national
policy
on education 1986

PROGRAMME OF ACTION
1992

Ministry of Human Resource Development
Department of Education

CONTENTS

N.B: (1) These chapters follow the sequence in which NPE, 1986 deals with subjects.

(2) Each chapter deals with aspects of 'Content and Process of Education', 'Making the System Work' and management appropriate to it. Therefore, unlike the POA 1986, there are no separate chapters 'Content and Process' and 'Making the System Work'.

(3) The chapter 'Management of Education' deals with management aspects which cover the entire field of education or more than one area of education.

ACRONYMS AND ABBREVIATIONS

AE	Adult Education
AEC	Adult Education Centre
AICTE	All India Council for Technical Education
ASC	Academic Staff College
ASCI	Administrative Staff College of India
BITS	Birla Institute of Technology and Science
BOAT	Boards of Apprenticeship Training
BPU	Bureau for Promotion of Urdu
BRAOU	Dr. B.R. Ambedkar Open University
CABE	Central Advisory Board of Education
CBR	Community Based Rehabilitation
CBSE	Central Board of Secondary Education
CCRT	Centre for Cultural Resources and Training
CCE	Continuous Comprehensive Evaluation
CDC	Curriculum Development Centre
CDPO	Community Development Project Officer
CEO	Chief Education Officer
CHD	Central Hindi Directorate
CIEFL	Central Institute of English and Foreign Languages
CIET	Central Institute of Educational Technology
CIIL	Central Institute of Indian Languages
CIVE	Central Institute of Vocational Education
CLASS	Computer Literacy and Studies in Schools
COBSE	Council of Boards of Secondary Education
COSIST	Scheme of Strengthening of Infrastructural Facilities in Science and Technology
CSIR	Council of Scientific and Industrial Research
CSTT	Commission for Scientific and Technological Terminology
CTE	College of Teacher Education
CTV	Colour Television Set
DAE	Directorate of Adult Education
DGE&T	Director-General Employment and Training
DIET	District Institute of Education and Training
DRC	District Rehabilitation Centre
DRDA	District Rural Development Agency
DRU	District Resource Unit
DST	Department of Science and Technology
DWACRA	Development of Women and Children in Rural Areas
EB	Educationally Backward
ECCE	Early Childhood Care and Education
ECE	Early Childhood Education

EEO	Education Extension Officer
EFA	Education For All
EMRC	Educational Media Research Centre
AVRC	Audio Visual Research Centre
GVE	Generic Vocational Courses
HH	Hearing Handicap
IAMR	Institute of Applied Manpower Research
IASE	Institute of Advanced Study in Education
ICDS	Integrated Child Development Science
ICHR	Indian Council of Historical Research
ICMR	Indian Council of Medical Research
ICSSR	Indian Council of Social Science Research
IDES	Integrated Education for Disabled Children
IDS	Institute of Development Studies
IETE	Institute of Electronics and Telecommunications Engineers
IGNOU	Indira Gandhi National Open University
IIM	Indian Institute of Management
IIT	Indian Institute of Technolog
INFLIBNET	Information and Library Network
IPCL	Improved Pace and Content of Learning
ITI	Industrial Training Institutes
JCVC	Joint Council of Vocational Education
JRC	Janardhana Reddy Committee
JRF	Junior Research Fellows
JRY	Jawahar Rozgar Yojna
JSN	Jana Shiksha Nilayam
KHS	Kendriya Hindi Sansthan
KOU	Kota Open University
KVIC	Khadi and Village Industries Commission
KVK	Krishi Vigyan Kendra
LM	Locomotov Handicap
MHRD	Ministry of Human Resource Development
MIL	Modern Indian Languages
MIS	Management Information System
MLL	Minimum Levels of Learning
MOU	Memorandum of Understanding
MLA	Member of Legislative Assembly
MP	Member of Parliament
MLC	Member of Legislative Council
NAB	National Accreditation Board
NCC	National Cadet Corps
NCERT	National Council of Educational Research and Training
NCHE	National Council of Higher Education

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NCTE	National Council of Teacher Education
NEC	North Eastern Council
NEO	National Evaluation Organisation
NET	National Eligibility Test
NFE	Non-Formal Education
NGO	Non-Governmental Organisation
NIEPA	National Institute of Educational Planning and Administration
NIHH	Al Javar Junj National Institute of Hearing Handicapped
NIVH	National Institute for the Visually Handicapped
NIMH	National Institute for the Mentally Handicapped
NIOH	National Institute for the Orthopaedically Handicapped
NLM	National Literacy Mission
NLMA	National Literacy Mission Authority
NOS	National Open School
NPE	National Policy on Education
NPERC	National Policy on Education Review Committee
NSS	National Service Scheme
NTMIS	National Technical Manpower Information System
NYK	Nehru Yuvak Kendra
OB	Operation Blackboard
PC	Personal Computer
POA	Programme of Action
RCCP	Radio-cum-Cassettee Player
RCE	Regional College of Education
R&D	Research and Development
REC	Regional Engineering College
RPF	Revised Policy Formulations
SABE	State Advisory Board of Education
SAP	Special Assistance Programme
SC	Scheduled Caste
ST	Scheduled Tribe
SCERT	State Council of Educational Research and Training
SCHE	State Council of Higher Education
SCVE	State Council of Vocational Education
SEEUY	Self Employment for Educated Unemployed Youth
SH	Speech Handicap
SRC	State Resource Centre
STEI	Secondary Teacher Education Institute
SIET	State Institute of Educational Technology
TLC	Total Literacy Campaign
TQM	Total Quality Management
TRYSEM	Training for Rural Youth in Self Employment
TTTIs	Technical Teacher Training Institutes

TV	Television
UEE	Universalisation of Elementary Education
UGC	University Grants Commission
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations International Children's Emergency Fund
UT	Union Territory
VEC	Village Education Committee
VH	Visual Handicap
VRC	Vocational Rehabilitation Centre
YCMOU	Yashwantrao Chavan Maharashtra Open University

INTRODUCTION

The Revised Policy Formulations (RPF) which set forth the modifications to the National Policy on Education, 1986 (NPE, 1986), were placed in both Houses of Parliament on 7th May, 1992. These modifications were evolved through the same consensual process through which the NPE, 1986 was evolved. In July, 1991, a CABE (Central Advisory Board of Education) Committee on Policy (JRC), under the chairmanship of the Chief Minister of Andhra Pradesh, and comprising six other Education Ministers belonging to the major political parties and eight educationists, was constituted to review the implementation of the various parameters of the NPE, 1986, taking into consideration the report of the Committee for Review of the NPE (NPERC) and other relevant developments since the Policy was formulated. The JRC, in its report submitted in January, 1992, came to the conclusion that while very little of the NPE, 1986 required reformulation the Programme of Action (POA) needed to be revised considerably. At its 47th meeting held on 5-6th May 1992, the CABE, the historic forum for forging a national consensus on educational issues, considered the JRC report and formulated the RPF. While replying to the discussion on the RPF in the Rajya Sabha, on 12th May 1992, the Minister of Human Resource Development gave an assurance to present a revised POA (hereafter referred to as POA, 1992) in the Monsoon Session.

The POA, 1992 was evolved through the same consensual process through which the Policy was reviewed. Twenty-two task forces were constituted on different subject areas comprising educationists and officials of the Union and State Governments. A Steering Committee was also set up. The composition of the Task Forces and the Steering Committee is given in the Appendix to this document. In spite of the time constraint, the Task Forces and the Steering Committee accomplished their work with great care.

The draft Programme of Action was discussed at a Conference of State Secretaries and Directors of Education, held on 3-4 August, 1992. Suggestions received during this meeting were carefully considered and incorporated in the document. The Central Advisory Board of Education (CABE) met on 8th August, 1992 and endorsed the document after detailed consideration. The valuable suggestions made by the State Education Ministers and educationists were also taken into account in finalizing this document.

The Policy review had established that the policy framework the NPE, 1986 enunciated is robust and can guide the educational development of the country for a long time to come. Likewise, many of the strategies outlined in POA continue to be relevant and should be acted upon. There are, however, many exceptions, the best example of which is adult literacy. The Total Literacy Campaign approach is a post-POA innovation which has emerged as a viable model and has transformed the perception of universal adult literacy from one of hopeless dream to an achievable prospect. The wisdom of hindsight as well as the evaluation of major programmes launched after the POA, and the recommendations of NPERC and JRC facilitated the revision. The constant endeavour of the Task Forces and the Steering Committee was to make the POA, 1992 more practical and action-oriented.

The NPE, 1986 has the distinction of giving an operational meaning to concurrency. Given that Education is a concurrent subject, the POA, 1992 can be implemented only if the Union and the States/Union Territories (UTs) work together in meaningful partnership. The POA, 1992 has to be perceived as a charter for action of the nation as a whole requiring a co-operative effort of the Union, States/UTs, the education community, and the community at large. Given the rich diversity of our continental nation it would be in the fitness of things if each State and UT formulates a State POA which is in line with the situational imperative as well as with the POA, 1992. This process has to be carried to its logical conclusion with each district and educational institution formulating a POA of its own. In this context it is necessary to stress that what is presented here is not an inflexible structure but only a projection of the direction with varying degrees of detail. A certain amount of flexibility is assumed which will help the implementing agencies in tailoring the POA, 1992 to suit their contexts and emerging scenarios.

In the ultimate, resources and management would define implementation. In developing this document the resource availability indicated for the 8th Five Year Plan (1992-97) was kept at the back of the mind; but at the same time the long term perspective has not been lost sight of. Many actions envisaged by the POA, 1992 span not only the 8th Five Year Plan but also the 9th and even beyond. Phasing has, therefore, to be left somewhat flexible so that the pace of implementation can match the mobilisation of resources.

The national resolve of raising the outlay on education to 6% of the national income should be translated into practice at the earliest possible. As envisaged by the NPE, 1986 and through the modalities it outlined, the nation as a whole, should assume responsibility of providing the resource support for education. The logical corollary of this proposition is that an ethos of cost-effectiveness and accountability should permeate every part of the education system. To say the least, unplanned proliferation of sub-standard institutions should stop here and now; programmes should cease to be driven by budgets and instead should stress processes

and outcomes; efficiency should be rated not by the ability to consume budget and demand more but by performance and delivery. All this calls for extra-ordinary attention to the management of education which is often neglected. It is obvious that the many tasks which the NPE, 1986 and POA, 1992 envisage cannot be performed in a state when even routine tasks like supply of textbooks, conduct of examinations and operation of academic calendar leave much to be desired. Reform of management in its entirety should be the first and foremost task of the education community.

While the Union and State Governments will fully shoulder these responsibilities it is people's involvement in the educational reconstruction which will make the real difference. The total literacy campaigns have demonstrated that, given the will, and the right strategy and appropriate structures, people's involvement can be elicited on a large scale. The management challenge in education lies in creating appropriate arrangements for a similar involvement to take on long-standing problems like the Universalisation of Elementary Education (UEE). There is no better way to ensure accountability than an awakened and "demanding" community.

Another important challenge is establishing linkages between education and other related services like child care, nutrition and health. As it is, the responsibility for educational administration is fragmented in most States, with more than one Education Secretary and several Directors of Education. There is need for greater coordination amongst these multiple agencies and functionaries on the one hand and between Education and other areas of HRD on the other. Appropriate mechanisms should be developed.

Education for Women's Equality is a vital component of the overall strategy of securing equity and social justice in education. Paras 4.2 and 4.3 of the National Policy on Education (NPE), 1986 are very strong and forthright statements on the interventionist and empowering role of education. What comes out clearly from the implementation of NPE, 1986 and its POA, is the need for institutional mechanisms to ensure that gender sensitivity is reflected in the implementation of all educational programmes across the board. It is being increasingly recognised that the problem of UEE is, in essence, the problem of the girl child. It is imperative that participation of girls is enhanced at all stages of education, particularly in streams like science, vocational, technical and commerce education where girls are grossly under-represented. The education system as a whole should be re-oriented to promote women's equality and education.

Another facet of the overall strategy of securing equity and social justice in education is the concern for the educational needs of SCs/STs, minorities, and the physically and mentally handicapped. Here again it is necessary for educational system to be sensitive to the educational needs of these groups; it should be geared up to promote equalisation of educational opportunities.

The formulations on management outlined in this document cover not only structures but also processes. Many of the structures envisaged like the State Advisory Boards of Education (SABEs), District Boards of Education, Village Education Committees (VECs), are participative in nature and facilitate greater coordination between education and support services. The processes envisaged include planning, training, and monitoring and evaluation. Experience since 1987 has established the need for the monitoring arrangements being strengthened and being supplemented by periodic impact studies. The formulations in POA, 1992 should be implemented with vigour and determination, with adaptation which may be necessary to suit specific situations.

More than ever, there is an increasing awareness about national integration and adherence to certain national values and concerns; observance of secular, scientific and moral values; inculcation of an understanding of our composite culture, with its rich diversity, of our history, the history of freedom struggle and of the achievements of independent India; creation of an awareness of the importance of protection of environment and observance of small family norm; and stress on commitment of youth to manual work and social service. While these aspects have received due attention in the past, further reorganisation of the content and process of education on these lines would be a matter of foremost priority.

Time is of essence, and unless we act now, we stand in the danger of once again missing the opportunity of educational reform, so critical not only for the development of our nation but for our very survival.

1. EDUCATION FOR WOMEN'S EQUALITY

1. PREFACE

1.1.1 Education for Women's Equality is a vital component of the overall strategy of securing equity and social justice in education. Paras 4.2 and 4.3 of the National Policy on Education (NPE), 1986 are very strong and forthright statements on the intervening and empowering role of education. *Inter alia*, they emphasize the provision of special support services and removal of factors which result in discrimination against women at all levels of education. The POA clearly spells out the actions which need to be taken to promote education for women's equality; it can hardly be improved upon. What is sought to be done is to modify the contents of the POA wherever appropriate. What comes out clearly is the need for will to implement and institutional mechanisms to ensure that gender sensitivity is reflected in the implementation of educational programmes across the board. Education for Women's Equality is too important to be left to the individual commitments or proclivities of persons in charge of implementing programmes. It should be incumbent on all actors, agencies and institutions in the field of education at all levels to be gender sensitive and ensure that women have their rightful share in all educational programmes and activities.

2. PRESENT SITUATION

1.2.1 According to the 1991 census female literacy rate is 39.42% compared to 63.86% for males. The number of female illit-erates at 197 million is more than male illiterates by 70 million even though the female population is less than the male population by 32 million. There are significant rural-urban disparities among women, rural female literacy is about half of urban female literacy. A striking finding is that for every 100 girls in class I in rural areas, there are only 40 in class V, 18 in class VIII, 9 in class IX and only one in class XII — the corresponding figures for urban areas being 82, 62, 32 and 14. If ten to twelve years of general education is the basic requirement for entrance into technical and professional education, rural girls would therefore stand excluded. An overwhelming proportion of vocational, higher and technical educational facilities are located in urban or semi-urban areas. Participation of girls in this sector continues to be low and gender stereotyped. Similarly, proportion of women and girls in engineering and agriculture based courses is woefully low.

1.2.2 This is compounded by the fact that the proportion of women teachers in the low literacy States is extremely poor. The percentage of women teachers at the primary and middle schools is 21% and 23% in rural areas and 56% and 57% in urban areas.

1.2.3 It is therefore imperative that the entire educational system is alive to the gender and regional dimensions of educational disparities.

3. POLICY PARAMETERS AND STRATEGIES

1.3.1 In pursuance of NPE the main features of the implementation strategy will consist of the following :

    (i) to gear the entire education system to play a positive interventionist role in the empowerment of women;

    (ii) to encourage educational institutions to take up active programmes to enhance women's status and further women's development in all sectors;

    (iii) to widen women's access to vocational, technical and professional education at all levels, breaking gender stereotypes;

    (iv) to create a dynamic management structure that will be able to respond to the challenge posed by this mandate.

4. PLAN OF ACTION

1.4.1 Strategies outlined below deal primarily with operational details regarding implementation of the POA :

    (i) All the Bureaus of the Department of Education will prepare a concrete action plan addressing gender related concerns in their specific area of work by August, 1993. Relevant nodal institutions like the UGC, AICTE, ICSSR, ICHR, CBSE, ICAR, ICMR, IAMR, State Boards, Vocational Education Bureaus, etc. will also prepare similar action plans. Part IV, para 4.1 to 4.3 of the NPE and Chapter XII of the POA will form the guiding principles for the action plan.

    (ii) A monitoring unit will be created in the Planning Division of the Department of Education to ensure integration of gender issues into policies, programmes and schemes. This unit will develop indicators for monitoring implementation, ensure effective dissemination of information and coordinate action. This will be done by August, 1993.

    (iii) Similar monitoring units/bureaus will be set up at the State level.

    (iv) Annual reports of all the bureaus and institutions will clearly spell out the steps they have

taken to enhance women's and girls' access to education, ensuring that the content and process of education is sensitive to gender concerns and equal access is assured for science and technical education at all levels.

5. EMPOWERMENT OF WOMEN

1.5.1 Education can be an effective tool for women's empowerment, the parameters of which are :

- enhance self-esteem and self confidence of women;

- building a positive image of women by recognizing their contribution to the society, polity and the economy;

- developing ability to think critically;

- fostering decision making and action through collective processes;

- enable women to make informed choices in areas like education, employment and health [especially reproductive health;

- ensuring equal participation in developmental processes;

- providing information, knowledge and skill for economic independence;

- enhancing access to legal literacy and information relating to their rights and entitlements in society with a view to enhance their participation on an equal footing in all areas.

1.5.2 The following measures will be taken for achievement of the above parameters and the concerned bureaus and institutions will report on progress as stated in para 4.1 above:

(i) Every educational institution will take up active programmes of women's development;

(ii) All teachers and instructors will be trained as agents of women's empowerment. Training programmes will be developed by NCERT, NIEPA, DAE, SRCs, DIETs, SCERTs and the University System. Innovative training programmes will be designed with the assistance of concerned organizations and women's groups;

(iii) Gender and poverty sensitization programmes will be developed for teacher educators and administrators. An environment will be created whereby all the sections of the education sector will become alive and sensitive to the role of education in eliminating gender disparities.

(iv) In order to create a greater confidence and to motivate parents to send girls to school, preference will be given to recruitment of women teachers.

(v) The common core curriculum is a potentially powerful instrument to promote a positive image of women. The Department of Women's Studies, NCERT will intensify activities already initiated in the area of developing gender sensitive curriculum, removing sex bias from textbooks and training of trainers/teachers. SCERT and the concerned State level boards and institutions will initiate similar work.

(vi) Funds would require to be earmarked in all education budgets for such awareness and advocacy related activities.

6. RESEARCH AND WOMEN'S STUDIES

1.6.1 Women's Studies is a critical input to promote better understanding of women's contribution to social processes within social, technological and environmental change, their struggles and aspirations, conceptual obstacles that make them "invisible" in many areas of scientific enquiry. The programme aims to investigate and remove structural, cultural or attitudinal causes of gender discrimination, and thus empower women to achieve effective participation in all areas of national or international development. The four dimensions to be supported are :

(i) Research to advance the frontiers of knowledge, develop human resources and produce teaching/learning material in pursuit of the above aims.

(ii) Teaching to change present attitudes and values of men and women to one of concern for gender equality. Existing biases and deficiencies in curriculum will be addressed.

(iii) Training of teachers, decision makers, administrators and planners to enable them to play a positive interventionist role for gender equality.

(iv) Extension or direct involvement of institutions in women's development activities among the community.

1.6.2 Special efforts will be made to make the Women's Studies Centres set up in 20 universities and 11 colleges to become more effective through intensive training of their staff. Eminent institutions and well known women's organizations will be involved in the process of revitalizing existing centres/units and helping in the establishment of new ones.

1.6.3 Networking between different institutions for research, extension and information dissemination has

demonstrated high cost-effectiveness as well as potential for coordinated growth. Such networks will be initiated to increase output of quality teaching materials especially in regional languages, training and curriculum design, and decentralized area-specific models of intervention.

1.6.4 Foundation course should be designed and introduced for undergraduates with a view to promote the objectives of empowerment of women. This will be done within the 8th Plan period.

7. UNIVERSALIZATION OF ELEMENTARY EDUCATION AND ADULT EDUCATION

1.7.1 It is impossible to achieve Universal Elementary Education (UEE) unless concerted efforts are made to reach out to the girl child. Girls who cannot attend formal schools or have had to drop out will be provided educational opportunities through Non-Formal Education (NFE). Efforts will be made to design special NFE programmes for out of school and adolescent girls with a view to get them back into the formal stream or qualify for technical or vocational education. The Open School, distance education systems and other innovative educational programmes will reach out to girls in rural/remote areas and urban slums. Voluntary and community based efforts will be encouraged in this sector. The above tasks acquire a greater significance in the SAARC decade of the girl child.

1.7.2 The rural girls are doubly disadvantaged by non avail-ability of educational facilities and by the work they have to do related with fuel, fodder, water, sibling care and paid and unpaid work. Coordinated efforts, albeit with other Departments/Ministries, need to be made to provide the necessary support services to enhance their participation and performance. Provision of support services and child care facilities should be seen as a necessary and integral adjunct of UEE.

1.7.3 An important constraining factor for female education is the lack of women teachers in rural areas. The Revised Policy Formulations postulate that at least 50 per cent of teachers recruited in future would be women. Therefore special efforts would be made to recruit women teachers and to augment teacher-training facilities for women so that adequate number of qualified women teachers are available in different subjects, including Mathematics and Science.

1.7.4 Total Literacy Campaigns (TLCs) being taken up should pay special attention to women in the 15-35 age group as it has been done with very positive impact in many districts. NFE should be dovetailed to TLCs in order to reach out to girls in the 10-20 age group.

1.7.5 Programmes for continuing education should be designed to ensure that neo-literates and school going girls have access to reading materials. If necessary, books and magazines should be made available to women in their hamlets. The medium of radio will be utilised to sustain enthusiasm and motivation.

1.7.6 Efforts should be made to coordinate the different vocational schemes both within the formal system and those initiated by other Departments/Ministries.

8. WOMEN'S ACCESS TO VOCATIONAL, TECHNICAL AND PROFESSIONAL EDUCATION AND EXISTING AND EMERGENT TECHNOLOGIES

1.8.1 Improvement of girls' access to technical, vocational and professional education requires a national programme to introduce and strengthen Science and Mathematics teaching in all girls schools. A special scheme will be designed to meet the shortfall of Science and Mathematics teachers in girls schools. Serious efforts should be made by the Centre and State planners, curriculum developers and administrators to consciously encourage participation of girls in non-traditional and emergent technologies at all levels. Guidance and counselling for girls should be undertaken as a necessary pre-condition to encourage participation.

1.8.2 Women's access to technical education will be improved qualitatively and quantitatively especially in rural areas. Women's ITIs and Polytechnics and women's wings in general Politechnics and ITIs will be revamped with a view to diversify disciplines, trades and courses to encourage participation in new and emerging technologies.

1.8.3 Information about credit, banking, enterpreneurial abilities will be developed in technical and vocational institu-tions. The apprenticeship scheme will be strengthened to increase the coverage of women.

9. MEDIA

1.9.1 The electronic, print and traditional media will be used to create a climate for equal opportunities for women and girls. It will thus play a complementary and supportive role in awareness generation, dissemination of information and communication. Given the fact that almost all rural areas are covered by radio, special efforts will be made to utilize this medium to reach out to women.

10. MANAGEMENT STRUCTURE AT CENTRE AND STATE LEVEL

1.10.1 Women's cells should be set up forthwith in all Central and State agencies concerned with curriculum development, train-ing and research.

1.10.2 A Monitoring cell will be set up within the Planning Bureau of the Department of Education, Ministry of Human Resource Development. Similar units in the states should take responsibility for monitoring and evaluating progress.

1.10.3 A high level Inter-Ministerial Committee will be constituted by the Department Of Education, MHRD to :

    (i) review implementation of POA on a continuing basis;

    (ii) advise the government on policies and programmes related to girls education;

    (iii) activate planning mechanisms in consultation with each other to ensure provision of essential support services that will enhance girls' and women's participation in education.

1.10.4 Similar committees will be constituted at the State level.

2. EDUCATION OF SCHEDULED CASTES AND SCHEDULED TRIBES AND OTHER BACKWARD SECTIONS

1. PRESENT SITUATION

2.1.1 According to 1981 census, the population of Scheduled Castes (SCs) was 10.6 crores and that of Scheduled Tribes (STs) 5.4 crores accounting for 15.75% and 7.8 % respectively of the country's population. The corresponding figures of 1991 census are not yet available.

2.1.2 According to 1981 census, the literacy rates of SC and ST population were 21.38% and 16.40% respectively as against 41.22% of non-SC/ST population. The literacy rates of women for these categories were 10.93, 8.04 and 29.43 percent respectively. The corresponding figures of 1991 census are not yet available. The proportion of enrolment of SC/ST children continues to be much less than their population proportion except in the case of primary education where the enrolment ratios are comparable to the general enrolment. But this is possibly due to the higher proportion of over-age children amongst these categories.

2.1.3 The drop-out rate among SC/ST students continues to be very high at all levels of education. The drop-out rates for the year 1987-88 amongst SC, ST and general population are given below:-

Drop-out Rates (1987-88)

Classes	SC	ST	General
I-V	51.60	65.21	46.97
I-VIII	68.81	80.01	62.29
I-X	81.98	87.62	75.30

2.1.4 The NPE, 1986 was unambiguous about removal of disparities and attainment of equalisation of educational opportunities for SCs, STs and other Backward Sections, specially for girls. The POA detailed a number of strategies aimed at accelerating their rate of enrolment and retention. The NPERC as well as the JRC have reiterated the need for concerted efforts for bringing about equality of educational opportunity and achievement for SCs, STs and other backward sections of the society. However, despite the policy imperatives, the implementation of the various schemes has not been commensurate with the goals set up for each scheme.

2.1.5 A number of Centrally Sponsored Schemes are being continued in the 8th Five Year Plan (1992-97) for SCs, STs and other backward sections. These are (i) Post-matric scholarships; (ii) Grant-in- aid to voluntary organisations; (iii) Pre-matric scholarships for children of those engaged in un-clean occupations; (iv) Book banks; (v) Boys' and Girls' Hostels; (vi) Coaching and allied schemes. In addition to these, two schemes in the central sector have also been approved, viz., (i) special educational development programme for girls belonging to SCs of very low literacy levels, and (ii) educational complex in low literacy pockets for development of women's literacy in tribal areas. These programmes are in addition to the special thrust given to the weaker sections in the general programmes for educational development like opening of schools, running of Non-Formal Education (NFE) centres and adult education centres, schemes of Operation Blackboard, upgradation of merit of SC/ST students, reservation in educational institutions, etc.

2. ELEMENTARY EDUCATION

2.2.1 Taking into account the experience gained in the implementation of NPE, 1986 and POA, the following strategies are proposed:

(a) Access and Enrolment

2.2.2 In order to ensure universal access and enrolment of SC children in rural areas, henceforth, in opening primary and upper primary schools priority would be given to the needs of SC habitations and hamlets. As far as possible pre-primary section will be an integral part of such schools.

2.2.3 Every Scheduled Tribe habitation will be provided with a primary school or other suitable institution before the end of the 8th Five Year Plan in order to ensure universal enrolment and participation.

2.2.4 In tribal areas educational plan will be implemented in an integrated manner. Pre-school education (through Balwadis), Non-Formal Education, elementary education and adult education will be organically linked and integrated to ensure achievement of total literacy of the entire population. This integrated Educational Complex will be responsible for total education within its area serving all children in the age-group 3-14 and adults in the age-group 15 and above.

2.2.5 For SC children access and enrolment will be assured primarily in the formal school. Where SC children are not able to attend the formal school provision for non-formal and distance education centres will be made to ensure universal access and enrolment.

2.2.6 It will be the responsibility of the teachers to organise drives at the beginning of every academic session to enrol all school-age children specially girls belonging to SCs, STs and other backward sections. For this purpose active assistance of voluntary agencies and local communities shall be taken. Traditional and folk media can be very effective in reaching parents and children in remote areas to motivate them.

(b) Participation

2.2.7 Adequate incentives will be provided for the children of SC, ST and other backward sections in the form of Scholarships, Uniforms, textbooks, stationery and mid-day meals.

2.2.8 All schools, NFE centres and pre-school centres in SC/ST habitations will be equipped with necessary and essential infrastructural facilities in accordance with the norms laid down for Operation Blackboard and for achieving Minimum Levels of Learning (MLL).

2.2.9 Operation Blackboard shall cover within a period of two years all schools in tribal areas and Harijan Bastis irrespective of the date on which the school was set up.

2.2.10 The indigent families among SC/ST will be given incentives to send their children, particularly girls, to schools.

(c) Achievement

2.2.11 Children from tribal communities will be taught through the mothertongue in the earlier stages in primary school. Teaching/learning material in the tribal languages will be prepared providing for a transition to the regional language by Class III.

2.2.12 The home language of children of SC/ST may be different from others. Therefore, standard teaching/learning material will be re-written to make them intelligible to the SC/ST children especially in areas where the standard language and the learners' dialect are different.

2.2.13 It will be ensured that MLL already set-up for primary schools will be achieved, that the necessary standards of three Rs are acquired by all children in SC/ST communities. Effective methodologies for measurement of MLL will be implemented.

3. ADULT EDUCATION

2.3.1 Adult education programmes will be an integral part of educational micro-planning in all tribal areas.

2.3.2 Under the total literacy campaign SC and ST populations will be the major focus for achieving total literacy. Special attention will be paid to adult illiterate women.

2.3.3 Adult education programmes for SCs/STs will essentially be programmes of empowerment. Special and relevant curricula and materials shall be prepared for this purpose as a crash programme.

2.3.4 Post-literacy centres will be set up in SC/ST areas where literacy campaigns have been carried out in order to provide facilities for continued literacy for adult neo-literates specially women.

4. INCENTIVES

2.4.1 Under the scheme of pre-matric and post-matric scholarships, the rates will be linked with the increase in the cost of living index.

2.4.2 Scholarships for SC/ST students in upper primary (middle) school and onwards will be distributed through bank/post-office. Scholarships will be payable in advance on the first day of each month. Special provisions will have to be made to allow minor children to operate bank accounts.

2.4.3 Coaching, training and remedial teaching classes will be organised for students of SC/ST and other backward sections in order to enhance the scholastic achievement of these students. Special coaching for entrance examinations for institutions of higher learning, particularly for professional courses to be provided to SC/ST students of Classes X and XII.

2.4.4 Residential facilities will be provided for SC/ST students preparing for competitive examinations.

2.4.5 Additional scholarships will be provided for SC/ST girl students in the secondary and senior secondary classes. Special coaching and remedial courses will be organised for SC/ST girl students.

2.4.6 Merit Scholarship Schemes covering A Grade students will be implemented in all the States.

2.4.7 Books of proven quality including classics from Indian and foreign languages will be abridged, adapted, translated and reproduced and made available at subsidised rates to the children and neo-literates in SC/ST communities.

5. RESERVATIONS

2.5.1 Implementation of reservation will be monitored at all levels and failure to adhere to the same will be made punishable.

2.5.2 Reservation in recruitment of teachers from SC/ST communities will be ensured in all educational institutions.

2.5.3 In Navodaya Vidyalayas, admission for SCs and STs are reserved on the basis of either the national norm of 15% and 7.5% respectively or of the percentage of SC and ST population in the district, whichever is higher. This principle will be considered for adaptation by State Governments in other educational institutions, wherever feasible, the criterion of reservation being the national percentages of 15 and 7 1/2 or the State percentages of SC and ST or the district percentages of SC and ST, whichever is higher.

2.5.4 Through an appropriate scheme facilities will be provided to SC/ST children for studying in reputed private educational institutions of high quality. Reservation will be provided for SC/ST children in schools which receive grant-in-aid.

6. TEACHERS AND THEIR TRAINING

2.6.1 Where teachers are not available in schools located in SC/ST localities, crash programmes for giving suitable training to eligible persons from SCs/STs will be started. The eligible amongst them will be appointed as teachers in the schools.

2.6.2 Specified teacher training institutions such as DIETs will be identified for training of SC/ST teachers on a large scale.

2.6.3 In order to encourage SC/ST students to become teachers special courses integrating secondary, senior secondary and professional training wil be devised. This will encourage such candidates to opt for the teaching profession from an early stage and get adequate training as teacher.

2.6.4 Wherever possible husband-wife teams will be posted as teachers in tribal areas. This will ensure high participation by such teachers in school education.

7. ADDITIONAL MEASURES

2.7.1 A chain of pace-setting institutions from primary to higher secondary will be established in areas of SC/ST concentration for providing quality education to talented learners as well as for upgrading the achievement levels of comparatively slow learners in these communities.

2.7.2 Education in tribal areas should be linked with outdoor activities. Many tribal children excel in sports, games and other out-door activities. Such talent must be identified and nurtured. Adequate coaching will be provided at early stages so that these talented sportsmen and women can participate in sporting activities and competitions. Scholarships will be provided for such students paying special attention to their dietary requirements.

2.7.3 There is need for improvement in the standards of hostels for SC/ST students. Special attention has to be paid to the nutritional need of the students. As far as possible hostels should be managed by teachers. Hostels for SC girls should be constructed in or around the vicinity of the school/college where the girls are enrolled and adequate security measures should be provided. Hostels should preferably be run by Non-Governmental Organisations(NGOs).

2.7.4 There is need to incorporate in the school curriculum philosophy of Dr. Ambedkar which emphasised an untiring effort to alleviate the educational standards of SC/ST persons, an inculcation of an understanding among teachers and students about the richness of the culture of SC/ST and of their contribution to culture and economy.

8. OTHER EDUCATIONALLY BACKWARD SECTIONS

2.8.1 Special efforts will be made to improve the educational infrastructure in remote and inaccessible areas, border areas, islands and hilly and desert areas and areas of concentration of educationally backward sections. Measures will also be taken to ensure that incentives in the form of scholarships, uniforms, books, stationery, etc. reach the clientele groups.

9. MONITORING

2.9.1 In addition to the monitoring by the existing scheme, monitoring of education in SC/ST areas will be entrusted to the local community/village education committee with adequate representation of SC/ST members specially women. The local community will take the total responsibility of planning the educational facilities in SC/ST areas.

2.9.2 In most of the States and at the Centre the incentive programmes like scholarships, mid-day meals, free uniforms, etc. and setting up of hostels and Ashram Schools for SC/ST are being implemented by the Welfare Departments, while the Departments of Education run programmes of setting up of schools, appointment of teachers, preparation of textbooks, curriculum, etc. which cater to SC/ST students as a part of the general programmes of the Education Departments. It would, therefore, be appropriate that the monitoring is done by the respective departments implementing the programmes. The Joint Monitoring System developed for this purpose by the Ministry of Human Resource Development, Ministry of Welfare and Planning Commission will be taken up earnestly.

2.9.3 In some States, educational institutions for Scheduled Tribes are being run by agencies other than the Education Department. It is better that these are managed by Department of Education.

10. EVALUATION OF SCHEMES

2.10.1 A number of evaluation studies have been conducted on the implementation of Centrally Sponsored Schemes as well as schemes of the State Governments. For example, in the recent past, the post-matric scholarship scheme has been reviewed by the Department of Personnel and by NIEPA. Pre-matric scholarship schemes of the State Governments have been evaluated by NCERT. The Girls' Hostel scheme was reviewed by three research organisations under the scheme of evaluation of the Department of Education. Many studies have also been conducted under the programmes of assistance of Ministry of Welfare, NIEPA, NCERT, Tribal Research Institutes, etc. But there does not seem to be a proper follow up of the reports.

2.10.2 What is needed is a systematic documentation and utilisation of the findings of the reports for taking corrective action.

3. MINORITIES' EDUCATION

1. PRESENT SITUATION

3.1.1 Articles 29 and 30 of the Constitution of India guarantee the rights of minorities to conserve the language, script and culture and to establish and administer educational institutions of their choice whether based on religion or language. So far as minorities are concerned the following constitutional gaurantees have been provided which are in addition to Articles relating to Fundamental Rights in part III of the Constitution :

    (i) Article 29. Protection of interests of minorities.

    29(1) Any section of the citizens residing in the territory of India or any part thereof having a distinct language, script or culture of its own shall have the right to conserve the same.

    29(2) No citizen shall be denied admission into any educational institution maintained by the State or receiving aid out of State funds on grounds only of religion, race, caste, language or any of them.

    (ii) Article 30. Right of Minorities to establish and administer educational institutions.

    30(1) All minorities, whether based on religion or language, shall have the right to establish and administer educational institutions of their choice.

    30(1A) In making any law providing for the compulsory acquisition of any property of an educational institution established and administered by a minority, referred to in clause (1), the State shall ensure that the amount fixed by or determined under such law for the acquisition of such property is such as would not restrict or abrogate the right guaranteed under that clause.

    30(2) The State shall not, in granting aid to educational institutions, discriminate against any educational institution on the ground that it is under the management of minority, whether based on religion or language.

    (iii) Article 350A. Facilities for instruction in mother-tongue at primary stage.

It shall be the endeavour of every State and of every local authority within the State to provide adequate facilities for instruction in the mother-tongue at the primary stage of education to children belonging to linguistic minority groups; and the President may issue such directions to any State as he considers necessary or proper for securing the provision of such facilities.

3.1.2 The implementation of the above guarantees has been uneven although the various Conferences of Education Ministers, Government of India Memorandum of 1956 as also the Statement on Languages in 1958 etc., have been laying emphasis on the special treatment to linguistic minorities. Efforts should be made to safeguard these constitutional guarantees more vigorously.

3.1.3 According to 1981 Census, the religious minorities constitute about 17.4% of the population of which Muslims are 11.4%, Christians 2.4%, Sikhs 2%, Buddhists 0.7% and Jains 0.5%. The High Power Panel on minorities, SC/ST and other weaker sections, appointed by Ministry of Home Affairs and headed by Dr. Gopal Singh has identified Muslims and Neo-Buddhists as educationally backward at national level. Subsequently, the Government have extended to neo-Buddhists all the benefits which are available to Scheduled Castes. The State Governments may identify other groups which are educationally backward at the State level. Special efforts need to be taken to bring the educationally backward minorities on par with the rest of the society and to make them participate fully in the national developmental activities. The census data of 1991 in respect of minorities is not yet available.

3.1.4 The National Policy on Education (NPE) 1986 states the following regarding education of minorities vide para 4.8 of the document: "Some minority groups are educationally deprived or backward. Greater attention will be paid to the education of these groups in the interest of equality and social justice. This will naturally include the constitutional guanrantees given to them to establish and administer their own educational institutions, and protection to their languages and culture. Simultaneously, objectivity will be reflected in the preparation of text books and in all school activities, and all possible measures will be taken to promote an integration based on appreciation of common national goals and ideals, in conformity with the core curriculum." This has been reiterated in the Revised Policy Formulations.

2. 15-POINT PROGRAMME FOR THE WELFARE OF MINORITIES

3.2.1 Former Prime Minister Smt. Indira Gandhi issued a 15-Point Directive on welfare of minorities to the Central and State Governments in May, 1983. Point Nos. 11 and 12 concern education of minorities.

Point No.11: In many areas recruitment is done through competitive examinations. Often minority groups are handicapped in taking advantage of the educational system to compete on equal terms in such examinations. To help

them to overcome these handicaps, steps should be taken to encourage the starting of coaching classes in minority educational institutions to train persons to compete successfully in these examinations.

Point No.12: The acquisition of technical skills by those minorities who are today lagging behind would also help in national development. Arrangements should be made to set up ITIs and Polytechnics by Government or private agencies in predominantly minority areas to encourage admission in such institutions of adequate number of persons belonging to these areas.

3. ON-GOING PROGRAMMES FOR MINORITIES' EDUCATION

(i) Scheme of Coaching Classes for Competetive Examinations

3.3.1 The University Grants Commission introduced a Coaching Scheme in 1984 to prepare students belonging to educationally backward minorities to enable them to compete in various competitive examinations for recruitment in services and for admission to professional courses including Engineering, Medical etc.

3.3.2 The U.G.C. is currently implementing the scheme in 20 Universities and 33 colleges. Besides these, two Regional Resource Centres, one each at Calicut and Aligarh Muslim University, have been set up with the objective of preparing teaching and learning materials and also for conducting orientation programmes for the functionaries of the Coaching Centres. So far, during the period 1984-90, 24,000 candidates have availed of the facility of Coaching Classes. UGC has incurred a total expenditure of Rs.140.00 lakhs on the implemntation of the scheme. The number of successful candidates is approximately 1,900.

3.3.3 A Standing Committee of UGC reviewed the scheme and on the basis of its recommendations the scheme was revised in 1988. The Standing Committee has been making periodic visits to the centres and has suggested further changes to improve the quality of the scheme. UGC has accepted to carry out these changes. This needs to be pursued.

3.3.4 Ministry of Welfare had launched during 1990-91, a scheme of pre-examination coaching/training to prepare candidates belonging to educationally and economically backward minority communities for various competititve examinations/professional courses/entrance examinations through reputed minority voluntary organisations. 36 Pre-examination coaching/training centres were sanctioned till March, 1991.

3.3.5 The Planning Commission has agreed to include a scheme of pre-examination coaching for weaker sections based on economic criteria under the 8th Five Year Plan. The modalities are being worked out by the Ministry of Welfare.

(ii) Community Polytechnics in Minority Concentration Areas

3.3.6 The scheme of Community Polytechnics was initiated in 1978-79 with a view to ensuring for the rural society a fair share of benefits from the investments in technical education system. The major areas of activities of Community Polytechnics are socio-economic surveys, training programmes for providing skills to unemployed persons for self/wage employment, organising technical services in villages etc.

3.3.7 As a part of implementation of the 15- Point Programme, ten polytechnics were selected during 1984-85 in minority concentration areas for upgrading them as community polytechnics. At present, all the 41 minority concentration districts listed in POA-1986 have been covered by Community Polytechnics or their Extension Centres.

(iii) Training programmes for principals/managers/ teachers in minority managed schools.

3.3.8 NCERT has been organising seminars and training programmes for principals/teachers of minority managed schools. The programmes include seminar cum workshop for principals and managers, and training programmes for teachers from minority managed institutions in subject areas of English, Science, Mathematics, Vocationalisation of education and Educational Evaluation. Such training programmes are also being organised by the Regional Resource Centres. About 1400 Principals and teachers have been trained so far.

(iv) Guidelines for recognition of Minority Managed Institutions

3.3.9 The Union Department of Education have prepared policy norms and principles for recognition of educational institutions as minority managed institutions and these have been circulated to State Governments for enabling them to prepare detailed guidelines in the matter. However, the response from State Governments has not been encouraging. These guidelines need to be vigorously pursued and effectively monitored.

(v) Review of Text-Books from the Stand-Point of National Integration

3.3.10 The programme of review of text books from the point of view of providing communal harmony, secularism and national integration is being implemented jointly by the NCERT and State Governments. NCERT takes up review

of Text-Books of State Governments on sample basis. A Steering Committee has been set up at national level to make this programme a regular feature. A meeting of the National Steering Committee was organised at International Institute of Dravidian Linguistics, Trivandrum (Kerala) on 19-20 April, 1991 to consider the report of the work done and formulate its recommendations. A workshop to evaluate History and Language text-book of West Bengal, Assam, Manipur and Tripura was held at North Bengal University from 13th to 16th March, 1992.

(vi) Programmes identified for State Governments

3.3.11 The Programme of Action 1986 listed a number of other programmes to be taken up by the State Governments for the upliftment of educationally backward minorities. However, most of them have not been taken up because of paucity of funds.

(vii) Monitoring

3.3.12 A quarterly monitoring report on action taken on programmes envisaged under POA is submitted to Ministry of Welfare. The quarterly report, however, are not regularly submitted by the State Governments.

4. REVISIONS SUGGESTED IN THE EXISTING POA/STRATEGIES OF IMPLEMENTATION

3.4.1 In school education and adult education sectors, areas of concentration of educationally backward minorities to be taken care of by an Area Approach with Block/Tehsil as a unit where specially designed programmes would be implemented to ensure accelerated progress.(Action : Deptt. of Education - Centre and States/UTs).

3.4.2 Suitable Centrally Sponsored/ Central Schemes should be formulated in the 8th Five Year Plan for implementing the strategies for the development of educationally backward minorities. (Action : Deptt. of Education, Ministry of HRD and Planning Commission).

3.4.3 A revised list of minority concentration districts and blocks/Tehsils should be prepared by the Ministry of Welfare taking into account all relevant facts. Schemes for the development of the Minorities should be designed for such districts and tehsils/blocks (Action : Ministry of Welfare; Deptt. of Education, Ministry of HRD).

3.4.4 Non Formal Education equivalent to primary schooling to be adequately provided in areas of concentration of educationally backward minorities. The Scheme of Non Formal Education needs to be reviewed and strengthened accordingly. This is necessary to reduce the drop-out rate. (Action : Deptt. of Education - Centre and States/UTs).

3.4.5 A time-bound crash programme of school improvement with an in- built mechanism for covering minority con-

centration areas with the on-going programmes of Operation Blackboard, Non-formal Education and District Institute of Education and Training to be implemented on priority basis. (Action : Deptt. of Education, Centre and States/UTs).

3.4.6 Remedial coaching schemes for SC/ST students to be extended to students belonging to educationally backward minorities also. Remedial coaching should also include enrichment classes for the relatively better students. (Action : Deptt. of Education/States/UTs.).

3.4.7 In the higher education sector, educational trusts, foundations and non-Governmental organisations to be supported and strengthened to cater to the educational needs of educationally backward minorities. (Action : UGC/State Govts./UTs).

3.4.8 In areas where there is concentration of the educationally backward minorities, girls hostels to be constructed in schools and colleges on a priority basis. (Action : Deptt. of Education, Centre/States, Ministry of Welfare and U.G.C.).

3.4.9 Studies and surveys to be commissioned on selective basis by Research organistions, Universities and other Central and State Agencies. (Action : Deptt. of Education - Centre and States/UTs, Ministry of Welfare, NCERT, U.G.C., Planning Commission, ICSSR).

3.4.10 The safeguards guaranteed in the Constitution to linguistic and religious minorities in respect of education at the primary and secondary stages to be effectively implemented. (Action : Deptt. of Education - Centre and States/UTs).

3.4.11 A centrally sponsored/central scheme to be launched in areas of minority concentration to ensure the availability of Urdu knowing teachers in schools. Facilities for instruction through the medium of Urdu at the primary stage to be implemented effectively. Where the situation warrants on the basis of existing formula, the Urdu medium sections to be opened in the existing secondary schools. Urdu knowing teachers to be appointed for students offering Urdu as a medium. The number of the students belonging to educationally backward minority should be the criterion for the appointment of Urdu teachers in each class/school. and also for starting Urdu medium schools and Urdu as subject at different classes in existing schools. State Governments shall ensure that Urdu Textbooks are made available to the school students on time alongwith textbooks in English/Hindi. (Action : Deptt. of Education - Centre and States/UTs).

3.4.12 (a) A Centrally sponsored/Central scheme for the introduction of Science, Mathematics, English and Hindi etc., in traditional institutions to be formulated by the Department of Education and to be adopted by such in-

stitutions purely on voluntary basis (Action : Deptt. of Education, Ministry of HRD).

(b) The State Govts would be encouraged to establish Madrasa Boards to look after the education of the minorities. Effective administration of these boards to be ensured through adequate staff support. (Action : States/UTs.).

3.4.13 Educational programmes with a vocational bias to be introduced in the educational institutions in areas of concentration of educationally backward minorities on a priority basis. Training programme in crafts in which there are inherited skills among educationally backward minorities to be organised through craft training institutes. Efforts to be made to locate such craft training institutes in area of concentration of educationally backward minorities. Where these institutes are available, in such areas, they are to be upgraded on a selective basis as advanced craft training centres so that the inherited skills of the educationally backward minorities become more productive. Artisans' children to be given preference in admissions in ITIs. (Action : Ministries of HRD, Labour, Textiles and State Govts.).

3.4.14 The coaching scheme of UGC to be revamped and expanded to cover more minority concentration areas. Wherever necessary, new coaching centers to be opened not only in these areas but also in non-minority concentration districts for remedial and enrichment coaching, where suitable target group and facilities are available in Colleges and Universities. The existing scheme of the Ministry of Welfare for providing pre-examination coaching for minorities through reputed voluntary organisations to be strengthened and extended to provide remedial coaching. The Ministry of Welfare will have to take into consideration the involvement of non-Governmental organisations known for their interest in educational development of minorities. UGC will be exploring possibilities for adopting their scheme for coaching through reputed private institutions for recruitment to the public services. (Action : Ministries of HRD and Welfare and U.G.C.).

3.4.15 A Centrally Sponsored/Central Scheme for appointment of language teachers, funded by Government of India, will be launched in the Eighth Five Year Plan. (Action : Ministry of HRD and Planning Commission).

3.4.16 The alarming rate of drop-out among the minority students to be checked by specially designed measures. Incentives to be given to poor minority students in the shape of freeships, stipends and uniforms. They are also to be given pre-matric and post-matric scholarships by extending the scholarship schemes of SC/ST students. (Action : Ministries of Welfare and HRD).

3.4.17 Voluntary Organisations, Federations and Associations of Minority-managed institutions to be encouraged and actively associated with the functioning of minorities education. (Action : State Govts./UTs).

3.4.18 Special monitoring machinery must be set up both at the centre and States. The Monitoring Committees should be headed by eminent public persons and have representatives of the community, Voluntary Agencies and the concerned Govt. agencies. (Action : Deptt. of Education - Centre and States/UTs).

