



India

Revised version, November 2006.

Principles and general objectives of education

India's commitment to the spread of knowledge and freedom of thought among all citizens is reflected in its Constitution, promulgated in January 1950. The Directive Principle contained in Article 45 ensures that "the State shall endeavour to provide within a period of ten years from the commencement of this Constitution, for free and compulsory education for all children until they complete the age of fourteen years." Article 29 (1) ensures that any citizen having a distinct language, script or culture will have the right to conserve it. Article 350-A stipulates that "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." Moreover, special care of the economic and educational interests of the underprivileged sections—in particular the Scheduled Castes and Scheduled Tribes—is a declared obligation of the State under Article 46.

Article 29(2) ensures that no citizen shall be denied admission into any educational institution maintained by the State or the receipt of aid from State funds on grounds of religion, race, caste, or language.

The expression "the State" includes the Government and Parliament of India, the government and the legislature of each of the states and all local or other authorities within the territory of India or under the control of the Government of India.

Current educational priorities and concerns

Educational policy and progress have been reviewed in the light of the goals of national development and priorities set from time to time. In the National Policy on Education (NPE) approved in 1968, an emphasis on quality improvement, a planned and more equitable expansion of educational facilities and the need to focus on the education of girls was stressed.

The 1986 NPE, as updated in 1992 and the 1992 Plan of Action (POA) provide for several key strategies. Among the distinguishing features and recommendations of this policy, the following should be mentioned:

- increasing reliance on social mobilization to promote basic education;
- emphasis on pre-primary education;
- decentralization, with the district as the unit of planning for implementation of elementary education and adult literacy;



- formulation of strategies based on micro-planning at the grassroots level to ensure children's retention in school;
- introduction of Minimum Levels of Learning (MLL) in schools to improve learner's achievement; micro-planning will provide the framework for universal access and universal participation, while MLL would be the strategy for universal achievement;
- integration of adult literacy and non-formal education programmes with vital national concerns such as the small family norm, health care, environment and nutrition;
- provision of essential facilities in schools;
- adoption of a child-centred, activity-based approach;
- establishment of District Institutes of Education and Training (DIET) for the pre-service and in-service training of teachers for elementary schools and for personnel employed in non-formal and adult education programmes.

Since the 1986 National Policy on Education, the most significant development has been the acceptance of a common structure of education and the introduction by most states of the 10+2 system, i.e. a ten-year programme divided into three cycles—primary, upper primary (or middle school) and secondary education—followed by two years of higher secondary education.

As far as elementary education (primary and upper primary) is concerned, ensuring accessibility of educational opportunities has been the principal governmental strategy. Special efforts were aimed at educationally disadvantaged groups—particularly Scheduled Castes (SCs) and Scheduled Tribes (STs), 17% and 8% of the population, respectively. This has included monetary and other incentives, and recruitment of more teachers from disadvantaged communities, as well as flexible school timings. As an incentive to enrolment, attendance and retention, in addition to improving the nutrition of children, a nationwide mid-day meal programme was launched during 1995/96. More than 33.5 million of children benefited from the scheme.

In addition, the education system seeks to give due recognition and importance to the social organization, traditions, customs and value systems of the various communities—in particular SCs and STs. This is supported by the development of materials and curricula in their languages, the creation of residential schools and the participation of young and educated members of the community in the educational process.

Various initiatives have been taken to reduce the academic burden on students while improving the quality of education. Not only is the curriculum development being decentralized, but also teachers are being increasingly involved in the development of textbooks, child-centered and activity-based methods of teaching in schools, and examination strategies are being formulated to assess the ability to understand rather than the ability to memorize. The examination system is under



permanent review through the introduction of continuous and comprehensive evaluation.

In 1996 the Government renewed its commitment to the universalization of elementary education (UEE) and to raise education allocation from the level of 3.23% of Gross Domestic Product (GDP) up to 6% by the turn of the century. The opening of residential schools for poor children in each district and a Teacher Housing Scheme are the thrust areas of the new policy.

