having population of 300 or more should be provided a primary school by 1990. Similarly, all habitations of 250 or more should be provided with a school in tribal, hilly and desert areas.
- (ii) All the states have now switched over to 10+2 system as far as the structure of school education is concerned. It was decided by the CABE, not to set a definite time target for some of the affected states for the switchover to 5 years of primary schooling as this would require large inputs for additional class rooms and teachers.
- (iii) The scheme of Operation Blackboard initiated by the Government of India has been well under implementation. This scheme ensures that all primary schools have basic minimum facilities in terms of class rooms, toilets, two teachers and essential teaching and learning aids by 1990.
- (iv) Under the scheme of reorganising and restructuring teacher education, the setting up of the District Institutions of Education and Training (DIETs) were initiated to substantially improve teacher competencies and providing total academic and professional support to the elementary education system at the district level. Out of one proposed for each district DIETs, 116 have started functioning.
- (v) Mass orientation of 500,000 teachers annually, is being done through the NCERT and State Governments since 1986.

The NCERT has coordinated a series of measures specifically pertaining to education curricula. Some of the steps taken in this direction are :

- (a) development of a framework for National Curriculum for Primary and Secondary Education in April, 1988, and a draft curricular framework for higher secondary education subsequently
- (b) preparation and publication of a model curricula entitled Minimum Levels of Learning at the Primary Stage by including common core components
- (c) development of innovative text books and teacher's manual for all areas of learning for classes I to V and its introduction in the Kendriya Vidyalayas (Central Schools) in 1987-88 and 1988-89

- (d) organization of a training programme for the teachers of Central Schools for properly implementing the new sets of instructional materials
- (e) improvement of the evaluation practices in schools during 1988- 89
- (f) formulation of a scheme under which financial assistance is provided to States/UTs for leading undertaking activities to renewal of curriculum and development of instructional materials, including text books.

There is a renewed emphasis on the use of new technologies for improving education in schools all over the country. It has been envisaged that modern educational technology should reach out to the most distant areas and deprived sections of beneficiaries simultaneously with areas of comparative affluence and easy availability. In 1982, a centrally sponsored scheme was launched by the Ministry of Education for Educational Television (ETV) programme with centralized facilities for production in the Central Institute of Educational Technology (CIET) in the NCERT. The State Institutes of Educational Technology (SIETs) were established in six States viz. Andhra Pradesh, Bihar, Gujarat, Maharashtra, Uttar Pradesh and Orissa. At the same time, educational technology cells in States were strengthened. The CIET has been engaged in the development of software relevant to educational needs; the training of personnel working in the field of educational technology; and conducting research and evaluation in educational technology.

A revised scheme was formulated by the Department of Education seeking to consolidate existing efforts under the satellite (INSAT) transmission programme, and extending the radio and television coverage to 100,000 and 500,000 elementary schools respectively. The scheme commenced in 1987-88. The responsibility for programme production, which was hitherto being shared between the National Television Network (Doordarshan) and CIET on 50:50 basis, is now shouldered entirely by CIET. The thrust of production of Educational Audio/Visual Programmes in the CIET during 1988-89 was on common core components and the National Curriculum Framework.

A number of films and educational charts in humanities and sciences at the elementary and secondary levels, ETV scripts on low-cost teaching aids and other audio and visual programmes supporting the common core components in the school curriculum have been developed.

A pilot project on Computer Literacy and Studies in Schools (CLASS) under the aegis of NCERT, initiated in 1984-85 has undertaken several advance level training programmes for school teachers to train them in the use

of computer for educational purposes. The total number of schools covered under the project was 2,322 in 1988-89 and extended to 380 more schools. 53 resource centres established under the project provide technical support, to the schools participating in the project. To implement the project on a large scale keeping in view the results of evaluation and experience gained so far, a proposal has been drawn up jointly by the Department of Electronics and the Department of Education aiming to cover 13,000 higher secondary schools all over the country. Necessary steps have been taken to select indigenous software packages for use in new schools participating in the project.

The use of new and innovative technology has also been initiated in the field of Adult Education. Production of documentaries, animation and films have been undertaken. A number of collaborating agencies are designing techno - pedagogic inputs. Videorama or projection TV is being tried in Rajasthan and Karnataka to ascertain their suitability. The installation of solar power packs in unelectrified areas is also being undertaken.

2.6 EDUCATION AND THE WORLD OF WORK

There were, as per the *Fifth All-India Educational Survey*, 1,706 institutions offering vocational courses at +2 stage with an enrolment of 68,180 in class XI and 58,391 in class XII. Thus the vocational intake in the country at the higher secondary stage was just 3.2 per cent of the total number of the students at this stage. In view of the difficulties and shortcomings, the need for promoting vocationalization has now been accepted as a responsibility of the centre.

A new, centrally sponsored scheme for vocational education at the plus 2 stage was started in February, 1988 for diversification of students at the higher secondary stage to the vocational stream by 1990. The scheme substantially funded by the Central Government, has the following features :

(a) *Management Structure*

Setting up of Joint and State Councils of Vocational Education for coordination, policy, planning and review and provision of academic support by the NCERT and State Councils of Educational Research and Training in each state.

(b) *Teacher Preparation*

Development of training courses at the national level by the NCERT and by the Regional Colleges of Education (RCEs), Technical Teacher Training Institutions (TTIs) and SCERTs.

(c) Academic Resource Support

Designing of vocational courses and preparation of manuals for teachers and text books for students by the NCERT.

(d) Teaching Arrangements

Three to four vocational courses will be offered in each school covered under the programme; practice oriented teaching through practising professionals; subsidised text books to vocational students; and identification of vocational courses through district surveys to ensure employment potential.

(e) General

Payment of apprenticeship stipend to vocational students; arrangement for vocational guidance to students and follow-up placement in employment after education and involvement of voluntary agencies for conducting nonformal vocational courses.

During 1988-89 financial assistance amounting to Rs.497.5 million was sanctioned creating facilities for 4169 courses in 1505 schools in 17 States/Union Territories. For the year 1989-90, an amount of Rs.456.8 million has already been sanctioned to 13 States/UTs. Comprehensive guidelines on establishing school- industry linkages have been made available to all States/Union Territories. The collaborative arrangements are being worked out with the Health and Railway Ministry for starting work related vocational studies. Courses have also been developed in close collaboration with the General Insurance Corporation of India which ensures employment to the successful students.

The scheme of Community Polytechnics introduced under the Central sector in 1978-79 was further expanded in 1988-90. These Polytechnics, in addition to offering diploma courses in various branches of engineering and technology, are required to interact with the environment and serve as focal point to promote transfer of technology to rural areas. The scheme of industry-institute interaction, approved in 1988, envisages interaction between engineering colleges and industry; interaction between polytechnics and industry; and setting up of one 'industrial foundation' at the Indian Institute of Technology in Delhi. The scheme has already been introduced in 20 engineering colleges and 9 polytechnics in the current year. A third scheme of Continuing Education was also launched in 1988 for preparation of course materials in engineering/technology areas to meet the needs of working professionals. ...

A Project on strengthening of technicians' education (development of Polytechnics) in the country has been undertaken with financial assistance

from the World Bank group. It is expected to be operational from 1990 for a period of five years with the objectives of capacity expansion, quality improvement and efficiency improvement. It will be covered in two phases. The total cost of the first phase is estimated at about Rs.7,140 million out of which the World Bank group assistance will be of the order of Rs. 4,104 million approximately.

Considering the importance of vocational programme for the rural areas and the girls, the Central Advisory Board of Education appointed a committee on vocational education in 1987 which comprised two groups, one each to work out appropriate vocational courses for rural students and for girls. Both groups have already done a considerable amount of work.