3.4.19 Scheme for Scholarships for weaker sections on merit-cum-means basis, with in-built system of placement in good institutions; fee exemption/fee concession for artisans and other weaker sections; such help could be routed through Voluntary Societies of all India repute. (Action : Deptt. of Education, Ministry of HRD; Ministry of Welfare; States/UTs.).

3.4.20 Scheme for encouraging setting up of Libraries, Reading Rooms etc. in minority concentration areas; projects in a few blocks on an experimental basis to be undertaken by State Governments which will provide adequate finances for the purpose. (Action : States/UTs.).

3.4.21 A suitable incentive scheme to be devised to encourage States achieving the targets in respect of minorities education. (Action : Ministry of HRD).

3.4.22 Arrangements for appointment of regional language teachers in Urdu medium schools may be made on a priority basis. (Action : States/UTs).

3.4.23 Voluntary Organisations should be encouraged to set up ITIs in areas of concentration of educationally backward minorities. Where required, suitable funds should be provided. (Action : Ministry of Labour, States/UTs).

5. PHASING OF TARGETS, STRATEGIES ENVISAGED AND PRIORITY MEASURES

3.5.1 Short term measures include:

(i) Imparting of Technical skills through the 41 Community Polytechnics set up in the areas of pre-dominant minority concentration. There are many areas in which Community Polytechnic programmes have not borne the desired result. Corrective measures need to taken and vigorously implemented. Due publicity and incentives, should be provided. (Action : Deptt. of Education - Centre/States).

(ii) University Grant Commission's Scheme of giving assistance to Universities/Colleges for coaching classes for students belonging to educationally backward minorities to be revamped and expended to cover more minority concentration areas. Wherever necessary, new coaching centres to be opend including in non-minority concentration areas. (Action : UGC)

(iii) Programme of Evaluation of text-books from the stand point of national integration under-

taken by NCERT and State Governments to be taken up more systematically for speedy and effective implementation of this programme. (Action : NCERT/ SCERTs)

(iv) Orintation programmes for principals/managers and training programmes for teachers of minority educational institutions taken up by NCERT/NIEPA to be intensified (Action: NCERT/NIEPA).

(v) A crash programme of School Improvement consisting of Elementary Education, Non-Formal Education and Adult Education to be implemented on priority basis in minority concentration areas. (Action : Deptt. of Education, M/O HRD).

(vi) The scheme of Resource Centres will be extended for providing training and guidance to minority educational institutions situated near these centres. (Action : NCERT, U.G.C.).

(vii) A proper monitoring machinery must be set up at the Centre and States. The Monitoring Committees should be constituted under the Chairmanship of eminent publicmen of the community and well-versed with the problems of minorities. The Committee at the Centre should have all India representation. It should include eminent persons of the community, officers from Education Department and the Ministry of Welfare of the rank of Joint Secretary, Members of Parliament, Vice-Chancellors, representatives of voluntary organisations of repute and a representative from Anjuman Taraqqi-Urdu-i-Hind. The State Committee will submit quarterly reports to the Central Monitoring Committee. Monitoring proforma for the purpose will be carefully designed. State Governments should be requested to form such committees in their respective States on the same pattern with immediate effect. They may also be requested to form District Committees. (Action : Deptt. of Education - Centre and States).

(viii) Arrangements for appointment of regional language teachers in Urdu medium schools in States may be made on priority basis. (Action : States/UTs.).

(ix) There are complaints of standards of education being lowered down in some institutions run by educationally backward minorities. Similarly there are many allegations regarding appointment of teachers and admissions in engineering, medical and other professional colleges. There are also complaints about the general management of institutions at all levels from primary schools to universities.

It is the crying need of the hour that an awakening should be created among the Muslims themselves to run and manage their institutions with academic excellence on the lines of the Institute of Mass Communication, Jamia Millia Islamia. To achieve this, Government of India should extend generous financial grant to such institutions and also provide total protection to Minority Institutions under Article 29 & 30 of the Constitution. The monitoring committees at State and Central level should be charged with the task of ensuring improvement of standards in minority managed institutions. (Action : Deptt. of Education; Ministry of HRD, Ministry of Welfare, States/UTs).

(x) Women's Community Polytechnics should be set up in minority concentration areas on priority basis. (Action : Deptt. of Education - Centre and States/UTs).

(xi) Implementation of Guidelines for Recognition of Minority managed educational institutions :

a) Clear guidelines for recognition and for timely disposal of applications. Each State Government to formulate its recognition policy and giving wide publicity to this. (Action : Deptt. of Education Central/State Governments).

b) Effective monitoring arrangements should be made to see the proper implementation of the guidelines. (Action : Deptt. of Education Central/State Governments).

c) State Governments should fix a time limit for processing applications for recognition. There should be a maximum period of three months fixed for disposal from the date of receipt of application. (Action : States/UTs).

d) The State Governments may grant automatic recognition to schools of minorities upto Class V. (Action : States/UTs).

(xii) Special attention should be paid to the minority concentration areas in locating schools so that minority children have access in matters of admission. The Ministry of Welfare will prepare a revised list of minority concentration Blocks/Tehsils (Action : Ministry of Welfare, Deptt. of Education - Centre and States/UTs).

(xiii) Urdu teachers should be appointed in all the Kendriya Vidyalayas and Navodaya

Vidyalayas located in minority concentration areas and arrangement for teaching Urdu as a subject should also be made in these schools with immediate effect. (Action : Deptt. of Education, Ministry of HRD).

(xiv) The number of students belonging to educationally backward minority shall determine the appointment of Urdu teachers and teaching of Urdu as a subject and also for establishment of Urdu medium schools. (Action : State Governments).

(xv) In the schemes of Operation Blackboard, Adult Education and Non-formal Education and other such schemes where Urdu has been neglected so far should be given due importance and Urdu teachers/instructors should be appointed in schools in minority concentration areas and arrangement for Urdu facility should be made with immediate effect. (Action : Deptt. of Education, Ministry of HRD).

3.5.2 Medium term measures include:

(i) Centrally sponsored / Central scheme of Area Intensive Programme for Educationally Backward Minorities in the light of Revised NPE (1986) and POA and the recommendations of other expert bodies. (Action : Deptt. of Education, Ministry of HRD).

(ii.a) Centrally Sponsored/Central Scheme of Modernisation of Madrasa Education by the introduction of Science, Mathematics and English/Hindi in traditional Madrasas and Maktabs on Voluntary basis. (Action : Deptt. of Education, Ministry of HRD).

(b) The State Govts. would be encouraged to establish Madrasa Boards to look after the education of the minorities. Effective administration of these boards to be ensured through adequate staff support. (Action : States/UTs.).

(iii) Centrally sponsored/Central scheme of Appointment of Urdu teachers in the States where Urdu is spoken by a substantial number of people with a view to a more effective implementation of the Three-Language Formula as envisaged in the 1968 Policy, NPE-1986 and Revised NPE-1992. (Action : Deptt. of Education, Ministry of HRD).

(iv) A Centrally sponsored/Central Scheme of Language teachers, funded by the Government of India for more effective implementation of the safeguards guaranteed under the Constitution to linguistic minorities. (Action : Deptt. of Educa-

tion, Ministry of HRD)

(v) Complaints have been received that NCERT Urdu text books are not easily available at all or if available are not available on time. A time-bound schedule should be prepared for publication and timely availabilty of Urdu textbooks along with those of Hindi and English. The Bureau for Promotion of Urdu should be directed to publish text books for primary and secondary classes on priority basis in addition to the text books being published by NCERT. For this purpose special funds should be provided to BPU. (Action : Deptt. of Education, Ministry of HRD).

(vi) An Urdu Open University may be established with a view to cater to the needs of the Urdu speaking people. (Action : UGC).

(vii) All programmes of Minorities Education should be given wide publicity through Radio, TV and Newspapers in regional and minority languages in order that the programmes launched by the Government really reach the beneficiaries. (Action : Ministry of I & B).

(viii) NCERT should bring out Urdu text books along with those of Hindi and English. The Bureau for Promotion of Urdu should be directed to publish text books for primary and secondary classes on top-priority basis. (Action : Deptt. of Education, Ministry of HRD).

(ix) There is a large concentration of minorities in urban slums. A Centrally sponsored Central Scheme be devised to cater to their educational, health and nutritional needs. Special infrastructure should be provided for implementing schemes of Operation Blackboard, Adult Education, Non-formal Education etc. (Action : Deptt. of Education, Ministry of HRD; Ministry of Urban Development).

(x) It should be ensured that the constitutional rights of the minorities in respect of opening and administration of institutions, admissions etc. are fully protected to uphold the cherished ideals of Constitution as defined in Articles 29, 30, and 350-A. (Action : Ministries of HRD, Welfare and Home Affairs, States/UTs).

(xi) Where the situation warrants Urdu medium sections may be opened in the existing secondary schools. Urdu knowing teachers should be appointed in anticipation of students offering Urdu as a medium. This will give the Urdu speaking students an opportunity to mix freely

in the schools with students whose mother tongue is not Urdu and will promote national integration. However, new Urdu medium secondary/higher secondary schools should be opened in areas of concentration of educationally backward minorities in special circumstances. In such Urdu medium schools also there should be provision for parallel sections with regional language as a medium. (Action : State/UTs.).

(xii) The Central/State Governments should release grants to minority institutions on a quaterly basis in the interest of work and effeciency. (Action : Central and State Governments/UTs).

(xiii) A suitable incentive scheme to be devised to encourage States achieving the targets in respect of Minorities Education. (Action : Deptt. of Education, Ministry of HRD).

(xiv) In areas where there is concentration of the educationally backward minorities, girls hostels to be constructed in schools and colleges on a priority basis. (Deptt. of Education Centre/States, M/O Welfare and U.G.C.).

(xv) Voluntary Organisations would be encouraged to set up ITIs in minority concentration areas. Where necessary, suitable funding would be provided. (Action : Ministry of Labour, States/UTs).

3.5.3 Long Term Programmes include:

(a) *Early Childhood Care and Education Centres*

Early Childhood Education Centres will be set up in Primary Schools in areas pre-dominantly inhabited by educationally backward minorities. Socially Useful Productive Work (SUPW) should also be introduced in such schools. The Department of Education, Ministry of Human Resource Development should prepare a scheme of assistance to State Governments in this regard. However the State Governments will be encouraged to start their own prpogrammes in ECCE. (Action : Deptt. of Education, Ministry of HRD).

(b) *Primary Education*

(i) Institutional system for compilation of statistical information required by Commissioner for Linguistic minorities regarding educational facilities. (Action : State Govts./UTs.).

(ii) Eliminating delay in sanctioning of linguistic minority teachers' posts and appointment of teachers by delegation of powers to District Collectors (Action : State Govts./UTs).

(iii) Survey on availability of text books in minority languages and setting up of printing facilities in minority languages. (Action : State Govts./UTs).

(iv) Survey on availability of teacher training facilities for teachers in minority languages and measures to enhance such capacity wherever necessary. (Action : State Govts./UTs.).

(v) Efforts will be made to utilise 15% of the curricular time for training in local crafts/trades and to arrange evening classes for children of artisans/agricultural labourers. (Action : State Govts./UTs).

(c) *Middle and Higher Secondary Education*

(i) A scheme for in-service training from minority institution teachers in Science, Mathematics, Social Sciences, English and Career guidance, through SCERT and other resource centres and State career guidance institutions. At present the NCERT has a scheme for such courses. The proposal is to extend this activity through SCERTs and other above mentioned institutions. (Action : State Govts./UTs)

(ii) A scheme for Orientation Courses for Managers and Principals of minorities institutions in modern educational techniques by SCERT. This is being done by NCERT at present on a small scale. There is need to increase the coverage. (Action : State Govts./UTs).

(iii) Scheme of appointment of regional language teachers in minority institutions for national integration and for implementation of the Three Language Formula. (Action : State Govts./UTs).

(iv) A scheme of remedial coaching in minority managed educational institutions. This sheme should also provide for enrichment classes for better students. (Action : State Govts./UTs).

(v) Minority managed educational institutions will be given fair representation in the scheme for computer literacy in school education (Action : State Govts./UTs).

(d) *Higher Education*

In the higher education sector, educational trusts, foundations and non-Governmental organisations to be supported and strengthened to cater to the educational needs of educationally backward minorities. (Action : Deptt. of Education Centre and States/UTs, Ministry of Welfare and State Welfare Departments).

(e) Vocational and Technical Education

Provision of vocational courses in higher secondary schools specially catering to educationally backward minorities. (Action : State Govts./UTs).

Ensuring that in all the programmes on technical and vocational education included in the policy, minority run institutions derive full benefit. (Action : State Govts./UTs).

Setting up Crafts Training Institutes in identified minority artisan concentration blocks, with 80% seats for artisans' children. Where these institutions are available, they are to be upgraded on selective basis as Advanced Craft Training Centres. Artisans children should be given preference in admission to ITI's (Action : Ministries of Labour and Textiles, State Govts./UTs).

(f) Women's Education

(i) As the women literacy and the girls enrolment is lowest among educationally backward minorities, in the schemes of opening of girls schools, appointment of lady teachers, opening of girls' hostels and providing of incentives in the form of mid-day meals, uniforms etc. Minorities needs should be fully met. (Action : State Govts./UT's).

(ii) A Production-cum-Training Centre for crafts exclusively for girls preferably with women instructors to the extent possible in each of the identified minority concentration districts. (Action : State Govts./UTs).

(g) Voluntary Effort in Adult Education & Early Childhood Education

Orientation Courses for professionals from minority communities to motivate voluntary effort; attaching one centre to all minority institutions to create awareness of these schemes and to train supervisors for multiplier effect. (Action : State Govts./UTs).

(h) Libraries, Reading Rooms and Extension Work

Scheme for encouraging setting up of libraries, reading roooms etc. in minority areas; projects for educational ex-tension work in a few blocks on an experimental basis. (Action : State Govts./UTs)

(i) *Scheme for Scholarships* — Scheme for scholarships for weaker sections on merit-cum-means basis, with in-built system of placement in good institutions; fee exemption/fee concession for artisans' children and other weaker sections; such help could be routed through Voluntary Agencies of All India repute. (Action: Deptt. of Education - Centre/States, Ministry of Welfare).

6. ORGANISATIONAL AND MANAGEMENT ISSUES

(i) Bench Mark Survey and Research Studies

3.6.1 Arranging Bench mark Survey and periodical surveys to assess the increase in literacy and in educational attainments; scheme for periodical research studies on various aspects to improve the effectiveness of remedial measures especially relative availability of schools in minority concentration areas. (Action : State Governments/UTs).

(ii) Association of Educationally Backward Minorities with Boards of Education and other Advisory Bodies

3.6.2 Educationally Backward minorities to be associated with various Education Boards and Advisory Committees at Central and State levels. (Action : Deptt. of Education Central/State Governments).

(iii) Monitoring Arrangements

3.6.3 A Cell will be created in the Union Education Department and in the State Education Departments exclusively for monitoring implementation of programmes for educationally backward minorities.

(iv) Review and Evaluation

3.6.4 There shall be a departmental review and evaluation by an outside agency of all minority education programmes every year.

4. EDUCATION OF THE HANDICAPPED

1. PRESENT SITUATION

4.1.1 It is estimated that about 12.59 million children with disabilities are to be provided education in the school system. The details are as follows :

		Figures in Million
Projected Population of children with disability in the age-group 5-14 years[@]		3.19
Locomotor Handicap	1.48	
Hearing Handicap	0.65	
Speech Handicap	0.91	
Visual Handicap	0.15	
Mentally retarded children in the age group 5-14 *		3.60
Children with learning disability in the age group 5-14		3.60
Children with disability in the age group 16-18 years		2.20

@ The 1981 figures of the survey by NSSO have been extrapolated on the assumption that population with disabilities would have grown at the same rate as the general population.

* Estimated at 1% of the population in the age group 5-14 years.

Out of these, about half a million require vocational training.

4.1.2 The educability of another 2 million disabled children is to be improved through early intervention and services by ECCE.

4.1.3 At the end of 1991-92 about 30,000 children with disability were availing special benefits under the scheme of Integrated Education for Disabled Children (IEDC). In addition, about 60,000 children with mild disabilities received resource support without special benefits. A large number of children with disability are also receiving education in special schools which number about 1035.

4.1.4 The Project Integrated Education for Disabled (PIED) is being implemented, as a field demonstration, in one block each in ten States and Union Territories. In these blocks about 90 per cent of children with disability are receiving education in general schools per pupil in these blocks is now around Rs. 2,000/- and is likely to come down further as the number of beneficiaries increases. General teachers feel confident and motivated as their status in the community has improved due to the services they provide.

4.1.5 The innovative multi-category training of resource teachers has been found to be effective and has been institutionalised in the Regional Colleges of Education, the universities offering special education courses and the training programmes organised by Non-Governmental Organisations.

4.1.6 Each DIET has been provided a resource centre for orienting elementary teachers and establishing field demonstrations in lab areas. Faculty from 102 DIETs have so far received induction training at the NCERT.

4.1.7 The Ministry of Welfare had taken steps to ensure supply of trained manpower to special schools and improve standards in these schools through the National Institutes for the Handicapped (NIHs) and increased support to NGOs.

4.1.8 The Ministry of Labour manages 17 Vocational Rehabilitation Centres (VRCs) for the handicapped and helps in their placement also. About 66,000 persons with disability have been rehabilitated under this scheme by September, 1991. Three percent of seats for admission to ITIs and under the Apprenticeship Training Scheme are available for handicapped persons. These seats are being fully utilised.

4.1.9 The evaluation of special schools and the scheme of IEDC has revealed some grey areas. General education system is not yet mobilised, to a noticeable extent, for education of the handicapped, either at the Central or State level. Inputs from different schemes like CBR, DRC, ECCE, non-formal education, adult education, vocational and technical education, etc. are not being brought together for the education of the physically handicapped. Some States are still reluctant to implement IEDC while some are implementing it rather indifferently. Few NGOs are active in rural areas. The standard of education in special schools needs improvement. Facilities for the education of children with multiple handicaps are yet to be developed. The early detection and intervention programmes so essential for education of these children have yet to be started. The goal of UEE for this disadvantaged group would remain an unachievable dream unless concerted and urgent measures are taken.

2. NPE REVIEW PERSPECTIVE

4.2.1 As part of its concern for equalisation of educational opportunities, the NPE, 1986 focuses on the needs of children with disabilities. The NPE, 1986 recommended an integrated education in general schools for children with locomotor handicaps and with other mild disabilities, orientation and pre-service training of general teachers to meet special needs of these children, provision of vocational training, establishment of special schools for severely dis-

abled children and encouragement of voluntary organisations in these tasks. The POA suggested a pragmatic placement principle. It postulated that a child with disability who can be educated in a general school should be educated in a general school only and not in a special school. Even those children who are initially admitted to special schools for training in plus curriculum skills should be transferred to general schools once they acquire daily living skills, communication skills and basic academic skills.

3. TARGETS

4.3.1 For achieving equalisation of educational opportunities, children with disability should have access to quality education comparable to other children. However, considering the financial resources likely to be available during the 8th Plan the targets for education of disabled children would be as follows:

(i) Children who can be educated in general primary schools

(a) Universal enrolment by the end of 9th Five Year Plan.

(b) Ensuring achievement of minimum level of learning through adjustment and adaptation of curriculum and teaching to special needs.

(ii) Children who require to be educated in special schools or special classes in general schools

(a) Universal enrolment by the end of the 9th Five Year Plan.

(b) Ensuring achievement of level of learning commensurate with their potential.

(iii) Reduction of drop out rates on par with other children.

(iv) Providing access to disabled children to secondary and senior secondary schools with resource support and making special provision for vocational training of these children, particularly those with intellectual disabilities.

(v) Reorienting pre-service and in-service teacher education programmes including pre-school teachers training programmes to meet special needs in the classroom.

(vi) Reorienting adult and non-formal education programmes to meet educational and vocational training needs of persons with disability.

4. IMPLEMENTATION STRATEGIES

4.4.1 The strategy of area-specific and population-specific micro-planning for UEE is equally relevant for this disadvantaged group. Planning for UEE and adult literacy at all levels - Centre, State, District, Block and Project - should provide for the educational needs of this category of children.

4.4.2 Education of children with disability will be a component in the training of educational planners and administrators as well as preservice and inservice teachers. DIETs, CTEs and IASEs which have been provided facilities for this component will have to pay particular attention to this aspect of teacher training. While drawing up schemes for strengthening SCERTs, cells for education of the handicapped may be considered as envisaged in IEDC.

4.4.3 The material supplied under Operation Blackboard will have to take into consideration special needs of these children. School buildings will have to take note of architectural adjustments needed to ensure access to children with disability, at the construction stage itself so as to avoid expenditure on modifications later on. Special schools need to be opened in the districts which have no special school facilities. The education of the handicapped should form an essential component in all externally assisted basic education projects being implemented or proposed to be implemented.

5. INTEGRATED EDUCATION FOR DISABLED CHILDREN (IEDC)

4.5.1 The POA, 1986 target of increasing enrolment of children by 25 per cent per year was achieved as enrolment of disabled children in general schools increased from 15,000 to 30,000. Subject to availability of resources, the cumulative enrolment would reach 50,000 by the end of the 8th Plan. However, an additional 1,00,000 children with mild disabilities will be provided resource support from teachers and learning aids and equipment.

4.5.2 The following actions are needed for achieving the targets laid down:

(i) Adequate allocations of resources.

(ii) Provision for education of persons with disability should be made an integral component in externally assisted basic education projects.

(iii) Provision for education of disabled children should be made in the Centrally Sponsored Schemes of Operation Blackboard, Vocationalisation of Education and Non-Formal Education.

(iv) Co-ordinated implementation of schemes like Community Based Rehabilitation, ECCE, VRCs and IEDC so as to reduce cost and achieve higher coverage. This would require coordination among the Ministries/Departments of Health, Welfare, Education, Women & Child Development and Labour.

(v) The NGOs have to be encouraged to implement IEDC, particularly in rural areas. The NGOs involved in other educational activities will be encouraged to work in this area also and assisted in developing their expertise.

6. SPECIAL SCHOOLS

4.6.1 The POA envisaged provision of an additional 400 special schools at the district headquarters. However, because of resource constraints no new special school has been established. The Ministry of Welfare has identified 240 districts without any special schooling facility. Efforts would be made to provide special schools in these districts by the end of 9th Five Year Plan.

7. VOCATIONAL TRAINING

4.7.1 The Ministry of Labour is providing vocational training to the handicapped through the Craftsman Training Scheme (CTS), the Apprenticeship Training Scheme and separate Vocational Rehabilitation Centres (VRCs). Three per cent of the seats for admission to ITIs under the Craftsman Training Scheme and Apprenticeship Training Scheme are reserved for candidates who are handicapped but have aptitude and are otherwise fit to undergo the required training. The States/UTs have been advised from time to time to implement this reservation for the handicapped which will be continued during the 8th Plan also. Seventeen VRCs will continue to provide training to a larger number of handicapped persons during the 8th plan. The instructors in ITIs will receive orientation to meet special needs of handicapped persons. This component will be added in ITI instructor's training programme. Adjustment and adaptation of equipment to provide full access to disabled persons will be ensured.

4.7.2 The National Institutes for the Handicapped under the Ministry of Welfare will continue their efforts to provide vocational training to the handicapped.

4.7.3 The Department of Education will also encourage voluntary organisations working in the area of vocational education and training for the handicapped. The CIVE will provide support to vocational training programmes for the handicapped through teacher training material and other resources.

8. ORIENTATION AND TRAINING OF TEACHERS

4.8.1 All the DIETs to be established by the end of the 8th Plan will have a resource room and trained faculty to teach the essential component of education of children with disability. They will also run orientation programmes for teachers at least from lab areas and practising schools to establish field demonstration of IEDC programme. The SCERTs will support field demonstrations under the scheme of IEDC. Similar action is suggested for the 250

CTEs and 50 IASEs. The budget provision is available in the scheme itself. The pre-service training curriculum will induct essential components in these areas, wherever it has not been done so far.

4.8.2 All in-service teachers should receive awareness input on education of children with disability in orientation programmes. In each area/institution where IEDC is implemented all teachers will receive orientation as envisaged in the scheme of IEDC. The heads of institutions and educational administrators will also receive training. Considering the large numbers to be covered, the Indira Gandhi National Open University and NCERT should plan credit courses on special education to equip general teachers to meet special needs. The NCERT will provide training to the IEDC cell staff. Multicategory training of resource teachers will be encouraged in UGC supported programmes.

9. TRAINING OF EDUCATIONAL ADMINISTRATORS

4.9.1 The NIEPA in collaboration with NCERT should develop programmes for training educational administrators and making them aware of the needs of this group. The IGNOU should design and offer courses for this target group also.

10. SPECIAL TEACHERS

4.10.1 The NIHs and its regional training centres have built up capacity to train single disability special teachers for special schools. Besides meeting demands of the new special schools, the existing untrained teachers will be trained and backlog cleared by the end of the 8th Plan. Inservice training of special teachers will be planned in a way that each teacher receives a three-week course every four years.

4.10.2 Efforts will be made to promote special education units in university departments of education for training teachers to handle multicategory disabilities.

11. EDUCATIONAL AND VOCATIONAL GUIDANCE PERSONNEL

4.11.1 The existing educational and vocational guidance counsellors should be provided training in dealing with disabled children and their parents. Essential component should also be added to their preservice training programmes. The NCERT and NIHs should design and offer in-service course for in-service counsellors.

12. CONTENT AND PROCESS

4.12.1 Curriculum flexibility is of special significance for these children. Special needs of these children will be met, if child centred education is practised. The curriculum adjustment and adaptation of teaching methods and material

will be worked out, field-tried and provided to the users. The following actions will be taken:

(i) Guidelines for child centred education, including special needs in the classroom, being developed at the NCERT will be made available by mid 1993.

(ii) Guidelines for adjustment of curriculum and instructional material and methods for visually and hearing handicapped at primary level have been developed. These will be made available to teachers. Work for upper primary and secondary school level will be started and completed by the end of 1994.

(iii) The achievement of minimum levels of learning by children with mild disabilities should be ensured through resource support and alternative learning material, wherever needed.

(iv) The Boards of Examination should make adjustment and adaptations in examination for the handicapped children.

(v) Study of more than one language should not be compulsory for deaf children.

(vi) Teaching of Science and Mathematics is either not available to handicapped children or they opt for an easier substitute. Special efforts should be made by the NIHs and the NCERT to develop an action programme to improve access of disabled children to these important areas.

(vii) Child-to-child help in education of children with disability is an effective resource in view of large classes and multigrade teaching. NCERT should develop a package and make it available to teachers by the end of 1993.

(viii) The special learning aids and equipment like braille books, braille kit, audio visual material will be developed and made available to schools by NIHs and NCERT.

13. USE OF MASS MEDIA

4.13.1 Radio and television are being used in a limited way both for advocacy as well as educational purposes. The CIET, SIETs, NIHs and other organisations will develop a variety of programmes so that they can be regularly telecast/broadcast. The MHRD will approach the Ministry of Information and Broadcasting for providing adequate time for this purpose.

4.13.2 The CIET, SIETs and NIHs will also develop software in non-telecast mode and make it available to DIETs, other training centres and NGOs working with disabled persons.

4.13.3 Field publicity units should be utilised by States for advocacy programmes. Newspapers and magazines have started popular advocacy and educational writing in this area. The NCERT and the NIHs will develop packages and hand over to journalists in workshops.

14. AVAILABILITY OF SPECIAL LEARNING MATERIAL AND AIDS

4.14.1 Learning material in braille is still not available to all children. Same is the case with aids like braille slate, Taylor frame, etc. Similarly language training material for speech and hearing handicapped is not available in regional languages. Steps will be taken by the NIVH, AYJNIHH, NIMH and the NCERT to ensure the availability of such material.

15. MONITORING AND EVALUATION

4.15.1 The availability of a reliable data base is essential for proper monitoring and evaluation of educational programmes for persons with disability. Towards this end the District Education Office, must, with the help of other agencies, collect data about the number of disabled persons in the District - disability wise, sex wise and age group wise; beneficiaries under IEDC, special schools, ITIs, VRCs, etc., number of special and resource teachers, their qualifications and pay scale, and budget utilisation. Similar information should also be included in the statistics collected by MHRD as also the Educational Surveys conducted by NCERT.

4.15.2 The MHRD and the Ministry of Welfare should make grants under IEDC and special schools contingent on the periodic returns giving the information. An inter-departmental Committee should be set up at the State and Central levels for monitoring. In addition, regular visits by the officers of the MHRD, NCERT, Regional Colleges of Education and field offices, should lead to status reports.

4.15.3 Evaluation studies by external agencies, universities conducting courses on education and rehabilitation of persons in specific geographical areas will be commissioned by MHRD and the Ministry of Welfare.

5. ADULT AND CONTINUING EDUCATION

1. PRESENT SITUATION

5.1.1 The National Literacy Mission (NLM) was launched as a societal and technology Mission on 5th May, 1988 with the objective of imparting functional literacy to 80 million illiterate adults in 15-35 age group by 1995. Built on an objective assessment of the strength and weaknesses of the National Adult Education Programme it has imparted a new sense of urgency, new emphasis and seriousness to the problem of eradication of illiteracy in the country. The implementation of the programme of adult literacy and education in a Mission mode during the last four years has confirmed in more than one sense that eradication of illiteracy is possible, feasible and achievable. This has been demonstrated by the provisional figures of 1991 census which revealed that the literacy rate for the population aged 7 years and above in the country increased from 43.56% in 1981 to 52.11% in 1991, registering an increase by 8.55%. The country achieved for the first time the distinction of having larger number of literate persons (352 millions) than that of the illiterate ones (324 millions). After experimenting with successive alternative models of literacy programmes, we have settled down to one which is known as campaign for total literacy which is area-specific, time bound, volunteer based, cost-effective and outcome oriented. This has given us lot of hope and faith that illiteracy is not a fatality and can be overcome in a time bound manner with planned, concerted and co-ordinated efforts. Mass campaigns for total literacy have been launched in 156 districts (either fully or partially) during the last 2-3 years. Even though the emphasis under NLM is on imparting functional literacy to illiterate adults in the age-group 15-35, potential learners in the age-group 9-14 and above the age of 35 have also been enrolled in most of these campaigns. Taken together, about 55 million potential learners are presently covered in these campaigns. While the total literacy campaigns have made some impact in few parts of the country, the States of Bihar, Rajasthan, Arunachal Pradesh, Madhya Pradesh, Uttar Pradesh, Andhra Pradesh, Meghalaya and Orissa and UT of Dadra & Nagar Haveli are significantly below the national average of 52.11%. Intensive efforts have, therefore, to be made and special strategies to be adopted to improve literacy situation in these States/UTs with special emphasis on persons belonging to SCs/STs and women.

2. STRATEGIES OF IMPLEMENTATION - MASS CAMPAIGN APPROACH TO BE THE DOMINANT STRATEGY

5.2.1 The mass campaign approach is based on mass mobilisation and support of government (both Central and State), district administration, non-governmental and voluntary agencies, people from all sections of the society and all walks of life with a tinge of voluntarism, a compact, well-knit and efficient management structure with an inbuilt monitoring system. The efficacy of this approach has been established beyond doubt in as much as it has succeeded in transforming a fully government-funded and government-controlled traditional centre-based programme (which was also honorarium-based) into a mass campaign leading towards a people's movement for total literacy and a new awakening. The Total Literacy Campaign (TLC) approach constitutes the principal strategy of NLM and would continue to be so for such time till the goal of universal literacy has been fully achieved.

5.2.2 As a result of the evolution of the programmes of literacy, post-literacy and continuing education during the past four years or so under the NLM, a clear and comprehensive conceptualisation of the total programme has already emerged and would be adopted for future work. This will include the following:

    i) Basic literacy for about 200 hours spread over about six months which will basically be a guided learning programme;

    ii) Systematic post-literacy programme for about 50 additional hours spread over two months which will start with guided learning and will culminate into self-learning by making the learner self-reliant; and

    iii) Self-directed continuing education in the perspective of life-long learning through library service, newspapers for neo-literates, charcha mandal, and such other activities. This may also include the skill development programme for personal, social and occupational development.

3. PROCESS

5.3.1 The process involved in implementation of the mass campaign for total literacy strategy would include the following:

    a) Persuading the State Governments/UT administrations to formulate detailed action plans for the state as a whole as also for each district for achieving total literacy before 1997-98. The imperatives of literacy would be built into the educational and developmental planning process at all levels.

    b) Orientation of political parties, as also representatives of the people (MPs, MLAs, MLCs,

Chairmen, Zilla Parishads, Panchayat Samitis, Mandal Panchayats/Panchayats, Municipalities, notified area councils, etc.) to come together, plan together, work together and pledge their unqualified solidarity and support to the campaign experiment despite their ideological and political differences.

c) Orientation of officers of all departments (of both Central and State Governemnts) at the state and district level in the campaign approach so as to secure their co-operation and support to the campaign at all stages of its operationalisation.

d) Registration of Saksharata Samitis in the districts/areas where mass campaigns for total literacy are to be taken up with representation of officials, non-official members, voluntary agencies, educational institutions and opinion leaders in the community/society.

e) Mass mobilisation of all sections of the society like teachers and students of educational institutions, employers, trade unions, members of disciplined forces, ex-servicemen, banks, co-operatives, educated unemployed youth, voluntary agencies and the volunteers mobilised by them for combating illiteracy. The important role of voluntary agencies in mass-mobilisation will be continued and strengthened.

f) Peoples' participation in environment building, planning and operationalisation of the campaigns by assigning specific roles to key resource persons, resource persons, master trainers, volunteers, etc. and by serving on various committees at the district, Panchayat Samiti/Mandal Panchayat/Panchayat and village levels. This should lead to emergence of various grass roots level community institutions, including the Village Education Committees.

g) Creation of people oriented, well-knit management structures at the district, taluka, block, mandal/panchayat and village levels consisting of both officials and non-officials to function in a decentralised, debureaucratised and participative mode with a view to ensuring participation and support of people at all levels. For this purpose, services of experienced and committed personnel would be obtained from educational institutions, central and State government departments, Central and State public sector undertakings, autonomous bodies, etc. preferably on secondment basis.

h) Effective involvement of good, committed and reliable voluntary agencies interested in taking up campaigns for total literacy in small and compact areas where total literacy campaigns are not being implemented and bringing them under the umbrella of TLC wherever a TLC is being undertaken with a view to securing their support and services for the campaign.

i) Mobilising and harnessing all components of the educational system at the university, college/school level for promoting literacy as part of their social obligation.

j) Elaboration of the present NLM norms into appropriate and specific competencies in literacy and post-literacy for ensuring effective achievement.

k) Insistence on the preparation of teaching/learning material on the motivation centred technique of Improved Pace and Content of Learning (IPCL) in the campaigns supplemented by readers on host of development messages such as health, family welfare, immunisation, nutrition, maternity protection, child care, protection of environment, small family norm and women's equality, etc.

l) Insistence on all institutions/agencies/individuals interested in literacy work to work with understanding, rapport and bonhomie and carry out specific assignments related to material production, training and environment building under the leadership and direction of the concerned saksharata samiti.

m) Ensuring implementation of the total literacy campaigns in accordance with the guidelines of the National Literacy Mission Authority (NLMA) combined with such flexibility and freedom as may be necessitated by local conditions.

n) The Central/State Governments/UT Administrations and Central/State public sector undertakings to make available the personnel at various levels to work for the campaigns as and when requested to do so and to ensure a reasonable continuity in their tenure so as to avoid a dislocation in pace and momentum of the TLC.

4. ENVIRONMENT BUILDING - A CONTINUED NECESSITY

5.4.1 Both the literate and the educated will be sensitised to take literacy work with a sense of pride, patriotism and social obligation. The community of learners will be motivated and mobilised for literacy to perceive the need for literacy and internalise this need for their collective well-being. For this purpose, environment building activities would continue to be undertaken through organisation of jathas, street plays and nukkad nataks, wall writings, literacy songs and slogans, articles in newspapers and magazines by creative writers, thinkers and opinion leaders, etc.

5.4.2 Media would be used in literacy promotion as a tool of dissemination of information, as a tool of mobilisation, motivation and sensitisation, as a tool of learning by sharing information, ideas and experiences and as a tool of social action for change. For this purpose, discussion on various aspects relating to literacy would be arranged on Doordarshan and Radio, spots and motivational films would be produced and shown on TV and classes conducted through radio. Both print and non-print media, including the traditional folk arts, would be fully harnessed for disseminating the message of literacy and for creating a positive climate for literacy.

5. INTEGRATION WITH OTHER DEVELOPMENT DEPARTMENTS

5.5.1 With a view to ensuring that acquisition of literacy actually enables the neo-literates to participate in various processes of national development, the NLM would be geared to the nationally accepted goals by way of development of an effective linkage between literacy and other development programmes. In particular, the endeavour of the NLMA would be on the following:

a) All development departments/agencies would be fully oriented to literacy and sensitised to improve and strengthen the delivery mechanism for which they are directly or indirectly responsible with a view to meeting the natural demand and sometimes heightened aspirations of the people (arising as a result of the campaign for literacy) which in turn will sustain the need for literacy.

b) Benefits available under various protective and anti- exploitative laws, institutions as well as development schemes would be made available to learners with a view to alleviating their poverty and deprivation, promoting general and economic well being to the extent possible and ensuring an effective participation in the affairs of family, community and society as also larger affairs of the nation.

c) Social, emotional and linguistic integration, communal harmony, tolerance of and respect for each others' faith and belief which has been achieved to a fair extent in many of the campaign districts would continue to be sustained and invigorated.

d) Literacy campaigns would take up activities related to protection and conservation of environment with a view to generating intensive awareness for such conservation and formation of groups, wherever possible which will provide the nuclei for all activities which go with conservation. Such activities will be integrated into the content of primers, content of materials for neo-literates, curriculum and course content of training and orientation of all functionaries, transaction of instructional lessons, evaluation, etc. This will enable the learners and neo-literates to assimilate, imbibe and internalise the messages related to conservation.

e) Propagation of the message of small family norm which has been yet another issue of national concern as also one of the sub-themes of all literacy campaigns would continue to be accelerated. This, alongwith other measures like importance of delayed marriage, proper spacing, changing existing social biases in favour of the male child in our society, etc. will be integrated into the content of the primer, content of materials for neo-literates, curriculum and course content of training and orientation of all functionaries, transaction of instructional lessons, evaluation, etc.

f) Promotion of women's equality will be a major area of focus in literacy programmes. Working towards this objective will have following implications for planning and implementation of TLCs:

i) Enabling the participation of women in the decision making processes of the campaign and developing organising skills.

ii) Ensuring widest possible participation of women as teachers and learners in the teaching-learning process.

iii) Organising activities specifically designed to bring about attitudinal change amongst men, thereby developing a greater sensitivity towards the difficulties faced by women in Indian society. This should lead to collective action to remove such difficulties wherever possible.

iv) Promoting the formation of women's organisations which will take up issues relating to women's rights.

v) Providing suitable avenues of gainful employment of women and ensuring their participation in every stage of the developmental process.

vi) Ensuring that society as a whole is sensitised to the need to translate assurances of equality into concrete action such as payment of equal wages for equal work.

vii) Designing and promoting innovative and imaginative schemes which consciously work towards women's equality and empowerment. Existing models such as the Women's Development Project (WDP), or the Mahila Samakhya concept, would be enlarged in scope and ambit, and integrated with literacy campaigns.

viii) Creating structures, and facilitating mechanisms by which the concept of women's equality and gender justice is integrated at all levels with the work of the Saksharta Samitis — be it in training, content or participation.

g) An important and positive fallout of the campaigns is that parental demand for enrolment and retention of children in the formal school system has increased manifold. Endeavour would be made to positively respond to such demand by opening new schools, adding rooms to the existing school buildings, appointing additional teachers and arranging their orientation and training and improving the operational efficiency of the delivery system so that it can absorb the growing demand. Simultaneously efforts would be made to provide appropriate and needbased non-formal education to working children in 9-14 age group so that they do not, after reaching adulthood, add up to the ranks of illiterate adults. For this purpose, an effective linkage would be established with programmes/activities related to UEE, including NFE.

h) Messages of basic health care and programmes formulted thereunder, both protective, curative and preventive with special emphasis on health care programmes for women and children, would be integrated into the content and process of campaign materials, training, environment building, actual teaching learning phase, etc. in the same manner as small family norm, conser-

vation of environment and women's equality.

6. ACADEMIC AND TECHNICAL RESOURCE SUPPORT

5.6.1   In view of the increasing responsibilities of the State Resource Centres (SRCs) in the wake of TLCs having been launched in 156 districts in the country and similar campaigns likely to be launched in about 200 additional districts during the 8th Five Year Plan, the SRCs, which have been providing academic and technical resource support to the literacy and adult education programme, would be suitably equipped, strengthened and stabilised so as to enable them to shoulder their responsibilities in an effective manner and without any uncertainty. The services of District Institutes of Education and Training (DIETs) and District Resource Units (DRUs) would also be suitably used in providing academic and technical resource support to the campaigns for total literacy particularly at the district and block levels. Wherever considered necessary, their working will be reviewed and revamped in such manner as would admirably serve the purpose for which they have been set up.

5.6.2   Additionally, with a view to making orientation and training programmes for functionaries of the total literacy campaigns at various levels more effective and further improving other aspects of academic and technical resource support to the programme, the following measures would be taken:

i) Establishing a national pool of resource persons for covering various elements of the NLM strategy, by drawing upon the stock of expert personnel already available in practically all the States in universities, SRCs, State-level and national institutions of education and social sciences and eminent non-governmental organizations engaged in education and development activities at the grass-roots level.

ii) Establishing a State-level pool of scholars and resource persons to enable the SRCs and other State-level resource organizations to avail of their expertise so as to build up effective programmes of resource support to literacy, post-literacy and continuing education at the State and district levels.

iii) Utilizing the services of experts from all over the country for the preparation of orientation plans and development of materials for the guidance of resource persons. In this connection, activities at the national level would be closely inter-linked with similar activities to be undertaken at the State level, in a flexible manner and with active participation of state-level

experts in order to respond to varied needs and situations in different States

7. POST-LITERACY AND CONTINUING EDUCATION

5.7.1 Literacy per se is a minimal and imperative entry point to the world of information and communication. It is a basic step towards adult education which is a process of life-long learning. This entry point will have to be carried forward, sharpened and refined to enable learners to enrich their knowledge, to acquire skills for improving their functional capability keeping in view the latest developments and to apply literacy skills for solution of their day-to-day problems and improve their well-being. Post-literacy and Continuing Education programmes would be organised keeping these objectives of adult education in view. The main features of the post-literacy and continuing education programme to be implemented under the Mission would include the following:

a) Keeping in view the wide variations in the levels of literacy and numeracy achieved by those who are supposed to have become literate and keeping in view the possibility that a substantial proportion of persons who have acquired basic literacy skills through the total literacy campaigns will tend to relapse into illiteracy, different strategies for post-literacy and continuing education would be evolved and used in different parts of the country keeping in view the local needs and priorities, levels of achievement in the basic literacy phase and the situation in which most of the learners are placed.

b) The planning for each post-literacy programme would be initiated much in advance and preferably in the middle of the basic learning phase of the campaign so that the time-gap/inter-regnum between close of the basic literacy phase and commencement of the post-literacy phase is minimised.

c) Post-literacy would be a planned, structured and co-ordinated effort and would preferably be implemented in a campaign mode as in the TLC. The Saksharta Samiti at the district level and similar peoples' committees at the block/mandal panchayat, panchayat and village level would continue to provide leadership and direction for the post-literacy campaign as in the TLC.

d) The three important goals of post-literacy programme would be *remediation* by way of starting a bridge course of 30-40 hours' dura-

tion, *continuation* of learning activities through facilities of libraries and reading rooms, supply of reading material suiting the felt needs and interest of learners and *application* of literacy skills to actual living and working situations.

e) As the frame-work of the Jana Shikshan Nilayam (JSN) as a strategy designed to cater to the post literacy and continuing education needs of the neo-literates of the centre-based programme may not be of universal application, particularly in the areas covered by total literacy campaigns, it would not be the only mode of post-literacy. It would be the endeavour of the NLMA to provide an institutional frame-work in the form of learning centres in every village/habitation/urban slum in as decentralised and debureaucratised mode as possible. Irrespective of the form the learning centres may take, it would be ensured that the community is fully involved in planning and implementation of the post literacy programmes, the ultimate objective being to organise the unorganised. Functioning of JSNs would be reviewed with a view to making them more effective and ensuring that they subserve the purpose for which they have been set up. Where JSNs and other forms of learning centres co-exist, an effective linkage between the two would be established.

f) Each post-literacy programme would be suitably integrated with programmes of other development departments. These departments would provide facilities for location of the learning centres, impart training to the beneficiaries of the post-literacy programme and would provide literature on activities/ programmes being undertaken by them, besides meeting and talking to the learners at the post literacy centres to understand the existential reality of the situation in which they have been placed and to provide support services to minimise the rigour and hardship of their existence.

g) Schemes/programmes of TRYSEM, DWACRA, SCYTES, etc. would be suitably interlinked with post-literacy and continuing education so that the facilities under these schemes are available to the neo-literates.

h) Newspapers for neo-literates, neo-literates' newsletter, wall papers, periodicals, magazines, etc. would become a part of supportive learning strategy.

i) The library movement like the Kerala Granthshala Sangam would be converted

into a mass movement and a programme of mobile libraries would be evolved and implemented in consultation with the state governments. Facilities available through the Raja Ram Mohan Roy Library Foundation and other institutions/agencies working in this area would be extended to the post-literacy centres, to the extent possible.

j) For promoting reading habits, the learning centres would be encouraged to set up penfriend clubs, reader clubs, etc. Book voyage will be integrated with post-literacy programme at the local, district and state levels.

k) Government support to post-literacy programme would continue for a period of at least two years before the community takes it over for implementation on a long-term basis.

l) The employers, trade-unions and the government departments/undertakings would be expected to provide facilities of reading rooms, libraries, etc. for the neo-literates/learners, and their employees/members, etc. The Central Board of Workers' Education would be involved in organising learning centres for the workers in the industrial establishments.

m) The National Book Trust, State Resource Centres, voluntary agencies and the private publishers would be encouraged to bring out books of common interest to the learners at subsidised rates. The educational institutions would be persuaded to allow the neo-literates to make use of the facilities of their libraries.

n) The University Grants Commission would be involved organically and effectively in literacy and post-literacy movement by galvanising the entire higher educational system to discharge its social obligation.

o) Radio, television and films would be used with creativity and innovative skills to encourage efforts in the districts covered by the total literacy campaigns to sustain literacy, particularly reading and numeracy skills. Specially designed audio-visual learning material would be prepared for use in the JSNs and post-literacy centres. Serials, particularly for the neo-literates, would be developed and shown/broadcast through TV/radio.

p) Use would be made for extending local radio net-work being set up by AIR to design curricula in different vocational and other life skills

for the neo-literates in the TLC districts. Radio programmes would be supported by print and other materials which may be prepared locally to cater to the particular needs of the area.

q) All other avenues of learning of appropriate levels would be provided to the neo-literates, the ultimate objective being creation of a learning society.

r) Industry, trade, commerce and banks would be impressed upon the need to provide avenues for continuous learning to their employees, particularly the neo-literates.

8. SKILL DEVELOPMENT

5.8.1 Skill development would be integrated in each programme of post-literacy and continuing education. In particular, the endeavour of NLMA would be on achieving the following objectives in close collaboration with other departments/agencies which will be requested to assume specific responsibilities:

a) Enabling the neo-literates to acquire skills for economic self-reliance, such skills also including managerial and entrepreneurial skills.

b) Opening of additional Shramik Vidyapeeths in urban, semi-urban and rural areas and promotion of more agencies/institutions in the non-formal sector for the purpose of imparting vocational skill information to the neo-literates and conducting such programmes.

c) Enabling the educational institutions to start vocational courses for neo-literates, without the educational qualification being a condition precedent for admission in such courses, which could be run in the evening.

d) Creation of enabling structures for working neo-literate women in the form of creches, day care centres, etc. by the village level agencies and other developemnt departments/organisations.

e) Imparting skills like communication skills, survival skills and skills aimed at upgrading the functional capability of the neo-literates.

5.8.2 Based on the needs voiced by women neo-literates, wide range of interventions in terms of information sharing on availability of schemes/programmes, bank credit, appropriate technology, marketing channels, availability of materials, etc. would be executed. With a view to enabling them to become self employed/better employed, formation of cooperatives of women neo-literates would be facilitated.

9. RESEARCH

5.9.1 The National Institute of Adult Education (NIAE) which has been set-up as a technically independent, administratively autonomous, professionally competent and a highly specialised body with research and academic orientation would undertake good quality action research on various aspects relating to adult education programmes of all descriptions. The emphasis in programmes and activities of NIAE would be on creative and innovative work and on collaboration and net-working with other agencies in India and abroad, working in the field of adult education. The other agencies/organisations interested in taking up such research would also be encouraged to do so.

10. TARGETS

5.10.1 It is estimated that at the beginning of the 8th Five Year Plan the number of adult illiterates in the age-group 15-35 was 104 million. Whereas, 80 million adult illiterates would be covered by total literacy campaigns to be taken up in 350 districts in the country by the close of the 8th Five Year Plan, the remaining 24 million illiterates would be imparted literacy through programmes to be taken up by voluntary agencies, educational institutions, Nehru Yuva Kendras, etc. It would be the endeavour of NLMA to cover about 21 million persons in the age-group 15-35 in each year of the 8th Five Year Plan.