The District Primary Education Programme (DPEP) is the major initiative undertaken to effect improvement in the quality and UEE. The programme is distinguished by its holistic approach and the principle of contextuality in planning. This, in effect, implies that education is planned and organized in the specific context of the area concerned—a shift from macro- to micro-planning with the district as the unit of planning. The programme lays great emphasis on people's participation and management, has a marked gender focus and seeks to enhance school effectiveness by increasing infrastructural facilities, developing instructional materials and teacher training. The vision of creating and strengthening community participation is being translated into reality through the creation of Village Education Committees, School Management Committees, Mothers Teacher Associations, Parents Teacher Associations, and Mothers Associations.

The 1986 NPE, while accepting the enormous challenge of achieving UEE in its entirety (access, retention and achievement), recognized the fact that schools would not reach all children—in particular, the millions of girls and working children whose participation in the school system is thwarted by socio-economic conditions. The Policy, therefore, called for a large and systematic programme of non-formal education (NFE) as an integral component to achieve UEE, with enough flexibility for learners to study at their own pace and, at the same time, having an acceptable level of quality.

The revised NPE (1992) has proposed reforms and a restructuring at the secondary education stage, aimed at an improvement of curriculum content and systemic efficiency. The two main areas of focus are: vocationalization and greater use of educational technology. Vocationalization in the last two years of school education was first introduced in 1988 and is anticipated to serve individual employability, create a bridge between the demand for and supply of skilled manpower and provide an alternative to higher education for those not inclined to academics. In 2000, only 4.8% of students opted for a vocational stream at the higher secondary stage, against a target of 25%.

The National Council of Educational Research and Training (NCERT) has developed eighty-two competency-based curricula for six identifiable subject areas of vocational education. General education and foundation courses, as well as language development, will form 30% of the teaching/learning requirement, in addition to vocational theory and on-the-job training, which will account for 70% of course time.

Pursuing the goal of decentralization along with the principle of partnership between the centre and the states demands careful orchestration of the policies and programmes particularly in the area of elementary education. As envisaged by the



National Policy on Education and reiterated by several bodies, the central government will continue to play a major role in terms of co-ordination and capacity building, and it will continue to monitor the progress of reaching national goals in the field of elementary education.

Approaches to achieve the goal of UEE in the years to come have to face the magnitude and complexity of the task which has so far remained incomplete. The central government has been working with the state governments on a principle of shared responsibility for achieving the goals of UEE.

The last decade has witnessed a number of new initiatives to improve the access to and participation of children in elementary education as well as for improving the quality of education provided in primary schools. The National Campaign for Universal Education—*Sarva Shiksha Abhiyan*—has been launched by the Government of India in partnership with the state governments with a long-term perspective and through a district-level decentralized management framework involving local bodies. It is envisaged that the Campaign will move towards achieving the following four goals:

- providing access to all children in the age group 6-14 years through formal primary schools or through other equivalent alternative programmes by the year 2003;
- completion of five years of primary education by all children by 2007;
- completion of eight years of elementary education by all children by 2010;
- focus on elementary education of satisfactory quality with emphasis on education for life;
- bridging all gender and social gaps at the primary level by 2007 and at the elementary level by 2010;
- universal retention by 2010.

The programme will be implemented in a manner that will provide adequate opportunities for NGOs and the private sector to contribute towards the achievement of these goals and lead towards a community-owned initiative for universalizing elementary education. Keeping in view past experiences, efforts under the *Sarva Shiksha Abhiyan* (SSA) will be underscored by effective decentralization, sustainable financing, cost-effective strategies for universalization, relevant curriculum, community-owned planning and implementation, and focus on girls and disadvantaged groups (Department of Education, 1999). Up to 2004, 271 districts in 18 states have launched district specific plans under the centrally-sponsored scheme of SSA and the largely externally-assisted DPEP. Districts with low female literacy and with a concentration of educationally backward sections of society, like scheduled castes and scheduled tribes, were identified for implementing DPEP interventions by the respective states, whereas the SSA covers all the districts of the states.



The fresh initiatives for the transformation of the education system have gained a new impetus since May 2004. The new Government has adopted the National Common Minimum Programme (NCMP) which includes various new initiatives and provisions addressing the main issues relating to: (i) the elimination of disparities in access; (ii) empowering women; (iii) securing a rightful place for the disadvantaged and the minorities; (iv) eradication of illiteracy; (v) education for women's equality; (vi) improvement in the quality of education and its content; and (vii) decentralization of the processes of educational change with the participation of people at the grass root level through the Panchayati Raj Institutions (local government sub-statal bodies).