2.7 ENVIRONMENTAL EDUCATION

The NPE, 1986 attached due importance to environmental education and stated that protection of the environment was a value which along with certain other core values, had to form an integral part of the curriculum at all stages of education. The Environmental Education Programme thus envisages enhancement of environmental consciousness among students and teachers by strengthening the input about environmental concerns in the syllabi and text-books. This general awareness has to be supplemented by local specific programmes which would vary from area to area with variations in ecological situations.

Accordingly, a centrally sponsored scheme of Environmental Orientation to School Education has been started with effect from 1988-89 under which 100 percent financial assistance is being provided to States/UTs as well as voluntary organizations working in the field of environmental education. The scheme envisages a project approach with each project covering an ecologically homogenous area. The project activities include revision of textbooks to make illustrations and examples conform to local environmental situations; teacher orientation about local environmental concerns; redesigning of work experience activities in schools for enhancing environmental awareness; and involving students in improving environment. The last includes adoption of monuments by schools for study and upkeep, study of ecological problems in the neighbourhood, participation in conservation projects. Setting up of school nurseries would also be taken up as one of the preferred activities with the help of State Departments of Environment and Forest and the National Wastelands Development Board.

Some states have initiated environmental orientation in elementary education with the help of nodal agencies for involving NGOs working in the

area of environment education to take local-specific activities in a cluster of schools around them. The Centre would provide orientation to key functionaries of the NGOs, collaborate with and guide them in their programmes, and monitor and supervise the implementation of the environmental education programme in schools. Besides, the *Approach to the Eighth Five Year Plan* calls for a coherent framework of social objectives in pursuing development and adopting technologies for generating an ecological imagination that will inform development thinking. In this, it emphasizes the need to promote grassroots level participation as part of a larger approach to the local area planning and development.

2.8 NONFORMAL AND ADULT EDUCATION : LITERACY AND FUNCTIONAL LITERACY

According to the 1981 census, the literacy rate in India was 36 per cent. On the basis of trend-analysis and taking into account the improvement in enrolment and retention in primary education and the efforts made in the sphere of adult literacy since 1981, it is estimated that the literacy rate in 1990 would be about 44 per cent.

In the light of the emerging concerns, a multifaceted effort at achievement of a higher level of literacy and education is envisaged through the following measures:

- (a) provision of education for the 6-14 age group as a first priority in literacy planning
- (b) continuation of adult education of the National Literacy Mission (15-35 age group)
- (c) encouraging the spread of literacy in the 35 plus age group
- (d) priority to female literacy, as this would make a difference to women's status and consequently to child development, fertility rate, education and culture
- (e) monitoring of the illiterate/literate population as part of micro-level planning.

Between the years 1990 and 2000, the endeavour of the Indian Government is to move from being a predominantly illiterate to a literate and better educated nation. In this the nonformal and adult education programmes are started to perform a central and indispensable role, given the flexibilities within their structure vis-a-vis the structured and rigid formal education system.

In the Indian context, nonformal education emphasises both on the cognitive as well as the non-cognitive aspects of learning. Curriculum and textual materials are adjusted to the needs and the interests of the learners and the total duration is generally shorter than in formal education. The programme is organised at the time convenient for learners, and is not dependant on professional teachers. It is organised by volunteers and local persons who are specially trained for it. The programmes of nonformal education can range from the acquisition of non functional literacy to the pursuit of a formal course.

The Government's scheme of nonformal education (NFE) introduced in the educationally backward states, was later extended to urban slums, hilly, desert and tribal areas and for working children. Under the revised scheme, assistance is being given to state governments in the ratio 50:50 and 90:10 for running mixed NFE and girls' NFE centres respectively. Decentralised management has been introduced and the programme is now being implemented on a project basis (a project is generally coterminous with a block comprising about 100 NFE centres). Voluntary agencies and Panchayati Raj institutions are involved in this programme in a significant way.

For the year 1988-89 the target is 2650 projects (approximately 265,00 centres in States/UTs) and 100 projects (10,000 centres) of voluntary agencies. Monitoring system in the programme has been designed and is being field tested. Simultaneously, computerisation to provide an appropriate support system and regularly flow of information is being organised in a project on Computerised Planning for Education (COPE) at the National Institute of Educational Planning and Administration and also in the Department of Electronics.

The most widespread NFE programme in the country, popularly known as the Madhya Pradesh Model, comprises condensed primary education providing competency in language and mathematics of the same level as primary education. The programme is run for two to three hours in the evening for two years. The responsibility for running the NFE centre rests on a locally selected instructor who is imparted short-duration training. At several other places in the country, voluntary agencies are running *balwadi* (literally children's courtyard) for children of 3-4 years. These children are prepared for primary education and receive instruction upto class II and then move on to a regular primary school. The instruction corresponds to the ungraded unit in a primary school; but is generally unstructured and completely nonformal.

Considerable amount of research and developmental activities related to nonformal education is being undertaken alongwith training/orientation of personnel involved in implementation of the nonformal education programmes.

The main thrust however has been towards the development of instructional material and teaching-learning and evaluation strategies suited to such programmes. Besides this a UNICEF-assisted project — Comprehensive Access to Primary Education (CAPE) undertaken by the NCERT has been developing learning materials and organising learning centres for the education of out-of-school children. Another project sponsored by the same agency for meeting the educational needs of groups that are deprived, is the 'Developmental Activities in Community Education and Participation' being conducted through community education centres established under the project and run by State Governments.

After the NPE, 1986, the National Adult Education Programme was reviewed in the light of which the National Literacy Mission (NLM) was set up. The objectives of the NLM are to impart functional literacy to 80 million illiterate people in the 15-35 age group by 1995. The NLM was also visualised as a technological mission that would harness and utilise the findings of scientific and technological research for the benefit of the deprived sections of the society. Action plans were also prepared in respect of 40 technology demonstration districts. Campaigns for loan mobilisation for NLM were launched at the national and state levels. While publicity was given to various aspects of NLM through radio and TV spots, production of documentaries, animation and video film were undertaken. The rich culture and tradition in different parts of the country would be harnessed and utilised for spreading the message of literacy and creating the environment. Competent and motivated persons were identified for writing stories and features for broadcast on the radio and television networks. Literacy Jathas (processions) were organised at village, block, sub-division and district levels. Youth animators were trained to be deployed as instructors and activists.

Steps were taken to encourage voluntary agencies and the scheme of grant-in-aid was liberalised for benefit of those involved in adult education programmes. During 1988-89, 272 projects of 198 voluntary agencies involving 12,615 centres were approved.

Teaching-learning materials were prepared in a number of spoken languages and a special manual entitled "Learning for Participation" was developed for the training of different levels of functionaries. Training programmes were strengthened through a participatory process. The central Directorate of Adult Education undertook training programmes for senior and middle level adult education functionaries.

In making adult education a mass programme, a number of steps were taken to involve external agencies such as the National Service Scheme and

the National Cadet Corps, universities and colleges, schools, trade unions and ex-servicemen. In 1988, over a hundred thousand literacy kits were supplied for distribution to learners.

A new and improved scheme of *Jana Shikshan Nilayam* (centre for people's education) has been started since 1988 as part of the post literacy and continuing education programme all over the country. The basic objective in providing this set-up is to ensure retention of skills, provision of facilities to enable the learners to continue their learning beyond elementary literacy and to create scope for application of their learning for improvement of their living conditions. So far 10,065 JSNs have been sanctioned to all States/UTs which are in the process of being set up. For the benefit of employed workers, self-employed persons, and family members of industrial workers *Shramik Vidyapeeths* (SVP) — educational institutions for workers, have been started in different industrial centres in the country offering nonformal, continuing education and polyvalent training programmes. These institutions are mainly for those persons having low educational qualifications and low income. Each SVP engages the services of locally qualified and experienced resource persons to impart different skills or organises courses relevant to specific areas of activity.