5.10.2 Where as persons in the age-group 9-14 would also be covered in the total literacy campaigns where the Saksharta Samitis so propose, it would be ensured that after the first phase of basic literacy in the total literacy campaigns, appropriate arrangements are made for learners in this age-group so that they complete prescribed course of non-formal education and acquire the minimum levels of learning prescribed for non-formal education. As the priority age-group under NLM is 15-35, it would be difficult to make an estimation about the number of persons in the age-group 9-14 which would be covered under the total literacy campaigns.

11. CONTINUATION OF THE MISSION

5.11.1 Launched in May 1988 with the objective of imparting functional literacy to 80 million illiterate adults by 1995, the NLM has now come to stay, and the need of literacy for improving the overall well-being of the illiterates and enabling them to make an effective contribution in all processes of national development has been fully realised. The time span of National Literacy Mission was initially fixed upto 1995 so as to coincide with the terminal year of the 8th Five Year Plan (1990-95). Since, however, the 8th Plan could not start from 1990-91, as was originally planned, the time span of the Mission would be extended upto 1997 which would be the terminal year of the 8th Five Year Plan (1992-97). It would be imperative to retain and strengthen,

if considered necessary, all the structures of the Mission at the national, state and district levels, as have already come into operation and which, with their combined efforts, have succeeded in covering 156 districts in the country by the literacy campaigns.

12. MONITORING AND EVALUATION

5.12.1 A detailed monitoring system to facilitate timely flow of information on the pace and progress in the implementation of the programme from the field to the national level, which has already been evolved, would be made more effective in the light of the experience that may be gained for about a year or so. It would be ensured that both qualitative as well as quantitative aspects of the programme are monitored.

5.12.2 Evaluation under the NLM would be systematic, simple and intelligible and technically sound. It would be participatory, supportive and non-threatening. The important features of the evaluation system under NLM would be the following:

a) It would provide basic information on the achievement of the literacy campaigns from the point of view of social accountability, providing feed-back to the organisers, securing political support and injecting an awareness and respect for education in general and literacy in particular.

b) Scores for competencies achieved in reading, writing and numeracy skills would be clearly defined.

c) While conducting evaluation, the wide variations in regard to the rate of literacy in different parts of the country and the situation in which most of the learners are placed would be kept in view.

d) The findings of the evaluation would be shared with the representatives of the people, learners, volunteers and all those who have worked for the campaigns.

e) A manual on evaluation techniques, including design of training modules would be prepared and a number of parallel tests would be evolved and indicated in the manual.

f) Well defined criteria would be evolved for the purpose of declaring an area fully literate.

g) The literacy scenario in the country is characterised by wide-spread disparity in both relative and absolute terms in respect of a State as also a district(s) between urban and rural areas, between males and females. It is quite likely that as a result of operationalisation of the TLCs, the

position will undergo qualitative change result-
ing in substantial reduction of this disparity.
Agencies undertaking evaluation studies in
respect of TLC districts would be asked to
reflect this in the evaluation study reports so
that the situation obtaining before the commen-
cement of the programme and after the con-
clusion of the programme could be known and
shared with the masses.

6. EARLY CHILDHOOD CARE AND EDUCATION

1. THE PRESENT SITUATION

6.1.1 The National Policy on Education (NPE) has given a great deal of importance to Early Childhood Care and Education (ECCE). It views ECCE as a crucial input in the strategy of human resource development (HRD), as a feeder and support programme for primary education and as a support service for working women of the disadvantaged sections of the society. It has also taken into account the holistic nature of ECCE and has pointed out the need for organising programmes for the all-round development of the child. It specifically focusses on the need for early care and stimulation of children belonging to the vulnerable sector. Since the age span covered by ECCE is from conception to 6 years, emphasis has been given to a child-centred approach, play way and activity based learning in place of formal methods of teaching and early introduction of the three R's. The importance of community involvement has also been highlighted. Emphasis has been given to establishing linkages between Integrated Child Development Service (ICDS) and other ECCE programmes.

6.1.2 The Revised Policy Formulations reiterate the postulates of NPE, 1986 on ECCE. The prescriptions of POA, 1986 continue to be of relevance. What is attempted here is to update the POA, 1986 taking into account the developments since then and the need to strengthen the programmes by, *inter-alia*, improving the programme components, coordination mechanism and enlisting community participation in mobilising resources, planning and monitoring.

6.1.3 Realising the crucial importance of rapid physical and mental growth during early childhood, a number of programmes of ECCE were started particularly after the National Policy for children (1974). The existing ECCE programmes include;

    (i) ICDS.

    (ii) Scheme of assistance to voluntary organisations for conducting Early Childhood Education (ECE) centres.

    (iii) Balwadis and day-care centres run by voluntary agencies with Government's assistance.

    (iv) Pre-primary schools run by the State Governments, Municipal Corporations and other governmental and non-government agencies.

    (v) Maternal and child health services through primary health centres and sub-centres and other agencies.

6.1.4 ICDS is currently the biggest programme of early childhood development, with 2.90 lakh Anganwadis serving nearly 140 lakh children and about 27 lakh mothers; 91.5% ICDS projects are located in rural and tribal areas and 8.5% in urban slums. Besides the ICDS, by the end of 1991-92, there were 12,470 creches with a coverage of about 3 lakh children below 5 years, 4395 ECE centres in 9 Educationally Backward (EB) States and the Balwadi Nutrition programme serving nearly 2.30 lakh children in the age-group of 3-5 years.

6.1.5 Over the recent years, a number of initiatives have been taken to make the programmes more focussed. The measures under ICDS, include emphasis on practical training for Anganwadi workers, and extension work by Anganwadi training centres; which are required to adopt 10 Anganwadis each for developing them as model Anganwadis. To build up resource capabilities in the field, action is afoot to develop CDPO's office into resource centre. Instructional materials for Anganwadi Training Centres are also under preparation. Efforts are also being made to distribute education cum play materials to Anganwadis to improve their pre-school education component. Initiative has also been taken to improve the scheme of creches by reviewing norms for voluntary and community participation. A scheme has been worked out by the Department of Women and Child Development for converging the services under DWCRA, ICDS, pre-school education and related schemes of the Departments of Health, Family Welfare, and Rural Development.

2. TARGETS AND PHASING

6.2.1 The aim of ECCE is that every child should be assured access to the fulfilment of all basic needs. As such efforts will be made towards universalisation of ICDS by A.D. 2000. By the end of the Eighth Plan, 3.75 lakh Anganwadi centres would be established and by A.D.2000 seven lakh Anganwadi centres. Anganwadis will be gradually converted into Anganwadis-cum-creches. By the end of Eighth Plan, 25 per cent of Anganwadis will be converted into Anganwadis-cum-creches. Qualitative improvement of ongoing ECCE programmes would receive high attention. New cost-effective designs of ECCE will also be encouraged and supported.

3. STRATEGY OF IMPLEMENTATION

6.3.1 The ECCE involves the total development of child, i.e. physical, motor, cognitive, language, emotional, social and moral. The age span under consideration in ECCE is from conception to about 6 years. Even a modest development process during this period includes care of mother during pregnancy (ante-natal health check-up, nutritional support, control of anaemia, immunization for prevention

of tetanus following delivery, etc.) hygienic and skilled birth attendance, nutritional care of mother during lactation, correct infant feeding practices, immunization of infant from communicable diseases, mothers' education in the child care, early childhood stimulation, and health and nutritional support throughout. Thus, ECCE is a complex integral function. It requires workers with integrated ECCE training, integrated worksites or ECCE centres where the essential services flow to young children through the period of their growth and preparation for formal education. To tap the full advantage of the synergistic impact of well-integrated ECCE activities and associated programmes, efforts will be directed at coordinated functioning of various agencies — governmental and non-governmental — striving to meet different needs of young children. An Inter-ministerial Committee will be set up comprising representatives of Departments of Labour, Education, Rural Development and other related Ministries/Departments to plan, coordinate and monitor the programme. This will be done by the Department of Women and Child Development which will function as the nodal agency for ECCE programme.

6.3.2 Community and parental participation will be enlisted wherever possible in resource mobilisation, planning and implementation. To this end village/mohalla level committees with adequate representation of mothers will be organised. The role of capable voluntary agencies will be emphasized to create a wide and rich network of resources for ECCE. At the same time, it is imperative that proliferation of sub-standard institutions of ECCE is discouraged. Norms and minimum standards will be devised.

6.3.3 Ongoing programmes/schemes that reflect a concern for the holistic development of young children will be improved to provide effectively integrated services. These include :

(a) *ICDS:* The following initiatives that have been introduced will be continued and strengthened :

(i) Assigning each Anganwadi Workers' Training Centre the responsibility of developing at least 20-25 Anganwadi Centres so as to provide the trainees with adequate field practice.

(ii) Placing trainees for a minimum of one month in the Anganwadis for practical training.

(iii) Development of instructional materials for use of trainers and the trainees.

(iv) Providing materials for children-picture books, picture posters, minimum essential play materials to all Anganwadis and replenishing them periodically.

(v) Developing the CDPO's office into a resource centre that is equipped with training materials.

(vi) Coordinating the timings of ICDS Anganwadis with the primary schools wherever possible.

In addition, efforts will also be made :

(i) To orient trainers, supervisors and CDPOs through refresher courses in pre-school education component and through field training both at pre-service and in-service levels,

(ii) to convene periodic workshops for functionaries of related programmes to optimise resources and strengthen programme linkages,

(iii) to develop a small percentage of Anganwadis as day-care centres, and

(iv) to effect convergence of services and functions of ICDS and other related schemes.

(b) *ECE Centres:* The ECE Scheme, as it stands, does not have a component of nutrition; neither does it have any provision for the training of teachers. The following measures will, therefore, be taken with immediate effect :

(i) Adding nutrition component with parent/community assistance.

(ii) Provision for training the personnel.

(iii) Supply of educational materials for children.

(iv) Using play-way method and discouraging early teaching of the three R's.

(v) System of monitoring.

(c) *Balwadis run by Voluntary Agencies:* There are varieties of patterns in the Balwadis. Each scheme has its own history and background. All programmes of child development implemented through voluntary agencies will have an integrated approach, offering a comprehensive package and avoiding duplication. Where this does not happen, the existing activities will be merged in some comprehensive and integrated programme. Most of the programmes run by voluntary agencies do not have all the components of health, nutrition and education. They need to be converted into total child development centres.

(d) *Pre-primary schools and classes:* They essentially focus on education. Therefore, they require :

(i) Adding components of nutrition with community/parent participation.

(ii) Discouraging the early introduction of the three R's.

(iii) Using play-way method.

(iv) Developing a relationship between home and community.

(v) Discouraging entrance tests for admission.

(e) *Day Care Centres*: The creches and day-care centres run with/without Government support otherwise need to be reviewed and strengthened on an immediate basis. The following requirements will be ensured :

(i) Timing co-terminus with school working hours or mother's working hours

(ii) Adequate, safe and hygienic space

(iii) Adequate child worker ratio

(iv) Safe drinking water

(v) Supplementary nutrition

(vi) Paramedical care under medical supervision

(vii) Minimum equipment including linen and cradles

(viii) Toys and play materials

(ix) Training and supervision of workers

6.3.4 Besides strengthening existing programmes, emphasis during the Eighth Plan and thereafter will also be on experimentation for evolving low cost and context specific models. The models which are in experimentation stages, at the moment, would be encouraged and expanded. Appropriate agencies will undertake a survey of such models. Some of the models which are already being experimented with, which have much promise are as follows :

(a) *Home Based Model (from conception to 6 years)*: This model involves developing techniques of stimulation that can be taught to parents or other members of the family to foster child development. It requires (i) training of local women who will play the leadership role in conducting home visits and encouraging family members to conduct stimulation programmes for their children, (ii) development of low cost play materials to be used by the family, (iii) development of audio and video programmes for the mass media for wide implementation, and (iv) creation of a mobile supervisory cadre.

(b) *Day-care Centres (from birth to 6 years)*: This model is a support service to free older children and working women. Some voluntary organisations are successfully implementing these programmes. Such Day-care Centres should be established at all work sites where women are employed in substantial numbers. While support for voluntary agencies should be provided on a liberal scale by Government the expenditure on the centres run on work sites should be the responsibility of the employers.

(c) *Family Day-care Centres*: This is best suited for areas where the target group is very small and a Day-Care Centre may or may not be viable. In this model, a suitable woman from the same group is identified as the home-care worker, and given the necessary materials, training, supervision and infrastructural support, including food, to take care of five or six children in her own home. It is envisaged that every cluster of about 10 home care units would be supervised, guided and supported by a supervisory worker who is competent to give the necessary support.

6.3.5 Keeping in mind the role of ECCE as a support service in Universalisation of Elementary Education (UEE), as well as for HRD, ECCE will continue to be directed to the most under-priviledged groups, those who are still outside the mainstream of formal education. Some of these can be defined as follows:

i) Very poor urban slum communities;

ii) Ecologically deprived areas where children are required to fetch fuel, fodder, water and do other household chores;

iii) family labour and household chores in rural areas and artisan households;

iv) itinerant, or seasonal labour, who have a mobile and transient life-style, like road workers;

v) construction workers in rural and urban areas;

vi) landless agricultural labour;

vii) nomadic communities and pastoralists;

viii) forest dwellers and tribals in remote areas;

ix) residents of remote isolated hamlets.

Girls in these groups may require support services like child care, sometime in very small units. Special attention should be given to scheduled castes and scheduled tribes in all the above defined categories.

6.3.6 Appropriate linkages will also be developed between ECCE, primary schools and Non-Formal Education

(NFE) Centres. Two-way interaction between the Anganwadi workers and school teachers/NFE instructors will be encouraged. Suitable space will be provided for ECCE close to primary schools.

Media

6.3.7 Media support will be developed and fully utilized for conveying to the parents and community the significance of ECCE. It is equally necessary for the training of personnel in ECCE. Attention should also be paid to the development of stimulating programmes for children. Concerted efforts will be made by all concerned organisations such as Doordarshan, AIR, NCERT, NIPCCD and other related organisations in developing software in all major regional languages.

4. PERSONNEL

6.4.1 Crucial to the success of any programme is mobilizing an adequate number of workers, designing suitable incentives to sustain their motivation towards work and equipping them for efficient functioning through proper training. Since ECCE programmes aim not just at providing custodial care, but initiating developmental processes, the workers force would need to be suitably augmented in accordance with the diverse components of the programmes. This will require an improvement in child-worker ratio, wherever feasible.

6.4.2 Working conditions of ECCE functionaries will also need attention, especially in terms of adequate honoraria/remuneration. Efforts will be continued to see that in case of day-care centres, the remuneration of full time workers is not less than the wages earned by unskilled workers. The long term goal would be to bring the trained full-time child care workers on par with primary school teachers. Part-time child care workers should be paid not less than minimum wages proportionate to their hours of work. To ensure proper supervision, ratio of supervisors to the number of ECCE Centres should be improved. Considering the nature of work, which requires rapport with mothers and tenderness to children, ECCE workers and their supervisors should preferably be women.

5. TRAINING

6.5.1 In all models of ECCE programmes, the component of training will be strengthened. Training would include a strong component of field placement under supervision. As the early childhood care and education programmes are bound to expand considerably over the next two decades, corresponding training facilities will be available for all levels of functionaries. Following would be some of the important parameters for meeting the training requirements:

- Initiating a two-year vocational course in ECCE at +2 level with the objective of creating

basic skills which can later be adopted through job training for specific situations;

- Strengthening the educational content of ICDS functionaries training by providing appropriate training inputs, resources, materials etc., and extending it, where possible, to include a component on day care.

- Review of the existing training programme of ECCE.

- Working out flexible models for day-care training at field level.

- Taking steps for setting up a higher course in ECCE for senior level functionaries of ICDS, trainers in the various training institutions and the supervisory personnel;

- Creating a system of accreditation of training institutions dealing with ECCE.

6.5.2 Greater technical resource support to ECCE programmes need to be given through NCERT/SCERTs/SRCs and DIETs. DIETs should play a pivotal role for technical resource support to ECCE programmes and functionaries in key areas like training, curriculum development transaction etc. These institutions should be strengthened with necessary infrastructures and resources to equip them for this. Resource capabilities of NGOs and VAs will also be drawn upon.

6. CONTENT AND PROCESS

6.6.1 The content of pre-school programme should provide inputs for a total development of child faculties. This would mean providing components of health, nutrition and education. Illustratively, these would include :

- regular medical checkup of children with follow up and referral services where necessary

- daily provision of supplementary nutrition in accordance with the nutritional status of children

- Growth monitoring through maintenance of height and weight through monthly/bimonthly records

- Child centred, and development and process oriented play activities planned in a manner to expose children to a variety of experiences that foster a sense of joy and curiosity

- Promote language skills and cognitive curiosity

- Foster joy and creativity and confidence

- Promote muscular development

6.6.2 Daily activities should be planned according to the age and developmental levels of the children. There should

be a flexible balance of activities for all aspects of development as well as a balance between individual and group activities, indoor and outdoor activities, vigorous and quiet activities and guided and free activities.

6.6.3 Medium of communication should be mother tongue/regional language. There should be a link between the mother tongue and the dominant language of the region.

7. REVIEW

6.7.1 With a view to improving the quality of ECCE, a comprehensive review of the existing ECCE programmes will be undertaken with special emphasis on pre-school curriculum, teaching/learning material, training including issues of accreditation and vocationalisation, monitoring and linkages with primary schooling. It is imperative to discourage proliferation of substandard institutions of ECCE. Norms and minimum standards will be devised with a view to ensuring better quality and healthy practices.

8. MONITORING AND EVALUATION

6.8.1 The system of monitoring and evaluation will be strenghtened on the following lines:

(i) A Management Information System will be evolved for monitoring all ECCE programmes. Information will be collected, compiled, analysed and acted upon at the block/local authority level. The flow of information to different levels (District, State, Centre) will be so planned that control functions at these levels can be performed effectively without delay.

(ii) Professional institutions and expert bodies will be involved in independent, objective evaluation that can identify gaps and problems and feasible alternatives for remedial action.

7. ELEMENTARY EDUCATION

1. THE SITUATION AS IN 1986

7.1.1 Provision of free and compulsory education to all children until they complete the age of 14 years is a Directive Principle of the Constitution. Since 1950 determined efforts have been made towards the achievement of this goal. Over the years there has been a very impressive increase in the number and spread of institutions as well as enrolment. Universal provision of institutions has been substantially achieved at the Primary stage (classes I-V) According to the Fifth All India Education Survey, 1986, 94.5% of the rural population had schools within a walking distance of 1 Km.; 83.98% of the rural population was served with middle schools/sections within a walking distance of 3 Km. The number of primary schools increased from 2.10 lakhs in 1950-51 to 5.29 lakhs in 1985-86. Similarly, the number of upper primary schools went upto 1.35 lakhs in 1985-86 as compared to 13,600 in 1950-51. The gross enrolment of 6-11 age group increased from 43.1% in 1950-51 to 62.4% in 1960-61 to 76.4% in 1970-71 to 80.5% in 1980-81 and to 85.0% in 1985-86. Likewise, the gross enrolment of 11-14 age group increased from 12.9% in 1950-51 to 22.5% in 1960-61 to 33.4% in 1970-71 to 41.9% in 1980-81 and to 48.9% in 1985-86.

7.1.2 However, Universalisation of Elementary Education (UEE) in its totality is still an elusive goal and much ground is yet to be covered. Drop-out rates continue to be significant, retention of children in schools is low and wastage considerable. In 1985-86, drop-out rates were 47.6% in classes I-V and 64.4% in classes I-VIII. Despite increased participation of girls, disparity still exists. Though the participation of girls in primary education (classesIV) increased from 28.1% in 1950-51 to 40.2% in 1985-86, it was still below the normative percentage of about 50%. The participation of girls in upper primary classes (classes VI-VIII) was lower; it increased from 16.1% in 1950-51 to 35.1% in 1985-86. The participation of SCs and STs is now more or less in proportion to their share in population at the primary level, but the sex disparity persists among SCs and STs. In classes I-V, SC girls account for 37.5% of SC students and in classes VI-VIII 29.9% (1985-86). The corresponding percentages of ST girls are 36.6% and 30.4% respectively.

2. NPE, 1986 AND ITS POA

7.2.1 The NPE, 1986, and its POA gave unqualified priority to UEE and introduced many innovations. First, the emphasis was shifted from enrolment perse to enrolment as well as retention. As the POA, 1986 put it crisply "enrolment by itself is of little importance if children do not continue beyond one year, many of them not seeing the school

for more than a few days." Secondly, the NPE, 1986 sought to adopt an array of meticulously formulated strategies based on micro-planning, and applied at the grass roots level all over the country, to ensure children's retention at school. POA, 1986 sought to replace enrolment drives by participative planning in which the teachers and the villagers would formulate family-wise and child-wise design of action to ensure that every child regularly attended school or non-formal education centre and completed at least five years of schooling or its non-formal equivalent. Thirdly, the NPE, 1986 recognised that unattractive school environment, unsatisfactory condition of buildings and insufficiency of instructional material function as demotivating factors for children and their parents. The Policy, therefore, called for a drive for a substantial improvement of primary schools and provision of support services. To this end, the scheme of Operation Blackboard was conceived. The launching of this scheme has greater significance in that it was a manifestation of the Union's intent to shoulder its share of responsibilities in this vital area of national life, a responsibility arising from Education being in the Concurrent List. Fourthly, the NPE, 1986 commended the adoption at the primary stage of a child-centred and activity-based process of learning. Fifthly, the NPE, 1986 and its POA postulated a large programme of restructuring of teacher education, pre-service as well as in-service, the details of which are spelt out in Chapter 22 of this document. Last but the most important, the NPE, 1986 sought to address the most difficult aspect of access, viz., access to education of millions of girls and working children who, because of socio-economic compulsions, cannot participate in school system. As rightly pointed out by the NPERC, it was for the first time, in 1986, that an educational policy had admitted that the school would not reach all children and that a large and systematic programme of Non-Formal Education (NFE) has to be an integral component of the strategy to achieve UEE. NFE, as envisaged by the NPE, 1986 and its POA, would have enough flexibility to enable the learners to learn at their own pace and at the same time would have quality comparable with formal education.

3. DEVELOPMENTS SINCE THE NPE, 1986, AND ITS POA

7.3.1 Most of the directives of NPE-POA, have been operationalised by the Union and States/UTs. The number of primary schools has increased from 5.29 lakhs in 1985-86 to 5.58 lakhs in 1990-91; and the number of upper primary schools has increased from 1.35 lakhs to 1.46 lakhs during the same period. The details of the increase in gross enrolment ratios are given below:

Gross Enrolment Ratio

		1986-87	1990-91
Total Enrolment			
Classes I-V	Girls	79.21	85.97
	Total	95.96	101.03
Classes VI-VIII	Girls	38.95	46.13
	Total	53.14	60.11
SC Enrolment			
Classes I-V	Girls	64.8	80.6
	Total	84.8	102.2
Classes V-VIII	Girls	26.5	33.3
	Total	40.0	47.7
ST Enrolment			
Classes I-V	Girls	68.0	78.6
	Total	90.1	103.3
Classes VI-VIII	Girls	21.9	27.5
	Total	34.1	39.7

The drop out rates declined from 47.61% in 1985-86 to 46.97% in 1987-88 in respect of classes I-V and from 64.42% in 1985-86 to 62.29% in 1987-88 of classes I-VIII. However, the data for subsequent years is not available, which is an indication of the weakness of the data collection system.

7.3.2 Non-formal education has become an accepted alternative channel for children who cannot attend full-time schools. The NFE scheme was revised in its content and emphasis in 1987-88. Although its focus is still on the ten educationally backward States, namely, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Jammu & Kashmir, Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh and West Bengal, it covers urban slums, hilly, tribal and desert areas and areas with concentration of working children in the other States as well. Financial responsibility is shared by the Central and State Governments in the ratio of 50:50 for co-educational centres and 90:10 for girls' NFE centres. Assistance to the extent of 100 percent is provided to voluntary agencies for running NFE centres for experimental and innovative projects. The number of NFE centres increased from 1.26 lakhs in 1986 to 2.72 lakhs by March, 1992 and the enrolment from 36.45 lakhs to 68 lakhs. During this period the number of girls' centres has increased from 20,500 to 81,600. In this programme, over 390 voluntary agencies also have participated and have been sanctioned grant-in-aid under the scheme of Non-Formal Education since NPE, 1986. Alongside, 50 Experimental and Innovative Projects and 19 District Resource Units have also been sanctioned for in-depth work in NFE.

7.3.3 By March, 1992, Operation Blackboard covered 4.14 lakh (77%) schools in 5385 (84%) Community Development Blocks and 1142 (29%) Municipal areas. Owing to resource constraint all the primary schools of the country could not be covered as envisaged. About 70,000 (46%) teachers have been appointed as against 1.52 lakh single teacher schools identified for coverage. Over 1.00 lakh (43%) class rooms have been constructed as against the target of 2.39 lakhs.

7.3.4 Following the guidelines in the National Curricular Framework, the NCERT revised the entire school syllabi and brought out revised textbooks for classes I to XII. Based on the National Curricular Framework and the NCERT syllabi/textbooks, the States and Union Territories have also undertaken measures of curriculum renewal and development of new textbooks for different stages of school education for their introduction into the school system in a phased manner.

7.3.5 Guidelines for operationalising microplanning have been prepared and distributed to the State Governments. The concept of micro- planning and local level capacity building have been given currency and efforts launched to decentralise educational planning and management vide new schemes or experimental projects. The resulting impact of these measures is expected to be felt during the coming years.

7.3.6 A positive externality, rather unanticipated, of the Total Literacy Campaigns, has been that in many districts covered by the campaign there has been an upsurge in the demand for primary education. In quite a few districts "out of school" children in the age group 9-14 was covered by the campaigns. Further, in these districts the awareness generated among parents is leading to better participation of children in primary schools. This happy experience has reconfirmed the need to pay more attention to the "demand side" in strategies for achieving UEE and highlighted the need for a disaggregated approach to the problem of UEE whereby districts, not States, and specific disadvantaged groups — the girls of SCs and STs — should become the basis for future planning.

7.3.7 Significant developments have taken place in the area of learner achievement. The NPE, 1986 spells out Minimum Levels of Learning (MLL) and stated that "to promote equality it will be necessary to provide for equal opportunity to all not only in access but also in the condition for success. Besides, awareness of the inherent equality of all will be created through the core curriculum.... Minimum Levels Learning will be laid down for each stage of education." In pursuance of this policy and based on the report of a Committee appointed by the Ministry in 1990 and the recommendations of the CABE, MLL have been laid down for the primary stage with the intention of reducing the curriculum

load and making it more relevant and functional for those children who have no support for learning at home or outside the school, who are not likely to avail of the opportunity of education beyond this stage and who must learn here what is required to sustain them throughout their lives and enable them to function in their world as socially useful and contributing individuals. It is now acknowledged that UEE cannot be accepted as having been achieved unless children passing out of school acquire MLL; achievement has come to be assigned equal importance alongwith access and retention.

7.3.8   Another important development was the World Conference on Education for All (EFA) held in March 1990, in Jomtien, Thailand. The Conference was organised by UNESCO, UNICEF, UNDP and the World Bank and attended by 155 member states of United Nations system and several donor agencies. The Conferene adopted a declaration calling upon all member states and international agencies to take effective steps for achieving EFA by the year A.D. 2000. The Conference advocated a holistic concept of basic education in lieu of a sectoral approach segregating sections like primary schooling, Non-formal Education, Adult and Continuing Education in separate compartments. In order to harness increased donor interest in the basic education, as a result of the Conference, it was decided to formulate comprehensive basic education projects in educationally backward States. The framework for availing external assistance for basic education was evolved at the 46th meeting of the CABE held on 8-9 March, 1991 and reiterated in the 47th meeting of the CABE held on 5-6 May, 1992.

7.3.9   CABE considered the failure to universalise elementary education and literacy as not only of a question of lack of resources but also of systemic deficiencies. The additional resources that may be available under external assistance should, therefore, be used for educational reconstruction which should go beyond the conventional measures such as opening new schools, construction of school buildings and appointing teachers. It is necessary to adopt a holistic approach, and to address

i) the educational needs of the working children, girls and disadvantged groups, and

ii) issues of content, process and quality.

Projects should be also used to develop sustainable and replicable models in different programmes related to basic education. Therefore, these projects should be developed and implemented in the true spirit of meaningful participation between the Centre and States as envisaged in NPE. It would also be necessary to implement these projects in a mission mode with effective and participative management structures and with involvement of local community, teachers and NGOs.

7.3.10   Two such externally assisted projects, viz., the Bihar Education Project with Unesco assistance and the Lok Jumbish Project in Rajasthan with the assistance of Swedish International Development Agency have been launched. The CABE further decided that project formulation should be a process of capacity building.

4.   REVISED POLICY FORMULATIONS

7.4.1   While reiterating the priority for UEE as well as the policy frame outlined by NPE, 1986, the Revised Policy Formulations (RPF) brought about following modifications:

i) Achieving essential levels of learning has been specifically incorporated as one of the thrust areas in para 5.5; this is a logical consequence of the increasing importance that came to be attached to MLL alongwith access and retention.

ii) Scope of Operation Blackboard (OB) was enlarged to provide three reasonably large rooms and three teachers in every primary school; it was also decided to extend OB to the upper primary stage.

iii) It was specifically laid down that at least 50 per cent of the teachers recruited in future should be women.

iv) Taking a realistic view of the enormous task of achieving UEE in its entirety (access, retention as well as achievement), the RPF envisage that free and compulsory education of satisfactory quality should be provided to all children upto 14 years of age before the commencement of the twenty-first century.

v) Taking note of the effectiveness of the Mission mode in social sectors, particularly literacy, the RPF envisage launching of a national mission to ensure the achievement of UEE by the year 2000.

Disaggregated Target Setting and Decentralised Planning

7.4.2   In the 8th Plan the strategy for UEE envisages adoption of disaggregated target setting and decentralised planning. An analysis of the educational indicators reveals that within each State, even in the educationally backward ones, there are areas and districts which are almost within reach of universalisation, while even in the educationally advanced States there are districts which are still quite backward. The attempt would be to prepare district-specific, population-specific plans for UEE within the broad strategy frame of Microplanning through people's participation and introduction of Minimum Levels of Learning (MLL) in schools to improve learner achievement. Microplanning

will provide the framework for universal access and universal participation while MLL would be the strategy frame for universal achievement.

7.4.3   In order to reduce disparities a disaggregated approach will be adopted through district planning by classifying districts into four categories:

i) High literacy districts in which access and enrolment are almost universal and community awareness for education is already high;

ii) total literacy campaign districts in which community mobilisation for educational needs has been successfully generated by the National Literacy Mission;

iii) low literacy districts in which the provision of education facilities is unsatisfactory and the delivery system functions without any community involvement; and

iv) externally assisted project districts with a different management structure and sufficient financial support.

7.4.4   The strategies with regard to access, participation, achievement, environment building, community participation, etc. will be different for the four categories of districts.

7.4.5.   Under this broad strategy of district planning and based on the experience gained in implementation of NPE, and the RPF, the following strategies are proposed:

i) Adoption of alternative channels of schooling like voluntary schools and NFE centres for those who cannot avail of conventional full-time schooling.

ii) Microplanning through involvement of teachers and the community in order to design and implement a family-wise, child-wise plan of action for universal access/enrolment and participation.

iii) Making parents aware about their responsibility for ensuring the completion of elementary education by their children and for providing at home the facilities and encuoragement needed for this purpose.

iv) Establishment of linkages between programmes of pre-school and primary education, and between programmes of literacy and UEE, in total literacy compaign districts.

v) Improvement of school facilities through revamped Operation Blackboard and connecting it to MLL strategy. It will also be extended to upper primary stage.

vi) Decentralization of educational management

for making the schools function so as to ensure universal enrolment, retention and achievement.

vii) Introduction of MLLs at primary and upper primary stages including coverage of the nonformal education channel.

viii) Revision of process and content of elementary education to make teaching-learning child centred, activity based and joyful.

ix) Introduction of continuous and comprehensive evaluation with focus on remedial measures.

x) Modification of teacher training programmes in view of changed strategies and programmes.

xi) Improvement of the monitoring system for UEE.

xii) Launching a National Mission to achieve the goals envisaged in the revised policy.

7.4.6   Further efforts would be made to develop district specific projects, with specific activities, clearly defined responsibilities, definite time-schedule and specific targets. Each district project will be prepared within the major strategy framework and will be tailored to the specific needs and possibilities in the district. Apart from effective UEE, the goals of each project will include the reduction of existing disparities in educational access, the provision of alternative systems of comparable standards to the disadvantaged groups, a substantial improvement in the quality of schooling facilities, obtaining a genuine community involvement in the running of schools, and building up local level capacity to ensure effective decentralisation of educational planning. That is to say, the overall goal of the project would be reconstruction of primary education as a whole in selected districts instead of a piecemeal implmentation of schemes. An integrated approach is more likely to achieve synergies among different programme components.

5.   PROVISION OF UNIVERSAL ACCESS

7.5.1   Existing schemes will be suitably modified and measures will be taken to incorporate the new policy formulations.

a)   Formal Schooling

7.5.2   New primary schools according to the norms, will be opened in unserved habitations. NFE centres will be opened in smaller habitations and for children who cannot benefit from the school system. In addition, a new scheme of Voluntary Schools will be launched to achieve universal access for children in diffirent areas.

7.5.3   Primary Schools : In 1986, it was estimated that there were approximately 32,000 habitations with a population of 300 or more that required primary schools. Though

many new schools have been opened, new habitations have also come into existence, and it is estimated that 35,000 new schools will be required. These schools will be opened by the State Governments following the norms specified under Operation Blackboard.

7.5.4 Upper Primary Schools : In order to increase enrolments at the upper primary stage, the infrastrcture at this stage will be expanded. The existing norm of providing an upper primary school within 3 km. walking distance is generally inconvenient for girls. This norm will be relaxed and the new ratio between primary and upper primary schools will be 2:1. Action will be taken in the next 5 years to upgrade every second primary school to the upper primary level. It will be primarily the responsibility of the State Governments to observe this norm for school-mapping.

7.5.5 In order to achieve UEE the school system will have to cater to about 18 crore children. This calls for increasing the number of teachers from the present 27 lakhs to 45 lakhs based on the teacher pupil ratio of 1:40. The increase in student population would also require an additional 11 lakh class rooms to be built in the next 7 years.

(b) Scheme of Voluntary Schools

7.5.6 A new scheme of Voluntary Schools will be launched to cater to the needs of neglected, hilly, tribal and difficult areas where there is no provision of schooling. This scheme will enable voluntary agencies to conduct schools for UPE/UEE and stimulate community participation in planning and conducting schools in a locally appropriate manner.

7.5.7 The Voluntary Schools would be organised to serve all school children in a given village/habitation. Areas would be well defined with a population of not less than 150 so that the Voluntary School has at least a minimum of 30 children. Voluntary Schools would be expected to complete primary/elementary education of the required level in a specific period adequate for the pupils to master the curriculum. Learners enrolled in the Voluntary Schools may appear as external students for entry into any class of full-time formal school. Local teachers will be appointed to run the schools and adequate training will be provided to them. Supervision of the Voluntary Schools would be the responsibility of the Village Education Committee (VEC).

7.5.8 A system of monitoring and evaluation will be designed by the grant-giving agency to periodically evaluate the work of the school on the basis of five main criteria — enrolment, attendance, retention, achievement of minimum levels of learning, and community involvement.

7.5.9 Central assistance will be given to the eligible Voluntary Agencies to run the schools.

(c) Programme of Non-Formal Education

7.5.10 In order to strengthen the NFE Scheme the following strategies will be adopted:

i) Provision of NFE centres will be based on the Microplanning excercise carried out for UEE. NFE centres will invariably cater to the needs of children, especially girls, who are not able to or who cannot attend the formal school.

ii) The community will be involved in the setting-up, and supervision of all NFE centres.

iii) The NFE instructors will be identified with the help of the community. Special efforts will be made to appoint women instructors wherever possibe.

iv) Training of NFE personnel, especially instructors, will be given top priority. Adequate training and re-orientation will be provided.

v) Training responsibility will be shared by the project, District level institutions like DIETs, DRUs, State level institutions like SCERT, and National institutes like NCERT and NIEPA.

vi) Project administration will be strengthened for effective decentalisation of management. Necessary administrative and management inputs will be provided at the State and Districts levels.

vii) Arrangements will be made for testing of children in the NFE stream with reference to an equivalent stage in the formal system and specific instructions issued to facilitate lateral entry into the formal system for students of the NFE stream.

viii) Efforts will be made to link non-formal courses with the Open Schools.

ix) The NFE programme will be linked with the scheme of public libraries, Jana Shiksha Nilayams, etc.

x) In total literacy campaign districts follow-up programmes will be taken up for children in the age-group 9-14 to go beyond NLM literacy norms. This will form a part of the post literacy and continuing education programme of the district.

xi) Vocational and technical courses of wide variety will be provided for children and youth who pass out of the Non-Formal stream. Shramik Vidyapeeth and Voluntary agencies will be involved in this process.

xii) Voluntary agencies will be encouraged to undertake projects of NFE, especially in areas where the formal school system is not able to meet the demands of UEE.

7.5.11 It is proposed that in the revised scheme, the following financial pattern will be followed:

a) Assistance to State Governments for setting up and running non- formal centres (boys and girls) on 75:25 basis;

b) assistance to State Governments for setting up and running non-formal education centres exclusively for girls on 90:10 basis;

c) assistance to voluntary agencies for setting up and running non-formal education centres on 100% basis; and

d) assistance to academic institutions and voluntary agencies for taking up innovative projects and research and evaluation activities in the field of non-formal education on 100% basis.

7.5.12 Pupil evaluation in NFE will be centre-based and related to the MLL. For project evaluation techniques and methodologies will be evolved by the various institutions concerned in the implementation of NFE, i.e., NCERT, SCERT, DIET, DRU, etc. Monitoring of NFE will be centre-based. Models already developed will be used for monitoring.

(d) Microplanning

7.5.13 Microplanning is a process of designing "a family-wise and child-wise plan of action" by which " every child regularly attends school or NFE centre, continues his/her education at the place suitable to him/her, and completes at least 8 years of schooling or its equivalent at the non-formal centre." A revenue village would be ideal for specific planning; however, microplanning for UEE may be carried out at the Block, Taluk, District levels. Within this area the steps by which this micro level planning will be operationalised are:

i) The Village Education Committee and similar participatory structures at Block, Taluk and District levels would play an important role in operationalising micro-planning.

ii) Mobilising community participation through environment building activities such as jathas, street plays, folk songs, etc.

iii) Ascertaining educational requirements of the areas through a family-wise survey to be conducted with the help of the community.

iv) Bringing to school all children who can be enrolled, and providing NFE centres or other in-novative and supportive channels for those who cannot go to school.

v) Ensuring that all children, specially girls and SC/ST children, regularly and actually participate in elementary education.

v) Planning for the improvement of schools or NFE centres so that effective learning takes place.

vi) Reorienting and strengthening local level administrative and resource support systems.

vii) Decentralising educational administration.

viii) Integrating all the schemes being implemented in the area which would contribute to the improvement of school system (e.g. Operation Blackboard, JRY, ICDS, Social Forestry, Health Check-up etc.).

7.5.14 In most of the total literacy campaign (TLC) districts, a positive environment has already been created for taking up Microplanning Projects. Many District Literacy Societies who have launched the TLCs have shown keen interest in elementary education and some of them have submitted project proposals under Microplanning to the MHRD. The initiative shown by these societies needs to be encouraged. DIETS/SCERTS and voluntary agencies will also be involved in the implementation of this programme.

7.5.15 Microplanning can be effective only when there is total integration of efforts and resources — human and financial — from all quarters. While centrally sponsored schemes — OB, JRY, NFE, etc. — will provide the major share of funds for improving school facilities and access, the State Governments will provide resources for opening new schools. Additional resources required for survey, environment building, training of VEC members. etc. will be provided by the Centre under this scheme.

7.5.16 Microplanning will be made operational in about 20 project areas on an experimental basis during 1992-93. Based on the experience gained during the course of implementation it will be expanded to cover about 100 districts during the 8th Plan. In due course the entire country will be covered, thus ensuring universal access and enrolment, and universal retention.

(e) Operation Blackboard

7.5.17 The scheme of Operation Blackboard was launched in 1987 in pursuance of NPE-POA, to provide minimum essential facilities to all primary schools in the country.

7.5.18 External evaluation of the scheme has indicated that lack of training of teachers in using the teaching material, specification of a large number of uniform facilities to be provided without modification according to local needs and

lack of provision for breakage of equipment have been some of the drawbacks of implementation of the scheme.

7.5.19 In order to operationalise the Revised Policy Formulations, the modified OB will contain the following three sub schemes:

    i) Continuation of ongoing OB to cover all the remaining primary schools especially those in SC/ST areas;

    ii) Expanding the scope of OB to provide three teachers and three rooms to primary schools wherever enrolment warrants them; and

    iii) Expanding OB to upper primary schools to provide (a) at least one room for each class/section (b) a Headmaster-cum-office room, (c) separate toilet facilities for girls and boys, (d) essential teaching learning equipment including a library, (e) at least one teacher for each class/section and (f) a contingency grant for replenishment of items, consumable and minor repairs, etc.

7.5.20 The following measures will be taken to improve the quality of implementation of OB :

    i) Teachers will be trained in using the OB teaching materials under a specially designed teacher training programme.

    ii) State Governments will make provision for breakage and replacement of equipment.

    iii) Enough flexibility will be provided for purchase of teaching learning materials relevant to the curriculum and the local needs.

    iv) At least 50% of the teachers appointed will be women. This will have a positive impact on girls' enrolment and retention.

    v) Wherever Micro-planning projects are taken up OB will form an integral part of Microplanning.

    vi) As far as possible low cost and locally available designs relevant to the local conditions will be adopted for school buildings. Nirmithi Kendras (Building Centres) and local teachnical institutes will be associated in this endeavour.

7.5.21 As in the past, Central Government will provide funds for equipment and teachers' salary for the plan period. The State Governments will mobilise resources under JRY and other schemes for construction of school buildings, including Headmaster-cum-office room and toilet facilities. The State Governments will also provide contingency and replacement funds for equipment.

7.5.22 Ongoing OB will cover all schools by 1993-94. Other two sub-schemes will be started in the second half of the 8th Plan. About 30% of the eligible schools will be provided three rooms and three teachers under the expanded OB by the end of 8th Plan and the remaining schools will be covered by the year A.D. 2000. Under the expanded OB a limited number of upper primary schools will be covered during the 8th Plan. Depending on the availability of funds, all upper primary schools will be covered by the year A.D. 2000.

6. CONTENT AND PROCESS

(a) National Curricular Framework

7.6.1 The National Policy on Education, 1986 envisaged a National System of Education based on a National Curricular Framework containing a common core along with the academic components. The NPE/POA envisaged a child-centred approach to education to promote universal enrolment and universal retention of children upto 14 years of age and substantial improvement in the quality of education in the school. In pursuance of NPE/POA, the National Council of Educational Research and Training (NCERT) brought out in 1988 a National Curricular Framework for all stages of school education. The revised curriculum took into account the need for reduction of curriculum load, keeping in view the requirements for modernisation and relevance.

7.6.2 Following the guidelines in the National Curricular Framework, the NCERT revised the entire school syllabi and brought out revised textbooks for classes I to XII. Based on the National Curricular Framework and the NCERT syallbi/textbooks, the State and Union Territories have also undertaken measures of curriculum renewal and development of new textbooks for different stages of school education for their introduction into the school system in a phased manner.

(b) Load of the School Bag

7.6.3 The tendency on the part of some schools, particularly in urban areas, to recommend a large number of books, has contributed to overburdening of students. The Ministry of Human Resource Development requested the State Governments/UTs to instruct the schools not to prescribe more books than necessary.

7.6.4 Of late, concern has been expressed in various forums, including both Houses of Parliament, about the increasing academic burden, particularly at the junior classes in schools. The whole question of curriculum load is a complex one and there are no simple solutions. It has to be tackled in a comprehensive way and would include curricular reform, examination reform, better pedagogical practices and teacher training. NCERT has given the guidelines but a more concerted effort to adopt them needs to be made by the State Education Departments, the

SCERTs, the Boards and other educational bodies. Keeping in view this concern, the Government have appointed a Committee under the chairmanship of Professor Yash Pal, Ex-Chairman of the University Grants Commission, to devise ways to reduce the academic burden on school in a time bound manner. The report of this Committee is awaited.

(c) Minimum Levels of Learning

7.6.5 The need to lay down Minimum Levels of Learning (MLL) emerges from the basic concern that irrespective of caste, creed, location or sex, all children must be given access to education of a comparable standard. The MLL strategy for improving the quality of elementary education is an attempt to combine quality with equity. It lays down learning outcomes in the form of competencies or levels of learning for each stage of elementary education. The strategy also prescribes the adoption of measures that will ensure achievement of these levels by children both in the formal schools as well as NFE centres.

7.6.6 The focus of MLL strategy will be the development of competency-based teaching and learning. The main steps by which MLLs will be introduced in school will be:

i) Preliminary assessment of the existing levels of learning achievements.

ii) Modification of the MLLs to suit local situations, if needed.

iii) Initial and recurrent orientation of teachers to competency-based teaching.

iv) Preparation of teacher training handbooks for MLL-based teaching.

v) Introdution of continuous and comprehensive evaluation of students and using evaluation results for remedial action.

vi) Preparation of unit tests and other evaluation materials and putting them in an item pool for using as and when required.

vii) Using MLL norms as and when curriculum and textbooks are revised; and

viii) Provision of competency based teaching-learning materials to make the educational process activity based and joyful.

7.6.7 Periodical and systematic programme of performance analysis will be carried out to ensure improvement in the quality of education. Efforts will be made to involve the community in this process.

7.6.8 Based on the experience gained in implementation of MLL projects sanctioned during 1991-92, the programme will be expanded to other areas in a phased manner. SCERTs/DIETs will be encouraged to take up MLL projects

so that this strategy becomes an integral part of pre-service teacher training. Project area teachers will be trained in utilising the teaching-aids supplied under Operation Blackboard. MLL concept will also be introduced in teacher training institutes/colleges for pre-service training. The immediate task is to lay down MLLs for upper primary stage. A committee will be set-up at the national level for this purpose.

7.6.9 At the national level, the MHRD will continue to play a major role. A network of Resource Centres will be identified to assist the Ministry in training, development of instructional and evaluation material, documentation, etc. At the state level Department of Education and SCERT will take the responsibility for implementation. A national pool of resource persons drawn from various educational institutions will be created. A similar pool at the State level will also be set up. Arrangements will be made for reorientation of these resource persons for effective implementation of MLL strategy.

7.6.10 While Cental Government will provide the funds in the initial stages when the strategy is implemented in a project mode, the State Governments, at least by the end of 8th Plan, will adopt this stategy as an integral part of their responsibility towards quality improvement of elementary education.

7. LAUNCHING OF NATIONAL MISSION

7.7.1 The Revised Policy Formulations provide for launching of a National Mission for the achievement of the goal of UEE. This being an important and immediate task, suitable mechanisms will be worked out to identify the objectives, strategies, functions, structure, etc. of the proposed National Mission. In this process wide consultations will be held with the State Governments, voluntary agencies, educational and social institutions, educationists, women activists, etc. The proposed Mission will have the cental objective of mobilising all the resources, human, financial and institutional, necessary for achieving the goal of UEE.

7.7.2 The Mission will be made operational during the year 1993-94, when all centrally sponsored schemes such as Microplanning, OB, NFE, MLL for quality improvement, etc. will be transferred to the Mission, so that implementation of UEE at the State, District, Block and village levels can be operated through the Mission mode.

8. MAKING THE SYSTEM WORK

(a) The Policy

7.8.1 NPE, 1986 suggested that education needed to be managed in an atmosphere of utmost intellectual rigour, seriousness of purpose and, at the same time, of freedom essential for innovation and creativity. The Policy also envisaged that discipline be introduced into the system with

immediate effect. The policy put it in simple words that for the system to work all teachers should teach and all students should study.

7.8.2 NPE, 1986 also suggested the following strategies for making the system work:

    i) a better deal to teachers with greater responsibility;

    ii) provision of improved student services and insistence on observance of acceptable norms of behaviour; and

    iii) provision of better facilities to institutions and creation of a system of performance appraisals of institutions according to standards and norms set at the national or State level.

(b) Proposed Action

7.8.3 While any insistance on imposition of rigid uniformity or martinet discipline will not be in consonance with the general tenor of NPE, and the process to be followed in creating the new educational order has to be participatory, it is incumbent upon us to develop a clear approach to this crucial task. The essential aspects of this task are the following :

    i) The functioning of the school administrative set up will be studied to find out the difficulties inherent in the system. The school administrative set up will be made alert and responsive so that they can correct the defects in the system. The people involved in educational administration will be trained and motivated to make the system under them work by inspiring the teachers and students. NCERT, NIEPA, SCERT and DIETs will intensify their training programmes for educational administrators for this purpose.

    ii) People will be involved in the process of education in their surroundings. This could be done through microplanning. This will ensure teachers' accountability to the society and community's accountabilities to the school system.

    iii) Steps will be taken to improve the working environment of the teachers. Teachers and teachers' representatives will be involved in planning and implementing the educational schemes at various levels. They may be made members of Committees at different levels set up by the Government for the review of the progress made in the education department schemes.

    iv) Greater autonomy will have to be given to the teachers to manage the affairs of the school.

    v) Students will be provided basic amenities such as drinking water, toilets, sports equipment, etc.

    vi) Students eligible for scholarships and other incentives should receive them in time.

    vii) Minimum basic facilities should be provided to all primary and upper primary schools under the scheme of OB.

    viii) Central and state organisations such as NCERT, NIEPA, SCERT, etc. will determine critria for assessment of performance of elementary education schools. An incentive scheme may also be worked out for the schools and community in order to motivate them to achieve the goal of UEE. This may be done at the block and district levels.