A number of measures have been taken including the following:

- The National Council of Educational Research and Training (NCERT) has been asked to take up the revision of the National Curriculum Framework for School Education (NCFSE).
- The Central Advisory Board of Education (CABE), which is highest advisory body to advise the central and State Governments in the field of education, has been reconstituted in July 2004.
- The National Minority Education Monitoring Committee, as proposed in the National Policy on Education, has been reconstituted and held its first meeting in August 2004. The Committee will, among other things, look into the issues of recognition and affiliation of minority educational institutions, problems of the minority educational institutions, working of the existing schemes relating to minorities and advise the government on contemporary approaches towards traditional methods of instruction. (Department of Secondary and Higher Education, 2004).

Laws and other basic regulations concerning education

In accordance with the principles contained in the Constitution, the Government has to provide free and compulsory education for all children in the age group 6-14 years.

One of the major developments during the 1990s has been the decisive step to decentralize the management of education through two Constitutional amendments made in 1993. They mandate states to enact laws devolving powers to elected bodies at urban, district and village levels for developmental administration.

The eighty-sixth **Constitutional Amendment Act** of December 2002 has made elementary education a fundamental right for all children in the age group of 6-14 years.

Administration and management of the education system

“The Government in India is federal in character. Although under the Constitution, the central and the state governments have joint responsibility for education, it is essentially treated as a state matter, except in some well-defined areas. The



responsibility of the central government is for educational planning and policy, for co-ordination and maintenance of standards in higher and technical education, for promotion of research and training relating to school education, adult education, promotion of languages, and so on. The Ministry of Human Resource Development, which comprises the Department of Education, has the principal responsibility in respect of education.” (Bordia, 1995, p. 435).

For the purpose of governance, India is divided into thirty-two States and Union Territories, the latter being administered under the direct control of the central government. A major challenge in national planning is to reconcile the planning priorities of states with the national plan frame. The National Development Council imparts a national character to the entire process of planning. In the education sector, the **Central Advisory Board of Education (CABE)** plays a leading role in the development and monitoring of policies and programmes. In some of the States, local self-government bodies—*panchayati raj* institutions in rural areas and municipalities in urban areas—have been associated with school education in order to make the system of administration sensitive to local conditions as well as to facilitate the participation of the community. (Department of Education, 1999).

The principle of decentralization has been extended to the management of primary education and **Village Education Committees (VEC)** have been set up in many parts of the country. These Committees are responsible for the enrolment and retention of children in schools; they supervise the functioning of schools, check teachers’ absenteeism and mobilize additional resources. Attempts have been made to ensure communities’ participation not only in the preparation of educational plans, but also in the administration of education including the mobilization of additional resources.

District Boards of Education (DBE) plan and administer education at the district level. District plans have been developed to increase infrastructural facilities, develop instructional material, train teachers, etc.

At the state level, it is usually the **State Department of Education** that administers secondary education. At the national level, the *Kendriya Vidyalaya Sangathan*, New Delhi, runs the *Kendriya Vidyalayas* (central schools) while the *Navodaya Vidyalaya Samiti*, New Delhi, runs the *Navodaya Vidyalayas* (i.e. schools for talented rural children).

The **Central Board of Secondary Education (CBSE)**, New Delhi, functions under the overall supervision of the **Department of Education, Ministry of Human Resource Development**, Government of India. It deals with activities related to affiliation, academic matters and examinations, and develops innovations and reforms to be introduced at the secondary and higher secondary levels in order to bring education at par with international standards. There are more than 4,300 schools affiliated to the Board. There are Boards of Secondary Education in each state as well.

At the higher education level, the following bodies determine and maintain standards and funding at the national level: the University Grants Commission, the All India Council for Technical Education, the Medical Council of India, the Indian Council of Agricultural Research, the Veterinary Council of India, and the National



Council for Teacher Education. Some states also have Higher Education Councils, as well as senior government functionaries (Secretaries) for higher education at the state government level. These bodies are in charge of the higher education administration within the state. Concerning the **University Grants Commission** (UGC), “although its principal function is to co-ordinate the development of higher education and to ensure maintenance of standards, over the years it has become the central government’s arm for assessing the financial needs of universities and colleges and disbursing funds to them.”