The Directorate of Adult Education (DAE) as the national apex resource centre, has initiated several steps for providing professional resource support as well as creating mechanisms for improved management of the programme at all levels. It also monitors the activities of state resource centres and disseminates information relating to implementation of the programme.

2.9 PRE-SERVICE AND IN-SERVICE TEACHER TRAINING

The National System of Education in India recognizes the need for a comprehensive policy on Teacher Education to ensure that it is recognized as a continuous process beginning with the pre-service preparation and continuing throughout the teacher's career. The National Council for Teacher Education (NCTE) is the apex body for the formulation of policies regarding elementary and secondary teacher education programmes in the country. The University Grants Commission also oversees the functioning of the secondary teacher training courses leading to the Degree of Bachelor of Education (B.Ed) in the colleges of Education affiliated to Universities and the Master of Education (M.Ed) programme offered by Universities. Several organizations and agencies are engaged in the organization of in-service training courses for elementary and secondary school teachers.

More recently (since 1986) efforts have been made to evolve an appropriate mechanism for periodic in-service teacher training. In this context, centrally sponsored scheme of Restructuring and Reorganization of Teacher Education was brought under implementation during the Seventh Plan with the following objectives:

imparting pre-service and in-service training to school teachers to equip them with teaching competencies

provision of meaningful academic support to formal and nonformal school systems as also adult education through professionally organized teacher education institutions.

Under this scheme a Programme of Mass Orientation of School Teachers (PMOST) has been launched to improve the professional competence of school teachers. During 1988, 9,113 camps were organized through the NCERT and State Governments for primary and secondary school teachers with the objective of increasing their motivation and professional expertise and to better equip them to play a key role in the process of reorientation of the content and processes of school education. 4,39,261 teachers comprising 2,97,977 primary teachers and 1,41,284 upper primary and secondary teachers were trained through these camps. Guidelines for the course directors and resource persons have been prepared and television support to the programmes were strengthened by including certain new programmes relating to the emerging curricular concerns.

The District Institute of Education and Training (DIET) under this scheme is an innovative institution to bring about a qualitative change in the standard of elementary education at the district level. It is also expected to help in the early realization of the goals of UEE and adult literacy. It has been designed to improve and enrich the academic levels of the elementary school teachers, nonformal and adult education functionaries and other educational personnel at the lowest level of the educational system. It is designed to provide quality pre-service and need-based in-service education to the elementary school teachers in the district. Provision for training of instructors and supervisors for nonformal and adult education also exists.

The target is for setting up of DIETs throughout the country, one for each district. About 217 DIETs have already been sanctioned under central assistance to twenty two States and the Union Territory of Delhi. It is recommended that the methodology of organizing the inservice course should be practice-oriented as far as possible and an evaluation of the programmes be organized to obtain feed back for improving the course contents as well as the transactional approaches. It is expected that the DIETs will continuously be under-

taking innovations, experimentation and action research with a bias for integrating knowledge and skill development, value orientation and development of social sensitivity.

Under the centrally sponsored scheme, central assistance has also been sanctioned for the establishment of twenty two Colleges of Teacher Education and ten Institutes of Advanced Studies in Education in seven States and the Union Territory of Delhi.

2.10 EDUCATIONAL RESEARCH

The University Grants Commission is the major funding body that promotes educational research in universities and colleges. Its schemes include funding of research to the students as well as the teaching faculty. Under its major research projects, the UGC has accorded priority to research areas having an interdisciplinary approach specially in fields which have hitherto remained neglected but which are of immense value from a socio-economic point of view. During 1987-88, the Commission approved 103 major research projects in different disciplines of humanities and social sciences involving an expenditure of Rs. 5.6 millions. In the minor research projects, the Commission approved 147 projects at an estimated expenditure of Rs. 1.2 million.

The Educational Research and Innovations Committee (ERIC) of the National Council of Educational Research and Training promotes coordination of research in all branches of school and teacher education. Dissemination of educational research through talks/lectures and seminars by eminent educationists and research scholars from India and abroad under the National Institute of Education (NIE) series are organised along with courses and workshops on research methodology. In order to promote the spirit of research, experimentation and innovative practices among teachers in schools, competitions for elementary and secondary school teachers are organized annually. It also has just completed the volume on the Fourth Survey of Educational Research.

The National Institute of Educational Planning and Administration under its Scheme of Assistance for Studies has been promoting research in educational planning and administration. It also sponsors research studies on problems which have direct bearing on policy, planning and management of the educational system. Other agencies which encourage and support interdisciplinary studies and research are the Indian Council for Social Science Research, Indian Council of Historical Research, Indian Council of Philosophical Research, the Planning Commission and several other State

Government bodies. The Department of Education of the Ministry of Human Resource Development also provides assistance to innovative projects in certain priority areas of education.

2.11 INTERNATIONAL, REGIONAL AND BILATERAL COOPERATION

As one of the founding members of the United Nations Educational, Scientific and Cultural Organization (UNESCO), India has consistently endeavoured to promote the aims and objectives of the organization. The Indian National Commission for Cooperation with UNESCO has been playing an effective role as an advisory, executive, information and liaison body at the national level and collaborating with the National Commissions of other countries in Asia and the Pacific Region and with the UNESCO regional offices and centres for implementation of UNESCO's programmes and activities.

India participated in the Twentieth session of the General Conference of UNESCO, held at Paris, in October-November 1989 to adopt the Draft Third Medium-Term Plans, 1990-95 and the Draft Programme and Budget, 1990-91. Besides being elected to the various intergovernmental bodies in the conference, it was also elected as one of the vice-presidents of the General Conference from the Asia-Pacific Group. The leader of the delegation, among other things, pointed to the horizons and unprecedented possibilities opening up for intensification of worldwide efforts in the areas of education, science, culture and communication. In this context, the UNESCO was urged to judiciously chart its course of action within the purview. India has been actively participating prior to the conference in consultations organized by the UNESCO at various levels for the formulation of its Third Medium-Term Plan.

Another significant activity to which India extended its full support and cooperation is the Asia-Pacific Programme of Education for All (APPEAL) which was launched in New Delhi by UNESCO in 1987. With a view to giving further fillip to this programme and to work out measures to eradicate illiteracy by the year 2000, a regional working group meeting on International Literacy Year under APPEAL was organized in New Delhi in October 1988. Afghanistan, Bangladesh, Indonesia, Iran, Nepal and Pakistan participated. Representatives of International Organizations such as UNDP, UNICEF and World Bank also attended the meeting. The working group examined the effectiveness of the various approaches and strategies to eradicate illiteracy especially among girls, women, and disadvantaged population. besides, considering in

detail, measures to be taken for eradicating illiteracy and the assistance that international organizations could provide to the countries of the region.

As a founder member also, of UNESCO's major regional programme of Educational Innovation for Development for Asia and Pacific (APEID), India has actively participated in its activities. A National Development Group established under this programme has been acting as an identifier, stimulator and coordinator at the national level, of educational innovation for development within the country. Dissemination of information about the activities of APEID and innovative experiments at the regional level have also been undertaken.

A sub-regional symposium was organized in New Delhi, in December 1988, by the UNESCO Regional Unit for Social and Human Sciences in Asia and Pacific in collaboration with the Indian National Commission. The objective of the symposium was to promote activities for Technical Cooperation among Developing Countries (TCDC) in South Asia in education, social sciences, natural sciences, culture and communication. The symposium reviewed activities in member countries of South Asian region with reference to TCDC experience of other regional institutions. It also identified needs, available for facilities and areas of possible collaboration with a view to recommending most suitable modalities of execution with identified possible source of funding.