9. MONITORING AND EVAUATION

7.9.1 With targets of UEE given separately for access, participation and enrolment, it will be necessary to develop a monitoring system that yields timely and reliable information with which to monitor enrolment, retention, completion and achievement. At present the system of data collection depends upon a manual collation of data at the block and district levels. Apart from time-lags in the compilation of data, this process restricts monitoring to the main indicators, due to which data essential for the monitoring of internal efficiency such as net enrolment figures, age-wise break-up of students, dropout ratios, transition rates, etc., are not obtained. In the 8th Plan, efforts would be made to computerise the data collection system at the district level, introducing user friendly software developed under the COPE project of NIEPA and giving computer training to district and block education staff. Data will be entered and stored in computers in each district office, and the NICNET used to transmit it to the state and national levels. A scheme for computerisation of educational statistics has been introduced but this needs further streamlining. A Cell for Monitoring of UEE can be set up at the State level. The computerisation at district level will begin in phases, taking 4/5 districts in the first year and gradually replacing the manual system with the computerised system till by the end of the 8th Plan, the entire system is computerised. The data base will be gradually expanded, so that information relevant not only to monitor the interal efficiency of the eductional system but also for microplanning and to improve and inform the district management functioning, can be obtained.

7.9.2 In addition to quantitative data, the qualitative monitoring of achievement will also be introduced. The National Evaluation Organisation (NEO) set up to assess the learning acquired by children at the end of the primary and upper primary stages will yield data for this purpose.

7.9.3   Reputed agencies, NGOs, NCERT, NIEPA, SCERT, etc. will be engaged in the external evaluation of the programme.

8. SECONDARY EDUCATION

1. PRESENT SITUATION

(a) Access

8.1.1   The NPE, 1986 laid down that "access to secondary education will be widened to cover areas unserved by it at present." There has been a significant increase in the number of secondary and higher secondary schools and in enrolment during the period from 1987-88 to 1990-91. During this period enrolment at secondary stage increased by 16.8 per cent and at the higher secondary stage by 17.6 per cent. The number of secondary schools increased from 54,845 in 1987-88 to 59,468 in 1990-91; corresponding figures for higher secondary schools are 16,460 and 19,151 respectively. The ratio of secondary and higher secondary schools to upper primary schools had declined from 1:1.98 in 1987-88 to 1:1.86 in 1990-91.

8.1.2   Gender disparities in enrolments are significant. In 1990-91 girls accounted for 33.4% of the enrolment at the secondary stage and 32% at the higher secondary stage. The SCs and STs also lag in regard to enrolment. Thus, SCs account for 11.85% at the secondary stage and 9.7% at the higher secondary stage; corresponding figures for STs are 4.21% and 3% respectively.

(b) Structure

8.1.3   Though a considerable degree of uniformity has been achieved in regard to common education structure of 10+2+3, there is a considerable diversity regarding the location of the +2 stage. In quite a few States it is not part of the school system.

(c) National Curricular Framework

8.1.4   The secondary stage is divided into two very distinct sub-stages - secondary (upto class X) which is the stage of general education and higher secondary (classes XI and XII) which is marked by differentiation and diversification. The National system of education, as stated in the NPE, 1986 envisages a National Curricular Framework. Such a framework has already been prepared for the secondary education though its implementation has been uneven. The work of curriculum revision for the secondary stage was undertaken in almost all the States and the Union Territories (UTs). The NCERT also prepared the guidelines, syllabi and textbooks for all stages of school education. For the higher secondary stage, however, the Curricular Framework has not yet been authorised. The NCERT had developed a draft document in 1988 but that document requires to be reviewed keeping in view the emerging concerns. However, several States used the draft National Curricular Framework for the higher secondary stage prepared by the NCERT.

(d) Facilities for Qualitative Improvement

8.1.5   The POA, 1986 specified programmes for providing adequate playground facilities, construction of additional classrooms and provision of laboratory facilities, as specified in terms of norms developed by various organisations. Although no systematic studies have been conducted to assess the progress of diversification of courses at the higher secondary stage, improvement in curriculum, the textual materials, teaching practices, examination/evaluation methods, and for the improvement of pre-service and in-service training programmes, there is a general feeling that the progress has not been marked.

2. POLICY CHANGE

5.2.1   The Revised Policy Formulations take note of the increased demand for secondary education and go beyond NPE, 1986 by calling for a planned expansion of secondary education facilities all over the country. Secondly, they call for higher participation of girls, SCs and STs, particularly in science, vocational and commerce streams. Thirdly, they call for reorganisation of Boards of Secondary Education and vesting them with autonomy so 'that their ability to improve the quality of secondary education is enhanced'. Fourthly, they envisage that secondary level institutions as possible so that the children are equipped with necessary computer skills to be effective in the emerging technological world.

3.   BROAD PARAMETERS OF THE STRATEGY ENVISAGED

8.3.1   They include :

- Extending access to secondary education by setting up new schools in the unserved areas and by extending and consolidating the existing facilities, with particular emphasis on ensuring substantially increased enrolment of girls, the SCs and the STs.

- Progressively bringing in the higher secondary stage (and all its equivalents) as a part of the school system in all States.

- Formulating a National Curriculum Framework for the higher secondary stage as well as development of new curricula and instructional packages based on the semester pattern.

- Reviewing and revising the curricula of secondary education (classes IX and X).

- Implementing a comprehensive scheme of examination reform.

- Improving considerably the physical and infrastructural facilities in secondary and higher secondary schools.

- Providing for diversity of courses in higher secondary schools.

- Reviewing afresh the existing system of pre-service teacher education for the secondary stage and formulating and implementing an improved teacher education system.

- Institutionalising in-service teacher training.

- Transforming the role of the Boards of Secondary Education.

- Strengthening the academic institutions and bodies concerned with research and development in the areas of curriculum, instructional materials and equipment for secondary schools.

4. WIDENING ACCESS TO SECONDARY EDUCATION

8.4.1 The following steps are envisaged :

i) As a short term measure, the State Governments would be advised to provide in existing institutions necessary facilities for a diversity of courses, including science, commerce and vocational courses. They would also be advised to immediately initiate services for locating unserved areas and open High (i.e., Secondary) Schools in unserved areas taking the block as a unit so that the ratio of Secondary Schools to Upper Primary schools is not lower than 1:1.86. The distance of the existing schools from the unserved habitations will be duly considered. Special emphasis will be laid on opening schools in backward areas, areas inhabited predominantly by the SCs and the STs.

ii) As a medium and long term measure, the programme of school mapping in each State for locating schools on the basis of clearly defined norms and standards will be revised. This exercise, to be carried out by NIEPA in collaboration with educational authorities in the States, will be completed by the end of 1994 and a programme to fully serve the unserved areas will be completed by 2000 A.D. In this exercise the educational needs of girls, SCs and STs would receive special consideration.

iii) The States/UTs will be urged to formulate a special enabling plan to ensure increase in enrolment of girls, the SCs, the STs and other educationally backward sections. Necessary guidelines to formulate the plan/mechanism

will be developed by the NCERT in consultation with the education authorities of the States/UTs.

iv) The educational needs of those who find it difficult to attend full-time school and for the working people who have missed the secondary school will be met by extending and strengthening the Open School system.

5. COMMON EDUCATIONAL STRUCTURE

8.5.1 In order to ensure that during the Eighth Plan period, a common educational structure of school education, that is, $10(5+3+2)+2$, is established throughout the country, the following steps are envisaged:

i) As an immediate step, States/UTs that have not yet switched over to the national common educational structure will be urged to see that every new school which is opened follows the $10(5+3+2)+2$ structure. States/UTs that have already initiated the process of bringing the +2 stage into the school system will be urged to intensify the effort in this regard.

ii) A task force will be set up to work out the modalities in consultation with the educational authorities of States/UTs, for solving the difficulties and problems of switching over to the common structure.

6. QUALITATIVE IMPROVEMENT AND FACILITIES

8.6.1 The key issues in secondary education, apart from access, are quality, modernization and diversification. Standards regarding minimum facilities such as classrooms, sanitary facilities, science laboratories/equipments, libraries, etc., will be evolved by the NCERT in consultation with the Boards of School Education and similarly norms in respect of number and qualifications of teachers will also be laid down. The States and UTs, and Boards of Secondary Education would be advised to enforce these norms. Taking into consideration the past experience that the equipment once given is not replaced and even maintained it is suggested that community participation by way of student contribution at the rate of Rs.10 to Rs.15 per month should be levied, except from girls and others exempt from payment of tuition fee. This collection should remain in the school for replacement and maintenance purposes. States and UTs will conduct surveys from time to time about the facilities available in schools so that they can plan their school improvement programmes on sound database. These surveys will also be meshed with the All India Educational Survey.

7. STRENGTHENING THE ROLE OF THE BOARDS OF SECONDARY EDUCATION

8.7.1 The Boards of Secondary Education occupy a key position as they prescribe the courses of study, prescribe/ recommend and, in some States prepare textbooks and other instructional materials, lay down the standards of achievement of students, and 'pass judgement on the quality of performance of the learners at the secondary stage'. A number of other institutions at the national and state levels such as the NCERT, the NIEPA, the SCERTs, the Directorates of School Education, etc., also play an important role in strengthening secondary education. While the mutual interaction and collaboration among the various institutions working in the area of secondary education will be strengthened and institutionalized, the role and functions of the Boards will be redefined to enhance their ability to improve the quality of secondary education. This would require, a greater autonomy for the Board and strengthening them in terms of their structure and composition.

8.7.2 The much needed examination and evaluation reform will require the Boards of Secondary Education to play a greater role in improving and monitoring the quality of secondary education. The Boards will also be expected to play a central role in enforcing the norms with regard to academic and infrastructural facilities in secondary education.

8.7.3 A Task Force will be set up to study the existing position and status of the Boards throughout the country and to draw up a scheme to transform the Boards into effective instruments for bringing about qualitative improvement of secondary education. The Task Force would have due representation to the States/UTs, State Boards of Education and other institutions concerned. This Task Force will submit its report by March, 1993 and the States/UTs will be advised to implement its recommendations within the Eighth Plan period.

8. PROFESSIONAL DEVELOPMENT PROGRAMMES FOR HEADS OF SECONDARY/ HIGHER SECONDARY SCHOOLS

8.8.1 Suitable programmes for Heads of Secondary/ Higher Secondary schools will be designed to facilitate the effective implementation of the reforms outlined above.

9. CONTENT AND PROCESS

8.9.1 The programme of reorientation of content and process needs to be worked out separately for the two stages of Secondary Education, viz., the secondary stage (classes IX-X) and higher secondary stage (classes XI-XII). This is because in terms of both content and process, the two stages are very different. While the former is a continuation of, and forms the concluding stage of general education, the latter

marks the beginning of differentiation and diversification. There is a much clearer understanding of nature of education at the secondary stage than at the higher secondary stage. The National Curricular Framework visualized as a basis of the National system of Education in the NPE has been formulated and programmes for implementing it have been carried out by the educational authorities in almost all the States/UTs. However at the higher secondary stage, as mentioned earlier while a draft of the curricular framework was prepared in consultation with educational agencies and organizations and experts throughout the country, its acceptance as a national document cannot be said to have been achieved. It was not even printed for wide circulation though educational authorities in many States/UTs have used it in varying degrees in their programmes of reorienting the content and process. Many issues relating to the modernization of its structure and content, imparting it a greater degree of relevance and its transaction and evaluation are related to the question of semesterization recommended by the NPE.

8.9.2 At the secondary stage of education, where knowledge areas become increasingly important, the content and process of education has to undergo continuous reorganization and upgradation. Though, ideally, various learning experiences based on the school curriculum should make an integrated whole, they have to be classified under various subject areas for the sake of convenience. The planning of objectives, learning activities and strategies under each curricular area have to be further guided by considerations such as the requirements of the various stages of education and the developmental stages of the learners.

Secondary Stage

8.9.3 The NCERT, in 1988, brought out the modified version of the *National Curriculum for Elementary and Secondary Education - A Framework* in the light of the major thrusts and recommendations, including the core curricular areas, of the NPE. It dealt with various aspects of the reorientation of content and process of education as a whole and in various subject areas up to the secondary stage. This Framework formed the basis of the Guidelines and Syllabi as well as textbooks and other instructional materials in various subjects brought out by the NCERT. According to the Framework the content of secondary education which is the terminal stage of general education will be built around the following curricular areas:

- Languages (mother tongue, Hindi, English)
- Mathematics
- Science
- Social Sciences (History, Geography, Civics, Economics)
- Work Experience

- Art Education

- Health and Physical Education

8.9.4   Languages: One of the major thrusts in the Framework was the effective implementation of the Three Language Formula. It recommended the study of three languages before the child completes her/his Secondary Education with one language - the mother tongue/regional language - to be studied from the primary stage to the end of the secondary stage and the study of the second and the third language from the upper primary stage to the secondary stage.

8.9.5   Mathematics: The secondary stage (Classes IX-X) marks a beginning for the transition from functional mathematics studied till the upper primary stage to the study of mathematics as a discipline. The logical proofs of proposition, theorems, etc. is introduced at this stage. Apart from being a specific subject, it should be treated as a concomitant to any subject involving analysis and reasoning.

8.9.6   With the recent introduction of computers in schools, educational computing and the emergence of learning through the understanding of cause-effect relationships and the interplay of variables, the teaching of Mathematics will be suitably redesigned to bring it in line with modern technological devices.

8.9.7   Science: The aim of teaching science at this stage is primarily directed towards problem-solving and decision-making through the learning of key concepts which cut across all the disciplines of science. The content of science should be organised on the basis of two guidelines, namely contemporary science and the learning ability of the pupil. It should reflect that science is a continuing human endeavour and that it is international in character and method.

8.9.8   The instructional materials in science based on the Framework will be reviewed to ensure that the approaches followed are in consonance with the objectives of science education as laid down in the policy, viz., to develop in the child well-defined abilities and values such as spirit of inquiry, creativity, objectivity, courage to question, and aesthetic sensibility. Learning of science will be oriented to ensure that the learners discover the relationship of science with health, agriculture, industry, and other aspects of daily life.

8.9.9   Social Sciences: The Framework recommended that social sciences at the secondary stage may comprise elements of History, Geography, Civics and Economics to promote an understanding of contemporary India. The general framework of objectives of teaching social sciences at this stage had three major components. These were:

(i)   deepening the pupil's understanding of contemporary India and its social, economic and political development as an independent nation, and

its composite culture;

(ii)   developing in the pupil a world perspective and an understanding of the problems of the contemporary world, particularly those relating to international peace and human rights and the establishment of a just world order; and

(iii)   inculcating in the pupil a spirit of enquiry, a scientific and forward looking outlook and aversion to injustice and bigotry.

8.9.10   Art Education: The Framework defined the aim of art education up to the secondary stage as sensitization of the learners so that they may learn to respond to the beauty in line, colour, form, movement and sound, and knowledge and understanding of the cultural heritage.

8.9.11   Work Experience: The Framework visualized Work Experience — 'purposive and meaningful manual work, organized as an integral part of the learning process and resulting in either goods or services useful to the community' — as an essential component at all stages of education. Its introduction through well-structured and graded programmes comprising activities in accordance with the interests, abilities and needs of learners was recommended. The Framework also laid stress on the inculcation in the learners respect for manual work, values of self-reliance, cooperativeness, perseverance, helpfulness, inquisitiveness, work ethics, attitudes and values related to productive work, and concern for the community. For the secondary stage, the imparting of a pre-vocational orientation to the programme was recommended to facilitate the choice of the vocational courses at the higher secondary stage.

8.9.12   Health and Physical Education: Health and physical education was visualized as an integral part of education up to the secondary stage. The Framework laid emphasis on the total health of the learner and the community by promoting desirable attitudes, understanding and practices with regard to nutrition, health and sanitation and developing health, strength and physical fitness of the body through games and sports activities, yoga, scouting, guiding, N.C.C., social service, etc.

8.9.13   Education in Values: The Framework emphasized value education as an integral part of school curriculum. It highlighted the values drawn from national goals, universal perception, ethical considerations and character building. It stressed the role of education in combating obscurantism, religious fanaticism, violence, superstition, fatalism, exploitation and injustice as well as the inculcation of values like honesty, truthfulness, courage, conviction straightforwardness, fearlessness, tolerance, love for justice, dependability, compassion, etc. for creating a humane society and balanced individuals. The Framework paid particular attention to the values specified by the NPE as the core curricular

elements. Efforts were made to integrate the various components of value education into the curriculum at all stages of school education, including the secondary stage.

8.9.14 Population Education: The NPE specified observance of the small family norm as one of the core curricular elements at all stages of education. This has been sought to be achieved through the population education programme. Contents relating to population education have been integrated into the syllabi and textbooks of Geography, Economics, Civics, Science, and Languages at the secondary stage. These contents have been drawn from areas like population and economic development, social development, environment, health and nutrition, family life and population dynamics. These contents are related to six major themes, viz., Family Size and Family Welfare, Delayed Marriage, Responsible Parenthood, Population Change and Resource Development, Population-related Values and Beliefs, and Status of Women.

Higher Secondary (+2) Stage

8.9.15 The Senior Secondary (+2) Stage is a crucial stage of school education as after this stage students become eligible to compete for professional courses to be future engineers, technologists, doctors, teachers or for pursuing academic courses at the tertiary stage. A large number of them also join the world of work. Therefore, it is at this stage that students are to be exposed to the structure of individual subject disciplines such as Physics, Chemistry, Biology, Mathematics, Geology, History, Geography, Political Science, Economics, Sociology, Philosophy, Psychology, Languages and Arts.

8.9.16 The content of each subject has to take into account the recent developments in the subject in as much as they are relevant to the +2 stage, and providing all the needed foundations in each subject so that the needs of the different professional courses and the other areas of their further education can be met with in reference to these subjects.

Strategies

8.9.17 The implementation will broadly cover the following:

(a) *Orientation of content:*

(i) Semesterization and General Education: Following the recommendation of the NPE, the NCERT's curriculum in various subjects at the secondary stage was organized in the form of semester courses. However, as the secondary stage in the 10+2+3 structure is a part of the stage of general education with undifferentiated common courses for all, the semester pattern at this stage has the limited meaning of the division of courses for purposes of transaction and evaluation, and not for diversification of the curriculum. There cannot be any provision for options and electives at this stage nor for the introduction of different levels of courses. While the organization of courses on semester pattern for purposes of transaction and evaluation, including continuous and comprehensive evaluation, will be pursued, no departure from the nationally accepted policy of general education upto the secondary stage will be made.

(ii) Implementation of the National Curricular Framework: The implementation of the National Curricular Framework upto the secondary stage throughout the country will be pursued. Status studies will be carried out by March, 1994 to monitor the implementation, particularly of the core curricular elements, and remedial steps will be taken, in consultation with the educational authorities of States/UTs, wherever necessary. Particular emphasis will be laid on the implementation of the Three Language Formula. The task of identifying Minimum Levels of Learning (MLLs) for the secondary stage will also require to be undertaken both in reference to the essential competencies which cut across different subjects and also the knowledge base of the subjects.

(iii) Modernization of Curriculum: Though the major thrusts in the NPE in its revised form are reflected in the National Curricular Framework, the curricula in various subjects will be examined for any deficiencies and inadequacies and for its modernization keeping in view the increased emphases on some issues of major concern, advance in knowledge and pedagogical considerations. The NCERT will be advised to initiate the necessary changes in the curriculum before the end of the Eighth Plan period. Special attention will be paid to strengthening the programme of education in values to make it more effective as well as the programmes of population education.

(iv) The National Curricular Framework for Higher Secondary Education will be finalised at the earliest. The NCERT will be asked to complete it by the end of March, 1993. An important feature of this Framework will be the semesterization of Higher Secondary education. This Framework will reflect the increasing importance of knowledge base in various subject areas as well as the essential competencies which cut across all subject areas. The NCERT will also develop guidelines, syllabi and in-

structional packages in the light of the Curricular Framework in a phased manner. The educational authorities in the States/UTs will be advised to initiate the implementation of the new Framework before the end of the 8th Plan period.

(v) The present progress of evaluation of textbooks from the standpoint of national integration will be extended to include the core curricular elements as well as elements relating to International Education. This would form a part of the monitoring of the implementation of the National Curricular Framework at all stages of school education.

The main emphasis will be on:

(i) Revising the syllabi and instructional materials in the light of the revised policy formulations, wherever necessary.

(ii) Study of State level curriculum materials from the standpoint of implementation of the NPE thrusts.

(iii) Semesterization of the +2 stage curricula and development of exemplar materials.

(b) *Orientation of Process:*

(i) Redesigning of pre-service teacher education curriculum to suit the requirements of Secondary Education; design of pre-service teacher education programme specially relevant for +2 stage teaching.

(ii) Reorientation of inservice teachers on periodic basis.

(iii) Special training programmes for in-service teachers in subjects like the following for which the facilities are generally inadequate:

- Work experience
- Art Education
- Health and Physical Education

Examinations Reform:

- implementation of continuous, comprehensive evaluation

- orientation of teachers in the new evaluation techniques

- Establishment of Educational Testing Service (ETS)

(c) *Strengthening of Technical Support System:*

- Strengthening of existing institutions of teacher training

- Linkages and networking with university departments

- Development of CTEs/IASEs as effective support for inservice education of secondary teachers

(d) *Use of ET:*

- Development of Communication Technology for improving classroom transaction

- Educational Radio/TV

- A/V Cassette service

- Computers for interactive learning

10. SPECIAL ARRANGEMENTS FOR TALENTED CHILDREN

8.10.1 There are talented children with pronounced competence in particular fields, which may be accompanied by indifference in certain other areas. Therefore, arrangements for such students cannot be fitted into regular courses of study. Special arrangements for such students will have to provide teaching/learning on modular basis for every small group of students in a small number of subjects of interest to them. Such arrangements will be characterised by better facilities, higher teacher-student ratio and regular participation by professionals in teaching programmes. A detailed proposal for this purpose would be worked out within one year, by a specially constituted group.

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* The term 'higher secondary' used in this report refers to all post-secondary (high school, class X) and Pre-Degree education and includes Higher Secondary of the 10+2 pattern, Pre-University (One year course) Pre-Degree/Pre-University (Two year course) and Intermediate Junior colleges.

** The issues relating to computer literacy, vocationalisation of education, Navodaya Vidyalayas, Open Learning Systems, Examination Reforms and Teacher Training, though linked with secondary education, have not been discussed in this Chapter. These have been discussed in chapters 19, 10, 9, 12, 21 and 22 respectively.

9. NAVODAYA VIDYALAYAS

1. PRESENT SITUATION

9.1.1   Since 1986, Navodaya Vidyalayas were set up in 280 districts spread over 29 States and Union Territories for children who are potentially high achievers, regardless of their socio-economic background. The POA envisaged establishing a Navodaya Vidyalaya in each district before the end of the 7th Five Year Plan, but this objective could not be achieved for want of sufficient resources; moreover, the three State Governments of Assam, Tamilnadu, and West Bengal did not accept the schemes, although the Assam Government has accepted the scheme subsequently. Neverthless, although all its objectives could not be achieved, the Navodaya Vidyalaya scheme achieved a significant degree of success and popularity, which is reflected in the demand for more Navodaya Vidyalayas.

9.1.2   The POA envisaged that the Navodaya Vidyalayas would make available good quality education irrespective of the parents' capacity to pay and their socio-economic background. The Navodaya Vidyalaya Scheme has achieved a certain measure of success in regard to this objective. According to a survey made in 1989, 40.7% of students belonged to families below the poverty line; 16% of the students were first generation learners. Students are selected on the basis of an all India test of an objective type which is intended to be as culture-free as possible, and designed to gauge potential rather than academic achievement. The academic results of the Samiti have generally been better than those of other groups of schools affiliated to CBSE, including private schools.

9.1.3   The Navodaya schools largely are intended to cater to rural talented children (for whom 75% seats are reserved) with reservation for SCs and STs. This social objective has been achieved to a great extent. In the Navodaya Vidyalayas, 77.45% of the students are from rural areas; 20.35% from SCs and 10.76% from STs. Girl students are 28.44% of the student population as against the target of 33%. An important feature of the scheme is the migration of a proportion of the students from one region to another, promoting national integration by providing opportunities to talented children from different parts of the country to live and learn together.

9.1.4   The provision of accommodation and other equipment and facilities is severely constrained by the paucity of financial resources. This is likely to affect the credibility of the scheme. Again, a shortage of personnel at all levels, particularly of teaching staff, is likely to affect standards if not rectified.

2. REVIEW OF THE SCHEME

9.2.1   The scheme was reviewed by the NPERC and by the JRC. While the NPERC was unable to reach any definite conclusion, the JRC recommended continuation of the scheme as originally envisaged subject to the following:-

a) Constant review to keep the scheme as cost effective as possible;

b) Ensuring the continued validity and reliability of the admission test by periodic evaluation and appropriate modification of admission procedure;

c) More particular attention to the pace-setting role of these institutions.

The Committee also observed the need to think of the future course of the scheme.

3. STRATEGIES

9.3.1   Keeping in view the considerations outlined by the JRC, the following strategies will now be adopted.

(i) *Coverage* : The objective will be to cover all districts in States accepting the scheme before the completion of the 8th Plan Period and preferably in the next three years. This will mean opening about 50 Navodaya Vidyalayas every year.

(ii) A revised strategy for construction to minimize costs which meshes the long-term reconstruction plans with a need based short-term plan to enable schools to function till sufficient permanent buildings are available. Given the resource position, the original plan for school campuses can remain only a long-term objective. For the time being, priority would be given to improvement of existing structure and to the provision of the essential requirements of a residential school. The permanent construction programme will be revised taking into account cost-effectiveness, re-phasing of the construction schedule, use of local material, merger of the design of the building with the local environment, involvement of the local people in the construction work and feasibility of maintenance, etc. A high level Committee of Architects and Engineers will go into all these aspects and submit its report by June, 1993.

(iii) *Admission Test*

(a) The validity and reliability of the admission tests is the most crucial factor in determining the success of the scheme. A high level committee will be appointed every two years to evaluate the testing process and to suggest modifications of the testing procedure if necessary. This will include consideration of the basic question whether the past approach of having a nation-wide test based on objective type answers is appropriate or whether the test design should not be more local-specific. The first such committee will be appointed immediately; its recommendations will be incorporated in the tests for admission in the academic year 1994-95.

(b) The Navodaya Vidyalaya Samiti will eventually take over the conduct of tests; by mid-1994 a separate cell would be set up for doing so.

(c) The Samiti should also be adequately staffed and equipped for continuous research and evaluation in respect of the admission tests.

(d) All research data thrown up by the testing procedures will be made widely available as an input in broader evaluation of the primary education system.

(iv) *Academic Quality* : Strategies to maintain a high standard of academic achievement will be:

(a) Recruitment of Teachers: The Executive Committee of the Samiti will review in March every year the recruitment vis-a-vis the manpower requirements. A job-oriented test will form the basis of selection followed by an interview for which about 25% marks should be set and which may include conduct of a demonstration class where feasible. Measures should be devised to attract better talented teachers to Navodaya Vidyalayas.

(b) Training : An annual programme of action would be drawn up for this purpose and monitored by the Academic Advisory Committee of the Samiti. Steps would include continued development of in-service training programmes and teaching/learning materials. In addition to in-service courses, short term in-house workshops will be organized for a cluster of Navodaya Vidyalayas and local schools. These workshops will be organized from 1992-93 itself.

(v) *Pace-setting and Networking of Institutions*: The NPE 1986 expects Navodaya Vidyalayas to become catalysts of a nation-wide programme of school improvement. Navodaya Vidyalayas will be encouraged and given full liberty to play an active role in this area in consultation with the parents, community and local educational authorities. Each Navodaya Vidyalaya will prepare an annual action plan which will be sent to the Samiti and also report the activities undertaken by the Samiti in order to facilitate sharing of experience among Navodaya Vidyalayas. Some possible activities which may be included in the action plan are:

a) Eradication of illiteracy within a radius of one-and-a-half kilometre to begin with;

b) Mobile library scheme to distribute books to the children and the villagers on loan for a few days;

c) Navodaya Vidyalayas to act as resource centres for training of teachers of neighbouring schools;

d) Closer interaction with DIET, SCERTs, etc.;

e) Making available resources and facilities available in Vidyalayas for children of nearby schools;

f) Short term exchange of teachers of other schools;

g) Programme of training of teachers of the district;

h) Organisation of inter-school competitions in the district.

(vi) *Vocational Opportunities* : In order to ensure the meaningfulness of Navodaya Vidyalaya education to its target group, constant efforts to narrow the gap between the school and the real world of work, through vocational education and through appropriate vocational guidance, will be necessary. It will be necessary to monitor this by sample surveys of ex-students and keeping contact with alumni (for example through an alumni magazine) as far as possible. The programme of vocational education should be further expanded. In addition, keeping in view the changing scenario in work situations, computer literacy will continue to be given high

priority. It should be the endeavour of the Samiti to widen the perspectives of its students regarding different career oppportunities available to them and to seek to instil among them a desire not merely for personal career success but for service to society and the nation. In particular, entry into the teaching profession will be encouraged and students made aware of its opportunities. Suitable students not inclined to pursue higher education, may be assisted in the matter of admission and by award of scholarship to become primary teachers. At the same time, the Samiti may intervene to help students who have passed class XII in obtaining admission in colleges, and also, assist them generally in seeking admission to professional collges by means such as providing extra reading materials, in-house coaching arrangements and provision of necessary guidance. For this purpose, an annual action plan should be approved and monitored by the Academic Advisory Committee. .

(vii) *National Integration* : The scheme of migration of students will continue to be implemented. Further, non-migrating students of class X (who constitute 70% of class-X students) should also visit the Vidyalaya where the students from that Vidyalaya migrate and stay with the parents of the children of that Vidyalaya as guests during the summer vacation for a period of about one month. The experiment has been attempted in 5 Vidyalayas during 1991-92. This should be expanded on the basis of experience.

(viii) *Accountability* : Accountability of the Navodaya Vidyalayas to the community it serves should play a decisive role. This will also entail the maximum possible decentralisation and giving autonomy to the school in day-to-day decisions. Structures promoting interaction with the community and with the parents, need to be devised. Methodologies of teacher evaluation need to be constantly reviewed and improved upon. This should be given high priority and immediate initial steps should be taken towards making this a continuous process.

4. FUTURE EXPANSION OF NAVODAYA VIDYALAYAS

9.4.1 A comprehensive review of the Scheme of Navodaya Vidyalayas will be required after Navodaya Vidyalayas have been established and consolidated in all districts of the country.

9.4.2 The NPE, 1986 envisages that resources, to the extent possible, will be raised by a number of measures including mobilising donations. A grant-in-aid scheme would be worked out for assisting the agencies that wish to assist the expansion of the Navodaya System by providing land, infrastructure and a share of the recurring expenditure. The scheme would spell out details such as the eligibility condition, admission procedures and management.

9.4.3 Future Action: After the scheme has been extended to all districts and further experience gained with it, it will be appropriate to consider the following two measures:-

(a) The charging of fees from students who can afford to pay. However, to start with, from 1993-94, Rs. 10/- per month may be charged as Pupils' Fund from each student; however, the Principal of the Vidyalaya may grant exemption to the students whose parents cannot afford to pay it.

(b) Autonomy to Navodaya Vidyalaya Samiti for having its own curriculum, textbooks and examining body.

10. VOCATIONAL EDUCATION

1. PRESENT SITUATION

10.1.1 The NPE, 1986 advocated a systematic, well-planned programme of vocational education which would be a distinct stream intended to prepare students for identified occupations. It envisaged that vocational courses would ordinarily be provided at the higher secondary (+2) stage but flexibility was provided to start vocational education after class VIII. The NPE, 1986 set a target to cover 10% of higher secondary students under vocational courses by 1990 and 25% by 1995. A substantially funded centrally sponsored scheme for Vocationalisation of Secondary Education was started with effect from February 1988. The scheme was taken for implementation in all States and Union Territories excepting Tripura, Daman and Diu, Dadra & Nagar Haveli and Lakshadweep. At the end of 1991-92, 12,543 vocational sections were approved in 4400 schools, thereby creating facilities for diversion of about 6.27 lakh students at the +2 stage (@ 25 students per vocational section in classes XI and XII). This accounts for 9.3% of students enrolled at the +2 stage. Although quantitatively the implementation of the Vocational Education Scheme at the +2 stage has been fairly substantial, in qualitative terms, there remains much to be done. Vocationalisation of education is identified as a priority area in the Eighth Five Year Plan.

10.1.2 The NPE, 1986 had also mentioned the need for non-formal and need-based vocational programmes mainly, though not exclusively, for disadvantaged groups. The NPE, 1986 also envisaged vocational courses at the tertiary level for facilitating vertical mobility. While some beginning has been made in these areas, they will receive impetus during the Eighth Plan.

10.1.3 The Revised Policy Formulations retain the policy framework laid by the NPE, 1986 but for two modifications. First, the target for coverage under vocational courses has been revised - ten per cent of the higher secondary students by 1995 and 25 per cent by 2000. Secondly, they envisage children at the higher secondary level being imparted generic vocational courses which cut across several occupational fields and which are not occupation specific, thereby adopting an important recommendation of NPERC.

2. MANAGEMENT OF VOCATIONAL EDUCATION

10.2.1 Management is critical to the implementation of a complex programme of vocationalisation of education. The following management structure was envisaged under the Centrally sponsored Scheme of Vocationalisation:

National Level

(i) A Joint Council of Vocational Education (JCVE) under the chairmanship of Union Education Minister for the planning and coordination of vocational programmes; to provide guidelines for development of vocational programmes at all levels, and to evolve schemes for involvement of public and private sector industry in vocational education.

(ii) The Bureau of Vocational Education in the Department of Education, Ministry of Human Resource Development, would provide secretariat support to the JCVE and oversee the implementation of the programmes.

(iii) The NCERT through its Department of Vocational Education would function as the apex level Research and Development (R&D) institution giving academic support in the planning and implementation of vocational programmes.

Regional Level

(i) Boards of Apprenticeship Training would be augmented to cater to the training needs of vocational students after they complete the vocational courses at the +2 stage.

(ii) The Regional Colleges of Education (RCE) under NCERT would function as regional vocational teacher training institutions in addition to performing R&D functions.

State Level

(i) The State Council of Vocational Education (SCVE) should be set up as a counterpart of the JCVE.

(ii) The Directorate of Education in the States/UTs should provide the administrative leadership to the vocational education programmes.

(iii) In the SCERTs, a separate wing would be established to provide R&D support to the programme at the State level.

District Level

A District Vocational Education Committee would be constituted to promote the programme and maintain linkages with the Directorate of Education and other related institutions as well

as backward and forward linkages with the Community.

School Level

A senior staff member will be incharge of the management and actual implementation of the vocational courses. He will also build up contacts and linkages with the community.

10.2.2 As envisaged by the scheme, the JCVE and its Standing Committee were established at the national level. In view of the magnitude and complexity of the programme and the number of areas requiring close attention it has been decided to set up a Central Institute of Vocational Education (CIVE) under the umbrella of the NCERT, but with considerable functional autonomy. The Institute will be the apex R&D institution in the field of vocational education.

10.2.3 However, at the State level, out of the 24 States and 4 UTs, only 15 States and 2 UTs have set up offices at the Directorate level; Only 8 States and one UT have set up organisations at the SCERT level and only 6 States have set up district level organisations for this programme. Many of these States, which have set up offices, have not filled the full contingent of posts required. Only 11 States have established the SCVEs or a similar body as the counterpart of the JCVE at the State level.

10.2.4 The following steps need to be taken:

(i) The state governments/UTs should set up adequate management structures at all levels as envisaged under the centrally sponsored scheme.

(ii) Personnel manning the management structure should be well trained and encouraged to establish linkages with concerned agencies in the Government, voluntary organizations and individuals with specialized training. They should also remain in position for a tenure of atleast three years so as to give continuity to the programme.

(iii) While giving financial assistance preference will be given to States/UTs which have set up adequate management structure.

(iv) The JCVE and SCVE should meet regularly in order to provide the required guidance and cooridnation at the National and State levels respectively.

(v) The CIVE should be made functionally effective as early as possible.

3. VOCATIONALISATION OF SECONDARY EDUCATION AT PLUS TWO LEVEL

A. Schematic Pattern and Coverage

10.3.1 As already mentioned, the Scheme of Vocationalisation of Secondary Education at +2 level was started in 1987-88 and taken up for implementation in 24 States and 4 UTs. Facilities have thus been created for diversion of about 6.27 lakh students at +2 level @25 students per vocational section at +2 level. The NCERT undertook a quick appraisal of the implementation of the programme in seven States in 1990. The Department of Education had engaged M/s Oper Main Systems to collect data on implementation of the programme. Data upto 1991 has been received for 19 States and UTs. A computerised Management Information System (MIS) has been developed so that necessary information on different aspects of the programme implementation are available at different levels from the district to the Central Government. The MIS will become operational from July 1992-93.

10.3.2 A determined effort will be made to introduce the programme in Tripura, Daman & Diu, Dadra & Nagar Haveli and Lakshadweep. The main emphasis during the 8th Plan would be consolidation and quality improvement of the existing programme. By the end of the 8th Plan it is proposed to create facilities for diversion of an additional 2.62 lakh students at +2 level. taking the cumulative coverage to 8.89 lakh students or in percentage terms, approximately 11% of the student population at +2 stage.

B. Revision of the Scheme

10.3.3 In the light of the feedback received from the States and the experience gained in implementation, certain aspects in the scheme are being revised. These include the financial outlays for equipment, construction of worksheds, vocational surveys, raw materials and field visits. Assistance to vocational organisations would be separate scheme hereafter.

C. Essentials for a Successful Vocational Programme

10.3.4 Essentials for a successful vocational Programme:

- The credibility of the programme should be established. This would depend on its quality, relevance and acceptability.

- Education-Employment linkages should be firmly established.

- Adequate infrastructure — physical and academic — should be provided.

- Assured supply of funds over an extended period of 5 to 10 years.

- Training programme for teachers — both pre-service and in-service.

- Training of teacher trainers.

- Effective management structures at all levels - at the Centre and in the States/UTs and reasonable tenure for their functionaries.

- Equivalence among the vocational, technical and academic courses.

- Curriculum development in consultation with employers.

- Enlisting community involvement and participation of commerical establishments and industrial houses.

- Need for active co-operation of other government Departments with the Department of Education at the Central and State level.

D. Apprenticeship Training

10.3.5 It has been consistently felt that students of the Vocational courses at +2 level should be provided facilities for apprenticeship training under the Apprentices Act as an important catalyst for promoting vocational education. The training would strengthen the skills of the vocational students by placing them in real work situation in industries/farms whereby establishing their worthiness in the area of vocational training obtained. In 1986, the Apprentices Act administered by the Ministry of Labour (DGE&T) was amended to provide training to vocational students of +2 level (Technician Vocational Apprentices). This scheme is being implemented through the four Regional Boards of Apprenticeship Training (BOAT) at Bombay, Calcutta, Madras and Kanpur. Twenty subject fields were notified for apprenticeship training in 1988. Despite that, the actual number of students who could actually get the benefit of these facilities is very small. The Central Apprenticeship Council under the Ministry of Labour has approved the inclusion of 40 more subject fields under the Apprentices Act (Technician Vocational Apprentices). This would facilitate a much larger number of students to derive the benefit of Apprenticeship Training. Efforts would be made to cover more vocational courses under the Apprentices Act. To derive maximum benefit from training facilities under the Apprenticeship Scheme under the category of Technician Vocational Apprentices, the States/UTs should, as far as possible, adopt the nomenclature of the vocational courses approved under the Apprentices Act (Technician Vocational Apprentices). They should also liaise with the Regional Boards for training of the students.

10.3.6 The Regional Boards of Apprenticeship Training should be suitably strengthened and activated so that they may effectively fulfill their resposibility in the placement of +2 Vocational students for Apprenticeship Training. Efforts should be made by the Boards to cover a much larger number of students passing out of +2 vocational stream in the 60

courses presently covered under the Apprentices Act (Technician Vocational Apprentices).

E. Teacher Training

10.3.7 It is the teacher who interprets and implements the educational policy in actual class room situation and as such is the most crucial input. Presently, pre-service training for vocational teachers is practically non-existent; in-service training is not adequate and competent vocational teachers are often not available in desired numbers. Teacher training, therefore, requires priority attention.

10.3.8 A phased and well structured programme of pre-service teacher training will be drawn by CIVE and implemented in RCEs on a priority basis. The pre-service training would gradually be extended to other suitable institutions such as agricultural and general universities. By the end of the 8th Plan, 1600 teachers are expected to be given pre-service training.

10.3.9 Inservice courses will be organised by the States in selected professional institutions on the basis of guidelines already provided by NCERT/CIVE in terms of duration, content and methodology. The SCERT should be the nodal agency at the state level for coordinating the teacher training programme. SCERTs should develop linkages with DIETs and Colleges of Teacher Education for this purpose. Besides, the CIVE will also conduct inservice training programmes on national or regional level in selected areas in its own premises as well as in collaboration with other expert institutions such as Universities, Research Laboratories, Medical Institutions, etc. It is estimated that by the end of the 8th Plan, 12000 teachers will receive in service training.

10.3.10 The State Departments concerned with vocational education will also evolve schemes to utilise resources in institutions, such as those under Khadi and Village Industries Commission (KVIC), Krishi Vigyan Kendra (KVK), Farms, Hospitals, etc., for training vocational teachers, on part-time as well as on full-time basis. It is estimated that 100 such professional institutions would provide traning to about 5000 teachers. The CIVE will monitor and evaluate the pre-service and inservice training courses.

F. Curriculum

10.3.11 The national vocational education curriculum for the +2 stage has been adopted by most States and UTs which have launched the vocational programme so far. A few are yet to fully switch over from the original state pattern to the national design.

10.3.12 The nationally recommended curriculum design consists of the following components:

1. Language(s)   15-20%

2.	General Foundation Course (Including Environment Education, Rural Development and Entrepreneurship Development)	10-15%
3.	Vocational Theory and Practice (including on-the-job training)	65-70%

10.3.13 It is essential that knowledge and skills acquired have relevance to self and wage employment, and should be based on an assessment of the market opportunities and potentialities. The communication skills, entrepreneurial skills, perception of environment and sustainable development should find suitable weightage. On the job training as an integral component of vocational curriculum is necessary for developing skill competencies.

10.3.14 The following steps would be taken:

    i) Persuading the States which have not yet adopted the national curriculum design to adopt the design at the earliest.

    ii) Developing competency based curricula following the national pattern in respect of all new vocational courses.

    iii) Ensuring substantial time allocation for on-the-job training and its proper execution.

    iv) Developing capabilities for teaching the General Foundation Course with particular reference to entrepreneurship development, curricular materials, teacher training, follow up support, etc.

10.3.15 The States will primarily be responsible for the first three steps; the collaborative support of the CIVE would be available to them. The CIVE will have to play a more direct role in regard to the fourth step by bringing in the expertise of other institutions in the field of entrepreneurship development.

G. Vocational Education at Tertiary Level

10.3.16 One of the factors responsible for the slow progress of vocationalisation of secondary education is the lack of opportunities for the vocational stream graduates for their professional growth and career advancement.

10.3.17 Vertical mobility can be provided for the +2 stage vocational students through specially designed diploma courses, general degree courses and professional degree courses.

10.3.18 In spite of the recommendations to this effect made in the POA, 1986, not much progress has been made in this regard. Some states have allowed the vocational stream graduates to enter second year of polytechnics while some others have reserved seats for them in the first year. Most of the universities have permitted vocational students to enroll in Arts and Commerce disciplines without any bridge course. But such a ready entry has not been possible in Science and professional courses. No bridge courses have been designed to facilitate such a mobility and no new courses introduced at the tertiary stage which could help vocational students to pursue higher studies in these areas. This deficiency would be rectified in the 8th Plan.

10.3.19 The Committee set up by the UGC to prepare model curricula for vocational subjects at the undergraduate level for students from the +2 vocational stream should complete its work at the earliest so that the courses recommended by them could be introduced by universities in the academic session 1993-94. The introduction of vocational courses ought to be preceded by a realistic assessment of the requirement of qualified teachers, laboratory/workshop, etc., to ensure that students who offer these courses graduate with the knowledge and skills required by the market. This would not only provide vertical mobility to vocational students but also offer an opportunity for greater diversity in course offerings in the university system in general. Further, UGC and CIVE would take a lead in organising these courses and monitoring their implementation.

H. Measures Facilitating Employment

(a) *Equivalence of Certificates*

10.3.20 Since employment is the main objective of vocationalization, it is important that standards are clearly laid down for the competencies required and that there should be an understanding regarding equivalence of certificates issued by various State Governments, organizations, within the Government by different Departments, etc. Much progress needs to be made in this area. It is proposed to entrust this vital task to the CIVE which would develop a suitable mechanism for the purpose of accreditation and recognition of vocational courses.

(b) *Modification of Recruitment Rules*

10.3.21 The acceptability of vocational courses would depend on the employability of vocational students. This in turn will depend on the usable skills acquired by the students as well as on the recruitment rules. The recruitment rules need to be amended for giving preference to students trained in specific vocational skills in jobs requiring such skills. For this purpose the Department of Education has been pursuing with various Departments at the Central level and at the State level for amending the recruitment rules. At the instance of the Department of Education, the Department of Personnel and Training issued a circular in November, 1988 to all Ministeries/ Departments requesting them to review their recruitment rules in order to make the vocational passouts eligible for employment. The State Governments/UT Administrations were advised to take urgent action in this

regard in respect of State Departments/Organisations. The response has, however, not been very encouraging although some states have done considerable work in this area. At the national level, a Committee with a representative each from the Department of Education, the Department of Personnel and Training, and Ministry of Labour has been set up by the Cabinet Secretariat to review the position department-wise about the posts available, where preference may be given for persons who have completed the +2 vocational courses training. After identification of the posts, recruitment rules for such posts would be modified suitably indicating the preference to be given. Similar initiatives should be taken by the State Governments with the Committee reporting directly to the Chief Secretary. It should be the endeavour at both Central and State levels to complete identification of posts in one year. Actual modifications of Rules should be completed as early as possible and in any case before the end of the 8th plan.

(c) *Vocational Guidance*

10.3.22 The centrally sponsored scheme envisages that vocational guidance will be available in the school for providing necessary guidance to students, parents and teachers regarding suitable educational and vocational choices. The guidance programmes should be directed at informing the students about job opportunities in various courses, facilities for on the job training and placement by working in collaboration with employers. However, very few States and UTs are actually providing any systematic guidance to students. It is imperative that this aspect of the vocational programme is given due importance and the teacher provided for general foundation courses should be responsible for providing vocational guidance. He should also be adequately trained to carry out his functions. A trained counsellor could be appointed at the state cost at the district level to organise the career advice centre and assist the teachers in vocational guidance activities. Existing State Bureaus of educational and vocational guidance should undertake the responsibility of training teachers in consultation with the NCERT for their respective States. States/UTs should also popularise the vocational programme by providing information on the media. The NCERT has made some video films and popularization folders which could be suitably used.

(d) *Linkages with Government Departments and Industrial Houses*

10.3.23 Successful implementation of the programme of vocationalisation of education would be facilitated by the implementing agencies at the Centre and State by developing linkages with Government Departments, industry and institutions in the fields of agriculture, medicine and health, etc. If SCVE meets regularly then only will it be possible

for the linkages to be forged. The State Governments should set for themselves targets for forging linkages so that there is an element of urgency. There should be frequent interaction between the SCVE and the agencies with which linkages would be set up. Association of senior functionaries like the Chief Secretary would help.

10.3.24 Linkages are now available in the agricultural and health sectors. The Indian Council of Agricultural Research (ICAR) in collaboration with the Department of Vocational Education of the NCERT has already developed some need-based and employment-oriented courses. The courses need to be further revised and updated with the help of ICAR Institutes/ State Agricultural Universities. The Agricultural Universities, their regional research stations and sub-stations and other infrastructures may also participate in the preparation of the curriculum and serve as faculty in the nearby vocational training programmes. Similarly, the other infrastructure developed in various ICAR Institutes, KVKs and other organizations assisted by ICAR, NGOs and GOs can also be drafted in accelerating the programme of agricultural vocationalization.

10.3.25 The Ministry of Health and Family Welfare in collaboration with Department of Education have developed health related courses at +2 level for training various categories of para-medical staff as envisaged in NPE, 1986 (Para 5.18). Para-medical staff are the back bone of hospitals and the public health system, and there is a need to match the future requirements in conjunction with the vocational education programmes. Considering the acute shortage of para-medical staff, States/UTs should make efforts to introduce more health related courses in close collaboration with the Ministry of Health, hospitals and other concerned agencies.