The administration of technical education is mainly ensured by the **All India Council for Technical Education** (AICTE). Set up as an advisory body in 1945, it was given a statutory status through an Act of Parliament in 1987, which came into effect in March 1988. The main functions of the statutory AICTE include: proper planning and co-ordinated development of technical education in the country; qualitative improvement at all levels in relation to planned growth; and regulation and maintenance of norms and standards. The AICTE performs its statutory functions through seven Regional Committees, All India Boards of Studies and various innovative schemes and programmes.

The **National Council of Educational Research and Training** (NCERT) was established as an autonomous institution in 1961. One of its major objectives was the promotion of qualitative improvements in school education and teacher education. The NCERT conducts research, development and training programmes and also plays a role in dissemination of information through its constituents: the National Institute of Education, New Delhi; the Central Institute of Educational Technology, New Delhi; four Regional Institutes of Education, located at Ajmer, Bhopal, Bhubaneswar and Mysore; the Central Institute of Vocational Education, Bhopal; and field offices in major states. At the state level, functions similar to those of the NCERT are performed by the SCERT.

The NCERT develops the curricula, syllabi and textbooks for schools and has provided invaluable assistance in the implementation of the District Primary Education Programme (DPEP) being conducted in several states. The NCERT also maintains close links with state-level education authorities, provides important inputs to the school system and co-ordinates activities related to UNICEF and UNESCO assisted projects.

The **Central Institute of Vocational Education** (CIVE) was set up in Bhopal, Madhya Pradesh on 1 July 1993 to serve as the top research and development institute for vocational education in the country. The CIVE’s main concerns and current activities focus on: the review and standardization of curriculum textbooks and instructional materials; teacher training programmes; and inter-state collaboration to facilitate and share information and experiences related to vocational education.

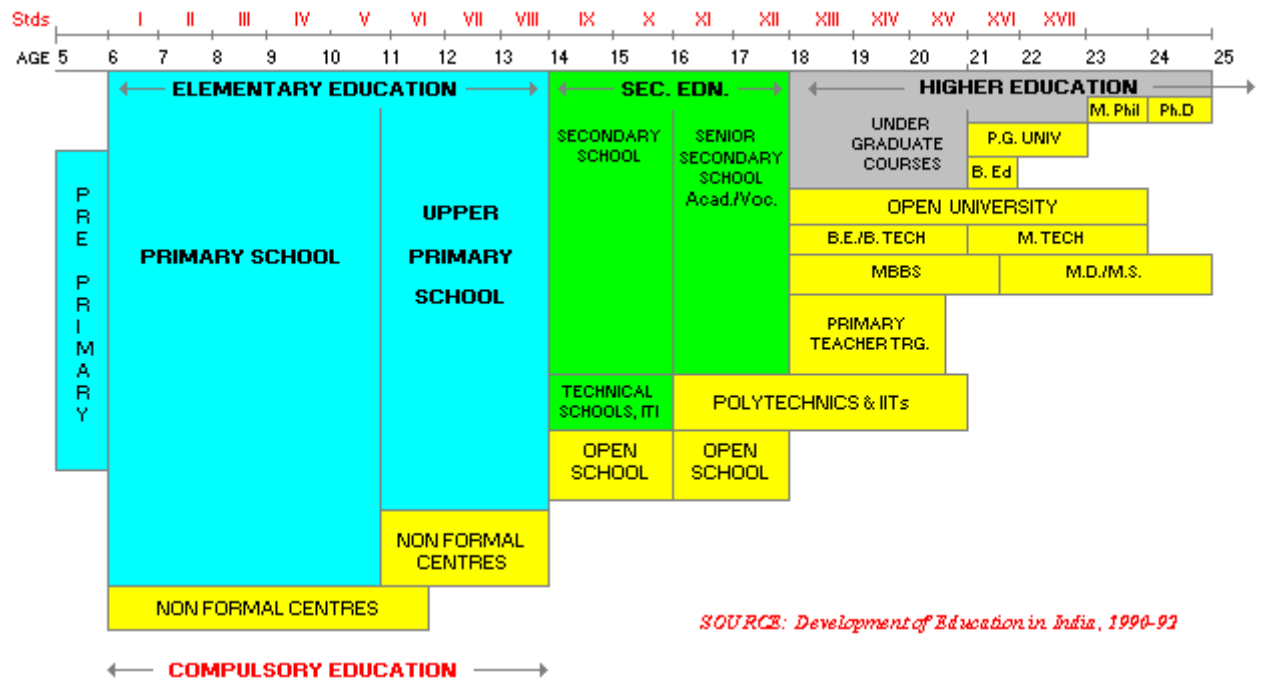
The **National Institute of Educational Planning and Administration** (NIEPA) is the major institution concerned with educational planning and administration. Set up as an autonomous body by the Government of India, NIEPA conducts research, organizes training, provides consultancy services, and disseminates relevant information on innovations, changes and developments in the areas of planning and management. Many states are also in the process of creating **State**