Besides this, India has bilateral, cultural exchange programmes, including educational programmes, with about 40 countries. The cultural exchange programme is a two-way process in which the Government of India sends delegations to other countries for studying their educational systems and innovative practices and also receives similar delegations from other countries. Apart from this, India participates in several programmes of bilateral and multilateral import, providing for the exchange of scholars through a number of scholarship and fellowship schemes. For the promotion of goodwill and friendly relations, 180 scholarships are offered every year by Government of India, to the nationals of selected African, Asian and other developing countries for under-graduate and post-graduate studies in India. Also, as a member of the Commonwealth, India participates in a number of programmes of exchange of scholars from among the various Commonwealth member countries. Under the Technical Cooperation Scheme of the Colombo Plan, the Government of India offers assistance for placement of scholars coming from different countries of the sub-region. Also, more than hundred scholarships are offered every year to the nationals of Bangladesh for higher studies in India. Apart from operating these specific programmes of cooperation at the regional and sub-regional levels, India is extending active support and cooperation for educational development by offering the services of its scholars to various

other countries and also by providing facilities for higher education at Indian Universities for scholars from a number of developing countries, particularly from Asian and African continents.

In the field of technical education some of the leading technical institutions of the country have international collaboration projects under umbrella agreements through the Departments of Economic Affairs and that of Science and Technology of the Government of India. At present, such collaborations are with institutions in advanced countries like the USA, United Kingdom, Germany, France, Italy, Switzerland, Canada, Norway and Sweden. Besides transfer of technology, the specific objectives of such collaborations are joint research and manpower development in emerging areas of science and technology.

In the area of Book Promotion, India has undertaken a number of bilateral as well as multilateral programmes. In the publication of low-priced university level books of foreign origin, the Department of Education is operating three programmes in collaboration with UK and USSR. Under this project, the latest edition of standard foreign university level text and reference books for which comparable Indian books are not available, are taken up for publication in low-priced edition. A new import and export policy for book publication also came into force from April 1988 and will be effective until March 1991. Under this policy, recognized educational, scientific, technical and research institutions as also the Central and State Government Departments engaged in research and development work can import educational equipment as specified in their areas of specialization.

SECTION III

MEASURES UNDERTAKEN OR FORESEEN IN THE PROMOTION OF EDUCATION FOR ALL

India's commitment to the provision of education for all and its endeavour to achieve this goal in the shortest possible period has to be understood in the complex milieu within which the educational system is currently functioning. In the background of large intra- and inter-regional structural imbalances, education is seen as a vital link in the totality of the development process and an important area of state intervention. A literate population and universal basic education for all children is recognized as for nation building.

In spite of the enormous efforts that are being made, the need to devise strategies for education for all has mainly been due to the backlog of the out-of-school children and consequently the increase in the number of adult illiterates. While the earlier models of development planning assumed the supply-side constraint as a major factor of educational underdevelopment, experience has shown that mere provision of schooling facilities does not ensure that all persons would actually avail of the facility. It is now increasingly realized that physical accessibility and its utilization need to be distinguished. The causes of low enrolments and high dropouts are in fact rooted in the socio-economic structure and the cultural milieu of each region. To overcome this malaise, various alternatives and possibilities are being worked out and tried in India. Some significant attempts include the *Bihar Education Project* for achieving universal education; improvement and extension of primary education in remote areas through an innovative approach, the *Shiksha Karmi Project*; *The Lok Jumbish Project* on education for all in Rajasthan; the *Mahila Samakhya* programme on education for women's development and mass mobilization strategies for adult education.

3.1 BIHAR EDUCATION PROJECT

The strategy envisaged under the Bihar Education Project (BEP) is to view education as an instrument of social change, as a means of reducing inequalities and as the most important investment in people. Such a holistic view of education calls for a systematic revamp of the entire content and process of education, with significant implications for teacher training, planning and management. Within this framework, the specific goals of the Project are:

- universalization of elementary education (up to 14 years of age); universal participation (through formal or nonformal education programmes), and universal achievement of at least, minimum levels of learning

- reduction in illiteracy i.e. bringing the literacy level in the 15-35 age group at least to 80 per cent

- education for women's equality and their empowerment

- equal educational opportunity to adults and children of deprived sections

- relating education to working and living conditions to cope with problems of livelihood

- emphasis on science and environment in all educational activities.

The major strength of these goals would be derived from reorganizing nonformal and adult education programmes in their structure, training and management.

With regard to the implementation machinery of the BEP, it calls for an overhaul of the entire administrative system. The most important characteristic of management will be its *mission mode*. This implies that the scheme of things would be time-bound in which specific responsibility is attached to institutions, agencies, or individuals who are also accountable. It also implies a 'debureaucratization' of the administrative machinery, that is, pulling down of hierarchies and building networks with 'symbiotic effect' where management essentially becomes an educative process giving way to modern techniques like computers and micro-processors. Such a system demands special selection of staff, based on willingness to join this campaign. It is proposed to give priority to women in staff selection at all levels.

The ultimate objective of the mission mode and debureaucratization will be evolution of participatory styles of management in which the staff, teachers, voluntary agencies and creative individuals will play a significant role through the active involvement of the community and village level committees (Village Education Committee). The State Mission Task Force (MTF) will be the

body responsible for the implementation of the BEP which is envisaged as an autonomous organization created as a registered society. The society will have two bodies: a Council with the Chief Minister as Chairman, to periodically review the implementation of BEP and to lay down broad guidelines, and a Mission Task Force under the chairmanship of the State Education Secretary. The MTF will ensure that while all the directorates concerned with the basic education fully involve themselves in implementation of BEP, the powers delegated to the District Task Force (DTF) are allowed unhampered.

The Ministry of Human Resource Development (Department of Education) will set up a National Monitoring Group (NMG) under the chairmanship of the Union Education Secretary. The function of the NMG will comprise:

maintenance of contact with the funding agency and persisting with efforts to secure adequate resources from external agencies

securing the services of training groups, and other people who can contribute to planning and implementation of BEP

periodic review and evaluation of BEP

providing necessary support at the level of MTF as well as DTF.

The overall expenditure of the Project has been estimated at Rs. 15,784 million for the period 1990-95. This amount is proposed to be shared as follows:

	<i>Rupees in millions</i>
Government of India	6128
Government of Bihar	2601
Other agencies	75
BEP	6980

3.2 SHIKSHA KARMI PROJECT

This project was initially based on an experiment developed in Silora block in Rajasthan in 1984, with the assistance of the Panchayat Samiti, the Social Work and Research Centre (Tilonia) and the State Institute of Educational Research and Training (Udaipur). Launched in 13 remote villages, the experiment aimed at rejuvenating the prevailing primary education system which had become ineffective in remote areas due to the irregular attendance of primary school teacher and the consequent extremely low enrolment of the children. After its initial success, the project has now been taken up on a larger scale with the objectives of:

universalization of education in remote, socio-economically backward villages where existing primary education has proved particularly ineffective

a qualitative improvement of primary education in such villages by adapting the form and content of education to local needs and conditions

achievement of a level of learning equivalent to that of class V by all children in the Project Villages with primary attention being given to girls.

This is a six-year project, aimed at revitalizing and expanding elementary education in about 2000 remote and socio-economically backward villages in Rajasthan. The crucial innovation in this project (based on the Silora block experiment) is the substitution of the primary school teacher by a team of two voluntary educational workers — *shiksha karmis*, who are local persons, living in the village, who would be motivated to run primary education through day and/or night centres in selected villages. *Shiksha karmi* candidates having about eight years of primary schooling are selected by a special committee on the basis of individual aptitude and the villagers' preferences. After one month of training, they are expected to take over the school and teach an average of 45-50 children for 2-3 hours per day, through a specially devised curriculum for classes I-V. Special efforts will be made to recruit female *shiksha karmis*. About 20 Training Centres for women would be established in order to provide supplementary primary education to female *shiksha karmi* trainees.