(e) *Self Employment*

10.3.26 As the organized sector can provide employment to only a small percentage of the total work force, most of the students passing out of the +2 vocational stream have to be prepared for self employment. The question of providing loan facilities on easy terms to students of vocational courses to enable them to take up small scale business was taken up by the Department of Education with the Banking Division of the Ministry of Finance; Development Commissioner (Small Scale Industries) Ministry of Industry and the Ministry of Rural Development. Under the scheme of Self Employment for Educated Unemployed Youth (SEEUY), students of +2 vocational courses will be given preference for loans provided they fulfil other criteria of eligibility. Banking Division of the Ministry of Finance have issued instructions to the banks to finance small scale industries on liberalized margins and concessional rates of interest. This would facilitate students of +2 vocational courses to get bank assistance for setting up small scale industries. The

State Education Departments should bring it to the notice of all concerned and have meetings with State Industries Departments for linkages to facilitiate self employment.

10.3.27 The Directors of Vocational Education in the States/UTs should contact District Industries Centres for loan facilities under SEEUY. They should also have linkages with the Project Director of District Rural Development Agency (DRDA) for assistance under Training for Rural Youth in Self Employment (TRYSEM) programmes under which loan facilities are arranged through banks for persons from families below poverty line, to enable them to set themselves up in self-employment.

I. Research

10.3.28 The NCERT through the CIVE would function as the apex level R&D institution. At the State Level, the SCERTs are required to provide R&D support to the programme. It is necessary that research activities should be an important activity of these organisations at the national and the State levels.

4. OTHER VOCATIONAL EDUCATION PROGRAMMES

(i) Work Experience

10.4.1 At the primary and middle school stages of education Socially Useful Productive Work (SUPW)/Work Experience (WE) forms an integral part of the curriculum in many States, but the actual implementation, both in coverage and quality, leaves much to be desired. It has been observed in actual practice that WE has degenerated into trivial activities in the school and in many states the time allocation rarely exceeds 10%.

10.4.2 The State Governments/UTs should ensure that WE is actually included as an integral part of the curriculum, that teachers are trained to impart the instruction and that necessary financial provision is made. WE p·ogrammes are aimed at developing confidence and sufficient psycho-motor skills in students to facilitate their entry into the world of work at a subsequent stage. In schools where WE already forms a part of the curriculum these courses need to be toned up in keeping with the perceptions reflected in the NPE. Atleast 12.5 % to 20% of the school time should be allocated for a systematic implementation of the programme.

(ii) Pre-vocational Education

10.4.3 The NPE 1986 has envisaged that pre-vocational programmes would be provided at the lower secondary stage to facilitate the choice of vocational courses at the higher secondary stage. A few states have taken the initiative in implementing this provision. During the 8th Plan WE at the lower secondary stage would assume the form of pre-vocational education.

10.4.4 The objectives of pre-vocational education at the lower secondary stage would be to impart training in simple marketable skills to students in classes IX and X, to develop vocational interests and to allow for self-exploration of vocational preferences, to prepare students for participation in work and to inculcate the desired values related to work culture.

10.4.5 Pre-vocational education would be offered in a phased manner in all secondary schools, to students in classes IX and X. The courses would be in modular form and each school would offer at least 3-4 courses relevant to the local needs. Twenty per cent of the school time would be made available for pre-vocational education. Additional time would be provided out of school hours for intensive practice/learning activities. The first year of the 8th Plan would be a preparatory year for orientation of Head Masters and Teacher Co-ordinators, teacher training, development of instructional materials and creation of infrastructure in the schools. From 1993-94 onwards, the programme will be gradually implemented.

(iii) Generic Vocational Courses

10.4.6 The streaming of students into vocational courses aims at developing employment-specific skills in individuals. In addition to the present model of 'streaming', the Revised Policy Formulations provide for Generic Vocational Courses (GVC) for the students of the academic stream. The GVC would aim to develop those employment related skills which cut across various vocations and are needed by all members of the educated work force regardless of the person's occupation. Computer applications, typing, interpersonal skills, problem solving along with the acquaintance of the state-of-art technologies such as in the field of information, communication, production, distribution, etc. can be broadly included in the curriculum of such a course. The GVC would be a step towards improving the quality of general education for the future technology oriented society.

10.4.7 In view of the fact that GVC curriculum would have to be developed from scratch keeping in view the country's needs and existing realities the programme will be experimented in 400 higher secondary institutions in different regions of the country. The CIVE will be responsible for this try-out and it's wider implementation during the 9th Plan.

10.4.8 It is envisaged that the first two years of the Plan would be devoted to developing curriculum and support instructional material, training teachers and equipping schools. The next two years would concentrate on actual try-out in the schools while in the final year, the programme evaluation would be conducted.

(iv) Vocational Education Programmes for Special Groups and out of School Population

10.4.9 The tribal and rural population do not have adequate access to school education, vocational courses in schools or vocational/technical training schools/institutions. There is also a paucity of vocational courses/institutions to cater to the women population whose earning power could be considerably augmented through vocational training. Handicapped and disabled persons form another significant section of the society who have. at present practically no avenues to acquire suitable productive skills to make their living more meaningful and self reliant. In addition, there is a large student population which does not go beyond class VIII and who need to be provided some skill training.

10.4.10 Vocational training programmes of non-formal nature are being organised by various Departments/organisations like the Department of Rural Development, Department of Women and Child Development, Ministry of Welfare, ICAR, KVIC, Central Social Welfare Board, Community Polytechnics, Shramik Vidyapeeths, Jan Shikshan Nilayams, etc. While these organisations would continue with their effort to provide non-formal vocational training programmes through voluntary organisations for different target groups, the Department of Education under the Vocational Education Programme would concentrate on organising non-formal vocational education and training programmes for school dropouts in the age group 14-18 years who had completed class VIII but had not gone beyond class X.

10.4.11 It is also felt that all polytechnics, engineering colleges and other vocational and technical training institutions should organise short-duration non-formal vocational training programmes. The concerned Ministry/Department/organisation as well as the States/UTs should earmark funds and provide financial assistance to these institutions for this purpose.

10.4.12 The Ministries of Welfare and Labour are already organising some vocational training programmes for the handicapped. They would intensify their efforts. The Department of Education would also encourage voluntary organisations working in this area. The CIVE will also provide support to vocational training programmes for the handicapped through teacher training materials and other resources.

(v) Vocational Education Programmes for Girls

10.4.13 The involvement of girls in the vocational education programmes is crucial. Under the Centrrally Sponsored Programme at +2 level, girls have equal access to vocational courses as the boys. Efforts should be made by the States/UTs to consciously encourage the participation of girls in the non-traditional and emergent technologies. The non-formal vocational programmes with emphasis on entrepreneurship should be specially geared to the needs of the out-of-school girls. Facilities for guidance should be available for encouraging their participation.

(vi) Vocational Education for Special Areas

10.4.14 Separate vocational schools are proposed to be set up in the rural areas and in the North Eastern States where it is not viable to start vocational courses in general educational institutions. As and when these vocational schools are established they would also run short duration non-formal vocational training programmes for special groups and out of school population.

(vii) Assistance to Voluntary Organisations for Experimental/Innovative Programmes and Short Term Vocational Courses

10.4.15 The centrally sponsored scheme of Vocationalisation of secondary education envisages the role of voluntary agencies for conducting innovative programmes in the field of vocational education and provides financial assistance to selected agencies for this purpose. However, since the scheme was launched in 1987-88 only a few voluntary organisations could avail the assistance provided under the scheme. This was mainly because the scope was limited and assistance restricted to programmes of "innovative character". It was therefore felt that, to mobilise greater involvement of the voluntary organisations in the vocational education programme, the scope and objectives of the scheme should be widened and the details of the facilities offered to voluntary organisations be made available separately. Accordingly a Scheme of Assistance to Voluntary Organisations is now being formulated.

10.4.16 The overall aim of the scheme is to promote non-formal vocational education through NGOs for achieving the goals spelt out in the NPE. The specific objectives of the scheme are to provide financial assistance to the voluntary organisations for:

- Innovative/experimental projects.

- short-term training programmes of vocational education preferably in backward/rural areas and particularly for girls of the age group of 14-18 years who have dropped out of the school before completing Class X.

- Organising special vocational training centres in rural areas where no institution/organisation is available to start non- formal courses.

- training of vocational teachers/resource persons.

- other activities connected with the vocational education.

10.4.17 States/UTs would have the primary responsibility to enlist the voluntary organisations for implementing the scheme. The NCERT should prepare the syllabus, curricula and instructional material for more short-term courses of varying duration. The programmes undertaken by voluntary agencies under this scheme should be evaluated towards the end of 8th Plan.

(viii)Vocational Education through Open Learning*

10.4.18 The NOS has taken up a crash programme of vocationalisation. Various types of vocational courses under different groups would be introduced and offered to the students with effect from the academic year 1992-93. The courses would be offered in collaboration with supporting partners, organisations and institutions working in the vocational education field and having basic infrastructural facilities. Presently NOS is linked with Shramik Vidyapeeths who are planning to offer a number of vocational programmes from the academic session 1993-94. Possibilities have been explored to run Vocational Courses in partnership basis with many national level Organisations such as KVKs, Voluntary Health Association of India, Central Social Welfare Board, Council for Advancement of Peoples Action and Rural Technology (CAPART), KVIC, etc.

5. MONITORING AND EVALUATION

10.5.1 A systematic and regular monitoring of the vocational education programme is essential for its effective implementation. Under the centrally sponsored scheme of Vocationalisation of Secondary Education, quarterly progress reports were to be sent by the State/UTs. However, these were generally not forthcoming and, therefore, there was considerable information gap between the policy planners and what was happening at the grass roots level. A computerised MIS has now been developed under which information would flow regularly from the schools to the district level, from the district level to the Directorate/State level and from the Directorate/State level to MHRD. The information is required on a quarterly and annual basis in a prescribed proforma. The first level training of coordinators has been organised by NCERT in 1991. The States should ensure that the MIS is systematically implemented and information is regularly sent to MHRD. The first quarterly report is expected from the states in July 1992.

10.5.2 The NCERT would be responsible for conducting evaluation studies on different aspects of programme implementation. Similar studies would also be entrusted to outside agencies. States/UTs should also conduct evaluation of their programme. They should obtain systematic follow up information on the students who have passed out of the vocational courses to find out whether they have found employment and if so whether it is in the area of skill obtained.

10.5.3 A monitoring system would also be developed for the other components of the vocational education programme, namely, implementation of generic vocational courses at higher secondary level and pre-vocational education at the secondary level.

11. HIGHER EDUCATION

1. THE PRESENT SITUATION

11.1.1 We have one of the largest systems of higher education in the world. However, the spread and developments in this area have been uneven. The infrastructural facilities of universities and colleges vary widely which accounts for variation in quality of teaching and research. The courses offered by the universities are generally of a traditional nature and few are related to the job market and environment. The credibility of the evaluation system is being eroded. Though university research is generally acknowledged to be cost-effective, it does not get an adequate proportion of the funds available to the research sector.

11.1.2 The university system should move to the centre stage. It should utilise its autonomy for innovations in teaching and pursuing high quality research. The emphasis on autonomy of colleges and departments, provision of means to interact across boundaries of institutions and funding agencies, better infrastructure, more rationalised funding of research, integration of teaching, research and evaluation, all these mirror this major concern.

2. THE POLICY, PROGRAMME AND STRATEGIES OF IMPLEMENTATION

11.2.1 The NPE; 1986 visualises that higher education should become dynamic as never before. The main features of the programmes and strategies to impart the necessary dynamism to the higher education system consist of the following:

    (i) Consolidation and Expansion of Institutions

    (ii) Development of Autonomous Colleges and Departments

    (iii) Redesigning of Courses

    (iv) Training of Teachers

    (v) Strengthening Research

    (vi) Improvements in Efficiency

    (vii) Creation of structures for co-ordination at the State and National levels.

    (viii) Mobility

    (ix) Finances

    (x) Review and Monitoring

3. MAJOR DEVELOPMENTS

11.3.1 The major developments in the field of higher education in pursuance of the National Policy for Education (NPE), 1986 and its Programme of Action (POA), 1986 include:

i) Revision of pay-scales of university and college teachers with financial assistance from the Central Government; provision for career advancement linked to performance appraisal and training; and formulation of a Code of Professional Ethics for teachers;

ii) Introduction of National Eligibility Test (NET) for recruitment of university and college lecturers and selection of Junior Research Fellows;

iii) Establishment of 48 Academic Staff Colleges by UGC in different universities in the Seventh Five Year Plan for organising orientation programmes for newly appointed teachers; identification of 200 University Departments for conducting refresher programmes for in-service teachers; so far 4600 teachers have participated in orientation programmes and 8400 have attended in-service training;

iv) Conferment of autonomous status on 86 colleges in 7 States;

v) Preparation and examination of a comprehensive report by the Gnanam Committee appointed by UGC to review the management structure of universities;

vi) Setting up of Inter-University Centres for providing common facilities for research in Nuclear Science, Astronomy and Astro-Physics, Atomic Energy, and Crystal Growth;

vii) Circulation of model curricula developed by UGC's Curriculum Development Centres in 27 subjects in Science, Social Sciences and Humanities;

viii) Formulation of UGC guidelines on setting up of State Councils of Higher Education (SCHE), and establishment of a SCHE in Andhra Pradesh; and

ix) Expansion of the distance learning and open university systems.

11.3.2 Proposals for establishing an Accreditation and Assessment Council are in an advanced stage. However, the proposal for setting up a National Apex Body for Higher Education has not made much headway.

11.3.3 The implementation of the NPE, 1986 and POA, 1986 was constrained by lack of consensus on some important measures such as non-proliferation of institutions of higher learning; development of autonomous colleges; establishment of SCHEs; redesigning of courses; promotion

of student and teacher mobility; Resource insufficiencies and absence of effective monitoring and review mechanisms were also constraints.

4. CONSOLIDATION AND EXPANSION

11.4.1 Despite the statement in the NPE, 1986 that the main emphasis will be on consolidation of, and expansion of facilities in, the existing institutions, the unplanned proliferation of institutions of higher learning continues unabated. Thus the number of universities has gone up from 149 in 1985-86 to 176 in 1990-91, the number of colleges from 5816 to 7121 and enrolment of students from about 36 lakh to over 44 lakh during the same period.

11.4.2 The NPE, 1986 states that provision will be made for minimum facilities, admissions will be regulated according to capacity and urgent steps will be taken to protect the system from degradation. However, in most parts of the country existing institutions of higher education are still constrained to admit students beyond their capacity without commensurate provision of physical and academic facilities. There is no institutional or other mechanism to ensure that admissions to universities and colleges are restricted to capacity.

11.4.3 State Governments have been unable to provide adequate funds to universities and colleges for provision of necessary infrastructure. At present as many as 55 State universities and 3000 colleges in different States are not eligible to receive assistance from UGC mainly due to lack of minimum facilities.

11.4.4 As the number of State universities and colleges eligible for grants from UGC gradually increases and the resources available to UGC remain limited, UGC's assistance to the State sector is being thinly spread. During the Seventh Five Year Plan, UGC's assistance to a State university averaged Rs.2.5 crore only and to a college it averaged Rs.4.5 lakh only

11.4.5 An analysis of the growth of colleges during the period 1986-87 to 1990-91 reveals that the 4 States of Andhra Pradesh, Madhya Pradesh, Maharashtra, and Karnataka accounted for nearly 60% of the increase in the total number of colleges during the period and that 65% of the increase was in Arts/Science/Commerce colleges. Increase in the number of colleges in some of the other States was negligible. This underlines the skewed pattern of growth in the collegiate system and the urgent necessity for planned and coordinated development of higher education in States.

11.4.6 In the light of the experience of the implementation of NPE, 1986 and POA, 1986 the following action is proposed:

(i) The establishment of State Councils of Higher Education (SCHE) as statutory bodies in all States during the Eighth Five Year Plan to en-sure proper planning and coordination of the development of higher education. In view of the fact that it may not be possible for small States, particularly in the North Eastern region, to establish separate Councils of Higher Education, such States will be encouraged to set up Joint Councils of Higher Education. For the North Eastern region, this responsibility could either be entrusted to the North Eastern Council (NEC) or a Council of Higher Education for all the States.

(ii) Pending the establishment of State Councils of Higher Education, every State Government should, in partnership with UGC, undertake a survey of the existing facilities for higher education in the State and its projected needs upto the year A.D. 2000. The information collected in the survey, should be used to develop, by 1993-94, a computerised Management Information System (MIS) to identify areas of the State which are not properly served by existing universities/colleges, and institutions which are over-crowded and/or deficient in minimum facilities.

(iii) To minimise expenditure on establishment of new colleges and universities it should be ensured that their campuses are compact and that they are established at places where infrastructural facilities like power, communication, road, transport, water, etc. are easily available.

(iv) The optimum utilisation of the existing infrastructure in universities and colleges should be ensured by introduction of extra shifts, especially in metropolitan areas and large cities.

(v) When the need for a College is established, its affiliation to a university is an academic matter and should be given on academic grounds alone, without any other considerations. The final authority for granting affiliation, its continuation, extension or dis-affiliation should vest solely with the appropriate university authorities. However, since affiliation may create eligibility for grant-in-aid, the university should consult the State Government concerned before granting affiliation to a private college. States should review the relevant legal provisions to give effect to these recommendations and universities should exercise greater vigour in adhering to UGC guidelines while exercising their powers of affiliation.

(vi) Where the existing colleges fall short of satisfying the conditions of affiliation prescribed by

UGC their requirements should be carefully assessed and brought to the notice of the colleges and the State Government concerned so that they are provided threshold facilities, preferably during the Eighth Five Year Plan. The establishment of new colleges in States, which have a large number of colleges with sub-standard facilities, should be deferred until such time as the existing colleges can be provided with minimum facilities. Efforts should also be made to evolve a consensus among UGC, State Governments and Universities not to continue provisional affiliation of colleges beyond the initial period of five years.

(vii) There is an urgent need to review, revise and update grant-in-aid rules in the light of recent developments in the field of higher education. It is felt that the criteria of 'deficit' as the basis for providing grant-in-aid to colleges should be reviewed and issues such as per capita cost, teacher student ratio, types of courses offered, internal resource generation, performance appraisal of teachers, etc. be taken into account for determining the quantum of grant-in-aid payable to colleges. For this purpose, UGC should formulate model guidelines in this regard.

(viii) The recommendations made by the Gnanam Committee in regard to changes in the management structure of the universities should be implemented by all States as and when approved by CABE.

(ix) The movement towards entrance tests for admission to institutions of higher education will be encouraged and promoted by UGC and State Governments. The services of the National Evaluationn Organisation (NEO) should be utilised by the university system for developing, designing and administering entrance tests for admission. During the next three years (i.e., by 1995) all universities should devise Entrance Tests for admission to post-graduate courses and prescribe ceilings for admission to postgraduate and professional courses, keeping in view the availability of teachers, libraries, laboratories, etc. It should be ensured that entrance tests for admission do not militate against students belonging to the weaker sections of society and rural areas who may not be proficient in the use of the English language and lack communication skills.

(x) With escalation in the cost of equipment, books and journals, a system of sharing and pooling of resources within university departments and between neighbouring universities/colleges, particularly in metropolitan areas and large cities, should be worked out within the next year (1993-94) by the UGC in consultation with the State Governments. To ensure better utilisation of equipment costing Rs. 2 lakh or more, their use should be monitored by introducing a system of 'Utility Audit' based on log book entries indicating the number of hours per day such equipment is put to use by faculty and students.

(xi) Inter University Centres were set up for providing common facilities to researchers from all parts of the country. Scholars in universities/colleges should be provided with opportunities for taking full advantage of the expensive and modern facilities in these Centres.

(xii) Given the necessity to arrest the declining trend in the flow of plan funds from UGC to state universities and colleges, the severe constraint of resources and the need to provide adequate infrastructure in newer central universities and the three central universities proposed to be established in the North-East, the Government should exercise restraint in setting up more central universities.

5. DEVELOPMENT OF AUTONOMOUS COLLEGES AND DEPARTMENTS

(a) Autonomous Colleges

11.5.1 In pursuance of the NPE, 1986 and POA, 1986 UGC revised the Scheme of Autonomous Colleges to provide for criteria for selection of colleges, procedure for grant of autonomy, pattern of governance of autonomous colleges, and mechanism for monitoring and evaluation of the Scheme. The UGC guidelines provide for financial assistance of Rs.4-6 lakh per annum to under-graduate colleges and Rs.7.00 lakh per annum to colleges offering under-graduate and post-graduate courses. In accordance with these guidelines 80 colleges in seven States have been granted autonomy since 1986. UGC has established a Cell to monitor the progress of the scheme on a continuing basis.

11.5.2 The POA 1986 had envisaged the establishment of 500 autonomous colleges in the 7th Plan. Though the number of colleges granted autonomy since 1986 falls short of the target mentioned in the POA, it is more than four times the number during the preceding twenty years. Of the 106 autonomous colleges in the country, the three states of Tamil Nadu, Madhya Pradesh and Andhra Pradesh account for 90 colleges. The need for pursuing the implementation of the scheme in the remaining States with greater vigour is evi-

dent. It would appear that the initial enthusiasm for this scheme has waned due to the opposition of a few States to the scheme on the ground that it is elitist, apprehensions expressed by the teaching community regarding increase in their work-load, arbitrariness by Managements, irregularities in conduct of internal examinations, paucity of funds, and operational difficulties in implementing the scheme.

11.5.3 In 1991, UGC had appointed an Expert Committee to review the implementation of the scheme of autonomous colleges. The major recommendations of the Committee were :-

- The scheme should be continued during the 8th Plan period in view of its objectives.

- An appropriate mechanism should be established at the State level for effective monitoring of the Scheme.

- Immediate action should be taken for amendment of the Acts/Statutes of the universities to make an enabling provision for conferment of autonomous status on colleges.

- State Governments should not transfer the teachers from Government autonomous colleges; should also sort out the problems of increased work-load of teachers for these colleges, besides fulfilling the system of block grants for maintenance purposes.

- The State Governments and the universities should hold regular meetings with Principals of autonomous colleges for coordination and resolving of issues.

- The Universities should accept the decisions of the autonomous colleges regarding new courses and flexibility in combination of courses.

- The autonomous colleges should prepare perspective plans for development, activate Finance Committees as well as Planning and Evaluation Committees.

The Commission accepted the report of the Committee in its meeting held on 6th June, 1991.

11.5.4 The following action is proposed for implementation of the scheme of autonomous colleges during the 8th Plan :

(a) the recommendations of the UGC Expert Committee on Autonomous Colleges should be implemented at the earliest;

(b) the number of autonomous colleges should be increased substantially;

(c) a Council of Autonomous Colleges be estab-

lished in every State in 1991-92 to review the progress of the scheme and to resolve the operational difficulties in its implementation; and

(d) UGC should establish a seperate mechanism for evaluation of the performance of autonomous colleges.

(b) Autonomous Departments

11.5.5 UGC's scheme for grant of autonomous status to Departments in Universities has not made much headway. The experience of the few Departments which have been granted autonomy has not been systematically analysed. The following action should, therefore, be taken in regard to this scheme :

(a) UGC should initiate a review of the functioning of Autonomous Departments during 1992-93;

(b) Departments receiving financial assistance from the Commission under the Special Assistance Programmes (SAP) and the Scheme of Strengthening of Infrastructural Facilities in Science & Technology (COSIST) should be granted autonomy in a phased manner by 1997.

(c) Departments offering professional and technical courses, such as, Engineering, Technology, Computer, Management, Law, etc. and other emerging areas should be targetted for grant of autonomy during the Eighth Plan.

(d) The progress of the scheme of autonomous departments should also be reviewed by the Cell established in UGC for review of the scheme of autonomous colleges.

6. DESIGN OF COURSES

11.6.1 Higher Education Programmes have to be redesigned to meet the growing demands of specialisation, to provide flexibility in the combination of courses, to facilitate mobility among courses, programmes and institutions, to update and modernise curricula, to integrate work/practical experience and participation in creative activities with the learning processes, and to facilitate reforms in the evaluation procedure. The present rigid structures do not permit these reforms.

11.6.2 UGC has sought to redesign courses by (i) issuing guidelines for restructuring of courses at first degree level in the faculties of Arts, Social Sciences and Sciences in universities and colleges during the 5th and 6th Plans; and (ii) by establishing 27 Curriculum Development Centres (CDCs) to prepare model curricula in Science, Humanities and Social Sciences during the 7th Plan.

11.6.3 The scheme of restructuring of undergraduate courses was last revised by the Commission in 1983. Upto the end of the 7th Plan only 9 universities and 290 colleges had

restructured undergraduate courses in accordance with these guidelines. The Bachelor's degree programme of Indira Gandhi National Open University (IGNOU) has been designed on the lines suggested by UGC and consists of inter-disciplinary foundation courses, core courses and application oriented courses. The lack of momentum in implementation of the scheme could be attributed to non-availability of specialised teachers, limited opportunities for practical training and the absence of clear linkages between these courses and improved job prospects.

11.6.4 The Commission provided about Rs. 3.5 crore to universities and colleges during the 7th Plan period for implementation of the scheme of restructuring of courses.

11.6.5 The 27 CDCs established by the Commission in different universities in the country since 1986 have undertaken a very comprehensive exercise to prepare model curricula in 27 subjects. These have been circulated to all the universities for adoption/adaptation. However, no mechanism has so far been created to monitor action taken in this regard at the university level.

11.6.6 In order to achieve the objective of redesigning of courses and introducing vocational courses the following recommendations are made :

i) The massive effort involved in developing model curricula by CDCs should be made full use of by the university system and a mechanism should be immediately created in UGC to monitor the adoption/adaptation of the revised curricula by universities and colleges;

ii) UGC should ensure updation of the model curricula at least once in five years;

iii) UGC's existing guidelines for restructuring of undergraduate courses, which were formulated more than a decade ago, should be comprehensively revised by 1993-94 with a view to incorporating latest developments, particularly in the field of Science & Technology, emerging employment trends, and concerns regarding value education;

iv) An effort should be made to expose all students at the first degree level to the world of work by including application-oriented courses in the curriculum and providing for opportunities for project and field work;

v) The Committee set up by the Commission to prepare model curricula for Vocational subjects at the undergraduate level for students from the +2 vocational stream should complete its work at the earliest so that the courses recommended by them could be introduced by universities in the academic session 1993-94. The introduction

of vocational courses ought to be preceded by a realistic assessment of the requirement of qualified teachers, laboratory/workshop etc. to ensure that students who offer these courses graduate with the knowledge and skills required by the market;

vi) Given the difficulties and cost of providing workshop and training facilities in universities and colleges for vocational courses, arrangements may be worked out by individual institutions with external agencies for imparting practical training to students who offer such courses;

vii) In future the emphasis should be on development of integrated Honours Courses in vocational subjects rather than optional vocational courses which do not enhance job prospects sufficiently;

viii) In view of the popularity of the modular courses introduced by IGNOU with provision for accumulation of credits and multiple entry and exit, and the need for encouraging mobility between the conventional and the open universities, a concerted effort should be made by the conventional universities to develop courses on a modular basis in the 8th Plan;

ix) As admissions to all post-graduate courses are sought to be made on a selective basis and restricted to capacity, postgraduate departments of all universities should gradually switch over to the semester, grading, continuous evaluation and credit systems;

x) UGC may consult the States with a view to making adoption of the semester, grading, credit and internal evaluation systems by new universities and colleges should be a condition precedent for eligibility of grants from UGC.

xi) The rigidity in age and other requirements for admission to postgraduate courses should be gradually dispensed with to enable working people to enrol in such courses in greater numbers. This would in turn lead to postgraduate courses being re-oriented to the world of work. However, the increase in age limit for admissions to post-graduate courses should not result in any relaxation in the age limit for eligibility for elections to the students' Union.

xii) The recommendation of Gnanam Committee on restructuring of Boards of Studies in universities should be implemented as and when considered and approved by the CABE.

xiii) In view of the fact that autonomous colleges and departments are seen as major vehicles for restructuring of courses, teachers in such institutions/departments should be given incentives and special orientation/training through refresher courses to equip them with necessary skills to design vocational courses and revise curricula.

xiv) Encourage establishment of community colleges dealing with vocationalisation of subjects related to service sector on line with community polytechnics.

7. TEACHERS' TRAINING

11.7.1 In pursuance of NPE, 1986 and its POA, 1986 Central Government and UGC have taken several steps to improve the status and motivation of University and college teachers. These include revision of their pay scales, creation of avenues for career advancement linked with performance, incentives for research, provision of training opportunities, etc.

11.7.2 In 1987-88, UGC formulated a Scheme of Academic Staff Colleges (ASCs) for organising orientation programmes for newly appointed lecturers and conducting refresher courses for in-service teachers. UGC has established 48 ASCs in different universities so far. In 1988-89 UGC initiated a programme for identifying University Departments for conducting subject-oriented refresher courses for in-service teachers and have identified 200 University Departments for the purpose. Nearly 13,000 teachers have attended orientation and refresher programmes in ASCs and university departments.

11.7.3 In 1991, the Scheme of ASCs was reviewed by an Expert Committee set up by UGC. While recommending the continuation of the scheme, the Committee made the following major suggestions:

i) In order to ensure proper development of both orientation and subject refresher programmes, short and long-term plans for academic staff colleges may be prepared on a regular basis and proper policy directions may be given from time to time.

ii) The innovations being carried out by academic staff colleges and reading and reference material developed by them should be properly coordinated so as to avoid duplication and help sharing the benefits of each others' efforts.

iii) The progress of academic staff colleges should be regularly monitored through quantitative and qualitative information. Based on such analysis, necessary feedback may be given to academic staff colleges for their future

developoment.

iv) A mechanism should also be created for networking of academic staff colleges. For carrying out these activities, a consortium of academic staff colleges may be set up in close collaboration with NIEPA. The details of Consortium may be jointly worked out by UGC and NIEPA; for this purpose NIEPA and UGC may enter into a memorandum of understanding.

UGC has accepted the recommendations of the Committee and decided to continue the scheme of ASCs during the 8th Plan.

11.7.4 In order to improve and strengthen the programmes of teachers' training the following proposals are made:

i) The recommendations of the UGC Review Committee on Academic Staff Colleges should be implemented at the earliest;

ii) Before considering further expansion of Academic Staff Colleges, UGC and the universities concerned should take measures for consolidation and strengthening of the existing ASCs;

iii) Efforts should be made to initiate training and orientation of teachers in Engineering and technical subjects;

iv) UGC should undertake a five yearly review of the performance of ASCs;

v) Keeping in view the popularity of IGNOU's Diplomas in Distance Education and Higher Education, suitable distance education programmes should be designed for upgrading knowledge and skills of teachers in institutions of higher education.

vi) Efforts of UGC and IGNOU for training of teachers should be integrated and coordinated. For instance ASCs could organise contact programmes for those teachers who are enrolled in IGNOU's Diplomas in Distance and Higher Education.

8. RESEARCH IN UNIVERSITIES

11.8.1 During the Seventh Plan, the Commission provided Rs. 133 crore, which is 23% of its total plan expenditure for research and development. Co-operative research facilities have been established by UGC in high priority areas through the Inter-University Centres and steps are under way to establish two more Centres. Active participation of Universities in industrial research has not materialised on a large scale. However, some universities have established effective linkages with industry. UGC is supporting 111 departments so far under the scheme of "Strengthening of

Infrastructure in Science & Technology" (COSIST). One of the pre-conditions for support under the scheme is that the grantee departments should change over to a method of teaching more conducive to students' learning and creativity and adopt new procedures for experimental work, project and field work. This is expected to sensitise Postgraduate students to research methodology and training. Since 1984 the Commission has been conducting national level tests for selection of Junior Research Fellows (JRFs). For Science subjects such tests are organised in collaboration with CSIR. The Memorandum of Understanding (MOU), signed between UGC and CSIR in 1991, provides scientists in universities access to the research facilities in CSIR and vice-versa.

11.8.2 The following recommendations are made for promotion of research in Universities:

   i) University-Industry linkages should be established on a priority basis in metropolitan areas, cities and regions with a concentration of industry;

   ii) UGC should initiate a scheme of providing incentives to universities which are successful in estasblishing effective linkages with industry;

   iii) Efforts should be made to increase the flow of research funds to the university sector;

   iv) Inter-institutional links between universities in India and "state of the art" research institutions abroad should be established to facilitate basic research in priority areas;

   v) Sophisticated and expensive equipment, which is used by different departments within the same University, should be put to optimal use rather than duplicating such facilities in each department;

   vi) Journals are essential for good quality research. Due to the steep depreciation in the value of the Rupee in the past 2-3 years, many universities are unable to continue subscription to essential journals. There is an urgent need to augment resources to ensure continuance of subscription to journals, particularly in Science, Technology and emerging areas; and to work out modalities for exchange of journals between universities situated in close proximity;

   vii) Full advantage should be taken by the universities of the facilities available at the National Centre for Science Information at Indian Institute of Science, Bangalore and the Information Centres in Humanities and Social Sciences at M.S. University of Baroda and SNDT Women's University, Bombay;

   viii) A high powered Committee should be constituted by UGC, with representatives of DST, CSIR, ICSSR, ICHR, etc. to assess the quality of research in our universities; and

   ix) The Commission has nurtured about 200 Science and Technology departments under SAP and COSIST. These schemes should be merged during the 8th Plan and departments which have been assisted under these schemes should serve as focal points for coordinating research in frontier areas and training scientists in other universities/colleges in research methodology, etc.

   x) New Inter-University Centres for research should be established in Humanities and Social Sciences.

9. PROMOTION OF SCIENCE EDUCATION IN UNIVERSITIES

11.9.1 Some of the notable steps taken by the UGC upto the end of 7th Five Year Plan for promotion of science education and research include:-

   i) Of the general development grants (Rs.103.00 crore) provided to Universities, Rs. 42.00 crore was for development of science infrastructure;

   ii) Under the scheme of COSIST, 111 University departments have been provided Rs. 37.40 crore for strengthening of teaching and research;

   iii) Upto the end of 7th Plan, 200 University departments in Science & Technology have been provided Rs. 26.80 crore under the Special Assistance Programme (SAP);

   iv) Inter-University Centres in Nuclear Science, Astronomy, Astrophysics, MSD Radar, and Crystal Growth have been established at a cost of Rs. 26.00 crore.

11.9.2 In addition to the above, the Commission has provided support for introducing courses in emerging areas like, Bio-technology, Ocean Development, Electronics, Computers, etc., as well as for research in super-conductivity, up-keep of University Services Instrumentation Centres and fellowships/salary to Research Fellows, Research Associates and Scientists.

11.9.3 While UGC would continue to provide support on the above lines to science education and research, the following recommendations are made for promotion of science education:-

   a) In the long-term a special Sub Plan should be prepared by UGC, in consultation with Department of Science & Technology and State

Governments, for equipping deficient science laboratories in Universities and Colleges in a phased manner by 2000 A.D. Steps should also be taken for removal of obsolescence and replacement of fragile equipment.

b) In the short-term, UGC should consider equipping atleast one science college in every district of the country with a modern laboratory during the 8th Plan.

c) There is an urgent need to provide special training to science teachers to keep them abreast with the latest developments in their areas of specialisation. UGC should work out a strategy in collaboration with the Department of Science and Technology, for meeting the training needs of science teachers on a priority basis.

10. INFORMATION TECHNOLOGY

11.10.1 UGC has been providing assistance to universities for setting up computer facilities and establishment of Computer Centres. Upto 1990-91, 105 Universities have been provided with Computer Systems and 948 Colleges with personal computers. The Commission has also been assisting Universities under the UGC-DOE Joint Programme for running several manpower development courses in the field of Computer Science.

11.10.2 UGC had decided to set up Information and Library Network (INFLIBNET) with a view to promoting and establishing communication facilities so as to improve capability in information transfer and access; for linking Libraries and Information Centres in Universities, Institutions of National Importance, etc.

11. IMPROVING EFFICIENCY

11.11.1 POA, 1986 made several recommendations in regard to improvement in the functioning of higher education institutions and outlines responsibilities of Government, institutions, teachers and students in this regard. In pursuance of the recommendations contained in NPE 1986 and POA 1986, the UGC has circulated the following guidelines/reports to the State Governments and Universities with a view to bringing about improvements in the functioning of the higher education system :

(i) Guidelines on Terms and Conditions of Affiliation of Colleges by a University (1987);

(ii) Guidelines on Minimum number of actual teaching days, Programme of examination reform and Workload for teachers in Universities and Colleges (1988);

(iii) Report of the Task Force on Performance Appraisal of Teachers (1988);

(iv) Report of the Task Force on Code of Professional Ethics for University and College teachers (1989);

(v) Report of the Committee on Academic Calendar in universities and colleges (1989).

11.11.2 Though the UGC has made serious efforts to improve the functioning of the universities and colleges through the above guidelines/reports, the implementation has not been satisfactory. Various factors are responsible for the slow progress, viz.

- Absence of appropriate mechanisms at the Central and State level to oversee the implementation of UGC's guidelines and recommendations;

- Reluctance of educational institutions and the academic community to change;

- Excessive politicisation of universities and indiscipline on campus.

11.11.3 The UGC has recently recognised its internal functioning on the basis of the recommendations made by the Administrative Staff College of India (ASCI), Hyderabad. The Commission has also undertaken a comprehensive review of its schemes with a view to consolidating, reducing of overlap and duplication, and strengthening of priority schemes. It is recommended that all universities should undertake similar reviews within the next year (1993-94) to bring about greater efficiency in their functioning. It is also necessary for each university to set up an internal mechanism to review its working on a continuing basis.

11.11.4 In order to improve the internal efficiency of the institutions of higher education, it is necessary to provide opportunities for professional development of University and College administrators. Recognising this, the Department of Education constituted a Committee in January, 1991, to suggest measures for the augmentation of training facilities for university and college administrators. The Committee has completed its work and is expected to submit its report to Government soon.

11.11.5 Measures to improve the efficiency of Universities should focus on :

a) Early implementation of the report of the Committee for augmenting of training facilities for university and college administrators;

b) Establishment of autonomous departments and units to decentralise administrative, academic, and financial powers in universities; and

c) Setting up of effective grievance redressal machinery.

12. CREATION OF MACHINERIES FOR COORDINATED DEVELOPMENT

(a) State Councils of Higher Education

11.12.1 The Policy envisages establishment of State Councils of Higher Education for :

* State level planning
* Coordination of plans and programmes within the State and with UGC for maintenance of standards.

In pursuance of the recommendations in the Policy and Programme of Action, UGC issued guidelines to State Governments and Universities for establishment of SCHE's. The guidelines provide for the composition, powers and functions of the Councils. Despite persistent efforts on the part of the Department of Education and UGC to persuade State Governments to establish SCHEs, only one State i.e. Andhra Pradesh has set up a SCHE so far. Three more States are actively considering setting up of SCHEs. The slow progress of the scheme could be mainly attributed to the apprehensions of State Governments and Directorates of College Education regarding transfer of their powers and functions to SCHEs and the non-availability of resources for establishing these bodies.

11.12.2 Early establishment of SCHEs is critical for giving impetus to long term planning in Higher Education. The role envisaged for SCHE is spelt out in para 4.6. The Government and UGC would persuade State Governments to set up SCHEs during the 8th Plan.

(b) National Apex Body

11.12.3 The NPE, 1986 envisages establishment of a National Apex Body for bringing about greater cordination and integration in the planning and development of higher education system, including research. A proposal for establishing a National Council for Higher Education (NCHE) was prepared in consultation with concerned Ministries and Agencies. However, a consensus could not be reached on the structure and functions. Efforts would be made to operationalise a National Apex Body as early as possible.

(c) Accreditation and Assessment Machinery

11.12.4 In March, 1992 UGC resolved to set up a National Accreditation and Assessment Council as an autonomous body for the achievement of the objectives envisaged in the NPE. Government would take an early view on UGC's proposal.

13. MOBILITY

11.13.1 The NPE, 1986 visualises measures to facilitate inter-regional mobility by providing equal access to every Indian of requisite merit regardless of his origin and em-

phasises the universal character of a university. To achieve this objective, the POA recommended that the State Governments and Universities would be encouraged to admit students based on merit without any regard to domicile or nativity. Schemes to provide necessary support and guidance to institutions to admit students from other States would be evolved. In order that the all India character in the composition of the student enrolment and faculty strength is ensured, priority will be given to schemes for construction of student hostels, staff quarters, provision of scholarships, etc. Efforts will be made to move towards the objective of making recruitment of teachers on all India basis in consultation with the State Governments.

11.13.2 The scheme formulated by Government in 1987 for revision of pay scales of University and College teachers, inter-alia, provides that recruitment of teachers should be made on merit on an All India basis through open advertisement. In pursuance of this, UGC has evolved a national eligibility test for selection of lecturers in Universities and Colleges. The liberalisation of UGC's norms for providing financial assistance for construction of hostels in the 8th Plan should facilitate student mobility in the long run.

11.13.3 To further enhance the mobility of faculty and students, the following proposals are made:

i) UGC and State Governments should encourage Universities to provide for an additional 10% seats on a supernumerary basis in each postgraduate department for children of employees with all India transfer liability and non-residents; and

ii) To facilitate inter-state mobility of teachers, the Central Government should modify its mobility orders at the earliest to provide that teachers who move from one State University/College to another should be permitted to carry forward the benefit of past services for retirement benefits, as in the case of employees moving from Central Government/Autonomous Bodies to State Government/Autonomous Bodies and vice-versa.

14. FINANCES

11.14.1 Higher Education has a crucial role in training manpower for national development. It is therefore necessary to provide it with adequate support and finances to:

i) maintain its infrastructure and establishment at an acceptable level;

ii) to keep abreast with latest developments; and

iii) meet future challenges.

11.14.2 In this context, it has become necessary for the institutions of higher learning to consider measures for rais-

ing internal resources and improving their cost efficiency. While there is a case for raising tuition and other charges, which have remained more or less static for the past forty five years, an elaborate and effective system should be established for providing freeships, scholarships, and loans to students belonging to the weaker sections of society. Efforts should also be made to evolve rational norms for providing grants to universities which should take into account per capita cost, teacher-student ratio, proportion of teaching and non-teaching staff, types of courses offered, costing of services and extent of their subsidisation, ratio of graduate and postgraduate/ research students, etc. There is need for a balanced distribution of resources between universities and research institutions.

11.14.3 A High Powered Committee would be set up to consider steps for mobilisation of additional resources for higher education, to bring about a better balance in the funding of institutions for higher education and research, and to improve the cost efficiency of the university system.

15. REVIEW AND MONITORING

11.15.1 The necessity for establishing effective mechanisms for a continuous review and monitoring of the Programme of Action was recognised. The following recommendations are made :

    i) The Commission should initiate the practice of reviewing one major scheme in every meeting and make recommendations for bringing about improvements;

    ii) The recommendations of the Commission should be made available to the CABE for review.

    iii) At the State level the SCHEs and SABEs would play roles corresponding to UGC and CABE.

    iv) At the institutional level, affiliating Universities should be entrusted with this task.

12. OPEN EDUCATION

12.1.1 The open learning system augments opportunities for education, ensures access, is cost-effective and promotes a relevant, flexible and innovative system of education. The initial experience of the Indira Gandhi National Open University (IGNOU) and the State Open Universities, as well as the National Open School underlines the tremendous potential of the open learning system.

2. THE OPEN UNIVERSITY SYSTEM

12.2.1 The IGNOU which launched its academic programmes in 1987 has made significant progress. The University presently offers Bachelor's degree programmes in 13 disciplines, a Master's degree in Business Administration, and several diploma and certificate programmes. The annual enrolment has increased from about 4400 in 1987 to over 62,000 in 1992. The three State Open Universities, namely, Dr. B.R. Ambedkar Open University in Andhra Pradesh (BRAOU), the Kota Open University (KOU) and the Yashwantrao Chavan Maharashtra Open University in Maharashtra (YCMOU) together admitted about 65,000 students in 1992. The distance education institutions (open universities and institutes of Correspondence Education of conventional universities) accounted for about 11.5% of the enrolment in higher education in 1990-91.

12.2.2 Several new programmes in employment-related areas are being developed by the IGNOU. Advanced Diploma programmes in Construction Management, Advanced Diploma in Irrigation and Water Resources, Postgraduate Diploma in Journalism and Mass- Communication, Bachelor's Degree in Nursing and Master's Degree in Distance Education and Library and Information Science are some of the new programmes under development by the IGNOU. The State Open Universities have also launched a number of relevant programmes in Electronics, Horticulture, Education and Communica tion besides the diploma and degree programmes in Humanities, Commerce and Social Sciences. The Directorates of Correspondence Education of the conventional universities have also been diver sifying their programmes. These institutions are presently offering a large number of diploma and certificate programmes in technical/professional areas.

12.2.3 The IGNOU has set up a Distance Education Council as a statutory body for the promotion, coordination and determination of standards of the open university/distance education system.

* The Distance Education Council will take steps for networking the State Open Universities and other dis tance-education institutions, for sharing courses and programmes, and developing a

pattern and structure for the open university programmes that would facilitate student mobility among programmes as well as institutions.

* The open university/distance education programmes would be structured on a modular pattern with provision for transfer of credits. Students will have the facility of registering for courses of their choice which, in appropriate combinations, will enable them to obtain certificates, diplomas or degrees.

* The Distance Education Council will encourage joint development of programmes and courses by IGNOU, State Open Universities and the Directorates of Correspond ence Educa tion of conventional universities.

* It will also recommend financial assistance from IGNOU to state open universities for their development and for undertaking specific projects.

* It will initiate steps to organise programmes of train ing for the development of human resources for the open university/distance education system especially in such areas as course development and production, organisa tion of support services, etc. The possibility of establishing institutional mechanisms for this purpose will be explored.

12.2.4 The Distance Education Council will ultimately assume the responsibility for developing the existing correspondence education programmes on a selective basis and converting them into distance education programmes of an acceptable quality. However, for the time being, the responsibility for the develop ment of distance education programmes in the conventional univer sities will remain with the UGC. There would be close consulta tion between the UGC and the IGNOU in the development of such programmes.

12.2.5 Electronic media will be progressively involved in the expansion of open learning. Doordarshan is already telecasting programmes of the IGNOU three days a week for 30 minutes from 6.30 to 7.00 a.m. The AIR stations of Hyderabad and Bombay are broadcasting selected IGNOU programmes. The Hyderabad station of All India Radio has set up a transmission network in Andhra Pradesh for broadcasting the programmes offered by the BRAOU. A few of the Institutes of Correspondence Education have made arrangements with the All India Radio for broadcasting their lessons. Distance education requires as a matter of prereq-

uisite multimedia instruction and its success will substantially depend on the availability of facilities for broadcasting and telecasting. Efforts will be made during the Eighth Plan period to augment and network these facilities so that these programmes can reach a larger number of students.

12.2.6 Measures will be taken to promote the mobility of students among Open Universities and among the traditional universities and open universities. A significant development in this regard is the signing of the Memorandum of Understanding between the University of Pondicherry and the IGNOU which provides for recognition of each other's degrees and diplomas as well as transfer of credits for courses successfully completed by students between the two universities. Efforts will be made to promote similar arrangements with other universities.

12.2.7 The recommendation of the Central Advisory Board of Education (CABE) that each State should establish an open university will be pursued with the State Governments for implementation during the Eighth Plan. The IGNOU will provide technical and consultancy support to the State Governments for this purpose. The Distance Education Council will prepare guidelines for providing financial support to State Open Universities for their development. Such assistance will include support to develop new programmes and courses. The course materials already produced by the IGNOU and other open universities would be made available to new State Open Universities which could offer them through the languages of the region so that access to open university programmes is widened. In order to promote the open university system on a significant scale, the existing rules framed by the UGC for declaring open universities fit for central assistance will be reviewed

3. The OPEN SCHOOL SYSTEM

12.3.1 The National Open School (NOS) already established, will be strengthened and developed to widen access to education at the Secondary and Higher Secondary levels. Efforts will be made to establish Open Schools in different States so that secondary education is significantly expanded through different regional languages.

12.3.2 The possibility of launching vocational education programmes through the open learning system will be explored*. For this purpose, meaningful linkages will be established with workstations, industries and other organisations. Such bilateral initiatives will help administer the theoretical and practical components of the vocational education packages.

12.3.3 The possibility of setting up a national consortium on open schooling will be explored in order to initiate coordinated steps in such areas as policy issues, priorities, longterm national and state needs, establishment of Resource centres for development of materials, development of

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* See para 10.4.18 of Chapter 10 Vocational Education

human resources for the open learning system, monitoring and evaluation of its performance, etc.

4. EMPLOYMENT RELATED EDUCATION

12.4.1 The open learning system at the secondary and tertiary levels will focus attention on education and training in areas related to employment and self-employment. It will seek the involvement of the existing institutions and organisations in commerce, industry, the service sectors as well as rural development organisations, including the mobilisation of the material and human resources in such organisations in the development of appropriate programmes and their delivery. Efforts will be made to develop close cooperation and collaboration between open education institutions and the agencies which use trained manpower both in the public and the private sectors as well as the professional organisations in various fields.

12.4.2 The open learning system will take steps to meet the continuing education needs of the manpower already employed in different sectors. It will help develop programmes in close cooperation with the concerned employing organisations for training and retraining of manpower, for the upgradation of skills for application of new technologies and also in providing opportunities to serving personnel to improve their qualifications for their professional advancement. The open learning system will seek the support and cooperation of a wide spectrum of employers in the fulfilment of these objectives.