Institutes of Educational Management and Training (SIEMT) to assist state-level educational planning and training of educational planners and administrators.

The **National Council for Teacher Education (NCTE)** was established in May 1973 by a Government resolution to advise central and state governments on all matters pertaining to teacher education. Until 1993, the NCTE's status and role have been purely advisory as it did not have statutory powers to enforce its guidelines. As per the provisions laid down in the 1986 NPE and in the Programme of Action for its implementation, the NCTE was conferred statutory status by a Parliamentary Act in 1993, with effect from May 1995. The Act provides for establishment of the NCTE with a view to achieving planned and co-ordinated development of the teacher education system throughout the country, as well as regulation and proper maintenance of norms and standards.

Structure and organization of the education system

India: structure of the education system



India: structure of school education by state

States/UT	Age of Admission to class 1	Structure of school education in India									
		I-IV	I-IV	VI-VIII	VI-VII	V-VII	V-VIII	IX-X	VIII-X	XI-XII	
Andhra Pradesh	5	✓	-	✓	-	-	-	✓	-	✓	
Arunachal Pradesh	6	✓	-	✓	-	-	-	✓	-	✓	
Assam	6	-	✓	-	-	✓	-	-	✓	✓	
Bihar	6	✓	-	✓	-	-	-	✓	-	✓	
Goa	5	-	✓	-	-	✓	-	-	✓	✓	
Gujarat	5	-	✓	-	-	✓	-	-	✓	✓	
Haryana	6	✓	-	✓	-	-	-	-	✓	✓	
Himachal Pradesh	5	✓	-	✓	-	-	-	✓	-	✓	
J&K	5	✓	-	✓	-	-	-	✓	-	✓	
Karnataka	5	-	✓	-	-	✓	-	-	✓	✓	
Kerala	5	-	✓	-	-	✓	-	-	✓	✓	
Madhya Pradesh	6	✓	-	✓	-	-	-	✓	-	✓	
Maharashtra	5	-	✓	-	-	✓	-	-	✓	✓	
Manipur	5	✓	-	✓	-	-	-	✓	-	✓	
Meghalaya	6	-	✓	-	-	✓	-	-	✓	✓	
Mizoram		-	✓	-	-	✓	-	-	✓	✓	
Nagaland	6	-	✓	-	-	-	✓	✓	-	✓	
Orissa	5	✓	-	-	✓	-	-	-	✓	✓	
Punjab	5	✓	-	✓	-	-	-	✓	-	✓	
Rajasthan	6	✓	-	✓	-	-	-	✓	-	✓	
Sikkim	5	✓	-	✓	-	-	-	✓	-	✓	
Tamil Nadu	5	✓	-	✓	-	-	-	✓	-	✓	
Tripura	6	✓	-	✓	-	-	-	✓	-	✓	
Uttar Pradesh	5	✓	-	✓	-	-	-	✓	-	✓	
West Bengal	5	-	✓	-	-	-	✓	✓	-	✓	
A&N Islands	6	✓	-	✓	-	-	-	✓	-	✓	
Chandigarh	5	✓	-	✓	-	-	-	✓	-	✓	
D&N Haveli	5	-	✓	-	-	✓	-	-	✓	✓	
Daman & Diu	5	-	✓	-	-	✓	-	-	✓	✓	
Delhi	5	✓	-	✓	-	-	-	✓	-	✓	
Lakshadweep	5	-	✓	-	-	✓	-	-	✓	✓	
Pondicherry	5	✓	-	✓	-	-	-	✓	-	✓	
INDIA	6	19	13	18	1	11	2	19	13	32	

Pre-school education

Pre-primary education caters to 5-year-olds and it is not compulsory. Pre-primary schools are mainly run by state governments, municipal corporations and other governmental and non-governmental agencies.