Innovations are envisaged in the curriculum and instructional methods to make the learning process child-centred and related to the environment, and to improve the pace and quality of learning. The Primary Education and Non-formal Education centres run by the *shiksha karmis* will follow the syllabi prepared by the State Institute of Educational Research and Training (SIERT), Udaipur. Organizations like the SANDHAN and other NGOs would be encouraged to undertake innovations and experimentation in all aspects of the educational process. The training and support system, adequate to sustain and promote the role of the *shiksha karmi* would also be established with the active involvement of these voluntary and non-governmental organizations. The overall responsibility for project implementation will be vested in a Project Director under the Director of Nonformal Education (Government of Rajasthan), who will be assisted by SANDHAN at Jaipur. SANDHAN will also be responsible for mobilising the support of local voluntary agencies and for the training of *shiksha karmis*.

The project envisages a gradual build-up of an organization in which government bodies will closely interact with non-governmental organizations

(NGOs) and voluntary agencies. The involvement of the NGOs will introduce the necessary flexibility in the implementation of the project at the supporting level. They will be requested to support the project in the selection, training, and continuous follow-up and support of the *shiksha karmis*. In blocks where NGOs are not available, effort will be made to set up such organizations. The coordinating, promoting and reporting responsibility at the block level will lie with the block development officer assisted by one additional educational extension officer per project block.

An intensive system of monitoring, participatory evaluation, refresher courses and training is built into the Project. The Institute of Developing Studies in Jaipur will be involved in developing participatory evaluation-cum-monitoring methods. This project is being sponsored by the Swedish International Development Agency (SIDA). The total expenditure for the project, for implementation over a six-year period (July 1987 - June 1993) is estimated at IRS 222.47 million which includes a cost escalation of 7 per cent per year. The initial SIDA support is planned for a four-year period and the total project cost for these four years is IRS 87.42 million. The Government of Rajasthan will share 10 per cent of the operational cost and provide the amount annually in its budget.

3.3 MAHILA SAMAKHYA PROGRAMME

In the strategies envisaged in the EFA, women's education is being given the central place not only because female enrolment and participation rates are extremely low, but also to ensure that the entire movement for widening access and participation in basic education subserves the goal of women's equality and development. According to the 1981 Census of India, 75 per cent of Indian women are still illiterates and in some remote areas female literacy is below 5 per cent. In almost half of the country, female literacy is below 15 per cent, only a small number of girls are enrolled in schools, a smaller number reaches high school and a very small percentage completes secondary education. The process of educational planning, therefore, has to address itself to the constraints faced by girls in acquiring education. The fact that women's contribution is central to the poor household is not recognised. The first step towards improving women's education then, will be to recognise women's role within the family, in the society and in the economy with the objective of enhancing their self-image and image in the society.

The experience of many voluntary social movements and a few innovative government programmes for women's development has clearly shown

that a group of motivated women can become an effective focal point for mobilisation for education. Thus micro planning as a strategy will be taken up with groups of women in each village, hamlet or urban dwelling to build a system of community mobilization, accountability of basic education services to women's collectives and above all, careful planning to provide educational opportunity for all children.

It is in this context that the *mahila samakhya* has been conceived. The Bihar Education Project has adopted it as part of its strategy for women's development. The first step in this approach is to create village women's collectives — a *mahila samakhya* in every dwelling. This provides the space where women can meet, be together and begin the process of reflecting, asking questions, speaking fearlessly, thinking, analysing, and above all feeling confident to articulate their needs through this collective. This entails creating a pool of talented and trained women — the *sathin* (companion) who would be given intensive training and help in the formation of the *mahila samooh* (women's group). The *mahila samooh* will mobilise the village community for educational activities, put pressure on the educational workers to respond to, and be sensitive to their needs. A *sahayogini* (helper) will be the motivator, supporter, guide and the information or feedback link for at least 10 villages. She will be selected from among the 10 villages, be a woman with basic educational skills, trained and supported by the District Unit of *mahila samakhya*. The *mahila samooh* will collectively address itself to the problems of access to fuel, fodder, drinking water and issues related to their work. In addition to funds being provided under this project the *mahila samooh* will harness resources available at the block and district level.

The State Programme Coordinator will be the administrative head of the programme in the concerned State. She could be a senior official in the State Department of Education or a non-government person with experience in the voluntary sector. In keeping with the basic objectives of the programme, evaluation is seen as a continuous process built into the operational strategies. A District Resource Group will be constituted in every district to advise and guide the programme. A National Resource Group (NRG) comprising educationists, social workers, women activists etc. has been set up in the Department of Education, Ministry of Human Resource Development, as an apex body to direct, coordinate, monitor and evaluate the programme. The programme which began in 1988-89 is designed to expand gradually depending upon the availability of resources.

3.4 LOK JUMBISH

It is proposed to take up a project for providing basic education for all in Rajasthan with Swedish assistance. The project goal is to create a people's movement — *lok jumbish*, with a view to providing relevant basic education to all, and to generate a stimulus for human development. Its specific objectives are:

universalization of primary education (meaning thereby universal participation, and achievement of at least minimum levels of learning prescribed for Class V, by all children)

drastic improvement in adult literacy, so as to bring it to the level of 80 per cent for the 15-35 age group.

The following are the main components of the proposed project strategy :

generating a people's movement so that basic education becomes everybody's concern

making the basic education system accountable to the local community

women's empowerment

fostering innovations and making the best use of them

appropriate training for educational personnel, community leaders, etc.

full involvement of voluntary agencies

linkages with other related development programmes

improvement in the systems of Early Childhood Care and Education, primary education, nonformal education, *shiksha karmi* programme, adult education and post-literacy and continuing education

emphasis on skill development and vocational training

improvement in the content and process of education

education for strengthening of cultural identity

strengthening of necessary support structure and management revamp.

A basic outline proposal, incorporating the above elements, was presented to Swedish International Development Agency (SIDA) in November 1989. A team of consultants appointed by SIDA has done a feasibility assessment of the proposal, and has concluded that it is a high-risk project but yet one which is necessary and "operationally both justified and feasible." Action is now being taken to get the detailed project document developed by December 1990.

Simultaneously, a number of pre-project activities are being initiated by the State government and implementation of the project in three blocks on a pilot basis is being taken up. The implementation of the project on a substantial scale is likely to commence around April 1991.

3.5 MASS MOBILIZATION CAMPAIGNS

The district of Ernakulam in the State of Kerala declared itself 100 per cent literate early this year. A campaign was launched for the complete eradication of illiteracy in the age group of 6- 60 in the State, to be achieved by the beginning of 1991. Inspired by this experience similar campaigns have started in the States of Tamil Nadu and Karnataka ; in the Union Territories of Goa and Delhi; and in metropolitan cities such as Bombay, Calcutta and Madras. The main characteristic of the campaign approach is large scale mobilization of literate as well as illiterate persons and the creation of an atmosphere in which the youth come forward to take responsibility for the eradication of illiteracy. So far most of these campaigns have started in areas which already have a high rate of literacy and the overall environment is favourable to its acquisition and sustenance. The crucial task however, is to conduct such campaigns in areas which are predominantly illiterate and where literacy programmes have not succeeded in the past.

Interest in mass mobilization has been aroused mainly because of the success of a number of voluntary organizations throughout the country. It is seen that people with commitment to the cause of upliftment of the deprived sections of the society, with leadership and organizational qualities can mobilise people on a large scale. The experience in the last few years in India shows that mass mobilization can become an effective instrument of change. Some of the measures being taken are as follows:

- (a) *Gram Vigyan Jatha* (People's Science Movement): The State of Kerala once again, is the torch bearer in this. The *Kerala Sastra Sahitya Parishad* (KSSP) has involved hundreds and thousands of teachers, students, artists, government servants, and unemployed youth to take up work relating to environmental conservation, science popularization and adult literacy. On the basis of this experience, it is proposed to set up People's Science Groups that would spread their network and create similar organizations in all the States.
- (b) *Paidal Jathas* (mobilization teams on foot) : It is proposed to organise these *jathas* with the help of a number of Gandhian and Sarvodaya voluntary agencies as well as youth activists who will move

from village to village talking to people, writing and painting on walls, forming village committees and identifying volunteer literacy workers.