5. TARGETS AND RESOURCES

12.5.1 During the Eighth Plan period, the enrolment in the open university/distance education system is expected to increase from about 11.5% of the total enrolment in higher education to about 16.5%. In absolute terms, this would involve a net addition of 4 lakhs students to the enrolment in the open university/distance education system by the end of the Eighth Plan. The open learning system at the Secondary and Higher Secondary level is expected to enrol an additional 6 lakh students during the Eighth Plan Period.

12.5.2 It is important that the cost-effectiveness of the open learning system is maintained. The strategy for this purpose will include :

* Involvement of the material and manpower resources of the user agencies in the development of programmes and courses for the open learning system and in the delivery of various services to students through establishment of Study Centres at the work place, involvement of employers in tutorials, counselling, etc.

* A system of differential fees under which the level of fees will be determined on the basis of the objectives of the programmes, the target

groups for whom the programmes are designed and other relevant factors (for example, higher fees for programmes in management designed for serving managers and lower fees for programmes designed to improve the competence of primary school teachers).

13. DELINKING DEGREES FROM JOBS AND MANPOWER PLANNING

1. PRESENT SITUATION

13.1.1 The Policy visualises delinking of degrees from jobs in selected areas, especially in services for which a university degree need not be a necessary qualification. It also envisages that this measure would lead to re-fashioning of job-specific courses. Concomitant with delinking, an appropriate machinery such as National Evaluation Organisation (NEO) is to be established to conduct tests on a voluntary basis to determine the suitability of candidates for specific jobs, to pave the way for the emergence of norms of comparable competencies across the nation, and to bring about an overall improvement in testing and measurement.

13.1.2 Some progress has been made in identifying jobs in Central Government for which a university degree is not a necessary qualification. Accordingly, the recruitment qualifications for some jobs have been suitably modified to do away with the requirement of a degree.

13.1.3 However, in the absence of a nodal agency at the national level to review and monitor the progress in regard to delinking of degrees from jobs, it is not possible to get a complete picture of the position prevailing in the Government and Public Sector undertakings under Central and State Governments.

13.1.4 The Ministry of Human Resource Development (Department of Education) has registered the NEO as a society on 9th December, 1991. The Memorandum of Association of NEO provides that its objects shall be to establish and develop at the national level a research and service organisation which can design, develop and administer a variety of tests, using the latest techniques in educational testing to certify the proficiency, skills, competences and aptitudes of persons who wish to take such tests for purposes of employment, or for any other purpose that such tests may, in course of time, serve. The NEO shall also design tests to assess levels of student's achievement for the school and non-formal education systems with a view to effecting improvement in teaching and learning process and in the development of text books and other curriculum materials.

13.1.5 Despite efforts to restructure and redesign university courses to relate them better to the world of work, there is a considerable mismatch between university education and employment; qualification for jobs, particularly in the government and public sector, still prescribes a degree as an essential qualification where it may not be necessary to fulfil job requirements; the dearth of reliable and up to date analyses of the labour market is a major constraint in matching education and training programmes with job requirements; a major share of employment today is in the un-organised sector, and that most future job opportunities are likely to be available in this sector.

2. STRATEGIES FOR IMPLEMENTATION

13.2.1 A national institution like Institute of Applied Manpower Research (IAMR) should in cooperation with State Governments and other agencies periodically conduct a thorough and detailed analysis of the labour market, in the organised and unorganised sectors with the objective of ascertaining the demands for different types of employment and keeping abreast of emerging employment trends.

13.2.2 The findings of the labour market surveys should be utilised by educational sector to introduce job-oriented courses and re-design existing courses to meet employment needs. For this purpose, information based on the surveys should be made available on a regular basis to the University Grants Commission (UGC), and other agencies such as Indira Gandhi National Open University (IGNOU), All India Council of Technical Education (AICTE), National Institute for Educational Planning and Administration (NIEPA), National Council of Educational Research and Training (NCERT), National Open School (NOS), Central Board of Secondary Education (CBSE), and Council of Boards of Secondary Education (COBSE).

13.2.3 Similarly the findings of the Labour Market System should be used by NEO to identify jobs for which tests require to be designed and developed and also by large employers to modify and link qualifications with job profiles.

13.2.4 In collaboration with UPSC, State Public Service Commissions, Banking Services Recruitment Board, Bureaus of Public Enterprises, Staff Selection Commissions and other recruiting agencies, Central and State Governments should initiate a time-bound programme for delinking of degrees for recruitment of clerical and allied staff in Government, Public Sector Undertakings and autonomous organisations. NEO can assume the nodal responsibility to monitor and review the implementation of the programme. It was noted that this would result in a considerable increase in the number of applicants for such jobs and that the employers, in collaboration with NEO, would need to devise further screening mechanisms such as objective tests to keep the numbers manageable.

3. PRIORITIES OF NATIONAL EVALUATION ORGANISATION (NEO)

13.3.1 The NEO is expected to be operational by March, 1993. The initial priorities of NEO would be as follows:

(i) Take note of the on-going efforts in the field of educational testing and attempt to function through a country-wide network of testing agencies to optimise utilisation of resources and avoid duplication and waste. For this purpose, it would be necessary for NEO to develop a comprehensive data base on educational testing within the first year of its establishment.

(ii) The NEO should commission short-term studies and need analyses to identify jobs, in consultation with government, public sector undertakings, etc., for which tests should be offered on a priority basis. This would supplement the long-term survey, by IAMR, of the labour market.

(iii) The NEO to publish curricula and self-instructional materials, which may be used by training agencies as well as individuals to assist and help candidates to appear in the NEO tests.

(iv) To establish close linkages with NCERT and coordinate efforts with regard to designing of tests to assess levels of student achievement in the school and non-formal education systems.

14. RURAL UNIVERSITIES AND INSTITUTES

1. PRESENT SITUATION

14.1.1 Rural higher education received fillip with intensification of the freedom movement. In addition to several other thinkers, Rabindranath Tagore and Mahatma Gandhi gave particular attention to the establishment of comprehensive institutions for the rural people starting at the early childhood level, going upto the highest. In spite of the difficulties faced by it, Gandhian Basic Education has survived in the country and represents a vital feature of our system. The University Education Commission presided over by Dr. S. Radhakrishnan mooted first the idea of Rural Universities. A large number of Rural Institutes were set up under the auspices of voluntary agencies during the Second Five Year Plan. Despite the increasing relevance and wider appreciation of Gandhian ideas, over the years, Basic Education, rural institutes and other institutes primarily meant for rural areas did not receive sufficient support and encouragement.

14.1.2 The National Policy on Education, 1986 stated :

"The new pattern of Rural University will be consolidated and developed on the lines of Mahatma Gandhi's revolutionary ideas on education so as to take up the challenges of micro-planning at grass roots level for the transformation of rural areas. Institutions and programmes of Gandhian basic education will be supported."

In 1992, this policy was reiterated without any modifications in the revised formulations. The Policy implies that educational institutions and voluntary agencies which take up educational programmes based on the concept of correlation between socially useful productive work, social service and academic study will be encouraged.

14.1.3 The Scheme on Rural Universities/Institutes could not be implemented during the 7th Plan period. The endeavours in the 8th Plan would be to operationalise the scheme on the lines visualised by the Programme of Action (POA) in 1986, the POA had visualised that for its implementation, a well-planned programme of encouragement will be launched for institutions/organisations which are composite in character, combining programmes from the primary and secondary levels to diploma and degree levels. The 'Rural Institute' is not envisaged as a conventional institution for award of diploma and degrees based on terminal examinations. Rather, a complex of institutes is envisaged which seek to integrate all aspects of education with life and needs of community. These may include training with productive and creative activities, horizontally across disciplines of science, technology, humanities and social scien-

ces and vertically across all stages of education - primary to higher education. This would help reduce the deep-rooted alienation of the conventional education from the people.

2. CENTRAL COUNCIL OF RURAL INSTITUTES

14.2.1 The Central Council of Rural Institutes is expected to be set up shortly.

The Central Council of Rural Institutes would :

- promote the concept of rural education on the lines Mahatma Gandhi's revolutionary ideas on education as envisaged in NPE, 1986; and

- consolidate and develop institutions engaged in programmes of Gandhian Basic Education.

The Central Council of Rural Institutes would, in pursuance of the objectives stated above, undertake measures such as

(a) Consolidation and reorganisation of existing rural institutes including those launched in the Second Plan.

(b) Encouragement to other educational institutions and voluntary agencies to develop in accordance with Gandhian Philosophy of education.

(c) Recognition and support to elementary, secondary and post-basic institutions based on the concepts of Nai Talim.

(d) Strengthening teacher training facilities for Gandhian Basic Education.

(e) Designing a variety of courses at tertiary level around emerging rural occupations.

(f) Strengthening of the content of all these institutions with emphasis on science and technology.

(g) Measures to encourage field-oriented courses of rural institutes.

(h) Promote research as a tool for social and rural development; and

(i) Promote extension services to the community through micro level planning.

The Central Government would take the initiative of providing resource support both for the development of infrastructure as well as conceptual, methodological and academic inputs in design and structure of programmes, development of teaching and learning materials, evaluation procedures, etc.

15. TECHNICAL AND MANAGEMENT EDUCATION

1. PRESENT SITUATION

15.1.1 Technical Education, which in our context also includes Management Education, is one of the most crucial components of Human Resource Development with great potential for adding value to products and services and for improving the quality of life of the people. As a result of the efforts made during the successive Five Year Plans in the past on the development of technical education, the expansion of technical education in the country has been phenomenal during the past four decades.

15.1.2 There are, at the present, over 200 recognised technical education institutions at the first degree level and more than 500 at the diploma level with the annual admission capacities of 40,000 and 80,000 students respectively. Facilities for Masters and Doctoral programmes in engineering and technology have also been created in 140 institutions with an intake of about 10,000 per year. The vast network of institutions includes IITs, RECs, technical universities, deemed universities, university departments of engineering and technology, State and private engineering colleges recognised by the AICTE, specialised institutions in the field of mining, architecture, industrial engineering, foundry and forge technology, etc. The Indian Institutes of Management, University departments and professional bodies cater to the needs of managerial manpower.

15.1.3 Some professional bodies in the fields of engineering, technology and management conduct formal and non-formal education/training programmes for fresh students as well as the working professionals and also contribute to professional development in their respective areas of activities.

15.1.4 The NPE, 1986 underlined the need for re-organising the technical and management education system to effectively deal with the changes in the economy, social environment, production and management processes and rapid expansion of knowledge and advances in science & technology. The NPE, 1986 laid specific guidelines for the qualitative and quantitative development of the technical and management education sectors; establishment of linkages amongst the concerned agencies; manpower assessment and technical education forecasting; increasing effectiveness of technical education management system; proper delivery systems, measures to achieve greater cost effectiveness and generation of resources through suitable means.

15.1.5 The Programme of Action (POA), 1986 contained several initiatives and steps to be taken during the 7th Plan and thereafter.

2. POST NPE/POA DEVELOPMENTS

15.2.1 AICTE: As one of the most significant achievements in the sector of technical education, the All India Council of Technical Education (AICTE) was conferred a statutory status under the AICTE Act in 1987. The Council has started functioning with an independent secretariat through the various Boards of Studies and the Regional Committees. There is, however, an urgent need to strengthen the AICTE in terms of its professional and administrative functions through a process of decentralisation.

15.2.2 Scheme of Continuing Education: The scheme was started through the Indian Society for Technical Education for upgrading the skills of working professionals under which more than 200 course modules were produced which provided training to about 10,000 working professionals.

15.2.3 Industry Institute Inter-action and Entrepreneurship and Management Development Programmes: A scheme of Industry-Institute Interaction for forging effective and closer interaction between technical institutions and the industry was launched. This also included establishment of an industrial foundation at IIT, Delhi and technological transfer and innovation. A scheme of entrepreneurship development for catering to the developmental needs of the non-corporate and un- organised sectors was also launched through the technical institutions.

15.2.4 Curriculum Development: A scheme for restructuring the curriculum development centres was launched for effecting curriculum development on the basis of realistic needs of the industry and the users.

15.2.5 Strengthening the scheme of Modernisation and Removal of obsolescence and Thrust Areas of Technical Education: Greater emphasis was given for covering more institutions by modernising their laboratories, workshops and teaching processes and by adopting new emerging areas of engineering and technology. This, however, needs massive financial inputs and a strong monitoring and evaluation system as compared to the one that exists.

15.2.6 World Bank Assisted Projects for Development of Technician Education: A massive project with the assistance of World Bank was launched to enable the State Governments to upgrade their polytechnics in capacity, quality and efficiency with the total cost of Rs.1650 crores to be implemented in two phases (1992-98) with a target of covering 500 approved polytechnics in 16 States and one Union Territory.

15.2.7 Review of IIMs and TTTIs: The IIMs and the TTTIs were reviewed by two separate National Review Commit-

tees in order to assess the present status and impact so as to give them a new thrust and direction.

15.2.8 Review of Community Polytechnics: The Scheme of Community Polytechnics was reviewed by a National Expert Committee in terms of its impact, coverage and effectiveness on the socio-economic upliftment and poverty alleviation. The number of Community Polytechnics-was also substantially increased.

15.2.9 Apprenticeship Training: In order to provide training for the 10+2 vocational students under the amended Apprentices Act, additional vocational subjects were included under the purview of the Act.

3. ACTION PLAN

(a) All India Council for Technical Education (AICTE)

15.3.1 In order to ensure proper maintenance of norms and standards, accreditation, funding of priority areas, monitoring and evaluation, maintaining parity of certification and awards, and a coordinated and integrated development of technical and management education, the AICTE in its statutory role will be adequately strengthened so as to function in a more decentralised manner with greater effective involvement of State Governments, UT Administrations and technical institutions of good quality. In order to ensure this, the AICTE will take the following steps :

i) Regulate admissions to all programmes of studies in technical education institutions with reference to manpower requirements and take steps for ensuring that admissions are made as per the approved guidelines.

ii) Activate the Boards of Studies which have so far not been operationalised and set up more Boards of Studies.

iii) Regulate effectively the establishment of new technical education institutions and starting of new programmes of studies with reference to the overall needs of the economy.

iv) Ensure greater involvement of the States in the monitoring and regulation, and coordinated development of technical education.

v) Activate the accreditation process through the National Accreditation Board (NAB).

vi) Strengthen the existing Regional Committees and establish additional Regional Committees for effective discharge of the functions assigned to the AICTE.

vii) Take steps for laying down a realistic fee structure based on actual cost of education and lay down guidelines for its implementation.

viii) Take steps for introduction of a penal clause in the AICTE Act for effectively curbing malpractices in the technical education system.

ix) Take suitable steps for enabling institutions to increase internal revenue generation.

x) Take steps for encouraging and promoting private initiative, support and participation in technical education system.

xi) Generate revenue for meeting expenditure incurred by the AICTE on services rendered to all technical education institutions.

xii) Lay down specific guidelines and norms for providing assistance to professional bodies on a selective basis so that they can conduct their activities effectively by way of consultancy, conferences, mission-oriented studies and surveys, conducting seminars and workshops.

xiii) Introduce a scheme for giving autonomy to selected technical institutions coupled with the concept of accountability so that the institutions can enjoy adequate freedom, flexibility and innovative approaches for meeting the rapidly changing needs of the society.

xiv) The AICTE will also lay down norms for granting Deemed University status to the technical institutions under the provisions of the Act on a selective basis.

(b) National Technical Manpower Information System (NTMIS) 15.3.2

A sound data base on technical manpower availability and requirements in the traditional and emerging disciplines is a pre-requisite for regulated and coordinated development of technical education with optimum allocation and utilisation of resources. The AICTE will take over the scheme of National Technical Manpower Information System during 1992-93 and take urgent steps, with the help of Govt. and non-Govt. institutions, organisations and professional societies for developing and maintaining a current data-base for the planning and development of technical education in the most effective manner.

15.3.3 The AICTE will also launch schemes for coordination between the Technology Information Forecasting and Assessment Council (TIFAC) and the NTMIS and also prepare a national directory of occupations and job titles and identify the variety of need based courses and fixing intake level with the help of higher technical institutions, professional bodies and industry. The AICTE will do this in definite time-bound programme.

4. TECHNICIAN EDUCATION

15.4.1 Technician Education has to play an important role in developing highly skilled middle level technical manpower for the organised as well as the unorganised sectors. Necessary steps will be taken to make technician education flexible, modular and credit-based with provisions for multi-point entry to achieve this goal. The upgradation of the technical education system in terms of capacity, quality and efficiency will be ensured through the World Bank assisted project throughout the country. The AICTE will lay down norms for minimum qualifying contact-hours, guidelines for design of curricula containing elements of computer education and new emerging technologies and will rationalise nomenclatures of courses throughout the country.

5. UNDERGRADUATE EDUCATION

15.5.1 In order to produce high quality personnel at the Under-Graduate level, the Under-Graduate courses will be developed and diversified on a modular pattern based on credits on the basis of norms and guidelines to be prescribed by the All India Board of Under-Graduate Studies of the AICTE.

15.5.2 The AICTE will lay down norms for minimum qualifying contact hours and guidelines for design of curricula covering elements of computer education and new emerging technologies and also rationalise nomenclatures of courses throughout the country. The AICTE will initiate action to launch the National Testing Service for admissions to the Under-Graduate courses.

6. POST-GRADUATE EDUCATION

15.6.1 In order to sustain the thrust of the academic pursuit of the post-graduate education and research programmes and to consolidate their activities for improving the R&D culture in the technical institutions, post-graduate programmes will be suitably regulated, modernised and strengthened by the AICTE. The AICTE, through its All India Board of Post-Graduate Studies & Research in Engineering & Technology, will increase the intake for the post-graduate courses to about 11,000 students per year by the end of the 8th Plan period with phasing out of the traditional courses and introduction of new courses in the emerging areas. The AICTE will also take suitable steps for reducing drop-out rate and increasing the utilisation of post-graduate students and facilities. The funds for assistance to post-graduate programmes will be transferred to the AICTE by April 1993.

15.6.2 AICTE will initiate steps for exploring the possibility of de-linking PG scholarship and converting the scheme of scholarships to that of teaching/research assistantship.

7. MANAGEMENT EDUCATION

15.7.1 The Management Education will be oriented to also deal with the manpower needs of the unorganised and rural sectors in which a system of studying and documenting the Indian experiences will be introduced.

8. INSTITUTIONAL DEVELOPMENT

15.8.1 IITs: In order to maintain the highest standards of these Centres of Excellence in producing competent engineers and technologists and to conduct mission-oriented research in frontier areas of Science and Technology including appropriate technologies and applied sciences, the IITs will also take up new activities like thrust areas of technology development, establishment of industrial foundations/parks, international consultancy etc. Steps will be taken to make them more and more self-reliant and financially autonomous through creation of Corpus Fund and other measures for generation of resources and such other innovations recommended by the Review Committee of IITs. The new IIT in Assam will be operationalised as per the Project Report.

15.8.2 IIMs: In order to produce high quality managerial manpower and carrying out research in non-corporate and under-managed sectors like agriculture, rural development, public systems management, energy, health, education, habitat etc., these premier centres will be given a new thrust and direction by making them self-reliant and financially autonomous in the light of the Review Committee recommendations.

15.8.3 RECs: In order to enable the RECs to effectively act as pace-setting institutions and to provide leadership to the technical institutions in the respective regions, steps will be taken to give them maximum autonomy by granting the status of Deemed University on a selective basis. A detailed review will be conducted for deciding the future thrust and orientation so as to broaden their horizon by improving the existing management structures.

15.8.4 TTTIs: As resource centres for development of technician education system through teacher training, development of curricula, extension activities, consultancy services and also facilitating the implementation of the World Bank Project for development of technician education, these institutions will be strengthened so as to utilise their potential to the maximum extent. The recommendations of the Review Committee of TTTIs will be implemented effectively.

15.8.5 Specialised Institutions: In order to promote and foster the specialised disciplines in technical education, the institutions like SPA, NITIE, ISM, NIFFT will be further strengthened in terms of their management, infrastructure and delivery systems through activities like R&D, consultancy, extension services etc.

9. MODERNISATION AND REMOVAL OF OBSOLESCENCE

15.9.1 Efforts will be made to provide substantive funding for strengthening the programme of modernisation and removal of obsolescence in order to upgrade the infrastructural facilities and thereby improving the overall quality of technical education all over.

10. THRUST AREA SCHEMES

15.10.1 The level of substantial funding provided to the technical institutions after adoption of NPE-1986 will be enhanced in view of their strategic importance in the process of development of technical manpower in the thrust areas of technical education. The detailed evaluation by a National Level Expert Committee to assess their impact on linkages of economy, industrial development, utilisation of funds, possible re-arrangement of priorities will be undertaken during 1994-95. The institutional level monitoring and evaluation system recently started in the institutions will be strengthened so as to get meaningful feedback through the perspective plans regarding the success and relevance of the projects. Some grants will be made available to the institutions as a part of the scheme for maintenance of the facilities created under the scheme.

11. TEACHERS

15.11.1 Recruitment: Teachers in technical and management institutions will be recruited strictly on merit by open competition and on All India basis as per the guidelines prescribed by the AICTE. The AICTE may also take steps for establishing a pool of persons suited for teaching in polytechnics and colleges in order that vacancies can be filled quickly by drawing personnel from this pool without delay as are usually caused through the established recruitment processes. The AICTE should also take steps for increasing teacher availability in areas of shortages.

15.11.2 Multiple Roles: The teachers will be required to play multiple roles including teaching, research, consultancy, extension work, development of instructional resources and management of institutions including planning and development functions.

15.11.3 Training: Appropriate academic and industrial training coupled with re-training programmes including pre-service and in-service training will be designed by the AICTE. The AICTE will also lay down guidelines for linking the training and higher qualifications required by the teachers with their career development. Efforts will be made to enhance the scope of present Quality Improvement Programme (QIP) to also include polytechnic teachers for acquiring higher qualifications. The Indian Society for Technical Education, the State Governments etc. will be involved in undertaking the activities like study leave, summer/winter training, innovative methods of teaching, consultancy, R&D work and industry secondment.

15.11.4 Performance Appraisal: In order to promote excellence of individuals and institutions by way of proper planning, implementation, review and feedback, etc., the AICTE will finalise the Performance Appraisal Development Scheme for technical teachers with the help of ISTE, TTTIs, Quality Improvement Programme Centres, State Governments and industry so as to keep the teachers abreast of the emerging technologies and changes taking place all over and thereby making the technical education system more dynamic and forward looking.

12. NON-TEACHING AND SUPPORTING STAFF

15.12.1 The AICTE will introduce coordinated training and retraining programmes with the help of ISTE, TTTIs and the Directorates of Technical Education in the States for the non-teaching and supporting staff in the technical institutions so that they can make effective contributions to the education process.

13. COMMUNITY POLYTECHNICS

15.13.1 On the basis of the recommendations of the Kalbag Committee, the scheme of Community Polytechnics will be further developed in terms of its scope, coverage and activities. Steps will be taken to involve more polytechnics in this scheme and establish village extension centers and National Regional Information Centers. An apex Coordinating Council at the national level and technical advisory committees at the regional level will be set up. Special programmes for women will be undertaken. Appropriate measures will be taken to popularise the scheme so as to extend its benefits to the under-privileged and disadvantaged sectors of the society. Efforts will be made to provide adequate funds from the Ministry of H.R.D., other concerned departments, organisations and agencies and also to provide sufficient manpower support. Group entrepreneurship will be encouraged for revival and promotion of rural centers and crafts through community participation.

14. TECHNICAL EDUCATION FOR WOMEN

15.14.1 Opportunities for Technical Education for women at all levels will be suitably increased. Additional polytechnics for women will be established under the World Bank assisted Technician Education Projects, and concerted efforts will be made to increase the proportion of girls enroling in polytechnics and engineering courses. Adequate hostel facilities will be provided to the girl students in technical and management institutions. Guidance seminars for girls at the 10+2 stage will be organised through the State Governments, Boards of Apprenticeship Training and other selected institutions to make them aware of opportunities in

technical education and the potential for employment and self-employment.

15. BRAIN DRAIN

15.15.1 In the present situation of global inter-dependence, interaction of institutions in one country with institutions and academics in another country has become inevitable and in most of the cases desirable. This trend, as is generally seen in other countries is true with India also. One should not, however, get alarmed with the fear of the so-called brain drain. The Indian technical personnel going abroad for acquiring higher education and valuable research and work experience do return to the country after study/work abroad. They could, in a way, be treated as a Brain Bank. In order to attract such personnel back to the country, steps are necessary to make them aware of the excellent infrastructural and R & D facilities developed in the country. Some specific steps that will be taken in this regard are :

i) The Scientists Pool in the CSIR will be made more attractive by offering better remuneration according to merit and placement in the right institution.

ii) All international collaboration programmes will be utilised to enable Indian scientist and technologists to undertake useful collaborative projects with well established institutions abroad.

iii) Concrete steps will be taken to enhance the mobility of scientists and technologists paving due attention to matters such as accommodation, financial compensation, children's education, etc.

iv) Migration of engineering graduates to non-engineering professions could be checked through career guidance activities.

16. COST EFFECTIVENESS

15.16.1 Keeping in view the large investments necessary for producing technical manpower, effective steps are required to get optimum utilisations out of the available infrastructural facilities. This will be achieved through the following steps:

i) Outdated and stereotype programmes and courses will be wound up and emphasis will be given to introduction of courses in emerging areas rather than conventional areas.

ii) Neighbouring academic and R&D institutions will be encouraged to cooperate through sandwich/cooperative teaching programmes and research consortia by sharing faculty and facilities.

iii) Multiple usage of infrastructural facilities in technical institutions will be attempted by conducting part-time evening courses, continuing education programmes, consultancy and testing services, etc.

iv) The institutions will be encouraged to generate their own resources by way of enhanced fees, consultancy and testing services.

v) Emphasis will be laid on non-monitory innovations through better planning, advanced technologies and practices, scientific method of supervision and administration, monitoring and evaluation with the help of teachers, students, educational administrators and users.

vi) Private and voluntary effort in technical education will be encouraged within the framework of guidelines and norms prescribed by the AICTE.

17. RESOURCE GENERATION

15.17.1 All institutions will be encouraged to achieve maximum self-reliance by generating resources through measures like enhancement of fees coupled with provision of soft loans to the needy students; consultancy; testing; sponsored projects; community contributions; institutional chairs; raising donations for infrastructural development with a provision for tax exemption; establishment of industrial foundations; charging fees for specific facilities such as laboratory, library, games, magazines, etc. The grant-in-aid institutions will be allowed to utilise the additional income generated for infrastructural and other developmental activities without linking it with the Governmental grants. As with Higher Education, a High Powered Committee would be set up to consider steps for mobilisation of additional resources for Higher Education, to bring about a better balance in the funding of institutions for technical and management education and research, and to improve the cost efficiency of the technical education system. Efforts will also be made to streamline the scheme of educational loans with a view to making it more customer friendly.

18. CONTINUING EDUCATION AND RE-TRAINING PROGRAMMES

15.18.1 AICTE will set up a Board of Studies for providing continuing education for the working professionals in the industry. The National Continuing Education Project launched by the Ministry of H.R.D. through the Indian Society for Technical Education will enhance its activities by including the use of Distance Education Mode, video tapes and CAP packages through collaboration with open universities. Continuing Education Programmes will be of-

fered in selected institutions at all levels thereby creating continuing education as a new National Culture.

19. INDUSTRY INSTITUTE INTERACTION AND ENTREPRENEURSHIP DEVELOPMENT

15.19.1 Formal linkages between technical institutions and the industry will be strengthened in terms of curriculum development, resource sharing, joint research projects, apprenticeship training for students, exchange of faculty and experts on mutual basis, consultancy and sponsored research, continuing education programmes, sandwich/cooperative programmes and the concept of adjunct professorship. Industry Institute Interaction Cells and Industrial Foundations will be set up in selected institutions.

15.19.2 In order to mitigate the problems of un-employment and under- employment, steps will be taken to create an environment of self-employment and entrepreneurship development through formal and non-formal programmes. Entrepreneurship concept will be introduced in the curricula at Diploma and Degree levels on a larger scale. Special programmes for developing women entrepreneurs will be conducted with the help of DST, STEP Colleges and State Governments in selected colleges and polytechnics.

15.19.3 Special programmes will also be organised in the areas of vendor development, quality assurance (ISO 9000) and Total Quality Management (TQM) for entrepreneurs so as to provide ancillary support to the organised sector.

20. RESEARCH FOR IMPROVING EDUCATIONAL PROCESS

15.20.1 Selected technical and management institutions including IITs, IIMs, RECs and TTTIs etc., will undertake research and studies on systemic issues concerning educational planning and management, teachers, students, cost effectiveness, research mobilisation, instructional system-design, curriculum development, examination reforms etc., and disseminate the findings to all institutions for information and suitable improvements.

21. MAKING THE SYSTEM OF TECHNICAL AND MANAGEMENT EDUCATION WORK

15.21.1 For enabling the technical and management system to contribute meaningfully to the national economic development, some conceptual and structural reforms are necessary. This could be achieved through the following measures.

(i) Adequate Financial Inputs

For maintenance of highest standards of technical and management education, adequate financial resources are a must. Inadequate funding poses serious difficulties on the overall quality.

(ii) Effective Functioning of AICTE Through Decentralisation and Participation

To strengthen the AICTE in terms of its functioning by using the principle of decentralisation and involving the State Governments to a greater extent.

(iii) Optimum Utilisation of Resources

To make optimum use of existing infrastructural facilities and to ensure involvement of retired eminent personnel, creation of a national pool of teachers for recruitment, effective teacher training based on needs, industrial exposure of students through Apprenticeship Training, popularisation of concepts like Practice School as at BITS, Pilani and introduction of Sandwich Programmes and Cooperative Education Programmes on a large scale.

(iv) Adoption of Educational Technology

To promote adoption of Education Technology and provide Continuing Education Programmes through Distance Education Mode, inculcating of self-learning culture amongst students and teachers.

(v) Inculcation of Values

To lay emphasis on value inculcation including culture of commitment, integrity, team work, ethics, social awareness and responsibilities, responsiveness to environmental and societal issues.

(vi) Recruitment and Development of Teachers

To recruit teachers purely on merit and retain them through suitable programmes of motivation and development. To appraise teachers through performance appraisal system so that their accountability is ensured and merit is rewarded. To use national pool of professionals for recruitment of teachers.

(vi) Involvement of Professional Societies

To encourage and promote the involvement of professional societies, selected institutions and voluntary agencies in the planning, development and evaluation of the programmes and their relevance.

(viii)Linkages

To strengthen the linkages between institutions to institutions as also between technical and management institutions and scientific agencies, national laboratories, research organisations, university departments, industry and professional societies.

(ix) Openness of the Educational System

To make the technical and management institutions open to the community by sharing of experience, expertise and

facilities and involve the community in the process of development through constant interactions.

22. CONTENT AND PROCESS OF TECHNICAL AND MANAGEMENT EDUCATION

15.22.1 In order to reorganise and upgrade the contents and process of technical and management education, the following steps will be taken.

(i) Industry Oriented Student Projects

The curricula will be so designed as to include a proper mix of conventional as well as emerging areas relevant to the current and future needs. The students will be asked to take up live projects having direct relevance to the industry.

(ii) Professional Ethics and Value Education

The teaching process will be geared to include elements of professional conduct, integrity, healthy competitions, team work and participative management so as to make the technical and managerial manpower more productive and forward looking. The facilities and expertise of the institutions should be made open to the Public and Community to en-

sure their participation and commitment. Continuing education will be made a national culture whereby the skilled as well as the unskilled working professionals get the opportunity for updating their knowledge and skills.

(iii) Introduction of Humanities and Social Sciences

Adequate emphasis will be given to the elements of humanities, social sciences, behavioural sciences, management inputs preferably by integrating these programmes into curricula.

(iv) Development of Holistic Vision

The students as well as teachers will be made aware and responsive to the technogenic problems such as environmental degradation and resource depletion for which introduction of a holistic vision is a must.

23. MONITORING AND EVALUATION

15.23.1 The system of Monitoring and Evaluation would be strengthened through creation of cells at national, State and institute levels and these institutes would be kept dynamic through the process of Accreditation.

16. RESEARCH AND DEVELOPMENT

1. THE PRESENT SCENARIO

16.1.1 This Chapter deals with Research and Development (R&D) in all areas of natural and social sciences, humanities, engineering, agriculture and medical science.

16.1.2 Since independence, the country has established a large number of national laboratories dealing with a variety of areas in Science and Technology (S&T) including agriculture and medicine. A number of institutions are also involved in research in social sciences and management studies. There are several agencies and departments of the government such as Council of Scientific and Industrial Research (CSIR), Department of Bio-Technology (DBT), Indian Council of Agricultural Research (ICAR), Indian Council of Medical Research (ICMR), Department of Electronics (DOE), Department of Science and Technology (DST) etc. dealing with science and technology. In order to support social sciences and humanities, several councils such as the Indian Council of Social Science Research (ICSSR) have been established. The total investment in R & D during the 7th Five Year Plan is around Rs.5000 crores (including non-plan expenditure).

16.1.3 Along with the expansion of the S&T system in the country, the education system also has expanded. Today there are over 150 universities and a number of institutions of technology including the five Indian Institutes of Technology (IITs) and the Indian Institute of Science (IISc) in Bangalore. A large number of these institutions are engaged in higher education and carry out research. However, the actual investment in R&D in the education sector is very small compared to that in the national laboratories. For example, the UGC had only a budget of around 75 crores (for 5 years) for the development of recognised centres of excellence in science and other subjects. The link between the national laboratories and the educational institutions as well as between industry and educational institutions is extremely weak.

16.1.4 When viewed in the context of the pace of development in S&T in other parts of the world, the nature and dimensions of the problems of national development confronting us and the immense potential of S&T to help solve current problems, it is found that, despite significant advances, the gap between India and other advanced countries has significantly widened in terms of scientific and technological capabilities. There is, therefore, a greater urgency for promoting Science and Technology, both for internal development and for international competitiveness. It would also be worthwhile to note that within the country there are enormous gaps in the infrastructural facilities and capabilities between what obtains in specialised scientific

agencies and national laboratories, in the industrial undertakings, and in the educational system. This situation needs to be remedied rapidly if those emerging from our educational system have to be effective in our national research and production systems. It is not just the limited number emerging from a few leading institutions that is of relevance, but there is a large number needed for the S&T effort as a whole. Another weakness of the S&T infrastructure has been its weak coupling with the production system. This has led to an insufficient use of science generated, and the lack of appreciation of capabilities in the universities, national laboratories, scientific agencies and the higher education system in general. The total resource of S&T personnel in the country compared to the population and the magnitude of the task before us is small in comparison to what obtains elsewhere in the world. The quality of this personnel varies very widely. Furthermore, large numbers of these are not actually engaged in activities that can be construed as scientific or technical. A clear effort for development of R&D manpower is called for in order to match in number and quality of training, the need of the country. Despite increasing allocation for S&T activities, allocation for development of R&D manpower remains meagre. There is also concern in the S&T community that the very best talent with the potential to be leaders of S&T are being lost either to opportunities available abroad or to other areas of endeavour in the country. There is need for determined effort to attract some of the best amongst our students to take to research as a career.

16.1.5 Despite the seemingly large infrastructure created for S&T, the quality of the infrastructure is not entirely satisfactory in the educational institutions. There are not many educational institutions in the country with R&D facilities and infrastructure comparable to those available in similar institutions in advanced countries. It is, therefore, becoming difficult for educational institutions to carry out competitive R&D work. Although our educational institutions produce large manpower, the absorbtive capacity of the educational institutions for R&D is not very high. There are brilliant individuals, young and old, in our educational institutions who have produced high quality work and yet the overall quality of research from the education sector needs to be improved.

16.1.6 Although all the post-graduate students and Ph.D.s in the country have been produced by our educational institutions, there is hardly any budget actually marked for R&D in these institutions. While it would be difficult to mention the exact figure, not more than 50 crores of rupees per annum is available in the regular budget of the university sector, earmarked for research. In general the univer-

sities do not have a research budget and much of the money received from the UGC is used for mere survival. Without support for innovation, the educational institutions will not be able to contribute to national development. It is necessary to orient R&D efforts in educational institutions to national needs and this effort can be made only when adequate support is provided. Almost all the funding that the scientists and others in the universities get for research are based on research projects from scientific agencies. The total money available for this purpose from these agencies is also not very high and is not commensurate with the size of the country and the large number of educational institutions. All the support for higher education comes from the government. Industry is yet to contribute its mite in this direction.

16.1.7 What was said about the quality of research in science would also apply to social science. In spite of a large number of universities in the country carrying out social science research, there are not many centres of real excellence in these fields. Without under-estimating the value of fundamental research there is a felt need for social science research scholars to deal with research of national relevance and to disseminate this information to policy planners in a form which is useful. There is also need for dovetailing of research findings into the syllabi and for linkages between social science research and other sectors of research. There is a real danger of creating a unidimensional man in the absence of such linkages.

2. MAIN PROBLEMS AND SHORTCOMINGS

16.2.1 Some of the main problems related to R&D in our higher educational institutions are:

i) Most of the effort is concentrated in a few institutions and not spread over the entire system. This should be seen in the context of the need to grow R&D culture in all institutions and at the same time using selectivity for creating and supporting groups of excellence.

ii) Experimental scientists and engineers have the greatest handicap in the educational sector due to poor infrastructural facilities. Maintenance, running cost, and technical support are not adequately provided for. Instrumentation is generally poor in the educational institutions.

iii) An atmosphere and pace appropriate to research is difficult to sustain in the face of cumbersome rules, procedural difficulties and, most of all, lack of resources.

iv) Cooperation and collaboration between research centres located in universities with R&D laboratories is scarce.

v) There is little premium on quality and excellence especially in the area of relevant research and development. An appropriate system for recognising excellence and achievement and rewarding performance is yet to evolve. While we have a number of scientists and engineers engaged in R&D and many more are needed, the aspect of quality requires greater emphasis.

vi) Mediocrity in R&D has to be guarded against. Research is by and large confined to traditional areas; inter-disciplinarity has not taken root. Choice of research problems is often dictated by considerations of easy publication in journals.

vii) Even in otherwise well-equipped laboratories adequate provision for spares, consumables and replacement of short-lived equipment is not available. Overheads need to be provided to the institutions by agencies sponsoring research. Without such overheads the institutions find it difficult to support research.

viii) Poor library, inadequate information system, absence of computational and reprographic facilities are endemic to the majority of educational institutions. The need for modernisation and removal of obsolescence in research facilities is urgent.

ix) Research in Technology suffers due to lack of appropriate linkages, the absence of articulation of felt-needs by the user industry, and by the absence of a strong linkage with basic science which provide primary inputs to technology. Research in Technology is meagre because highly qualified technical personnel find other avenues of employment more profitable.

x) Very little research is undertaken to improve existing technology or applying existing or newer technologies to meeting the needs of villages and rural areas. Generally technologies which increase productivity and improve the performance of an existing process are not being developed. Imported technologies have not been suitably adapted to local situation.

xi) Transfer/extension of technology even when developed indigenously, does not receive sufficient attention. A management culture suited for research and development of technology needs to be developed.

xii) Scarce resources and facilities existing in some schools of research are not easily available for utilisation by other organisations. There is a need for greater accessibility and cooperation.

xiii) The mechanisms for technology watching, technology assessment and technology forecasting need to be fully established and strengthened for providing guidance to the research worker on the one hand and the developmental agencies on the other to enable them to take suitable decision for providing funding and organisational support.

xiv) Industries as well as some S&T agencies draw heavily on the academic sector for their manpower needs yet, they do not do enough, financially or otherwise, to support R&D manpower development and/or research in the academic sector.

xv) Linkage between research activity and the improvement of educational processes is very weak. Research will have to be utilised for renovation and renewal of the educational process and energising modernisation of curriculum. There is an absence of a nodal agency for managing, implementing and monitoring R&D in education sector.

xvi) The results of social sciences research are not disseminated adequately to the policy makers in a form that they could be used in policy formulation. The linkage between research and curriculum renewal is also weak.

xvii) Most of the researches in social science are unidisciplinary. Inter-disciplinary and transdisciplinary researches are not taken up sufficiently. This is particularly needed in order to interface Social Sciences and Humanities with S&T.

xviii) The present recruitment practices in the University institutions promote inbreeding. This requires immediate change.

3. SYMBIOTIC RELATIONSHIP BETWEEN HIGHER EDUCATION AND RESEARCH

16.3.1 In the NPE, 1986, great stress has been laid on research as an essential component of higher education because of its role in creating new knowledge and insights and imparting excitement and dynamism to the educational process. There is a symbiotic relationship between higher education and research. Research cannot be carried out without the vital support of higher education, and education would be dull and monotonous without the opportunity and inputs of creativity. It is research, particularly in science and technology, and deep critical studies in social, cultural, economic and processes and situations, carried out in institutions of higher education which make these institutions play a crucial role in national progress, self- reliance and

security. In regard to science and technology there is a world wide conviction, reflected in the NPE, 1986, that intellectual capital will play a far more important role in future in maintaining industrial competitiveness. There are several paragraphs in the NPE, 1986, making important references and commitments about research.

16.3.2 The implication is that research in all fields — science and technology, social sciences and humanities including fine arts and indology has to be encouraged. Eventually all institutions of higher education must actively pursue research, and performance in research ought to be an important measure of success for the individual as well as the institution.

16.3.3 In the context of educational institutions it may be borne in mind that research is not only what one does to obtain a Ph.D. degree, but it has also to be viewed as an innovative way of accomplishing things, of doing things better, of discovering new relationship among facts. It is the exploration of the unknown through observation, experimentation and other forms of systematic enquiry followed by an objective and penetrating analysis and formulation of conclusions. The undergraduates and postgraduates could take up studies, surveys, field work, projects and other assignments related to scientific, technical and socio-economic problems — for which there is unlimited scope — and they could make a creative contribution to the larger studies designed to tackle national problems. Socio-cultural impediments to the full utilization of the benefits of science, for example, in having pollution free rivers, or small families, could be studied by students in specific areas, and ways and means of overcoming them may be suggested. Thus the culture of pursuit of excellence and of thinking beyond traditional lines could be generated and brought to bear both on the quality of education and to the solution of real problems. Curricular and methodological changes, including changes in assessment systems would be called for, and the small resources necessary to take up new activities would have to be provided to the institutions. The benefits would be immense.

16.3.4 Another factor of great importance is to recognise the pre- eminent role the universities and other institutions of higher education play in the field of basic research all over the world. In this age of strongly science based industry and defence systems, "strategic research" is much in demand and it is usually defined as basic research carried out with the expectation that it will produce a broad base of knowledge likely to contribute to the solution of current or future practical problems. This too is the forte of the universities. If the research potential of the educational institutions could be turned into relevant directions for solving immediate or distant problems, technological development, socio-economic development of regions, research related to thrust areas and national missions, and to critical studies on

society, culture and the nature of growth and development, etc., the country would stand to gain tremendously.

16.3.5 These features and characteristics of research lead to certain imperatives which have been recognised by the NPE, 1986. viz., there cannot be a compromise on the quality of research. Research of an indifferent quality neither contributes to knowledge nor to any social good; such research will have to be guarded against and reduced to the minimum. On the other hand, it is intrinsically difficult to judge or determine the quality of research when it has no relevance either to the concerned discipline or to the solution of significant problems.

16.3.6 Research, with all its economic and intellectual returns, requires enhanced support -- the implications of expanding frontiers, broader institutional base, and reasonable infrastructural and running costs have to be met. It calls for cooperation and collaboration between institutions of higher education, between them and research agencies mostly established by government, and between them and the industry or the production sector in general. Links and networking are mentioned in the NPE, 1986 in several places. The vast network of higher educational institutions undertaking great variety of research, some in cooperation with others, and the enhanced funds to be made available for this activity, as also the necessity of maintaining unremitting pressure for excellence, would require coordination, planning and evaluation under a well-considered policy in order to optimise the results. This leads to the question of a data base, and of "foresights" into future areas of thrust. Research in institutions of higher education should be a part of the national research effort.

16.3.7 A base of talent has to be built systematically. At under- graduate and post-graduate levels, a proper talent search examination should result in awarding a large number of merit- cum-means scholarships; scholars should be assisted in getting admission to leading autonomous colleges and university departments receiving special support. Either some new colleges be established or some of the leading autonomous colleges be specially selected for achieving really first rate standards, particularly in science including mathematics, because in the present situation high level educational facilities, particularly in laboratory work, are rare. Adequately financed teacher training programmes and schools for the talented should be organised. A pool of visiting professors may be centrally funded which may be made use of by the universities and other institutions part of which may be expatriate Indian scholars abroad who may be willing to spend time in India. Admission to research should also be based on merit determined by a common examination. Education and training of talent at the Master's and Ph.D. level should be linked with the needs of specialisation and manpower demand. A field which must receive special attention is "applicable mathematics" since a large number of

areas such as computer and information sciences, social sciences and engineering sciences are rapidly coming up where application of mathematics has opened up new concepts and possibilities. Another field which is vital to research is that of instrumentation.

16.3.8 Supervision of research and periodic as well as terminal evaluation have to be made more rigorous. A proper record of work and progress should be maintained. The selection of research problems should be taken up most carefully and superficial or routine type of work should be avoided. Ph.D. examiners' reports must be available in the UGC or corresponding organizations for confidential monitoring of the quality of the highest degree awarded by the institutions of higher education.

16.3.9 Systematic support indicated above would require funds, and new management structures. Today, hardly 10% of the departments/institutions are capable of doing research of reasonable quality -- some would put the percentage much lower. In the first instance, doubling of available funds in real terms should be the target with the 8th Five Year Plan, to give a reasonable chance of planning a substantial research contribution. Funds for basic research strategic research as well as applied (Project) research should be augmented. Assistance to Centres of Advanced Study, and Departments of Special Assistance and other major centres should be increased. The agencies should then confine their project support to areas of direct interest to them.

16.3.10 In accordance with the NPE, 1986 an indirect but an extremely significant enhancement of research support is by creating cooperative research facilities, in high money consuming fields, within the system of higher education institutions. Furthermore, national research facilities should be set up within the higher education system with proper autonomous management.

16.3.11 Public sector and other industry, and research agencies should be persuaded by the Government to set up at least some of their R&D activities on the campuses of the higher education institutions. Campus labs established by CSIR or Defence Research and Development Organisation (DRDO) (in suitable fields) or by the Department of Civil Aviation, or Ministry of Information and Broadcasting, or again by Oil and Natural Gas Commission (ONGC) or Fertilizer Corporation -- to mention a few examples -- would prove a shot in the arm for education and training, and it would perhaps also produce cost-effective results for the sponsors. Each major industrial organisation should be encouraged to develop strong cooperation and links with one or two institutions so as to utilize them intensively for its R&D work. Industries should also directly support R&D in educational institutions.

4. ACTION POINTS

16.4.1 The main problem today is the increasing difficulty faced by Indian scientists and engineers to be competitive in research and development. This is particularly true of those working in educational institutions. This is partly because our investment in R&D in educational institutions has been marginal. More importantly, the infrastructure available even in the best of our institutions is far from satisfactory It is imperative that we improve the infrastructure of at least some of the select institutions to take up good R&D work, while at the same time, attempting to raise the base support to universities and other educational institutions for the purpose. It is extremely important to promote and nurture excellence. Selectivity and preferential funding of individuals, departments and institutions of excellence seem more crucial today than ever before.

16.4.2 The COSIST programme of the UGC should be further strengthened. The DSA and CAS programmes of the UGC to university departments should be further increased and at the same time made more selective. The schemes of MHRD/AICTE for modernization, thrust areas in Technical Education and R&D require to be further strengthened.

16.4.3 National spending on R&D is not commensurate with the needs. In particular, funding available for research in educational institutions forms a very small percentage of the national budget. This should be remedied. All the funding is now from the Government and almost none from the industry. Funding for research in universities needs to be at least doubled (in real terms, after taking into account cost escalations, rupee-dollar exchange rate etc.) during the 8th Plan. The industry needs to provide direct support to higher education and research. Around Rs.100 crore p.a. for R&D in the education sector should come from industry. Appropriate measures may be taken by the government in this direction.

16.4.4 Research support in educational institutions is only through the grants that the faculty members obtain from agencies on a competitive basis. Unfortunately, generally these grants are not associated with institutional overheads. Educational institutions do not have the resources to provide infrastructural support to research projects and This is bringing down the absorptive capacity of these institutions for R&D. Without overheads it will become increasingly difficult for educational institutions to support research even though the faculty members may obtain grants from scientific agencies. It is recommended that at least 20% of the total project grant should be given as overheads to educational institutions. This is of utmost importance.

16.4.5 The average quality of research and development has to be improved. Many corrective measures need to be taken both by institutions as well as by funding agencies. It is necessary to be selective in areas of research rather than spreading ourselves thin, specially when the budget situation is so bad. The areas so chosen should be relevant to national needs and to the subject itself. Besides supporting the right areas and providing grants which are commensurate with the area being pursued, the promotion of an overall system which nurtures quality is also important. This is the responsibility of the scientists as well as of administrators and planners. Appropriate monitoring and coordinating mechanisms for R&D have to be worked out by universities, UGC, MHRD/AICTE and the scientific agencies.