Primary education

Primary education (or the elementary stage) caters to children aged 6-14; it is free and compulsory. In all the States and Union Territories (S/UTs), elementary education is composed of two cycles: primary education and upper primary (or middle school). Elementary education lasts eight years in twenty S/UTs and seven years in twelve S/UTs. In the case of eight-year programmes, the pattern followed by eighteen S/UTs is five years of primary education and three years of upper primary; in the other two S/UTs, elementary education consists of two four-year cycles. In the case of seven-year programmes, in eleven S/UTs the pattern is 4+3, while in one state primary education lasts five years followed by two years of upper primary.

Secondary education

Secondary education is divided into secondary and higher secondary (academic or vocational). In twenty S/UTs, secondary education lasts four years, divided into two two-year cycles (Grades IX-X and Grades XI-XII). In twelve S/UTs, secondary education lasts five years and is divided into two cycles—Grades VIII-X and Grades XI-XII. In all the States and Union Territories higher secondary education comprises Grades XI and XII (Department of Education, 1999).

General higher education is provided in universities and colleges. There are three levels of qualifications: undergraduate (bachelor's degree); post-graduate (master's degree); and pre-doctoral and doctoral. At the undergraduate and post-graduate levels, diploma courses are also offered. At the undergraduate level, the duration of courses varies between one to three years; post-graduate diplomas are normally awarded after one year's study.

Bachelor's degree programmes in arts, commerce and sciences last three years. In some places there are honours and special courses available. These are not necessarily longer in duration but indicate greater depth of study. Bachelor's degree programmes in professional fields (agriculture, dentistry, engineering, pharmacy, technology and veterinary medicine) generally last four years-five years in the case of architecture and five and a half years in the case of medicine. A bachelor's degree in law can either be taken as an integrated degree lasting five years or three-year course as a second degree. Master's degree programmes normally last two years. They could be coursework-based without thesis or research alone. Admission to post-graduate programmes in engineering and technology is done on the basis of Graduate Aptitude Test in Engineering or Combined Medical Test, respectively. A pre-doctoral programme, i.e. Master of Philosophy (M.Phil.), is taken after completion of the master's degree. This can either be completely research-based or can include coursework as well. A doctorate is awarded two years after the M.Phil. or three years after the master's degree. Students are expected to write a thesis based on original research.

In principle, at the primary and secondary levels a minimum of 180 days in a year should be available for effective instruction. "A primary school should function for five hours a day, out of which four hours may be set aside for instruction. For the upper primary and secondary schools, the duration of a school day should be six hours, out of which five hours should be kept for instruction and the rest for the other



routine activities. The duration of a class period may be around 40 minutes.” (NCERT, 2000).

The financing of education

“Education is financed by the central government, state governments, local authorities, and a variety of private sources. The education budgets of the central government as well as the state governments are divided into categories: developmental expenditure (Plan) and maintenance (Non-Plan). Over the years, there has been a remarkable increase in expenditure on education, both as percentage of the gross national product and as a percentage of government expenditure.” (Bordia, 1995, p. 436).

The total expenditure on education increased by 60.5% during 1990-95, of which the central government’s share was about 9%. As a percentage of GNP, the total expenditure on education reached 3.81% in 1998/99 and increased to an estimated 4.11% in 2000/01.

Total expenditure on education (in millions of rupees)

Year	State governments	Central government	Total
1990/91	155,505	16,432	171,937
1991/92	170,435	17,141	187,376
1992/93	191,557	17,973	209,530
1993/94	213,168	20,963	234,131
1994/95	251,049	24,891	275,940

Source: Government of India, Department of Education.