- (c) *Youth Training and Deployment*: The purpose of this is to undertake micro-planning and mobilization of the local community for active participation in mass education programmes. Large scale exercises of training village animators, members of village education committees and of *mahila samooch* are to be taken up.

3.6 INTERNATIONAL LITERACY YEAR

In response to the call by the United Nations General Assembly to observe 1990 as the International Literacy Year, India has initiated measures at various levels for the eradication of illiteracy. Universalization of elementary education, programme of nonformal education in the ten educationally backward States and the National Literacy Mission for providing functional literacy to 80 million illiterate persons in the age-group 15-35 are integral parts of a larger programme to reduce illiteracy in the country.

All the State governments and Union Territory administrations have been advised to draw up a calendar of activities to be organised as part of observance of the International Literacy Year (ILY). These activities are expected to generate public awareness about the implications of illiteracy as well as work out means for combating it, and to mobilise involvement of all sections of society in programmes aimed at removal of illiteracy. Some of the activities organised or proposed to be organised, in respect of ILY include :

environment building on a massive scale through mass media, folk and traditional media, and other means

launching of mass campaigns for complete eradication of illiteracy in the States of Goa and Kerala and the Union Territory of Pondicherry, and several selected districts, blocks, villages etc. in other States/UTs

a large involvement of students, educational institutions non-student youth, voluntary organizations, ex-servicemen, etc. in literacy activities
televising films on literacy.

Besides promoting new initiatives, these activities are expected to accelerate the efforts already underway to eradicate illiteracy in the country.

One of the significant measures is the introduction of the Improved Pace and Content of Learning (IPCL). The IPCL presupposes the creation of an atmosphere conducive to literacy promotion and learning, proper identification of functionaries and their training, adequate logistic support and most importantly, a drastic change in the methodology and design of material preparation. Under this method 200 hours of basic literacy instruction will be provided, reinforced through post-literacy and continuing education. The *Jana Shikshan Nilayam*, will provide access and opportunities to higher levels of learning. Under the IPCL pattern, projects will have area-specific and time-specific action plans with a campaign orientation. The graded primers will provide for inbuilt mechanism of self-evaluation by the learners.

3.7 APPROACH TO NONFORMAL AND ADULT EDUCATION

Given the importance of nonformal education, it is proposed to reorganize the entire programme from 1990-91. The main elements of the new strategy will be as follows :

- (a) All agencies taking up NFE programmes would be assigned project responsibility for a specific area with the objective of ensuring that all children regularly attend and complete primary education.
- (b) Comprehensive micro-planning exercises and decentralization will be undertaken to determine the need for nonformal education centres with focus on working children and in habitations without schools.
- (c) Achievement through formal and nonformal education at the end of primary education level will be quite comparable and would correspond to the minimum levels of learning laid down.
- (d) There will be promotional avenues for good instructors, as well as an enhancement in their honorarium . The quality of training would be improved (especially in animation) and opportunities provided for their continuing education.
- (e) The involvement of voluntary agencies will be enlarged. These organizations would be encouraged to take up flexible programmes oriented to the needs and interests of learners.
- (f) A proper system of monitoring and evaluation will be established to ensure that necessary qualitative and quantitative data become available in time for the improvement of the programme.

For the achievement of the objectives in adult education the above-mentioned document suggests reorganization of the centre - based pattern by making the action plan area and time specific. The Adult Education programme is now being implemented in a mission mode with emphasis on equality and equity. Every member of the society who is literate is invited to share his/her knowledge and skill with those who are illiterates. Since adequate resources to impart adult literacy are not available, India is giving up the traditional centre-based approach in favour of a large scale, volunteer-based one. Priority would be given to women's literacy which would include selection and training of women instructors, location of adult education centres at convenient places and inclusion of health, hygiene and vocational training in the programmes.

The existing, centre-based Rural Functional Literacy Programme and the State Adult Education Programmes are being gradually wound up. Suitable resources would be distributed to responsible and good instructors (*preraks*) who will be able to eradicate illiteracy within the prescribed time. As in non-formal education, decentralization and delegation of powers will be encouraged. Micro-planning techniques along with computerized management would be introduced. It is presumed that with the use of IPCL techniques the rate of dropout will decline, the programme will be cost effective while at the same time ensuring a larger coverage. A good deal of adult illiterates (about five million) are proposed to be covered under the volunteer-based programme.

3.8 EDUCATION FOR ALL BY 2000

The preparatory action on the World Conference on Education for All by 2000 stimulated a great deal of intellectual activity in all parts of India. Several small and large seminars were organised. University faculties and teachers' organizations used the theme for their conferences, and the Central Government set up a group at the National Institute of Educational Planning and Administration, New Delhi, to prepare a document spelling out the Indian perspective on this subject.

A preliminary draft was prepared and was subjected to a critical study and discussion in a workshop organised at the Indian Institute of Education, Pune in February 1990. On the basis of the comments received on the draft paper, the final version was prepared just before the World Conference in March 1990.

Education for All by 2000 : An Indian Perspective begins with a frank and critical analysis of the present status of the educational system. It brings out the fact that educational backwardness in India goes side by side with social and economic backwardness and some of the significant indicators of development such as IMR, fertility rate, proportion of females to the male population, etc. are correlated to educational status. The document spells out the goals and targets in a new fashion. They are disaggregated for rural and urban areas, for males and females, and special targets are envisaged for the weaker sections of society. In primary education, for example, separate targets are fixed with reference to 1995 and 2000 for provision of access, for securing higher level of participation/retention, and for ensuring that a minimum acceptable level of learning takes place for 70-80 per cent of children.

The subject of access and equality is dealt with reference to the main disadvantaged sections — women, working children, the minorities, physically and mentally handicapped persons, and persons belonging to the Scheduled Castes, Scheduled Tribes and migratory people. While discussing the women's issues, emphasis is laid not only on female participation, common curriculum and courses, but also on using education as an instrument of women's quality. Early childhood care and education are viewed both as a means for preparation of children of disadvantaged sections of society for primary education, and as a support service for ensuring that girls and women participate in educational programmes. A wide range of nonformal education programmes are envisaged for persons who cannot take benefit of the formal system. In the section on literacy, a clear shift is indicated from institutionalized adult education centres to shorter duration, area-based mass programmes, with insistence on achievement of well defined levels of literacy, post-literacy and continuing education.

The content and process of education are also viewed in a manner which marks a distinct advance from the earlier thinking. There is emphasis on the relevance of curriculum, on decentralization and involvement of teachers in framing of curriculum. Adoption of child centred and activity based approaches are referred to and a determined effort is called upon to introduce work experience for inculcating dignity of labour. Evaluation is envisaged as an integral part of the learning process. In respect of the cognitive aspects of learning, particularly language, mathematics and environmental studies, there is emphasis on laying down of national minimum level of learning, with provision for assessment of the present situation and intermediate levels to be determined by groups of teachers themselves. Teacher education is to lay emphasis on innovative techniques for preservice and continuing education.