16.4.6 Teaching and research should go hand-in-hand in higher educational institutions. It is important therefore that teachers get an opportunity to involve themselves in research activities. In order to do so, there should be a separate budget-head for research within the budget of educational institutions. At present the recurring grants of educational institutions do not have a research component. Necessary mechanisms to provide some support for research in important areas within the budgets of the institutions should be established. It would be desirable to have a Dean or a Board associated with research, within each educational institution. UGC and MHRD/AICTE should earmark a percentage of the grants for R&D.

16.4.7 Linkages

    i) It is essential to have a proper national research funding mechanism in science and engineering. The SERC of the DST is now providing the major funding for big science R&D projects while other organizations provide smaller grants. It may be worthwhile to see whether a coordinating mechanism can be established in relation to funding, in addition to increasing the funding for research in educational institutions.

    ii) It is important to link up data bases and libraries. With increasing budget constraints, it is impossible to have good library facilities in every decomming Institutions. For this purpose, it is necessary to see that there is proper networking of libraries.

16.4.8 It is essential that four good regional libraries are developed in different parts of the country during the 8th Plan. They should be supported in such a way that at least these libraries get all the important journals and active workers in different institutions have easy access through the networking mechanism or some other means.

16.4.9 National research facilities have provided some support for research in educational institutions, but the linkages are not as strong as desired. It is recommended that new national research facilities be established only in campuses of educational institutions. A joint committee of MHRD, UGC and scientific agencies should be formed for purpose of coordination and establishing linkages.

16.4.10 Rules and procedures of institutions for Stores/Purchase, recruitment in research projects etc. need to be liberalised. A committee should be formed to see how these rules could be rationalised at the national level.

16.4.11 The facility of custom duty exemption and Passbook facility for research equipment, import of chemicals and consumables for research should continue.

16.4.12 The Research Scientist Scheme of the University Grants Commission has been very useful and should be supported further.

16.4.13 There is need for a council of the UGC to coordinate and monitor R&D and related activities of the universities just as there is need for an advisory committee to oversee the modernization, thrust area and R&D programmes of the Technical Education Division of MHRD/AICTE.

5. FINANCING

16.5.1 Although the NPE, 1986 states that research in the universities would be provided enhanced support and that steps would be taken to ensure its quality, the present situation has become alarming due to financial constraints. There is every possibility that the little gains we have made till now will also be lost unless R&D is adequately funded in the education sector.

16.5.2 The expenditure on research and development in India is less than 1 per cent (0.85%) of GNP as against 2-3 per cent of the GNP devoted to research and development in many developing countries. Some developed countries spend as much as 6% of their GNP on R&D. The expenditure on R&D in higher education sector (expressed as percentage of total national expenditure on R&D) varies from a level of close to 30% in some developed countries and around 15% in other developed countries. The corresponding figure for India is very much lower. Precise figures are not available but it may be less than 5%. This is alarming since almost all the R&D manpower of the country is trained in the education sector. Within this meagre sum, the contribution from industry is close to nil and all the expenditure is by the government.

16.5.3 Within the education sector, there is an urgent need to strengthen the infrastructure and research capabilities in a large number of institutions/departments and, at the same time, to support R&D work in institutions that have already established necessary capabilities in certain areas. This would also help to widen the technology base as envisaged in the Technology Policy and to raise quality and standards of higher education as stressed in the Education Policy. This has to be done on a selective basis, examining the needs and potential institution by institution; at the same time, expansion of the base must also take place.

16.5.4 In regard to the promotion of research activities in educational institutions, measures taken so far have not been adequate. Programmes of quality improvement of research under the 7th Plan of the UGC included several measures of institutional support, shared facilities and project support but the financial resources were hardly adequate to take care of a large number of institutions.

6. MONITORING OF PROGRAMMES

16.6.1 The various suggestions made with regard to R&D would require close coordination and monitoring by the UGC, AICTE and the MHRD. It is necessary that the UGC has within its own system, a central committee looking at the R&D activities in the university system just as an advisory committee for the technical education wing of the Ministry of HRD should keep a close watch on the modernisation as well as thrust area programmes. Such committees should ensure that the kind of R&D projects taken up in the education sector are not only of importance to the concerned fields but also have some bearing on the national needs. The need for coordinating research funding of educational institutions by various agencies through a common research council was already referred to. This has to be further examined. What is really most important is for such coordinating committees and councils to keep a close watch on the future of research and development in the educational institutions.

16.6.2 Today, the situation of R&D in the education sector is not encouraging and immediate corrective measures are necessary. For various reasons, little/no money is available for R&D activities in the higher education sector. Keeping in mind the future of science and technology in the country, grants for R&D have to be provided in the education sector. It has to be kept in mind that mission-oriented programmes in S&T can be effectively carried out only with the support of the educational sector. Organic linkage should be promoted between the agencies and the educational institutions, by ensuring that the bonds are strengthened by proper apportioning of funds.

16.6.3 At present there is no way educational institutions can raise immediate resources for R&D or higher education when almost all the funding for S&T activities in the country has been by the government all through the years. While in the future, industries may take some responsibility for R&D as well as higher education, at least in the near future, adequate government support in this area is essential. All efforts should be made to ensure that the absorptive capacity of the educational institutions in R&D does not get reduced and that these institutions contribute towards the economic development and industrial growth of the country.

17. THE CULTURAL PERSPECTIVE

17.1.1 An interlinking of Education and Culture is emphasised in order to promote the process of child personality development particularly in terms of discovering the inherent potentialities of the child. Right from the pre-primary stage to the highest level of formal education, a programme of action has been formulated. Mutual participation, use of inexpensive and relevant material for cultural exposure, the promotion of the concept of cultural neighbourhood involving active participation of the community, a reform of curriculum, motivation of teachers and efforts to encourage the younger generation to participate in cultural and allied activities, will be some of the outstanding features of our cultural perspective.

Pre-Primary School Stage

17.1.2 The main objectives at the pre-primary stage would be:

a) to arouse in the child certain elementary sensitivity towards environment;

b) to help them learn through playing freely with natural material like clay, sand, flowers and leaves; and

c) to help them learn through movement and sound by singing and dancing together and by exposure to natural environment to participate in the joy of sensing colours, forms and rhythms.

17.1.3 The main accent of the programme would be on the following :

a) Preparation of a "Cultural Primer" as a kind of handbook for teachers, workers engaged in institutional care of children at the pre-primary level. This would cover pre-primary, nursery, anganwadi and other network of institutions.

b) The community would be motivated through Panchayats and other civic bodies to provide facilities like open space, other incentives to familarise children with toys, inexpensive material like posters, pictures, clay models etc. depicting cultural motifs.

17.1.4 Subsequently, action would be taken to provide certain basic facilities to cover those children who are not looked after by an institutional or departmental agency. This would require the following action:

a) Provision in each village and for each segment in urban areas of minimum facility for playing space or park for children at this stage.

b) Training of pre-school teachers in integrating cultural activities with pre-school learning programmes.

c) Preparation of educational toys and games for pre-school students which are indigenous and aesthetic in quality and safe for use by small children.

Primary Sschool Stage

17.1.5 The main objectives at the primary school stage would be:-

a) To impart the child with a basic core of facts about India's cultural heritage by encouraging rural teachers and students to collect folk songs, local history, local folk tribal community and archaeological artefacts;

b) To integrate and develop students' physical and cognitive skills; and

c) To create through awareness a feeling of love for India's natural and cultural heritage.

17.1.6 The major activities envisaged for achieving these objectives are the following :

a) Children School Theatre Movement would be launched with the teacher and children reading/enacting stories, plays and poems in the textbooks in the classroom. Learning of the local folk/tribal community theatre conventions will also be promoted.

b) Students will be encouraged to participate in creatively meaningful activities. Schools will be advised to invite local craftsmen, artisans, etc. for demonstrations of their skills before the impressionable minds of the children.

c) It shall be ensured that textual materials incorporate a strong and vitalising presence of our heritage, folklore, myths and symbols, etc. without making texts either burdensome or obscurantist.

d) Efforts will be made to incorporate suitable words, idioms proverbs etc. from local dialects in the textbooks.

e) Too much cultural indoctrination by covering the classroom walls with drawings, stickers, slogans moral sayings, etc. would be discouraged. Right from childhood a sense of design, aesthetics of vacant space and a sense of space would be inculcated.

f) Teachers' training programmes will be re-oriented to give the teachers capability of imparting instruction in theoretical and demonstrative methodologies in cultural instruction:

g) Extensive training programmes for in-service teachers in each district will be organised.

h) School museum corners largely with collections of students themselves in the form of stones, feathers, leaves, etc. will be set up.

i) Tours will be organised particularly to monuments and places of historical and cultural significance.

17.1.7 Subsequently the above mentioned activities would be systematised further and the emphasis would be on provision of more developed facilities and specialisation of training for teachers by way of:

a) preparation of special books, educational material and audio visual facilities for primary schools;

b) institutionalising community interaction in terms of seeking help of local artisans and craftsmen including performing artists like dancers, singers on an organised basis of association, through honorarium, fees, incentives, etc.

Middle/High/Secondary Schools

17.1.8 At the middle/high/secondary school stage the main objectives in cultural instruction will be:

a) To further strengthen and build up in students love and understanding of India's natural and cultural heritage;

b) To nurture in students an aesthetic approach based on perception of beauty and a perspective beyond immediate emotional or other passions;

c) To encourage the schools to be in live contact with local writers, artists, groups to ensure their assistance in guiding young creative talent or group cultural activities;

d) To impart to the student's personality a broad-based approach that reflects values of secularism, nationalism and consciousness of their constructive role in the larger destiny of India; and

e) To organise regional or State level competition of school magazines.

17.1.9 The approach would be to enlarge cultural activities mainly through students' own participation, community help and building up of certain core facilities. This would include :

a) Provision of atleast one core/resource teacher for culture in each school.

b) Reflection of diverse images of natural and cultural heritage in the school curriculum.

c) Imparting the curriculum with a distinct outlook particularly in terms of social studies and history by correcting historical distortions and by giving a value orientation to lessons drawn largely from Indian heritage and great classics.

d) Organisation of systematic visits to monuments, museums and sanctuaries.

e) Development of conservation ideas by adoption of monuments by the students and the community and helping to clean and safeguard these monuments.

f) Inducing among the students an idea of service by motivating them to participate in cleanliness operations, literacy drives, conducting of surveys with particular emphasis on the value of dignity of labour.

g) Setting up of museum corners with models, illustrations, posters, charts, books and with objects collected by students from their neighbourhood including local crafts, flowers, leaves, feathers, etc.

h) Setting up hobby clubs, book clubs and film clubs in schools.

17.1.10 The cultural exposures would be enlarged in terms of thematic coverage with broadbasing of participation and induction of technology. These aspects would cover the following action :

a) The network of Navodaya Vidyalayas would be used for development of resource centres in each district to share with other schools in the neighbourhood the facilities of exhibitions, projections through audio-visual technology and models for cultural soft-ware based on the peculiar features of the area.

b) Extensive cultural meets would be held at the inter-school, inter-district and later at inter-State levels to spot creative talent through a system of awards and scholarships. The idea would be to honour the creatively distinguished, as also the dedicated, through a system of incentives.

c) Networking of various schools for visits to museums, libraries, galleries and monuments maintained by the States, the Archaeological Survey of India as well as schools which would be identified in various States.

d) A cultural kit containing an audio visual and related educational material on Indian culture will be provided to every high school through Central/State sharing scheme.

e) Special courses would be organised for cultural reorientation of teaching and administrative personnel connected with educational institutions.

f) Software for satellite programmes on India's natural and cultural property with particular reference to themes of creativity and inculcation of values would be developed.

g) A cultural resurgence would be built up through a system of awards and incentives for honouring teachers and trainers for their expression of cultural creativity and devotion to its promotion.

University Level

17.1.11 At the college and university level, the main emphasis would be on the following aspects :-

a) Broad-basing and diversifying of cultural courses like music, fine arts, performing arts, etc.

b) Correction of historical and cultural distortions by reassessing critically the content of existing courses in social sciences, humanities, languages, etc.

c) Imparting of cultural instruction of students engaged in highly specialised science or technical courses so as to give their personality an all-round development;

d) Development of special courses in technical institutions like archaeological engineering, relevance of India's architectural heritage, maintenance of monuments, museology, musical composition etc., apart from performance.

17.1.12 It is proposed to materialise these objectives by adopting the following action plan :

a) Artists and writers will be invited as Visiting Professors for one or two years under an existing scheme of UGC to energise young talent on campuses of higher education.

b) Traditional gurus and artists will be given a place/recognition in the teaching system.

c) Courses in translation and comparative literature will be strengthened.

d) The NSS is involved in the survey of community arts in the region and in the upkeep, cleaning of local monuments, etc.

e) Efforts would be undertaken to set up university museums.

f) Outstanding works of creative writing should be recognised for research degrees.

g) University education in the fine arts, music, dance, theatre, and literature will be reviewed critically, remodelled and upgraded.

h) Each University should endeavour to adopt one regional form of culture for special attention regarding teaching, survey, research, etc.

i) University theatre movement will be supported and encouraged.

17.1.13 In the later phases, emphasis would be on enlarging the base as also on sophisticating the courses and technology connected with culture. This would cover the following activities:

a) Development and networking of specialised courses like archaeological engineering, traditional Indian architecture and its relevance to contemporary context, use of inexpensive local material for building, etc. in engineering and technical institutions particularly Regional Engineering Colleges, IITs, State Engineering Colleges and Institutions of Architecture.

b) Capsule courses on these subjects in institutions like Polytechnics and ITIs.

c) Special fellowships/scholarships/incentives would be given on the basis of State and national competitions for creative and performing arts.

2. IMPERATIVE REQUIREMENTS OF INSTITUTIONAL INFRASTRUCTURE

17.2.1 It is imperative that the Plan of Action should have institutional infrastructure for its implementation and monitoring. This aspect has the following crucial parameters:

a) strengthening of existing infrastructure;

b) evolving a system of organised networking with institutions in the neighbourhood by developing linkages between Central and State institutions through a 'cultural spread' effect; and

c) innovating new institutions to meet the needs of cultural education.

3. STRENGTHENING OF EXISTING INSTITUTIONS

National Council of Educational Research and Training (NCERT)

17.3.1 The NCERT will have a crucial role to play in revision and reorientation of curriculum at the school level. In this connection, it will be required to coordinate its activities with SCERTs and State Departments. In this context, it could be used as a channel for funding as also as an institution for monitoring.

Centre for Cultural Resources and Training (CCRT)

17.3.2 The Centre for Cultural Resources and Training (CCRT) will be required to play administrative and software development role to the activities of NCERT in respect of framing of curriculum. Its current programme of training of resource personnel in cultural instruction will have to be further expanded. It would be required to open State chapters/cells in close coordination with State Department of Culture and other institutions. Its chief task would concern evolving of inexpensive but effective cultural software mainly with local material. In close collaboration with NCERT, it would also develop models for cultural technology like audio visual projections, sets of posters, display album, etc.

University Grants Commission (UGC)

17.3.3 The UGC would, through a special arrangement in its organisation, monitor promotion of arts through institutions. It would also evolve an innovative scheme to encourage and finance participation by local communities, State Governments and Voluntary agencies in promoting art education through courses at the college and university level.

Zonal Cultural Centres

17.3.4 The networking of the entire country through Zonal Cultural Centres will help in provision of inter-state cultural linkages and affinities. These Zonal Cultural Centres would also build up exhibitions and displays of performing arts not only in terms of their emphasis on revival of languishing art homes but also in making the student community aware of the rich diversity of India's cultural heritage.

Scouting Movement

17.3.5 The Scouting movement has very pervasive coverage in the country. Through its inexpensive yet disciplined activities, the Scouting and Guiding and to the extent possible Rovering movement would be used to take care of activities like community singing, protection of monuments, cultural camps, rallies, jamborees and inter-State camps. This movement is capable of achieving a great deal with very little investment.

N.C.C., N.S.S. and N.Y.Ks

17.3.6 These institutions would be required to encourage cultural instruction particularly in terms of community interaction through camps and through organised and disciplined activity related to protection of cultural and natural environment.

Museums and Archaeological Surveys

17.3.7 While these institutions have at national and State level made a beginning to interact with educational institutions, in the proposed action plan, this activity would be systematised. The network of museums in the country and the protected monuments maintained by the Archaeological Surveys would be required to evolve comprehensive linkage with educational institutions by close collaboration.

4. DEVELOPMENT OF NEW INSTITUTIONS

17.4.1 In the 8th Plan, special institutions for documenting and promotion of folklore and arts would be set up. These would take care of preservation and documenting of the rich diversity of art forms particularly in the rural and tribal areas. These would conduct special capsule course for teachers and scholars.

5. REVIEW AND MONITORING

17.5.1 An inter-departmental committee under the chairmanship of Joint Secretary in Department of Culture and comprising representatives of CCRT, NCERT, CBSE and UGC would oversee, monitor and review implementation of this chapter of POA. Similar arrangements have to be made at the State level.

18. DEVELOPMENT OF LANGUAGES

1. POLICY

18.1.1 The National Policy on Education (NPE), 1986 has reiterated, in respect of languages, the policy elaborated in the National Policy on Education, 1968. Briefly, the policy emphasises the adoption of regional languages as the media of instruction at the university stage; vigorous efforts for implementation of the three language formula; improvement in the linguistic competencies of students at different stages of education; strengthening of the teaching of English and other foreign languages; development of Hindi as the link language, as provided for in Article 351 of the Constitution; promotion of arrangements for teaching and learning of Sanskrit at school and University stages on a more liberal scale; translation of books from one language to another; and the preparation of bilingual and multi- lingual dictionaries.

18.1.2 The Policy in respect of development of languages as contained in NPE 1986 has been reiterated without change in the Revised Policy Formulations.

2. MEDIUM OF INSTRUCTION AT THE UNIVERSITY STAGE

Present Situation

18.2.1 The emphasis in the Policy is on the adoption of Modern Indian Languages (MIL) as the media of instruction at the University stage. However, the need to provide education through the mother tongue, which may be different from a modern Indian language included in the VIII Schedule, is recognised on academic grounds. The Constitution of India recognises, in respect of linguistic minorities, the desirability of providing instruction through the mother tongue for first five years of education (Article 350-A). Every effort is, therefore, required to implement this obligation, although a number of difficulties are likely to be encountered; administrative and financial feasibility of providing instructional facilities through a variety of mother tongues, difficulty to use some tribal languages as media of education etc. In the context of these difficulties, switch over to a modern Indian/regional languages has to be ensured as early as possible.

Review of Implementation

18.2.2 The POA formulated under NPE 1986 had, while discussing the implementation of the policy with regard to adoption of MIL as medium of instruction at the University level, noted that the position was not satisfactory on account of (a) preparation and production of these books has not synchronised with the Universities' decision to switch over to MIL; (b) university teachers having received education through English find it difficult to teach through the Indian languages; (c) unlike the school stage, control over prescription of textbooks is not tied with the result that for various reasons the books produced by private publishers only get generally recommended; and, (d) Indian language-medium courses are generally not popular amongst the students because of lack of professional comparability and poor employment potential. In order to examine this question in its entirety Professor Suresh Dalal Committee was constituted. The recommendations of the Committee have been examined and it has been decided to continue the scheme within the overall financial allocations sanctioned therefor.

Strategies of Implementation

18.2.3 It is felt that the main stumbling blocks, even more important than non-availability of books are (i) the reluctance of Universities to change the medium of instruction in regard to languages; and (ii) lack of employment opportunities to those who have studied in MIL as medium of instruction. It is proposed to take up these two issues with the State Governments, UGC and Universities.

18.2.4 Once effective action is taken on (i) and (ii) above, the demand for off-take of books produced under the Scheme would improve automatically and the revolving funds would start operating more effectively. In order to enable the Commission for Scientific and Technical Terminology (CSTT) to liaise effectively with the State Governments on all aspects connected with the scheme, suitable measures to strengthen the Commission would be considered subject to availability of resources.

Targets, Priorities, Process, Phasing, Time Scheduling and Agencies Responsible

18.2.5 The State Government would have to identify, in consultation with University Grants Commission(UGC), the measures to ensure the adoption of modern Indian Languages as media of Instruction in a phased manner in a definite time frame (say 5 to 10 years). Some of the State Governments participating in the Scheme have been requesting continuance of assistance beyond Rs.1 crore, which is the maximum ceiling of grant to each State under the Scheme. These State Governments would be advised to make use of the revolving funds created by them to finance the projects from their own resources. However, the State Governments which have not yet received the grant upto the prescribed ceiling, would be given the balance.

Monitoring and Evaluation

18.2.6 At the Central level, the Commission for Scientific and Technical Terminology would continue to coordinate

and monitor the programmes and organise orientation courses for teachers of various disciplines. The UGC would also be advised to impress upon Universities to set up Language Cells to monitor the use of Regional Language and also consider some incentives to the Universities which switch over to MIL as their medium. Similar arrangements have to be made at the State level.

3. IMPLEMENTATION OF THE THREE LANGUAGE FORMULA

18.3.1 The Three Language Formula provides for a study of a Modern Indian Language, preferably one of the Southern languages, apart from Hindi in Hindi speaking States and of Hindi alongwith the Regional language and English in the non-Hindi speaking States.

Present Situation

18.3.2 At the time when POA of 1986 was formulated, it was noted that the implementation of the Three Language Formula had been less than satisfactory on account of (a) all the languages are not being taught compulsorily at the secondary stage; (b) a classical language has been substituted for a modern Indian language in some States; (c) no concrete provision yet exists (though a scheme is likely to take off very soon) for the teaching of South Indian languages in the Hindi speaking states; (d) duration for compulsory study of three languages varies; and (e) competency levels to be achieved by students of each language have not been precisely specified.

Review of Implementation

18.3.3 The effective implementation of the Three Language Formula would require (a) decision by States, State Boards of Secondary/schools education, etc., to make the study of three languages compulsory at the secondary stage; (b) prescription of the class from and the duration for which three languages will be taught; (o) specification of objectives of teaching different languages. The State Boards of Secondary Education will be asked to take uniform decisions in line with the recommendations of NCERT and CBSE in these matters; and (d) specification of levels of language proficiency to be reached in respect of each language. Language Institutions under the Ministry like Kendriya Hindi Sansthan (KHS), Central Institute of Indian Languages (CIIL), Central Institute of English and Foreign Languages (CIEFL) in consultation with NCERT, would be asked to prescribe minimum competencies to be achieved.

Strategies of Implementation

18.3.4 The action required would include:-

(a) The Central Government should continue to assist the non-Hindi speaking States/UTs for the appointment of Hindi teachers. It may be noted

that in accordance with the POA of NPE 1986, Central Government's assistance for appointment of Hindi teachers in non-Hindi speaking States/UTs has been restored to cent percent. This scheme should be continued in the VIII Plan and beyond.

(b) As suggested in POA 1986, a scheme for the appointment of MIL teachers in Hindi speaking States has been formulated. Adequate provision subject to availability of resources and effective implementation of the scheme would be ensured with effect from 1993-94.

(c) Apart from establishing teacher training institutions for training of Hindi and MIL teachers in States, facilities for training of language teachers need to be augmented and improved in existing teacher training colleges;

(d) The Ministry's language institutions should continue to undertake programmes facilitating teaching of languages, particularly research in methodology of teaching languages and experimentation in the use of computers and new communication technologies; and

(e) Since one of the constraints in the implementation of the Three Language Formula is non-specification of desirable language competencies as indicated vide (e) in para 3.2, concerned language institutions under the Department, i.e. KHS, CIIL and CIEFL would be advised to complete this exercise within a scheduled time.

Targets

18.3.5 Within a month of approval of POA, instructions will be issued to the language institutions that a certain level of language competency to be achieved may be determined within a maximum period of one year.

18.3.6 Central assistance will be provided to the States/Uts for appointment of about one thousand Hindi teachers during the 8th Plan period.

Monitoring and Evaluation

18.3.7 A Monitoring Cell has been established in KHS for monitoring the scheme of appointment and training of Hindi teachers in non-Hindi speaking States/UTs.

18.3.8 An Inter-Institutional Committee comprising representatives of KHS, CIIL, CIEFL, NCERT and the Department would be constituted to oversee and monitor measures in this regard from time to time. Similar arrangements would have to be made at the State level.

4. IMPROVEMENT IN THE LANGUAGE COMPETENCIES OF STUDENTS

Present Situation

18.4.1 The language institutions under the Department of Education are involved in improving language competency of students at school level. In this connection a number of programmes are being implemented by them. These include training of language teachers, production of teaching material, preparation and prescription of language proficiency test and field survey. The Kendriya Hindi Sansthan is implementing the programmes for training of Hindi teachers in non-Hindi speaking States/UTs. They are running regular 10 months' courses for Hindi teachers at Agra. The intake capacity of this programme is at present 75 besides 300 through correspondence. A number of NGOs were also engaged in training of Hindi teachers in non-Hindi speaking States/UTs. Similarly, the Central Institute of Indian Languages is also organising 10 months' training courses in 13 Modern Indian languages with intake capacity of about 400. District Centres have been set up for imparting training to English language teachers at school stage and have trained about 1,21,000 teachers by the end of 7th Plan. With a view to examining the proficiency of students passing Classes X and XII in English, the Regional Institute of English, Bangalore, under the guidance of the Central Institute of English and Foreign languages has designed English proficiency tests (DEPT) and TEP-12. Similarly the CIIL is also preparing language proficiency tests in Modern Indian languages. They should since complete these tests for the languages.

18.4.2 The position, so far as the training of language teachers is concerned, is satisfactory. However, a large backlog of language teachers remains to be trained. The training capacity of the language institutions as well as NGOs could not be enhanced because of resource constraints.

Strategies of Implementation

18.4.3 As recommended by the NPERC it is desirable to increase the intake of language teachers for training in language institutions and provide enhanced support to NGOs for this activity. It is proposed to increase the intake capacity of the institutions by 100%. Also the KHS, Agra, CIIL, Mysore and CIEFL, Hyderabad would be actively involved in organising two three week courses for training of trainers of language teachers in Hindi, MIL and English respectively at the school stage (so that it may have a multiplier effect on the training activities). The concerned State Governments/UTs would be participating in the training programme to be organised by the aforesaid language institutions.

Targets

18.4.4 CIIL, Mysore would complete the language proficiency tests in the remaining 7 MILs during the Eighth Plan period (1992-97). Similarly the test items already prepared in 6 MILs will be field tested by 31st December, 1994.

Monitoring and Evaluation

18.4.5 An Inter-Institutional Committee of language Institutions referred to in para 3.8 would also monitor and evaluate language programmes of training of language teachers and assessing language proficiency of the students at school level. Similar arrangements would have to be made at the State level.

5. DEVELOPMENT OF MODERN INDIAN LANGUAGES

Present Situation

18.5.1 The Department of Education has been supporting organisations involved in the development and promotion of Modern Indian Languages(MIL). Central Institute of Indian Languages (CIIL), Mysore, a subordinate office of the Department, is implementing, monitoring and coordinating schemes in this regard. The CIIL is also engaged in the development of Tribal languages. Primers, Readers and other teaching material have also been produced by CIIL for Tribal students. NGOs engaged in the promotion and propagation of MIL also receive financial assistance from the Central Government.

18.5.2 Since Urdu and Sindhi speakers are widely dispersed in various States and Union Territories of the country, the Department of Education has special responsibility towards their promotion and development. Taraqqi-e-Urdu Board, an Advisory Body under the Chairmanship of Hon'ble Minister of Human Resource Development, assisted by Bureau for Promotion of Urdu (BPU), a subordinate office of the Department of Education, advises the Department in promotion, propagation and development of Urdu. Similarly, Sindhi Advisory Committee, also chaired by Hon'ble Minister of Human Resource Development, renders advice to the Department on matters pertaining to promotion and development of Sindhi language. BPU has so far brought out approximately 600 titles in Urdu and has set up 36 Calligraphy Training Centres for imparting training in Urdu Calligraphy. The Bureau is also providing financial assistance to a number of Voluntary Organisations engaged in promotion of Urdu.

Review of Implementation

18.5.3 CIIL has so far trained about 3600 language teachers for teaching first and third language at the school level. They have also prepared 120 primers for MILs and

tribal languages. A software called BHASA for use of MIL in programming has also been prepared by them. They have also introduced use of MIL in teaching of Science subjects at school level.

18.5.4 The Committee for Promotion of Urdu, which was set up in 1970 under the Chairmanship of Shri Inder Kumar Gujral, had made a number of recommendations for promotion of Urdu. These recommendations were reviewed by a Committee set up by Government of India in 1990 which examined the present status of implementation of Gujral Committee recommendations and also made recommendations for speedy and time bound action. The work of implementation of Sindhi Schemes also needs further strengthening.

Strategies of Implementation

18.5.5 The Government is actively considering the recommendations of the Jafri Committee. Strategies of Implementation for promotion of Urdu would ultimately depend upon the decision to be taken on the recommendations of the aforesaid Committee at appropriate level. The possibility of setting up of Sindhi Vikas Board for effective implementation of schemes for promotion of Sindhi would be explored.

Targets

18.5.6 Besides strengthening their present activities CIIL would explore the possibility of setting up a Centre to develop methodologies and material for translation between various MILs during the 8th Plan period. Subject to availability of resources, a National Centre for Information on Indian Languages under CIIL would be set up. This Centre will have information on language demography, Language use, language typology and language research. CIIL has already brought out bibliographies of linguistic research on selected languages and language subjects. This will be computerised and additional information will be added. All languages will be covered. This computerised information will make available in one place all relevant facts about Indian languages and will be easily retrievable for planners, administrators, researchers, etc. BPU and the Organisation for Promotion of Sindhi would also be re-structured/strengthened to make them more effective in implementing schemes for promotion and development of Urdu and Sindhi respectively.

Monitoring and Evaluation

18.5.7 A Committee to Monitor and review schemes for Promotion and development of Modern Indian Languages would be set up under the Chairmanship of Director, CIIL, Mysore. Jafri Committee has, inter alia, recommended a high level Monitoring and Review Committee to Monitor Implementation of Gujral Committee Recommendations. This recommendation is also being processed alongwith the main proposal. Separate Committees have also been set up to evaluate the Scheme of Urdu Calligraphy Training Centres and Urdu Dictionaries published by Bureau for Promotion of Urdu. Similar arrangements would have to be made at the State level.

6. DEVELOPMENT OF HINDI AS LINK LANGUAGE

18.6.1 In pursuance to Article 351 of the Constitution, the duty has devolved on the Union of India to promote, develop and propagate Hindi. The Department of Education has been assigned this responsibility. At present, KHS, Agra, an autonomous organisation of the Department, CHD and CSTT (subordinate offices of the Department) are assisting the Department in this regard. About 200 NGOs are also receiving support from the Department for promotion and propagation of Hindi. A few activities undertaken by the aforesaid organisations are; (i) extension programme for interaction of Hindi scholars and students from non-Hindi speaking areas with those from Hindi speaking areas, (ii) survey of Hindi as link language, (iii) production of bilingual and multilingual dictionaries in Hindi and regional languages with Hindi as base; (iv) preparation of definitional dictionaries in science and humanities, and (v) production of glossary containing about five lakh terms in science and humanities. Computerisation of terminology evolved and compiled by CSTT is also under way. Because of financial constraints, proposal for International Hindi University could not be implemented.

Strategies of Implementation

18.6.2 It is proposed to strengthen the Hindi institutions as well as involve the NGOs more actively in the development of Hindi as link language. The possibility of setting up an International Hindi University, subject to availability of resources, would be examined. Use of electronic media for teaching, propagation and development of Hindi in non-Hindi speaking areas would also be explored.

18.6.3 The KHS, CHD and CSTT would continue to be implementing agencies for development of Hindi as link language. Co-operation of other Departments and agencies like Department of Official Language, Ministry of External Affairs, ICCR, Department of Electronics would also be solicited.

18.6.4 The CHD would take up publication of the conversational guides in Hindi for non-Hindi speakers with a view to facilitating their communication with Hindi speakers. CSTT will also complete computerisation of all the technical terminology evolved by them and also explore the possibility of setting up a National Terminology Bank with a view to disseminating their use in non-Hindi speaking areas and revise them if necessary on the basis of feed-back.

Monitoring and Evaluation

18.6.5 A Co-ordination Committee under the Chairmanship of Joint Secretary (Languages) in the Department of Education comprising representatives of Department of Official Languages, Ministry of Information and Broadcasting, Department of Electronics, Ministry of External Affairs, ICCR and the three language institutions (CHD, CSTT AND KHS) would be set up to review the progress with regard to development of Hindi as link language. Similar arrangements would have to be made at the State level.

7. SANSKRIT AND OTHER CLASSICAL LANGUAGES

Present situation

18.7.1 The Department of Education is implementing a number of schemes for promotion, development and propagation of Sanskrit and other classical languages. Rashtriya Sanskrit Sansthan, an autonomous organisation is assisting the Department in the implementation of the aforesaid schemes for development and promotion of Sanskrit. Government has also set up another autonomous organisation, Rashtriya Ved Vidya Pratisthan during the 7th Plan for promoting Vedic education. In addition, two deemed Universities for Sanskrit - one at New Delhi and another at Tirupati have also been established for imparting Sanskrit education in traditional style at University level. The Department is also providing financial support to about 850 voluntary organisations engaged in promotion and propagation of Sanskrit and other classical languages. Also 14 Adarsh Sanskrit Mahavidyalayas and two Sanskrit Shodh Samsthas are receiving assistance at the level of 95% from the Department.

Review of Implementation

18.7.2 The JRC, while reviewing programmes and schemes for promotion and development of other classical languages had accepted the recommendation of NPERC to establish a national level agency for laying down, maintaining, and coordinating the academic standards of Sanskrit education as a whole by bringing about meaningful interaction between non-traditional and traditional style. Government is accordingly considering the possibility of establishing a national level apex body for Sanskrit and other classical languages.

Strategies of Implementation

18.7.3 In addition to setting up a National Level Apex Body to lay down, maintain and coordinate the academic standards in Sanskrit as well as other classical languages, it is also being proposed to strengthen Rashtriya Sanskrit Sansthan and expand its activities in States/UTs where it does not have its Vidyapeethas (at present it has got only 7 Vidyapeethas). Rashtriya Ved Vidya Pratishtan would also be adequately supported for implementing its programmes.

18.7.4 The Government is also considering a scheme for modernisation of Madarsa education. NGOs involved in the field of promotion and development of Arabic and Persian languages would be given special attention for financial assistance.

Monitoring and Evaluation

18.7.5 A Committee comprising representatives of Department of Education Rashtriya Sanskrit Sansthan, Rashtriya Ved Vidya Pratishtan and NGOs working in the field of Sanskrit, Persian and Arabic languages would be constituted to monitor and evaluate implementation of schemes for promotion of Sanskrit and other classical languages. Similar arrangements would have to be made at the State level.

19. MEDIA AND EDUCATIONAL TECHNOLOGY

1. POLICY PERSPECTIVE

19.1.1 Acknowledging the potential of modern communication technology the NPE, 1986 and POA, 1986 had spelt out the actions that need to be taken in this important area. The Revised Policy Formulations have reiterated the provisions of NPE, 1986 relating to Media and Educational Technology. Hence what needs to be done is a restatement of the POA, 1986 taking into account the experience gained in its implementation and the developments in this area of rapid technological change.

2. ELECTRONIC MEDIA

Present Situation

(a) School Education

19.2.1 In school education, the Central Institute of Educational Technology (CIET) and the six State Institutes of Educational Technology (SIET) in Uttar Pradesh, Bihar, Orissa, Gujarat, Maharashtra and Andhra Pradesh continue to define the production facility. Since April 1988, the responsibility for programme production of ETV transmission is being shouldered by CIET and SIETs. Another important development has been that the Government has decided to make these SIETs autonomous in order to make them more professional. SIETs in U.P., Maharashtra, Orissa and Andhra Pradesh have already been conferred autonomous status. However, the working of the SIETs and their output is still sub-optimal. There is a need to improve the quality of the programmes. Increasing their output has to remain a priority during the 8th Plan. The programmes continue to be of an 'enrichment' type with the added feature that even the segments aimed at various groups of topics have not got defined. Topics get covered in a somewhat random manner. There would be advantage in defining beforehand the optimum coverage and the objectives to be achieved by transmission of even enrichment programmes and to schedule programme production accordingly. The involvement of non-government organisations(NGOs) has not come about in any substantial manner so far.

19.2.2 An important initiative has been the distribution of radio-cum-cassette players and colour TVs in primary schools under the Educational Technology Scheme. So far 37,129 schools have been provided with TV sets and 2,56,566 schools have been provided with radio-cum-cassette players. The scheme is being evaluated by the Ministry.

(b) Adult Education

19.2.3 A good beginning has been made for utilizing Education Technology for adult literacy and continuing education. Short capsules for conveying the message of literacy appear regularly at prime time on the TV. In order to retain the interest of the neo-literates an innovative project called 'Vivek Darpan' has been jointly launched by the Department of Electronics and Ministry of Human Resource Development. Under this programme 100 villages have been provided with a colour TV set and a VCR each (together called 'Sangha Mitra'). It is an experimental project and its experience would enable the Government to consider a larger coverage in the 8th Plan.

(c) Primary Education and Teacher Training

19.2.4 Recognising the need to provide necessary background and orientation to primary and upper primary school teachers, inputs in Educational Technology have been made an integral part of in-service as well as pre-service training for teachers in the DIETs. A senior lecturer and lecturer in Educational Technology are part of the prescribed staffing norm for each DIET. These faculty members also serve as nodal points to liaise with the nearest AIR Kendra besides acting as trainers. They help them in production of educational broadcasts. Teacher Training Institutes like DIET, CTE and IASE have been provided with VCRs and colour TVs and efforts are now being made to make available adequate number of software for their optimal utilisation.

(d) Higher Education

19.2.5 In higher education the IGNOU has been provided a half hour slot on the national TV network early in the morning. The Country-wide Class Room Programme of the UGC is continuing with a two hour transmission daily between 1-2 p.m. and 4-5 p.m. The UGC has created 15 Educational Media Research Centres (EMRCs) and Audio Visual Research Centres (AVRCs); through these centres the UGC has been able to achieve a level of 80% for indigenously produced programmes. However, in order to keep abreast with rapid developments in different areas of knowledge, programmes made abroad would have to be used optimally; a level of 15 to 20% seems reasonable. The UGC has also developed the framework for setting up an Inter University Consortium for Educational Communication (IUCEC) which will on the one hand provide coordination and leadership in EMRC-AVRC and on the other would develop as a forum to bring the Government, universities, NGOs and other professionals together. IUCEC would also oversee and organise efficient marketing of the educational cassettes. A notable initiative has been the preparation of a series

of cassettes for each subject at under-graduate level, which would make available the benefit of good quality teaching to students all-over the country.

(e) Technical Education

19.2.6 In technical education four Technical Teachers' Training Institutes (TTTIs) and some IITs have been provided with reasonable programme-production infrastructure. About 300 programmes have been produced and made available to Polytechnics and Engineering colleges for use through the VCRs and cinematographic equipment. Professional bodies like the Institute of Electronics and Telecommunications Engineers (IETE) have launched their own programmes of distance education and production of video films.

19.2.7 POA had envisaged establishment of radio stations in universities/colleges during the 7th Plan. Provision of a dedicated educational TV channel by 1991-92 and commissioning of dedicated satellite system for education have made no progress in this period. It is doubtful whether radio stations can be set up in the university/college immediately. Such transmissions may be possible in future with technological developments. Dedicated satellite system may not be required to sustain such a channel. There is a need for a dedicated educational TV channel and a sufficiently large fixed time segment for radio transmission for educational purposes. Such stations can cater to the entire school system, non-formal education, adult education, continuing education, higher education, vocational education and technical education. These requirements can be reasonably serviced only if educational transmission time becomes available for a major part of the day. Radio and TV transmissions have an important role to play in bringing the remote areas within the reach of good quality education. Therefore, a dedicated educational channel is an urgent requirement.

19.2.8 The Ministry of Human Resource Development commissioned an expert assessment of the needs of programme production and training of technical personnel. Action for implementation of the measures suggested by this Group (Karnik Group) have not made progress, largely because of paucity of resources. However, with the availability of INSAT 2A more transmission capability will be acquired and it is a hopeful sign that the GRAMSAT project is being considered by the Department of Space.

3. REVISED STRATEGY AND PROGRAMMES

19.3.1 In so far as transmission facility for educational programmes is concerned, efforts will continue for securing a reasonably large and fixed time slot on radio for transmission of educational programmes. The arrangement of decentralised scheduling of educational transmission at the level of individual radio station has not worked and possib-

ly cannot work with a large number of radio stations in the country, with many of them not being at the National or State headquarters. Continuing inadequate availability needs to be redressed and use of radio transmission for education become a priority area. Regarding TV, efforts have to continue for securing a dedicated channel for educational transmission. With increasing capability of the successive transmission satellites, this is an attainable objective in the medium term.

19.3.2 Simultaneously emphasis would be laid on improving the quality of educational programmes and for optimum utilization of transmission facility. For this the following measures will be taken:-

(i) The remaining SIETs would be made autonomous. Production facilities in North East will be set up. Subject to availability of resources, creation of programme production facilities in other language zones not covered by SIETs will also be considered.

(ii) In SIETS association of professionals on deputation/contract will be encouraged to professionalise the working environment.

(iii) Professional talent would be associated through commissioned programmes, to supplement the in house programme production arrangements. The CIET would seek to have 10% of its programmes transmsitted on TV produced by professionals outside CIET.

(iv) The EMRCs and AVRCs would be converted into autonomous departments of the university concerned and these institutions would associate professional talent from outside on tenure/contract basis to invigorate the EMRC system. One new AVRC would be set up in each of the remaining larger states in the 8th Plan.

(v) The UGC would set up adequate master's level courses or postgraduate diplomas in various aspects of educational programme production. To optimise returns on the investments such courses would be started where EMRC/AVRC already exist so that the cost on infrastructure does not have to be repeated. To upgrade the skills of existing technical manpower involved in production of educational TV/Radio programmes, the possibility of introducing Diploma courses in suitable disciplines in certain polytechnics will be examined.

19.3.3 Viewing of the educational programmes during the scheduled transmission time by large number of students poses obvious problems both in terms of management and learner outcome. The problem tends to become unmanage-

able as the level of students increases. Therefore, individual viewing and viewing in small groups is bound to become more and more important and it is already a fast developing area. To enable more and more students to have access to educational programmes the following measures could be taken:

i) Provision of receiving sets, Radio-cum-cassette player and T.V. sets in larger number in Primary Schools/Upper Primary Schools.

ii) Production of programmes for Upper Primary sector also.

iii) Special efforts for production of recorded audio-cassettes by CIET/SIETs to ensure optimal utilisation of RCCPs. Special emphasis will be given to production of cassettes dealing with teaching of Hindi and regional languages.

iv) Augmentation of equipments in SIETs/CIET.

v) Encouragement of educational institutions to raise resources locally to provide electronics hardware, radio, cassette player, T.V. and V.C.R. for group viewing/listening.

vi) Marketing of educational cassettes by the IUCEC. The revenues so earned could be used to improve and expand the programme production and viewing facilities in universities/colleges.

vii) Development of IUCEC as the nodal agency for marketing of educational software of all sectors of education.

viii) Setting up of training facilities for technical personnel by CIET and IUCEC on regional basis. The facility may be located either in the universities having EMRCs or in the SIETs.

ix) Development by the IGNOU of a large range of recorded audio and audio-visual cassettes to aid in the management of educational technology programmes. The CIET and the IUCEC would reach support to the UGC and other educational technology programmes of distance education having regional scale. The IGNOU in cooperation of supplementary Government policy and programme production of the IGNOU in approach to extensive programme production infrastructure would not be created in a multiplication.

19.3.4 In-service training of teachers would receive more importance through both T.V. and radio. The arrangements through CIET, once in a week would be made more effective and similar arrangements will be established under UGC transmission.

19.3.5 The programme of continuing education would be given more support through 'Vivek Darpan' and such other programmes and awareness for literacy would continue to be built up through capsules on the TV/Radio.

19.3.6 The working of programme production facilities in the TTTIs would be professionalised and output from these would be optimised. The IITs and Universities would undertake research for developing innovations in Educational Technology and Universities.

19.3.7 The IUCEC and the TTTIs/IITs and other professional agencies would make a sizable beginning for support to professional upgradation programmes for specific professional groups likes management, and medicine, etc.

4. COMPUTERS IN EDUCATION

Present Situation

19.4.1 In the school sector the use of computers has been initiated by the CLASS Project. Though the coverage was modest (2,598 schools) the CLASS project has led to increasing awareness of computer literacy among students, teachers and parents. However, a close scrutiny of the implementation strategy and achievements of the project shows that the project has not met with the desired degree of success, mainly on account of short comings in the implementation strategy. The more important among these may be enumerated as under :-

- Multiplicity of agencies involved in the implementation of the project and consequent lack of accountability

- Over emphasis on hardware and one time inputs and neglect of ongoing instructional inputs and softwares.

- Inadequate training and low motivation of teachers.

- Instruction outside school hours

- Want of curriculum and teaching material.

- Indifferent maintenance.

The existing arrangements for implementation of the project are being reviewed by MHR to overcome these shortcomings and made more effective. Access to computers in new schools would be improved.

19.4.2 A notable initiative, possibly triggered by the CLASS Project, has been the computer literacy programme alongside with Computer Application, however, would be encouraged. In most of the schools professional agencies have been contracted for providing the hardware and teaching inputs. In such cases fees are high but the outcomes are also good. The CBSE has pioneered the start of Computer Science at higher secondary stage and some State Boards have followed this lead.

19.4.3 In the university sector the UGC is supporting the programme in three parts;

i) A set of PCs has been given to college for use in educational management and for promoting computer literacy.

ii) Starting certificate, diploma and degree courses in universities in Computer Science.

iii) By giving sizeable computers as central computational facility for research and higher studies purposes universities have been assisted.

19.4.4 In technical education sector all the IITs and major engineering colleges have acquired sizeable computers. Computer Science is one of the high profile courses in many institutions. Provision of computers is also part of the World Bank assisted project for strengthening and modernising of polytechnics.

19.4.5 Within the resources available a good coverage has been achieved in the higher education and technical education sectors but there have persisted three areas of weaknesses:

i) The computer platforms provided for MCA courses are not sufficiently large and advanced to equip the students with experience on platforms which they will encounter in their working life.

ii) In many cases, the institutional faculty continues to be unconnected with the professional organisations and work, with the result that the faculty does not have the requisite practical skills which they can pass on to students.

iii) In college sector the training and software support is inadequate with the result that use of available computers is not optimum.

5. STRATEGIES AND PROGRAMMES

19.5.1 The CLASS Project would be expanded; subject to resource availability the coverage of 2000 Senior Secondary Schools is envisaged in the 8th Plan. The management system for implementation of CLASS Project would be strengthened and made more effective. Access to computers in the schools would be improved. Schools which want to charge fee to improve and extend the facilities for CLASS would be allowed. Computer Applications with adequate facilities of computers in schools would be encouraged on operational basis at secondary and higher secondary levels.

19.5.3 Access of students to computer facilities in universities, colleges and technical institutions would be improved. Computer facility will be made available to students and researchers round the clock. Within the resources available, computer platforms for MCA students and researchers would be upgraded. Diploma and certificate courses in the universities and colleges would be phased out. These would be left for the polytechnics and professional bodies accredited by the Department of Electronics. UGC would formulate a concrete programme for motivating and encouraging teachers of Computer Science to commercially link up with the professional agencies for mutual benefit. Within the resources available all the colleges will be sought to be covered by the computers for educational administration during the 8th Plan and the number of computers per college and software availability would be improved. UGC would set up effective training arrangements for college teachers in use of computer. UGC would also initiate a programme for starting a separate paper at Master's level for use of computers in various subject areas like Physics, Mathematics, Statistics, Economics, Commerce, etc. and would provide support to universities/colleges for a computer room provided with adequate number of PCs.

6. ROLE OF VARIOUS ORGANISATIONS

19.6.1 The Ministry of Human Resource Development (MHRD) would pursue with the Ministry of Information and Broadcasting, Department of Space, Department of Electronics, and Finance Ministry for augmentation of transmission facilities for educational programmes and, specifically, for setting up of a dedicated educational channel. The MHRD would also work for obtaining at least a minimum of resources for financing of educational technology programme. The CIET and the UGC would continue to discharge a coordinating role. They would provide leadership and guidance to the institutions and the State agencies. The State Governments would be involved more meaningfully in the funding and management of educational technology programme. The CIET and the IUCEC would reach out to the NGOs and involve them in the educational technology programme on a really meaningful scale. The IUCEC would develop into a forum for bringing Government institutions and private professionals and policy makers together for ensuring a coordinated approach to policy and implementation of the programme.

20. SPORTS, PHYSICAL EDUCATION AND YOUTH

1. PREFACE

20.1.1 Young people are the real wealth of nation. India has around 300 million youth constituting one third of its population. No planning process, including educational, can succeed without the willing participation of youth. The student youth in the Higher Education System and non-student youth outside have to be made an integral part of any policy package through creation of an 'enabling environment'. The NPE, 1986, particularly recognised the importance of youth in nation-building. The need, therefore, is to provide increasing opportunities to young persons for developing their personality, upgrading their functional capabilities, and making them self-reliant, socially useful and economically productive. Hence, while formulating the POA, 1992, the following facts and factors are to be kept in view:

(i) The number of unemployed youth is growing faster then ever before.

(ii) Violence, criminality and juvenile delinquency among youth is increasing.

(iii) A growing number of young people are falling prey to fissiparous and divisive forces.

(iv) Some university and college campuses are facing an increasing drug problem.