The bulk of the financial outlay on education is allocated to elementary and adult education. The total expenditure on elementary education rose from 79,555 million rupees (Rs) in 1990/91 to Rs129,834 million in 1994/95. The total expenditure on adult education rose from Rs2,731 million in 1990/91 to Rs3,585 million in 1994/95. Expenditure on elementary and adult education is mainly incurred by the central government, state governments and local bodies. Voluntary agencies, which are participating in providing basic education to children and youth, are mostly being financed from central and state funds.

The government provides free elementary education and provides incentives to children—particularly those from disadvantaged groups. The mid-day meal programme, which has been implemented on a large scale from August 1995, is one of the most important incentives being provided. Literacy programmes are also free.

The last few years have brought an increase in externally aided projects for elementary education. External assistance is considered only within the parameters laid down by the Central Advisory Board on Education (CABE). The parameters are the following:



- the external funding should be in addition to the national resources allocated to education;
- projects must be in total conformity with the national policies, strategies and programmes;
- the project formulation should be the responsibility of the central or state government or other national agency and should be a process of capacity building;
- the project must be drawn up on innovative lines emphasizing people's participation, improvement of quality and equality of education, and a substantial upgrading of facilities;
- external assistance should be used for educational reconstruction which should go beyond conventional measures (such as opening of new schools or appointing teachers) and address issues of content, process and quality.

The educational process

The National Policy on Education stipulated that the National Council of Educational Research and Training (NCERT) would carry out reviews of the curriculum every five years. It also stipulated that appraisals at short intervals will also be made to ascertain the progress of implementation and the trends emerging from time to time. While there is a common structure of school education throughout the country, there is variation in the division of the first ten years of schooling into different stages. While the core areas of the curriculum are common, there is sufficient flexibility to include local specificity worked out for transaction at the school level.

Keeping the learner at the centre of the educational process, the curriculum has to respond to the demands made by family, culture, economy and polity. Hence, the exercise of developing a curriculum framework and the selection of knowledge, subject areas and subject matter needs widespread consultation and transparency in the decision-making process. The National Curriculum Framework made available by the NCERT in 2000 was based upon a discussion document highlighting the issues and questions concerning the formulation of the framework. The document was widely discussed with various stakeholders and state-level educational policy makers, administrators and teacher associations. There was also widespread debate in the media.

The revised curriculum framework reaffirmed most of the objectives of school education indicated in the previous framework. It also introduced fresh concerns like the minimum levels of learning, value education, use of communication and information technology, and the management and accountability of the system. An effort has been made to integrate subject areas under the scheme of study; such integration is also required to make education life-skill oriented rather than knowledge oriented.



Evaluation continues to rely on periodic written tests and end-of-year examinations conducted at school level within each stage of education. The revised curriculum framework of 2000 emphasized continuous comprehensive evaluation conducted by the school and grading students' performance in cognitive, social and value dimensions. At the secondary level, no student should be declared "pass" or "fail". The evaluation should be predominantly school based, using continuous and comprehensive evaluation with special emphasis on diagnosis and remediation. The school-based evaluation system will be augmented by undertaking periodic achievement surveys using standardized tests in language, mathematics, sciences and social sciences at the end of every educational stage in order to ensure the maintenance of standards and planning interventions for quality improvements. (NCERT, 2000).

The National Curriculum Framework 2005 recognizes the primacy of children's experiences and their active involvement in the process of learning. Learning experiences at school should pave the way for construction of knowledge and fostering creativity and become a source of joy, not stress. Concerns and issues pertaining to environment, peace oriented values, gender, SC & ST and minorities must inform various subjects and school experiences. The examination system seeks a shift from content-based testing to problem solving and competency-based assessment. The Syllabus Committees setup for various stages of school education involving scholars, subject experts, teachers and NCERT faculty held several meetings and deliberated on the ideas reflected in the NCF and formulated the syllabi. A Monitoring Committee appointed by the Ministry of Human Resource Development, as per the recommendations of the CABE, approved the new syllabi in its meeting held in October 2005.