Recognising the fact that a good deal of the difficulty in the educational system is due to an archaic system of educational planning and administration, the document calls for a new strategy for community involvement with a view to ensuring that the basic education system — primary and adult education — becomes answerable to the local community and receives support from it, rather than looking to a hierarchy of inspectorates. The truism that an educational institution is generally just as good as its head is reiterated and special emphasis is laid on ensuring that heads of educational institutions are well chosen, provided necessary orientation and opportunity to put in their best. Detailed calculations regarding the resources required for implementation of the design have not been worked out, but stress has been laid on provision of adequate resources — going from the present level of approximately 4 per cent of national income to at least 6 per cent.

SECTION IV

PROBLEMS AND DIFFICULTIES IN THE DEVELOPMENT OF EDUCATION

Modern India is best described as a historical experiment and in that long winding experiment, education both in its attempts and aspirations, in its challenges and chasms remains the most critical imperative. As a chapter in our national history, education epitomizes, as nothing else can, the best of our achievements and the worst of our contemporary incongruities.

The *Approach to the Eighth Five Year Plan* has pointed out that not enough attention or resources have been given to providing the essential education, health, child care and other social services. There are wide disparities existing even today in the availability of these facilities between urban and rural areas. The lack of ability of the rural mass to articulate their needs, grievances and demands manifest in a scenario wherein a large section of the Indian population continue to remain at or below the subsistence level and in this mass of the populace are included women, the Scheduled Castes and the Scheduled Tribes besides other deprived communities. Most of these groups are subjected to social discrimination as well as economic deprivation. A substantial section of the population in the country is still below the poverty line.

Over the last 43 years, education has not fully succeeded in transforming our attitude towards women, backward castes, tribals and minority communities. The emphasis on quantitative growth in terms of providing more institutions, more incentives, and drive towards greater enrolment created greater gaps in working out strategies and a lag in the meaningful participation of the mass of the people in the educational process. It is now being realized that education must be understood as a process which enables one to question, conceptualise, find answers, seek information, reflect on one's actions and raise new questions.

In a vast country like India, considerable variations are, no doubt, bound to exist, across different regions in terms of their development status. One comes across highly developed pockets in stark contrast to the large expanse of very backward areas. And the educational status meets a similar fate, where literacy in some districts in States like Rajasthan, Uttar Pradesh, Madhya Pradesh and Bihar touches as low level as 7.15 per cent with female literacy at 3.7 per cent. At the other extreme, the State of Kerala has achieved more than 65 per cent female literacy. The process of planning in the country is still grappling to take stock of the same and effectively tackle this problem of wide disparities.

The challenge for planning education for all becomes ever greater, when the very base — the population — is expanding at a fast pace. The rapid population growth witnessed since the fifties has compounded the complexities of socio-economic planning in the country. Even modest projections indicate that the size of the population would be about one billion by the turn of the century and consequently the number of school-age children would further increase. It is only by 2050 (at conservative estimates) that a stable population can be visualized. Programmes of formal, nonformal and adult education have so far been unable to contend with the size, structure and spatial distribution of the population.

The inequitous socio-economic structure and relationships characterizing the rural society of India create further hurdles in the way of achieving the goal of education for all. Social discriminatory practices continue to be practised in villages in varying degrees which prevent them from gaining equal access to educational opportunities. Moreover, due to economic deprivation, children of disadvantaged communities join the workforce at a very early age in order to supplement the income of the family. The problem of child labour is thus of a very large dimension. It is estimated that there are about 40 million child labourers in the country. This problem is particularly acute in the case of the girl child who, if not earning wages, is required to do a variety of household chores such as looking after younger siblings, fetching water, fuel and fodder.

Other barriers to education for all are posed by such problems as cultural and regional diversities of which language poses a major problem. The division of the country based on linguistic considerations has combined the issue with questions of regional identity and cultural tradition and made it a complex and emotional issue. Of the numerous languages in the country, 15 have been included in the Constitution as national languages. While English and Hindi are recognized as official languages, at the national level, the policy is to promote all languages. Government has adopted a three-language formula to encourage

study of one regional language along with Hindi and English at the school level. However, the implementation of this language policy has not been satisfactory.

The problem of management of education for all is fraught with financial, structural, behavioural and attitudinal dimensions. A policy based on centralization and bureaucratization has hindered mass participation in the field of education by the society. The management of education has encouraged subservience to the achievement of quantitative targets rather than promoting learning and creativity. This has created a multiplicity of structures without the necessary co-ordination at the field level.

An insufficient understanding of the value of education, lack of understanding about the role of basic education, the extreme inadequacy of financial resources, the inefficiency of the delivery system, high dropout rates and a low level of achievement have compounded the problem.

The role of the teacher too has become passive. This is attributable to the system which leaves the teachers with very little freedom for innovative initiatives or creativity. While recognizing that alienation of teachers is at the root of much of the problem, the deterioration in professional standards and ethical norms of the teachers is a reality. No ambitious programme in the sphere of education for all can succeed unless steps are taken to improve the conduct and performance of teachers. While reorienting the educational system, there is a need to move away from thinking of education as an autonomous sector and locating it in the larger agenda of social transformation. This calls for the active involvement of the people and the community.

It is being realized, that the deficiencies in the existing educational programme could be corrected by transferring a substantial part of the responsibility for planning and implementation to elected, representative institutions of the local government under whose jurisdiction the necessary financial resources could be brought. At present people of each local area are unable to participate in the determination of priorities or to keep a check on the implementation of programmes or even maintain and manage the assets created. The failure of the system to integrate and activate the process of local area planning despite the importance assigned to this in the Indian policy and plan perspectives ever since its independence needs to be remedied. Some educationists feel that rather than giving priority to mass literacy and elementary and secondary education, there has been the tendency to divert resources disproportionately to higher levels of education which has only produced the volatile phenomenon of educated unemployed.

India, like other newly industrializing countries, is rapidly modernizing its economy through a large scale application of advanced technology. As a consequence, there exists simultaneously a broad spectrum of diverse technologies at disparate levels, even within the same production system and certainly along the wide production spectrum. In such a scenario the dependency ratio of the population on the state is high as the work force due to socio-economic deprivations (and this includes education) is largely engaged in primary and extractive activities or in a large informal economy overly exploitative by its very nature. This has posed a serious challenge to development planners in general and educational planners in particular.

The present state and status of the educational endeavour in India is not an isolated phenomenon but represents a trend existing in most third world countries as a response to the unleashing of new forces in the global economy. It is also not accidental that while the educational sector (along with other social services) remains imbalanced, the participation of these countries in the path of technological developments, capital intensive industrialization and agriculture, multinational collaborations and consumerism has been at times overriding. So much so that a number of these countries have been victims of debt-traps. In such a situation, it is generally the lower sections of the society, who, not being capable of adjusting rapidly to the fast moving pace of modernization, have paid a price that has impinged both on their social as well as their economic status. It is the confluence of all these forces that, while epitomising the explosive growth of the learning needs on the one hand, are also at the same time introducing a more pronounced stratification in the educational system. That is to say, the weakest section of the society — the landless, the small farmers, the unskilled workers cannot aspire to go beyond primary education; the middle section find opportunities stretching only up to vocational education while the upper middle and higher sections of the society, have the choice as well as access to higher education and beyond. The extent of educational achievement thus comes to define the extent of economic opportunities available to each of these sections. It is in this global context, that the travails and tribulations of the Indian education system may be understood.

SECTION V

FOLLOW-UP TO I.C.E. RECOMMENDATIONS

5.1 UNIVERSALIZATION AND RENEWAL OF PRIMARY EDUCATION IN THE PERSPECTIVE OF AN APPROPRIATE INTRODUCTION TO SCIENCE AND TECHNOLOGY

The Universalization of Elementary Education has been one of the basic goals of educational development in India and is included under the Minimum Needs Programme. Although it has not been possible yet to attain the goal of UEE, considerable progress has no doubt been achieved, as shown in the findings of *Fifth All-India Educational Survey* (1986). A number of meaningful programmes have been evolved and brought under implementation such as Operation Blackboard, non-formal education and the *Shiksha Karmi* Project. In the context of the World Conference on Education for All held in April at Jomtien this year, the nation renewed its resolve towards this goal.