(v) An increasing number of young people are indulging in highrisk behaviour, especially with regard to AIDS.

20.1.2 Conversely, the enormously productive potential of youth must be borne in mind, while formulating the Programme of Action. These include:-

(a) Youth is a large reservoir of idealism in any country.

(b) Here, in this country also, from the days of its struggle for independence, youth have shown exemplary patriotic feelings and after independence also, in many a situation they have very favourably responded to critical situations and challenges.

(c) Besides this, the sense of adventure exhibited by youth at different times is really commendable.

20.1.3 Programme for involvement of youth in constructive schemes within the education sector are, therefore, divided into two streams, namely, Sports and Youth Programmes. The objective of both these programmes is to draw as many youth as possible into constructive and productive activities whether based on Sports or Youth Programmes. Upon this foundation, specialised program-

mes for the attainment of excellence in both Sports and Youth Affairs have been proposed which can be implemented within a reasonable period of time.

20.1.4 Studies have shown that there is a positive co-relation between participation of youth in constructive social programmes, or in sports and games, and issues such as better social integration, reduced juvenile delinquency, better general health and fitness, and at a later stage, better productivity and output. Each of these benefits in itself is of considerable significance particularly in the Indian context. In formulating this Programme of Action, therefore, efforts have been made to indicate simple and low cost solution which are useful and give the maximum return both to the individual and to the society at large.

20.1.5 Due consideration also needs to be given to the broader issue regarding investment in Human Resource Development, particularly in Education. Given the significant benefits which accrue to society in terms of the points mentioned above, it is indeed worthwhile investing additional resources in building up an education system which includes activities under Sports and Youth as an integral part of the curriculum.

2. SPORTS

20.2.1 Action in following areas will be necessary to implement the policy objectives of the NPE, 1986:

(i) In deciding the curriculum load the need to allocate sufficient time to sports and physical education which the NPE, 1986 holds as an integral part of the learning process, should be kept in mind.

(ii) Physical Education and Yoga should be introduced for atleast 45 minutes per day, preferably just after assembly.

(iii) Approved games should be included in the school time-table for atleast two periods in a week.

(iv) Special incentives will need to be given to students who perform well in sports and games.

(v) Special incentives may be considered for subject teachers who perform extra duty in conducting classes in Physical Education, Yoga, Sports and Games.

(vi) The basic equipment, such as Footballs and Volleyballs, may be provided to each school. Similarly, some amount of contingency may be provided to each school.

(vii) A scheme for the creation and improvement of play-grounds should be taken up on a phased basis under JRY and NRY.

(viii) An intensive and extensive programme of teachers training to equip all subject teachers with the necessary skills to impart training in Physical Education, Games and Yoga will be necessary.

(ix) The present programme to train and recruit Physical Education teachers for high schools should be expanded.

(x) New schools may be established/recognised only if playgrounds are available.

(xi) A comprehensive system of Inter-school tournaments and championships in select disciplines should be introduced over a period of time. This system should culminate in a National School Championship.

(xii) Special cash awards to winning schools and a special system of incentives for successful athletes also needs to be introduced.

20.2.2 As the coordination and cooperation of all State Governments and UTs will be necessary to implement the above suggestions, it is recommended that this issue may be taken up and discussed as a special agenda item in a special meeting of CABE. To provide the CABE necessary background material, a CABE Committee would be constituted to consider all aspects of Sports and Physical Education as envisaged in the NPE, 1986.

20.2.3 For the promotion of Sports and Games at the University level, the following measures may be considered for implementation:

(i) Special incentives for athletes and sportspersons in select disciplines to enable them to continue their studies.

(ii) A phased programme to develop infrastructure facilities for sports and games, including sports sciences and sports medicine support, may be undertaken.

(iii) Appointment of Physical Education teachers and coaches in select disciplines in Universities equipped with adequate infrastructure should be taken up on a phased basis.

(iv) A comprehensive system for Inter-college and Inter-university tournaments and championships should be introduced in a phased manner. Necessary financial incentives to hold these tournaments should also be provided.

20.2.4 These recommendations may be referred to the UGC for consideration and implementation.

20.2.5 For private schools and colleges, special schemes to encourage investment in sports infrastructure may be introduced by providing income tax benefits to any investment or endowment made for sports, or sports promotion. The Ministry of Finance would be approached in this regard.

20.2.6 Special incentives for girls, Scheduled Castes and Scheduled Tribes should also be evolved to ensure that their participation remains proportional to their population.

20.2.7 Special and attractive alternatives will have to be evolved for students who are physically unable to participate in sports and games.

20.2.8 Implementation of these proposals will require constant monitoring and review. A monitoring system would be evolved for this purpose at the Central and the State levels.

3. YOUTH

20.3.1 The main objectives of the Programme of Action for Youth under the NPE will be as follows:

(i) To help reduce and, if possible, reverse the drop out rate particularly amongst girls, Scheduled Castes and Scheduled Tribes.

(ii) To promote social integration

(iii) To promote awareness of, and encourage involvement in, social programmes pertaining to literacy, environment, national integration, social reform, health awareness and family planning.

(iv) To help students develop an interest in adventure and other outdoor activities.

20.3.2 To achieve these objectives, the services of the Nehru Yuva Kendras (NYKs), the National Service Scheme (NSS), Bharat Scouts and Guides, the National Cadet Corps (NCC) and the National Volunteers Scheme will be expanded and developed so that coverage in schools and campuses is increased sharply and also developed along more innovative and interesting lines. Action will be taken in coordination with Universities, State Governments and UT Administrations to ensure that significant increases in participation are achieved within a reasonably short period of time.

20.3.3 Special incentives may also have to be evolved to encourage teacher interest and participation, quite apart from incentives to encourage and sustain participation of students and youth in these programmes. Possible incentives may include the following:

(i) Recognition of the outstanding contribution of teachers to NSS as an extension work under the third dimension of the university system as equivalent to research work.

(ii) Special financial incentives for teachers for outstanding contributions under NSS.

(iii) Special incentives for students with outstanding records under NCC, NSS, etc., at the time of their admission to college and university and also for promotion within colleges and universities.

(iv) Special focus on Nehru Yuva Kendras which are implementing programmes with educational objectives, such as literacy, curtailing dropout rates, vocational training, environment preservation, national integration, etc.

20.3.4 Simple and low cost adventure projects can easily be organised either during academic sessions, or during vacation periods. These programmes should benefit students and youth in a number of ways, including character building, cooperative endeavour and endurance. These objectives will also greatly help students develop a sense of self-confidence and self-esteem and will help them in their future careers.

20.3.5 By implementing the measures prescribed above, the principal objectives of the NPE, 1986, in so far as youth are concerned, can be significantly advanced provided that, adequate funds are made available. Efforts will be made, therefore, to channelise funds to the extent possible into these programmes.

21. EVALUATION PROCESS AND EXAMINATION REFORMS

21.1.1 Reforms in examination have been a subject of serious discussion for long. The NPE 1986, postulated that the examination system should be recast so as to ensure a method of assessment that is a valid and reliable measure of student development and a powerful instrument for improv-'ing teaching and learning; In functional terms, this would mean:

    i) The elimination of excessive element of chance and subjectivity;

    ii) the de-emphasis of memorisation;

    iii) continuous and comprehensive evaluation that incorporates both scholastic and non-scholastic aspects of education, spread over the total span of instructional time;

    iv) effective use of the evaluation process by teachers, students and parents:

    v) improvement in the conduct of examination;

    vi) the introduction of concomitant changes in instructional materials and methodology;

    vii) instruction of the semester system from the secondary stage in a phased manner; and

    viii) the use of grades in place of marks.

21.1.2 The NPE, 1986, held that the above goals were relevant both for external examinations and evaluations within educational institutions. It envisaged that evaluation at the institutional level will be streamlined and the predominance of external examinations reduced.

21.1.3 Whatever changes that have been introduced in the school and university examination systems at the instance of the NCERT and the UGC respectively, their impact on the developments indicated above is not perceptible. Inspite of the initiatives of the NCERT and the UGC in this field, only limited awareness has been created on the issues arising from the policy statement on examination reform.

21.1.4 Taking note of this situation the Revised Policy Formulations (RPF) called for preparation of a National Examination Reform Framework to serve as a set of guidelines to the examining bodies which would have the freedom to innovate and adapt the framework to suit the specific situations.

2. BROAD PARAMETERS

21.2.1 To formulate a national examination reform work the Department of Education would, inter-alia, constitute an inter-institutional committee with representations from UGC, NCERT, AICTE and State level organisations includ-ing Boards of Secondary Education. The framework can be expected to be formulated by December, 1993.

21.2.2 While the specifics of the framework cannot be postulated at this stage the broad parametres seem to envisage the following:

    (a) Elementary Stage: Specification of minimum levels of learning in the remaining areas and classes, their adaptation at the State and District levels, designing flexible procedures of evaluation to suit a variety of school conditions, and use of evaluations in teaching and learning;

    (b) Secondary Stage: Specification of expected levels of attainments in curricular subjects, designing flexible schemes of continuous and comprehensive evaluation, consider introduction of semester system at secondary stage in a phased manner.

    (c) Higher Education Stage:

      - Gradual switching over by post-graduate depart-ments of all universities to semester, grading, continuous evaluation and credit systems.

      - Exploring possibilities of introducing validation tests at the first degree and post-graduate levels.

    (d) The Higher Technical and Professional Stage: Preparing guidelines of evaluation for institutions by each university, replacement of external examination by internal institutional evaluation and All India testing programmes for admission to professional and technical courses; and

    (e) At all Stages: Devising procedures for setting up of appropriate administrative and technical support mechanisms, and a review of legislation.

3. STRATEGIES FOR IMPLEMENTATION

21.3.1 While the inter-institutional committee would work out the detailed features of strategy the following strategies are envisaged at this stage:

    (a) Elementary Stage:

      - The minimum levels of learning (MLLs) in language (mother tongue), mathematics and environmental studies for classes I-V have been developed by MHRD at the national level. Similar exercise to develop

these in the remaining areas and classes of elementary curriculum will be carried out.

- These MLLs will be adapted/adopted by the concerned agency in each state and district to suit the local conditions.

- Since no detention policy is envisaged at the primary stage, the main function of evaluation will be diagnostic in nature so as to provide remedial help to the pupils.

- The concerned agency in each state will prepare a flexible scheme of Continuous Comprehensive Evaluation (CCE) at the elementary stage so as to make the evaluation process an integral part of teaching and learning at this stage. The CCE will cover cognitive, affective and psychomotor areas of pupils' growth and will employ a variety of tools and techniques of evaluation for collecting evidence on different dimensions of pupils' growth. These evaluations will be reported in the form of grades on a comprehensive proforma. Appropriate procedures for ensuring reliability, validity, objectivity and transparency of the evaluations will be suggested by the concerned agency in each state.

(b) Secondary Stage:

- Each State Board will lay down expected levels of attainments at classes IX to XII and prescribe appropriate courses of
- studies to accomplish these levels in terms of knowledge and/or comprehension, communication skills, understanding, application analysis, synthesis, judgments, etc.

- In each State the concerned agency will prepare a flexible scheme of CCE for the secondary/senior secondry stage to suit a variety of specific situations obtaining in different regions and types of schools. Certain models have been developed by NCERT and other agencies which could be looked into for guidance.

(c) Higher Education Stage:

- Selection tests for admissions to all professional and technical courses will be conducted on an all India basis.

- Each University will prepare broad guidelines for grading to be followed by individual colleges, institutions and departments under its jurisdiction. Orientation programmes may be organised to

familiarize the teachers with the grading system.

- The movement towards entrance tests for admission to institutions of higher education will be encouraged and promoted by UGC and State Governments. The services of the National Evaluation Organisation (NEO) should be utlized by the university system for developing, designing and administering entrance tests for admission.

(d) Strategies common for all Stages:

- The emphasis will be laid on testing of expected levels of achievement of a variety of learning objectives in order to ensure due importance to higher abilities of understanding, application, analysis, synthesis, judgment and parallel parameters and not only to memory.

- The semester system when introduced at the secondary stage and onwards should, interalia provide for :

(i) flexibility in the combination of courses; and

(ii) accumulation of credits to enable the pupils to proceed at their own pace resulting in upward and horizontal mobility of the students across the country.

- Appropriate courses in examination reform will be developed by Indira Gandhi National Open University through distance education mode in collaboration with NCERT for the large scale training of different kinds and levels of personnel.

- An Examination Reform Centre will be established at the UGC for coordination, documentation and dissemination of information on examination reforms in higher education. Similarly, NCERT would perform this function at school stage.

(e) External Examinations : Nature and Conduct

- The possibility of introducing legislation to define various malpractices connected with examinations and to treat them as cognizable and unbailable offences will be considered. Such laws will, when enacted, make provision to prescribe the nature and type of punishments for various offences under the law, and to include within its scope persons engaged in various opera-

tions connected with examinations and also to provide protection to them.

(f) National Evaluation Organisation

- The National Evaluation Organisation will be developed as a quality control mechanism to organise nation-wide tests on a voluntary basis so that norms can be evolved for comparability of performance and also for conducting independent tests.

(g) Monitoring and Evaluation:

- Rather than leaving examination reforms to the individual initiatives and inclinations of the examining bodies, a strong and coordinated effort should be made by the Centre and State Governments in this area. It is , therefore, desirable that the monitoring and evaluation of the reforms in examinations and evaluation in a State is also done by the State Department of Education or an agency so designated by it.

22. TEACHERS AND THEIR TRAINING

1. THE PRESENT SITUATION

22.1.1 Teacher performance is the most crucial input in the field of education. Whatever policies may be laid down, in the ultimate analysis, these have to be interpreted and implemented by teachers, as much through their personal example as through teaching-learning processes. Teacher selection and training, competence, motivation and the conditions of work impinge directly on teachers' performance. The NPE, 1986 calls for a substantial improvement in the conditions of work and the quality of teachers' education. The Policy also emphasizes the teachers' accountability to the pupils, their parents, the community and to their own profession. The Revised Policy Formulations reiterate, without modifications, the NPE, 1986 postulates on Teachers and Teacher Education. The POA, 1986 spelt out the main aspects of the strategy for implementation of these postulates. The POA, 1986 prescriptions continue to be of relevance and need to be acted upon with vigour and determination.

22.1.2 The area where significant advances were made since 1986 is teacher education. A Centrally Sponsored Scheme of Teacher Education was launched in 1987. During the period 1986-89, 17.62 lakh teachers were covered under the Scheme of Mass Orientation of School Teachers. Roughly, 70% of the total teachers trained were primary and the remaining 30% were upper primary and secondary teachers. The objective of this scheme was to orient teachers in the main priorities and directions envisaged in the NPE, 1986 and to improve their professional competence. The orientation was done through 10-day camps mainly held during summer vacation. The SCERTs organized these camps under the guidance and supervision of the NCERT. In 1989, a special training package was incorporated to impart training in use of Operation Blackboard material and in child-centred education.

22.1.3 The POA, 1986 envisaged setting up District Institutes of Education and Training (DIETs) to provide quality pre-service and in-service education to teachers and Adult Education (AE)/Non-Formal Education (NFE) personnel, to provide academic and resource support to the elementary and adult education systems and to engage in action research and innovation in these areas. By March 1992,

306 DIETs have been sanctioned; of these 162 are already conducting training programmes.

22.1.4 The POA also contemplated upgrading Secondary Teacher Education Institutions (STEIs) into Institutes of Advanced Study in Education (IASEs), and strengthening Colleges of Teacher Education (CTEs). By the end of March 1992, 31 CTEs and 12 IASEs have been sanctioned.

22.1.5 A scheme was drafted to provide one-time matching grant of Rs.15 lakh for strengthening each State Council of Educational Research and Training (SCERT). However, this level of grant was found too inadequate and in consultation with the State Governments, a scheme has been prepared for conferring independent and autonomous status to the SCERTs with responsibility to oversee DIETs, District Resource Units (DRUs), and other Elementary Teacher Education Institutions (ETEIs).

22.1.6 The POA envisaged statutory and autonomous status being conferred on the National Council of Teacher Education (NCTE). For this purpose, in consultation with national and State level organisations and other concerned agencies, the details have been worked out.

22.1.7 A UGC Panel on Education is presently working out the details of a scheme to strengthen the Departments of Education in the Universities so that they can provide academic support to the network of training institutes set up since 1986, the IASEs, CTEs, DIETs, etc.

22.1.8 The Centrally Sponsored Scheme of Teacher Education was evaluated by institutions such as NCERT, NIEPA, Lakshmi College of Education, Madras, and Punjab University, Chandigarh. While acknowledging the positive aspect of the scheme, the evaluation reports suggested attention being paid to the following aspects :

    (i) Adequacy of implementation machinery at the State level

    (ii) Effective personnel policy and prompt filling up of posts with competent persons.

    (iii) Sufficient financial and administrative delegation to the Principals

    (iv) Streamlining flow of funds to institutions

    (v) Balance between pre-service training and in-service training.

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* This chapter deals mostly with school teachers. Aspects dealing with recruitment, grievance redress are dealt with in the chapter on Management. Issues dealing with teachers in Higher and Technical Education are dealt with in the related chapters.

2. ACTION PLAN FOR TEACHER EDUCATION

(a) Centrally Sponsored Scheme of Teacher Education

22.2.1 Keeping in view the desired goal of providing in-service training to all teachers at the interval of five years, the existing scheme of Teacher Education will be modified and continued. While attempt will be made to provide maximum coverage through DIETs/CTEs/IASEs, special orientation programmes for teachers will also be launched and Teachers' Centres and School Complexes will be tried out on pilot basis. The emphasis under the training programmes will be on training in the use of Operation Blackboard materials and orienting the teachers towards Minimum Levels of Learning (MLLs) strategy with a focus on teaching of language, Mathematics and environmental studies.

22.2.2 Under the DIETs, all the districts in the country will be covered by the end of the 8th Five Year Plan; about 250 CTEs/IASEs will be set up by that period. Efforts will also be made to provide programme support to other STEIS and also to develop training institutions not covered under the DIETs/CTEs/IASEs scheme. The SCERTs will be made independent and autonomous, overseeing the functioning of DIETs, DRUs, etc. and the NCTE will be conferred autonomous and statutory status and State Boards of Teacher Education will be set up for effective role in maintaining the standards of teacher training institutions and other related functions.

22.2.3 The norms of Central assistance under the scheme will be reviewed and revised suitably :

    (i) Keeping in view the increased costs and other norm-based requirements.

    (ii) Formulation by the States of an effective personnel policy and of suitable implementation strategy will be made a pre-condition for Central assistance. Delegation of powers to the Principals and release of money in time will also be made pre-conditions. The possibility of releasing funds through autonomous SCERTs will also be explored and encouraged. Encouragement will be given to non-governmental teacher education institutions for upgradation; the possibility of releasing funds either directly or through SCERTs or through other agencies will be explored.

22.2.4 Efforts will also be made to provide training for pre-school education.

22.2.5. In the area of secondary teacher education, some of the better existing institutions will be provided programme support so that benefit of in-service training could be provided to larger number of secondary teachers. This will be in addition to the existing scheme of CTEs/IASEs.

22.2.6 A special programme will be launched for preparation and production of teaching-learning materials for teacher education in different languages.

(b) Teacher Educators

22.2.7 The existing programme for teacher educators will be suitably modified taking into account the present day training needs. The induction and continuing training programmes for the DIETs/CTEs/SCERTs faculty will be designed and implemented by the NCERT, NIEPA, etc.

(c) Special orientation for school teachers

22.2.8 In order to achieve the desirable goal of in-service training of all the teachers within five years, special orientation programme for teachers will be launched covering about 4.50 to 5 lakh teachers per year. Before launching the programme, detailed exercise for management, curriculum, teaching-learning materials, including audio-video materials etc. will be undertaken. Use of distance mode of training will be encouraged in these programmes and all other programmes of in-service training of teachers. The programme will be implemented by NCERT through SCERTs and DIETs with other national level institutions also providing necessary input. Under this programme as well as under the training programmes conducted by the DIETs, the emphasis will be on training the teachers in the use of Operation Blackboard materials and orienting them towards the MLL strategy with a focus on teaching of language, mathematics and environmental studies.

(d) Strengthening of SCERTs

22.2.9 A revised scheme for strengthening of SCERTs for making them independent and autonomous and by providing norm-based non-recurring assistance and recurring assistance on a long-term basis, will be formulated.

(e) National Council of Teacher Education

22.2 The National Council of Teacher Education (NCTE) will be provided statutory status. A Bill has been drafted for this purpose and would be introduced in the Parliament soon. The Bill envisages a Council, an Executive Committee and Regional Committees. The objectives of the NCTE are as follows :

    (i) To create mechanism for determination and maintenance of standards of teacher education;

    (ii) to regulate institutions of teacher education with a view to phasing out sub-standard and malpractising institutions;

    (iii) to lay emphasis on continuing education of teachers; and

    (iv) to reduce the gap between supply and demand of trained personnel.

The main functions of the NCTE envisaged in the Bill include :

   (i) To lay down norms, standards and guidelines for teacher education courses and for institutions conducting such courses and to see to their observance;

   (ii) to promote coordination and linkages amongst various constituents of teacher education system and other related systems, promote innovation and research in all areas of teacher education and the dissemination of their results and to promote the status of teacher education in the country;

   (iii) to lay down norms, standards and guidelines for programmes of continuing education and professional development of teachers and teacher educators and training and education of personnel of adult and non-formal education; and

   (iv) to advise the Central Government, State Governments, UGC, universities and other agencies in all matters relating to teacher education and its development especially in regard to priorities, policies, plans and programmes. State Boards of Teacher Education will also be set up to help in this direction.

(f) Establishment and strengthening of Departments of Education in the Universities

22.2.11 The recommendations of the UGC panel would be taken up for appropriate implementation.

3. TEACHERS AND THEIR ROLE

22.3.1 While some of the problems being faced by the teaching community have financial implications, many of the other problems can be solved through non-monetary inputs and by a planned, systematic and sympathetic approach. Lack of clarity of purpose and interplay of various extraneous factors have often been instrumental in teachers not getting their due place and status. This has also led to lack of teacher accountability and diminished teacher effectiveness.

22.3.2 Keeping in view the financial constraints of various State Governments and their own policies, States will be encouraged to develop their own POAs especially with regard to matters like pay and allowances to teachers, other working conditions, norms for transfers and postings, removal of grievances, participation of teachers in the educational process, recruitment of teachers and the role of teachers' associations.

22.3.3 The primacy of the role of teachers in the educational process, their active participation at all levels of management, special measures for the teachers from the disadvantaged sections like women, SCs/STs, etc., provision of facilities similar to other government employees and fair and transparent working conditions and justice to them will be the guiding principles of any such POA. Efforts will also be made to ensure that the benefits of the existing schemes for women and other weaker sections are passed on to the teachers from these groups to the maximum extent possible.

22.3.4 Computerisation will be resorted to at the district level to help the existing weak educational administration in expeditious disposal of personnel matters of teachers. Use of computers available under other educational programmes, wherever possible, will be made.

22.3.5 Norms for accountability of teachers will be laid down with incentives for good performance and disincentives for non-performance. The NCERT will complete this task in respect of school education within one year. Assessment of teachers will be made on the basis of their comprehensive performance appraisal and their continuous education and improvement.

22.3.6 Responsible teachers' associations are necessary for the protection of the dignity and rights of teachers and also for ensuring proper professional conduct of teachers. Code of professional ethics should be evolved and adopted by all concerned within a year.

23. MANAGEMENT OF EDUCATION

1. EDUCATIONAL MANAGEMENT SYSTEM

23.1.1 The National Policy on Education (NPE) is comprehensive and envisages wide-ranging action on a variety of issues and problems. Yet it seeks a convergence of such action to secure a total and coordinated impact. It also reaches beyond the education sector to link effectively with other sectors of social development to achieve quick and positive results.

23.1.2 The task of ensuring effective implementation of the NPE rests on the education management system. Flexible and relevant management structures and organisations, processes and procedures are needed all along the line to secure the detailed planning and implementation of the Programme of Action (POA).

23.1.3 Education in India has been largely a budget-based system where efficiency is rated by ability to "consume' budget and to demand more. Performance at delivery point has not been an important criterion. The on-going economic reforms and structural adjustments would, therefore, demand a shift from inputs to performance and outcomes - consideration of cost effectiveness should inform all levels of educational administration and planning.

23.1.4 Absence of effective decentralisation, failure to evolve priorities and pursue objective-oriented programmes, weak personnel management system, and ineffective intra-departmental and inter-departmental coordinating mechanisms have adversely affected the performance of the education system. Even routine tasks like the supply of textbooks, conduct of examinations and operation of academic calendar are not being properly attended to. The highest priority in POA should be to ensure that these routine tasks are performed properly and that the delivery of education services improves at all levels.

23.1.5 Soon after adoption of POA 1986, the Central Advisory Board of Education (CABE) had constituted committees to recommend measures for toning up educational management. These committees prepared draft reports for pursuing action with the states and other authorities concerned. However, due to frequent political changes, action could not be pursued on many of these initiatives. It is now necessary to resume action and pursue these objectives vigorously.

23.1.6 This chapter covers only management issues which cover the entire field of education and those which cover more than one sub-sector of education.

2. DECENTRALISATION AND INVOLVEMENT OF PEOPLE

23.2.1 The NPE and POA have emphasised the importance of decentralising planning and management of education at all levels and involving people in the process. Decentralization implies democratic participation by elected representatives of people in decision- making at the district, sub-district and Panchayat levels. In pursuance of the POA provision the State Governments have been taking steps to set up structures for decentralised planning and management. The future course of decentralisation would be influenced to a great extent by the proposed Constitution Amendment (Seventy-second) Bill, 1991; they would have to be finalised after the Bill is enacted.

(a) The Constitution (Seventy-second) Amendment Bill, 1991

23.3.1 The Constitution (Seventy-second) Amendment Bill of 1991 on Panchayati Raj institutions envisages introduction of democratically elected bodies at the district, sub-district and panchayat levels. These bodies will be responsible for the preparation of plans for the economic development and social justice. The Bill provides for representation of women scheduled castes and scheduled tribes.

23.3.2 The proposed Eleventh Schedule of the Constitution provides, among other things, for entrusting to Panchayati Raj bodies of :

"Education including primary and secondary schools, technical training and vocational education, adult and non-formal education, libraries, and cultural activities".

The subjects closely allied to education, namely, health, welfare, women and child development are also to be entrusted to the Panchayati Raj bodies.

(b) State Legislation

23.3.3 The Panchayati Raj Bill is an enabling legislation. The states are to frame their own legislation in their turn. The states would need to draw up appropriate legislations which, among other things, must provide for Panchayati Raj Committees for Education.

(c) District Level Body

23.3.4 Within this legislation a district-level body may be set up with the responsibility for implementation of all educational programmes including non-formal and adult education, and school education up to the higher secondary level. The district body will provide for representation of educationists, women, youth, representatives of parents, scheduled castes/ scheduled tribes, minorities and ap-

propriate institutions in the district. Representation may also be provided for urban bodies and cantonments which organise educational activities. The district body will also be vested with the responsibility for planning which would include, inter alia, area development, spatial planning, institutional planning, administrative and financial control and personnel management with respect to primary, middle, secondary and higher secondary schools and other educational programmes. Implementation of different educational programmes at the district level will be supervised and monitored by the body. The district educational plans will also go into the levels of participation and retention of boys and girls under different age-groups by socio-cultural and economic categories, particularly SC & ST, and plan for measures for ensuring physical infrastructure, equitable access as well as qualitative aspects of education.

23.3.5 In order that the district body discharges the functions allotted, it would be necessary to assign state funds for implementation of the various programmes. Provision will also be made to enable the district body to raise its own resources. Funds, which are not earmarked, will also be placed at its disposal so that these resources can be used for any purpose that may be considered essential by raising matching funds of its own.

23.3.6 The relationship of the State Government with the district level body in terms of administrative and financial control and personnel management will be clearly spelt out in appropriate guidelines to be issued by the State Governments. It will also be necessary to clarify the levels of recruitment and structure of cadres of teachers of different categories.

23.3.7 There will be a Chief Education Officer for the District to look after all levels of schools, adult and non-formal education. Under him, there will be a District Education Officer looking after establishment, budgeting, planning and the educational data base. In addition, there will be district-level officials of appropriate rank engaged in specific educational programmes. The Chief Education Officer will be the principal education officer of the district body.

23.3.8 The district body will draw upon the expertise of the District Institute of Education and Training (DIET), and other institutions for substantive curricular and pedagogic inputs into all programmes of elementary education, non-formal education and adult education at the district level. It may also seek the support of institutions of higher education in the district.

23.3.9 In states and areas where the Constitution (Seventy-second) Amendment Bill, 1991 will not apply, such bodies on similar lines may be set up at district level.

(d) Village Education Committee

23.3.10 Under the Constitution Amendment Bill, Panchayats will be formed for a village or a group of villages. The Panchayat will have elected representatives. Besides, each Panchayat may constitute a Village Education Committee (VEC) which would be responsible for administration of the delegated programmes in the field of education at the village level. The major responsibility of the VECs should be operationalisation of micro-level planning and school mapping in the village through systematic house to house survey and periodic discussion with the parents. It should be the endeavour of the committee that every child in every family participates in the primary education. In these activities they will be provided exper guidance and support by DIET.

23.3.11 The State Governments may consider entrusting the following functions to the VEC:

- Generation and sustenance of awareness among the village community ensuring participation of all segments of population; and

- Developing teacher/instructor and community partnership to oversee and manage the effective and regular functioning of the schools and centres.

- In view of the critical role and function of VEC, it should be vested with appropriate statutory and necessary financial and administrative authority.

(e) Model Legislation

23.3.12 It would be necessary for the Ministry of Human Resource Development (MHRD) to prepare, model statutory provisions for the guidance of states when they formulate their legislation under the Panchayati Raj Act. As other sectors such as health, women and child development, social welfare are also involved, MHRD may also consider preparing comprehensive model legislation covering all these areas for achieving coordination. This may be done in collaboration with the concerned Central Ministries/Departments and Planning Commission. The preparation of this model Bill may commence immediately as it will be required by the States when the Constitution Amendment Bill is brought into effect.

(f) Urban Local Bodies

23.3.13 The Constitution Amendment Bill on Urban Local Bodies provides for constitution of Municipal Corporations, Municipal Councils and Nagar Panchayats. The proposed Twelfth Schedule to the Constitution provides for entrusting these bodies with "promotion of cultural, educational and aesthetic aspects". These bodies would be entrusted with appropriate statutory responsibilities with regard to the education sector by an appropriate state legislation. The

MHRD may prepare model legislation in this area also for the consideration of the states.

4. INVOLVEMENT OF VOLUNTARY AND NON-GOVERNMENTAL AGENCIES

23.4.1 The successful implementation of programmes like elementary education including non-formal education, early child-hood care and education, adult education, education of the disabled, etc. will require people's involvement at the grass-root level and participation of voluntary agencies and social activist groups on a much larger scale. Considering the need for ensuring relationship of genuine partnership between the government and voluntary agencies, the government will take positive steps to promote their wider involvement. Consultations will be held with them from time to time about programmes and procedures for selection of voluntary and non-governmental agencies. The procedures for financial assistance will be streamlined to enable them to play optimal role.

23.4.2 It would be desirable for the state governments to develop specific action plan for entrusting selected programmes of educational development to voluntary agencies and non- governmental organisations. They could be used to supplement effectively the on-going programmes to enhance their quality and impact. They should be allowed to function in a congenial and supportive atmosphere. It is expected that appropriate indices of accountability in terms of performance would be evolved in consultation with the voluntary organisations and NGOs.

5. ACCOUNTABILITY AND EFFICIENCY

23.5.1 Norms of performance by the different categories of educational personnel and institutions must be prepared by the states. The MHRD may assist them in the preparation of such norms. These should be finalised after due consultation and discussions with the representative groups. Norms which are finalised must be given publicity and the performance should be duly notified. Non-observance of norms must result in disincentives while good performance must receive recognition, incentives and due publicity.

23.5.2 Monitoring of all educational programmes for implementation at the district will take place at the state level and relevant indicators for inter-district comparison will need to be worked out. Suitable incentives may be provided to the districts linked to their achievements. Similar arrangements may be developed for the Block and Panchayat level institutions.

23.5.3 In view of the constraint of resources, cost effectiveness has to be promoted in educational planning and administration at all levels. Financial and administrative norms relating to the educational programmes will need to be evolved and enforced with greater diligence. Mere

budgetary concern must be replaced by assessment of efficiency on the basis of carefully developed indices of educational and institutional achievements. Location and establishment of institutions should be planned rationally with due regard to the catchment areas of existing institutions, identification of unserved and underserved areas, and the possibility of expanding facilities in existing institutions. As far as possible facilities should be shared among institutions and extrashifts resorted to in urban areas to provide better utilisation of resources. The chapters on Higher Education and Technical Education (chapters 11 and 15) have spelt out some measures in this regard.

23.5.4 All procedures and processes which hamper the functioning of institutions and hold up programme implementation must be reviewed and simplified. For example, migration, conduct and identification certificates and similar other plethora of outmoded practices only hinder programmes of education. Simplified manual of instructions and codes must be evolved to facilitate the proposed reforms in education. Modernization of educational offices will enhance their efficiency.

6. STRENGTHENING OF EDUCATIONAL PLANNING AND ADMINISTRATION

(a) School and Educational Complexes

23.6.1 School complexes will be promoted as a network of institutions on a flexible pattern to provide synergic alliances to encourage professionalism among teachers, to ensure observance of norms and conduct and to enable the sharing of experiences and facilities. The school complex will serve as the lowest viable unit of area planning and will form a cluster of 8-10 institutions in which different institutions can reinforce each other by exchanging resources, personnel, materials, teaching aids, etc. and using them on a sharing basis.

23.6.2 It is expected that in course of time, school complexes when fully developed, will take over much of the inspection functions including educational mapping, grading of institutions and identifying strength and weakness of individual schools. Inspection to be conducted will invoke a culture of participation and providing correctives rather than the existing practice of finding faults. These inspections will be in addition to the normal routine inspection functions of district/block level inspecting authorities.

23.6.3 Guidelines for functioning of school complexes have been prepared and communicated to the State governments. Although a number of states have experimented with the scheme of school complexes, the programme is yet to emerge as a comprehensive and systematically administered one. As the institutional resource endowment varies from place to place, there can be no single model for creation of school complexes. Every state has to evolve its

own operational model based on its experiences or by drawing upon experiences of other states. The states may prescribe necessary guidelines for creation and functioning of school complexes and define the nature, mode, type of planning and inspection work to be performed by them. Considering that some of the schools forming part of the complex will be non-government institutions, the State governments may give them necessary assistance to facilitate their participation. It would be desirable that the recommendations regarding the school complex programme are implemented on a state-wise basis during the Eighth Plan period.

23.6.4 At the same time it is desirable to attempt larger networking of institutions in a district in the shape of educational complexes on an experimental basis during the Eighth Plan period. In the educational complex, the networking could be done from the primary to college and university level. The Central Government may develop in the next two years guidelines for organising this on an experimental basis in situations where the atmosphere is congenial for launching such complexes. While developing the educational complexs, support from institutions like DIET, Teacher Education Colleges, ITIs, Polytechnics, particularly Community Polytechnics may also be sought.

(b) Block Level Administration

23.6.5 It is observed that the block-level set up of educational administration is very weak almost all over the country. The supervisors often have little contact with the schools. The routine administrative duties such as collecting statistics, disbursement of salaries, posting and transfers of the staff take up most of their time. The following steps may be taken to improve the functioning of block-level education set up:

(i) Norms, not only on the basis of number of schools but also number of teachers should be evolved through systematic studies so that the block-level education officer may effectively cope with his administrative responsibilities and supervisory functions.

(ii) Most of the time of block-level education officers is spent on routine administrative work. Their duties may be laid down in detail so that their support for the academic programmes gets due importance.

(c) District Educational Administration

23.6.6 The jurisdiction of a district for the educational purpose may be co-terminus with its revenue jurisdiction. The big districts could be divided into sub-educational districts but these will be coordinated and controlled by a Chief Education Officer (CEO) for the whole district. He will look after all levels of education -- primary, middle secondary

and higher secondary, non-formal and adult education. The planning and statistics branch of CEO will be provided with computer facilities for Educational Management Information System (EMIS).

23.6.7 For purposes of academic inspections, district supervisors of education may be provided on the basis of number of schools to be looked after for academic supervision. In discharge of these functions, the supervisors will also coordinate their activities with District Institutes of Education and Training.

(d) State Level Administration

23.6.8 In most states there are a number of directors and secretaries to take care of various sectors of education. In most of the cases this expansion is taking place by re-organisation of existing positions. States may consider reorganising their educational administrative set-up at various levels and strengthen it on the basis of certain norms which could be evolved for this purpose.

23.6.9 With the increase in number of departments/directorates dealing with education, states may have to evolve appropriate mechanism for their coordination. In most States, Directorates and Secretariat Departments dealing with the education have proliferated as a result of expansion of institutions and programmes. The need for appropriate mechanisms for coordination of this multiple organiztions operating in the same area is acutely felt. The delivery of education services and programmes is also being impaired by the absence of proper linkages between education and other areas of Human Resource Development (HRD). Many possibilities exist. One possibility could be separate Director-General of Education to coordinate the activities of various Directorates. Another could be for a Principal Secretary or Additional Chief Secretary to coordinate the various Departments of Education in the Secretariat. In case of states having more than one Minister dealing with education, there is a need for setting up of a Cabinet Committee which could coordinate and monitor educational programmes. Similar mechanism can also be envisaged for overall coordination in different areas of HRD. It seems appropriate to designate an Additional Chief Secretary to coordinate the activities of different sectors related to Human Resource Development - a HRD Commissioner on the lines of the Agricultural Production Commissioner.

23.6.10 Similar arrangements may be attempted to secure over-all coordination in human resource development. In case of states having more than one minister dealing with education, there is a need for setting up of a Cabinet Committee which could coordinate and monitor educational programmes.

(e) State Advisory Boards of Education

23.6.11 The NPE envisaged that the state governments would establish State Boards of Education (SABE) on the lines of CABE. The SABE will function as an apex body to coordinate all human resource development programmes. On the basis of available information, it seems that the Boards have not been set up in most of the states. The need for coordinated approach to educational policy and planning at the state level cannot be exaggerated and the states will be advised to set up SABEs preferably before 1995.

23.6.12 The composition of the SABE may follow the pattern of CABE. There may be institutional and organisational representatives besides eminent educationists and experts. Representations of weaker section of society particularly women, SC/ST and minority community should be ensured.

7. CENTRE-STATE MEANINGFUL PARTNERSHIP

23.7.1 The NPE has envisaged the role and responsibility of the states and the Centre in regard to education as one of meaningful partnership. While the role and responsibilities of the states in regard to education will remain essentially unchanged, the Union Government would accept a larger responsibility to reinforce the national and integrative character of education. The implementation of the NPE would require total involvement of both the states and the Centre and there has to be effective and positive interaction between these two partners for successful and effective implementation of the NPE.

(a) Central Advisory Board of Education

23.7.2 The Central Advisory Board of Education (CABE) has emerged as a very effective instrument of meaningful partnership between the states and the Centre, particularly at evolving a consensus on the major policy issues in the field of human resource development. The CABE would be expected to play a meaningful and important role in the implementation of NPE.

23.7.3 The CABE would have to evolve appropriate mechanisms and processes to discharge its tasks in overseeing and reviewing the implementation of the NPE. It may have to devise appropriate structures within its system and also seek the support of professional organizations and autonomous bodies in discharging its role. The CABE may consider the modalities it would adopt for its role in implementing the NPE/POA.

23.7.4 A heavy responsibility is cast upon the MHRD for providing adequate support to the CABE in its role. It has also an important role to play in respect of universalisation of elementary education and establishment of a National System of Education. Hence immediate steps will have to be taken to strengthen the Departments under the Ministry

of Human Resource Development dealing with the NPE. This strengthening will, inter alia, involve setting up of effective mechanisms for exploratory studies for collecting inputs for programme formulation; participative field studies to assess the effectiveness of on-going programmes and provide on the spot guidance; cellular structures for handling the tasks of project/programme formulation and appraisal and, administrative and financial management of programmes for which the Centre will hereafter be equally responsible along with the states; and performing the clearing house functions for exchange of relevant experiences between states. The state departments would need to be suitably strengthened to discharge their functions. In spite of proliferation of the number of Departments in the Secretariat dealing with Education the staffing pattern in the State Education Departments seems inadequate to cope with the pressure of work and the emerging challenges. The requirements of adequate staff needs to be looked into seriously.

23.7.5 While overseeing the implementation of NPE, the CABE will have the onerous task of bringing together all departments and ministries concerned with human resource development programmes. It would be necessary for the CABE to design coordination mechanisms and processes which will ensure human resource development linkages not merely at national level but up to the grass-roots level. SABEs would have to take similar measures at the State Level.

8. RECRUITMENT

23.8.1 Recruitment is an important instrument of quality control on human input to the education system. Besides the existing promotional practices for filling vacancies in management positions in education, provision should be made for direct recruitment to at least 25% of the posts of the district and block education officers as well as heads of secondary and senior secondary schools. Teacher education qualification should not be made essential for direct recruitment of educational administrators. The recruitment procedure for teachers and administrators should be modernised. States should set up their own mechanism on the same pattern.

23.8.2 Consistent with the important role assigned to the heads of institutions, their selection should be done with due care. It is essential that there should be a fixed term for posting of heads of institutions and their transfers should be kept to the minimum to enable them to exercise the leadership role and make their contribution to the development of their institutions.

23.8.3 Indian Education Service: The establishment of an Indian Education Service will be an essential step towards promoting a national perspective on management of education. Basic principles, functions and procedures for recruit-

.ment to this service will call for detailed consultation with the states so that they adequately appreciate the need and benefit of this structure, particularly in the context of attracting talented personnel and giving them a stature commensurate with their responsibilities. A detailed proposal inclusive of alternate career paths for the cadre, processes of selection and induction of existing manpower engaged in education, arrangements for mobility between the states and Central Government and the scope for lateral movement as well as mobility and secondment vis-a-vis the academic system will require to be worked out in consultation with the state governments.

9. TRAINING

(a) Training Policy

23.9.1 There is no system of regular and recurrent training of educational planners and admininstrators. Each State Government should formulate a training policy and perspective plan for organising training programmes for educational planners and administrators at different levels. NIEPA can, at national level, cover only key persons both at the Centre and the States. However, considering the large number of institutional heads and educational personnel working in various departments, directorates, districts, blocks as well as functionaries in the field of adult education and non-formal education, it is necessary that each State Government should identify suitable agencies capable of sharing training responsibilities for educational personnel. These institutions shall carry out the following activities in consultation with the nodal training institute: (i) identification of training needs; (ii) development of training modules; and (iii) conduct of pre-service and in- service training programmes.

(b) State Level Mechanism

23.9.2 While there are many institutions like the State Institutes of Education, State Institutes of Science Education, etc. which impart training and conduct research pertaining to pedagogical aspects, there is hardly any institution for training and research in areas of planning and management of education, more so when education department employs the largest number of personnel at different levels. To orient and train the state, district and block level educational planners and administrators, there is a need to establish, at least in the larger states, a separate state level mechanism for the purpose. Apart from the function of training, such a mechanism should also promote, sponsor, conduct research, including action research in areas related to planning and managment of education, provide professional and resource support to the state and district level agencies as well as undertake evaluative studies of various programmes and activities.

23.9.3 The pre-induction programmes shall be organised for new recruits appointed as heads of the institutions, dis-

trict education officers, block eduction officers, etc. The short-term in-service training programmes should be addressed to specific cadres of planning and management personnel.

(c) Linkages and Networking

23.9.4 The state level mechanism would be an apex body in the field of educational planning and management which would act as a nodal agency and provide professional support in that area.

23.9.5 Since no single state-level institute may be in a position to offer all the facilities required for pre-induction and in- service training programmes, a strategy of networking with other appropriate institutions, like the State Institute of Education, District Institutes of Education and Training and Colleges of Education should be evolved so that appropriate training programmes for new recruits and the serving educational personnel working at different levels could be arranged on a regular and systematic basis. NIEPA must act as a national level resource centre for this purpose.

10. REDRESS OF GRIEVANCES

(a) Education Tribunals

23.10.1 Considering the large volume of legal disputes generated in the education system between the educational personnel and the managements and that the normal legal processes are unable to provide quick and prompt settlement of these disputes, Education Tribunals may be set up at the state and Central levels. A CABE Committee may be set up to study the implications and formulate a model Bill.

(b) Grievances Settlement Machinery

23.10.2 Apart from legal disputes, a large number of other categories of grievances and disputes arise in educational institutions between various categories and groups of functionaries and management. Many of these are capable of being resolved at local level through appropriate mediatory mechanisms. It would be eminently desirable to set up appropriate grievances settlement machinery at the institutional, district and state level to respond to these grievances. The main objective would be to promote cordial and congenial atmosphere in the educational institutions for facilitating their normal functioning.

11. MANAGEMENT INFORMATION SYSTEM

23.11.1 For streamlining the flow of information and developing planning capacities at various levels of educational administration, integrated educational management information system will be introduced by the end of Eighth Five-Year Plan. An effort will be made to integrate the existing separate system of collection of information for planning, statistics, monitoring, evaluation, administration etc.

The system would be simple in its design, contents and coverage. The coverage of information will be both qualitative and quantitative. The Management Information System in education will be coordinated with NIC network established at the district level.

12. MONITORING AND EVALUATION

23.12.1 Concurrently the MHRD may enlist the services of reputed social science research organisations and universities departments to undertake periodic evaluation of high priority programmes such as UEE, NFE, women's education and SC/ST. Concrete Evaluation done in the case of National Rural Employment Programme can be a model. The findings of these evaluation exercises may be placed before the CABE. States may take similar action with SABE doing the role of CABE.

23.12.2 It would be necessary to have a critical look at different aspects of monitoring such as:

   (i) Institutional arrangements

   (ii) The achievements to be monitored into specific terms, assignment of responsibilities and identification of milestones

   (iii) collection and analysis of data

   (iv) Information flows between different levels such as institutions, State, Centre

   (v) Arrangements for corrective measures based on feed back

   (vi) Qualitative aspects of monitoring

23.12.3 The administrative structures outlined in this chapter, particularly the CABE and SABE, are admirably suited for a global review of the implementation of the POA, 1992 and the corresponding State POAs. In addition to review of individual schemes and programmes, the review by CABE and SABE can also pay critical attentions to the linkages between different programmes and schemes and the comparative progress in different areas of education, or to put figuratively, "look at the wood as distinct from the trees" To make reviews by these apex organisations meaningful it would be necessary to structure the deliberations of these bodies appropriately. Subject area groups with due representation can review in depth and place the reports for consideration by the plenary bodies. The reports furnished by the central departments (e.g. Education in respect of schemes exclusively administered by it or Women and Child Development in respect of ECCE) or institutions (e.g. UGC in respect of the Higher Education, AICTE in respect of Technical Education) would provide the basis for review by CABE groups. Corresponding arrangements have to be provided for SABEs.

COMPOSITION OF STEERING COMMITTEE AND TASK FORCES

STEERING COMMITTEE

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   Member, Planning Commission
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2. Professor G. Ram Reddy
   Chairman
   University Grants Commission
   New Delhi

3. Shri Bhaskar Ghose
   Secretary
   Department of Culture
   New Delhi

4. Ms. Mira Seth
   Secretary
   Department of Women and
   Child Development
   New Delhi.

5. Shri A.K. Pandya
   Secretary
   Department of Youth Affairs & Sports
   New Delhi

6. Shri S.V. Giri
   Secretary
   Department of Education
   New Delhi

7. Shri R.K. Sinha
   Additional Secretary
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8. Shri R.K. Srivastava
   Commissioner & Secretary (Education)
   Government of Bihar
   Patna

9. Shri R. Balakrishnan
   Secretary (Education)
   Government of Gujarat
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10. Dr. K.Gopalan
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    National Council of Educational Research and Training
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11. Dr. (Smt) Radhika Herzberger
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12. Shri M.P. Parameswaran
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13. Professor C.N.R. Rao
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11. Dr. (Mrs.) D.M. de Rebello
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9. Shri S.I. Siddiqui
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10. Dr. P.N. Roy
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11. Shri K.P. Hamza
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12. Dr. A.K. Basu
    Chief Executive
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13. Dr. S.S. Kalbag
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14. Representative of Department
    of Health (Medical Education)

15. Representative of ICAR

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    Department of Education
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    Government of Himachal Pradesh
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   Gandhigram Rural University

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4. Professor S. Balu
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   Technical Teachers' Training Institute
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   Inter University Consortium for
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   Nuclear Science Centre
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   Agartala.

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   Government of Goa
   Panaji

10. Shri Priyadarshi Thakur
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    Department of Education
    New Delhi

1. Shri Naved Masud   CONVENOR
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   Department of Education
   New Delhi

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   54 Sahyog Apartments
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   Bureau for Promotion of Urdu
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5. Shri Karnail Singh
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   Hony. Director Examination Reforms Unit
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    Evaluation Survey and Data Processing
    National Council of Educational
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   Government of Madhya Pradesh
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9. Shri P.L. Thanga
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    Development and Research
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    New Delhi

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   Department of Personnel PG and Pension
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   Department of Legal Affairs
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   Planning Commission
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   NIEPA
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   NIEPA
   New Delhi

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   Government of Madhya Pradesh
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    Department of Education
    New Delhi

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