The teaching of mathematics and science has been a major component besides attainment of literacy. The aim is to introduce a modern perception of science and technology among the students and inculcate and promote a scientific temper. At the same time, the need for a proper motivation of teachers in order to enable them to carry out this role was emphasized, and provision of suitable training to them in this context was proposed. A centrally sponsored scheme of Improvement of Science Education in Schools was finalised during 1987-88 in consultation with the education departments in States/Union Territories as the implementing agencies for the schemes. The contribution of voluntary and other non-governmental organizations was also underlined. Under this scheme 100 per cent assistance is being provided to the States Union Territories and the voluntary agencies for (a) provision of science kits to upper primary schools; (b) upgradation and strengthening of science laboratories and libraries (for secondary and higher secondary schools); (c) setting up of District Resource Centres for Science Education for teacher's training and

development of instructional materials, etc.; and (d) assistance to voluntary organizations for undertaking innovative projects and resource support activities in science education. This scheme is intended to cover all government and government-aided schools in a phased manner by the end of Eighth Plan.

As part of the centrally sponsored scheme, training courses for training science teachers are being periodically conducted by the NCERT. The other activities include organization of out-of-school programmes related to science and mathematics to nurture interest and talents in the field. Science kits for primary schools are being developed under an Indo-FRG Project to Improve Science Education in Primary and Upper Primary Schools in Madhya Pradesh and Uttar Pradesh.

The components of science and technology are included in the Operation Blackboard drive as also in the other nonformal education programmes. Assistance is also being provided to all the States/Union Territories for organising training programmes for science and mathematics teachers through summer institutes and in-service courses in the Colleges of Teacher Education.

5.2 THE IMPROVEMENT OF SECONDARY EDUCATION: OBJECTIVES, STRUCTURE, CONTENT AND METHODS

As part of the Eighth Five Year Plan preparation, a Working Group on Secondary and Higher Secondary Education has been constituted by the Planning Commission of the Government of India to work out the various modalities of improving the efficiency of and accessibility to secondary education. The significant achievements in secondary education in the Seventh Five Year Plan period have been the commencement of the centrally sponsored schemes for vocational education at the plus two stage; the strengthening of teaching of science education at the secondary and higher secondary stages; the constitution of a new scheme for making education of girls free in classes 9 to 12, started in 1985-86, with the objective of promoting girl's education at this level; introduction of yoga education started earlier on an experimental basis, but scheduled to cover about 15,000 schools from 1990; the implementation of programmes on Environment Education, Education Technology and the Programme of Integrated Education of the Disabled. Looking at the present situation in regard to secondary education, the Working Group has projected four thrust areas and suggested measures accordingly in each of the areas. These are :

Expansion needs of the system

Improving the quality of education

Strong bias in favour of vocational education, and

Upgrading the quality of teachers

Reform of the management structure is another priority area. The Working Group recommends that to strengthen the management system of schools, an attempt should be made to bring all the schools in the country under school complexes. It is proposed that new schools be opened in hilly, desert and tribal areas and also hostel facilities be provided where the students of the surrounding areas can come. Distance education through a network of open schools is also recommended.

With regard to the quality of secondary education, the Group recommends laying down of minimum levels of learning at the secondary stage as well; strengthening the set-up for science education and educational technology and provide assistance to schools for teaching of a third language under the three-language formula. Improvement in the quality of education must also include programmes for teacher education and for continuing improvement in curriculum and text books. It should also include programmes for linking education with environment; value education and provision of co-curricular activities. A comprehensive programme for nurturing talented children has also been outlined.

For strengthening the programme on vocational education, the Group has suggested the constitution of a consultative machinery in every State for advising on the vocational education and manpower requirement linkages. It foresees the availability of vocational courses in 10,000 higher secondary schools by the end of Eighth Plan. It recommends the commencement of a programme for work experience on a decentralized basis, in upper primary and secondary stages in 25,000 schools by making available resources to the school at the rate of Rs. 50 per student per year.

5.3 DIVERSIFICATION OF POST-SECONDARY EDUCATION IN RELATION TO EMPLOYMENT

In the context of diversification of post secondary education in relation to employment, a number of steps have been taken and considerable progress is being made in the area of technical education. It has been felt that the changing scenario by the turn of this century in socio-economic, industrial and technological areas needs to be considered to enable the system to play its role with greater relevance and objectivity. It has been foreseen that there will be sub-

stantial growth in industry in India. Knowledge based industry will be on the increase and the levels of skills required of manpower will, consequently be higher. Taking into account the present scenario, the situation during the years 1989-90, and national development goals, the Working Group on Technical and Management Education for the Eighth Five Year Plan has worked out a perspective plan for development of technical education.

The Working Group recommended a broad-based flexible system of technical education to enable a better response to the unspecified demands of the future. Accent has to be placed on developing creative, innovative, inventive, experimental and problem solving abilities. It calls for a review of the curricula on a continuing basis to cope with technological changes and manpower needs. At higher levels, a new institutional approach is suggested to provide education in science comparable in quality with that of Indian Institutes of Technology.

It has been suggested to diversify the traditional framework of engineering programme and incorporate emerging areas e.g. Computer Science, Operations Research, Laser Technology etc. and to train scientists/technologists who can handle the twin responsibilities of scientific research and innovative application.

The need for a networking system between technical education on the one hand, and industry, R & D organizations and other sectors with complementary characteristics on the other, has been recognised. However, the success of such networking lies in initiating a process of effective linkages. To promote the institution-industry linkage and collaboration, interaction through apprenticeship opportunities, consultancies and sponsored research, continuing education programmes for industry personnel, exchange of personnel between industry and institution, involvement of industry in the development of curricula and courses are important goals that have to be pursued vigorously. The Group has proposed the introduction of an 'education cess' or tax from industry to share the cost of technical education as also tax exemption on contributions made by industry for the development of technical education.

In establishing linkages with developmental sectors it is proposed that technical education institutions having the potential and capability to undertake problem-oriented and application-oriented programmes should be encouraged to interact directly with developmental sectors such as industry, energy, irrigation, agriculture and health. It has been suggested that management education and training facilities be reoriented to meet the requirements of hitherto neglected but vital areas such as transport, power, communication, health and education. They also must be geared to train and upgrade all those

health and education. They also must be geared to train and upgrade all those involved in productive enterprises in the unorganized sectors such as agriculture, handloom, and animal husbandry which are significant and critical sectors. Moreover, if technical education has to be related to the total needs of economic and technological development of the country, an integrated approach in the curricula aspects of technical, management, technician, vocational and craftsman education and training will be essential.

For a realistic assessment of technology requirements and its advancement, establishment of Technology Information Forecasting and Assessment Council is an important development. Its objectives include evaluation of existing technology, preparation of technology forecast reports, and estimation of nature and quantum of likely demands of goods and services in future.

The working group has proposed setting up of National Board for Science and Engineering Research solely for funding fundamental research in technical education. Multidisciplinary, trans-disciplinary and trans-organizational research with the emphasis on design and development is to be encouraged.

The National Policy on Education, 1986, had suggested delinking of degrees from jobs. In this context, a proposal to establish a National Testing Service (NTS) was approved by the Cabinet in January 1988. It is proposed that the NTS will conduct tests on a voluntary basis to determine and certify the suitability of candidates for specified jobs that do not require a diploma/degree qualification. It will be designed to identify requirements of knowledge, competencies, skills and the aptitude necessary for the performance of particular jobs. It will also make available its expertise and capabilities to institutions holding tests for admission to higher courses. It will function as a well equipped resource centre at the national level in test development and administration.

SECTION VI

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