In the area of language teaching, the thrust of the new syllabi is on creating meaningful contexts for language acquisition. In the area of mathematics, the new syllabi emphasize reasoning and conceptual grasp at every stage. The syllabus for environmental studies (EVS) up to Grade V has been perceived as an integrated curricular area for the entire primary stage. The syllabus is woven around six common themes close to the child's life such as family and friends, food, shelter, water, travel, and things we make and do. The matrix of each theme contains leading concepts and also suggested resources and activities. However, in Grades I and II, EVS components are integrated with language and mathematics.

Art covers four major spheres, i.e. music, dance, visual arts and theatre. The emphasis should be on interactive approaches, not instruction, because the goal of art education is to promote aesthetic and personal awareness and the ability to express oneself in different forms.

Sciences for upper primary stage have been built around seven core themes—food, material, the world of the living, moving things people and ideas, how things work, natural phenomena, and natural resources. The same themes are dealt at deeper levels at secondary stage. At the senior secondary stage, the syllabus takes a disciplinary route. Built on the ideas introduced at lower levels, the syllabus introduces the contemporary areas of biology stressing on connections of study of this discipline to real life problems. Both physics and chemistry syllabi aim at building a foundation for disciplinary rigour.



In the social sciences, the syllabi centre on activities and projects, which would help learners to understand society and its institutions, change and development. The social sciences components are reflected in the environmental studies at primary stage. At the upper primary level subjects like history and geography provide inputs to the child's growing grasp of socio-economic and political institutions and impart to children the ability to probe and explore. At the secondary level, greater emphasis has been given to thematic study with an eye to the disciplines of history, geography, political science and economics through which social science perspectives have evolved. Themes and details are structured in a form that seeks learners' active engagement in classroom processes and clarify the issues that take shape in contemporary society. At higher secondary stage, the syllabus provides for deeper engagement with disciplines covering specific skills. (NCERT, 2005).

Pre-primary education

The 1986 National Policy on Education defined the objective of early childhood care and education (ECCE) as being the total development of children in the age group 0-6 years, and added that special attention must be paid to children from underprivileged groups and those who were first generation learners. In a country like India, where inequalities are so extreme that thousands of children require—in addition to educational facilities and exposure to a learning environment—support in terms of health care and nutritional inputs, ECCE has evolved as a programme which seeks to provide such a holistic service. The ECCE programme is designed to further the three objectives of: (a) preparing children for primary school; (b) providing a support service for girls in Universal Primary Education (UPE); and (c) acting as a support service for working women of low-income groups.

This implies addressing different aspects such as cognitive development, language development, social and emotional development, physical and motor development, development of creativity and aesthetic appreciation, development of values related to personal, social and cultural life, scientific ways of thinking and inculcation of healthy habits. The activities, experiences and environment necessary for promoting the development in all the above areas constitute the core of an ECCE curriculum. The curriculum is envisaged in three sub-stages: early stimulation for children under 3 years, largely through parental involvement and education in a relatively unstructured mode; the organized center based play and development-oriented curriculum for the 3-5-year-olds; and the school readiness curriculum which overlaps for the 4-6 year olds and includes reading and writing readiness and number readiness, as a preparation for primary schooling.

This developmentally appropriate thrust in the curriculum has been reiterated all the way back from the National Curriculum Framework for Elementary and Secondary Education (NCFESE 1988) through the National Curriculum Framework (2000) and now the more recent National Curriculum Framework (2005). This framework, in addition, views education of child from ECCE to grade 2 along a continuum and emphasizes continuity of approach and methodology. All curriculum frameworks discourage formal teaching as well as formal evaluation of children at ECCE stage. The National Council of Educational Research and Training (NCERT) has over the years published several guidebooks and training manuals for ECCE to be used by the states and agencies implementing ECCE.



The content of ECCE programmes extends beyond health care and nutritional inputs to encompass structured and unstructured play activities, and to provide materials and learning experiences to promote the social, emotional, mental, physical and aesthetic development of children. There is also an effort to establish effective linkages between ECCE and other development programmes to ensure a convergence of services. These include the Integrated Child Development Services (ICDS), *balwadis/anganwadis* or day-care centres, schemes which are run by governmental and non-governmental organizations, and pre-primary schools managed by local organizations and state governments.

It can be noted that the spread of ECCE facilities—particularly in terms of ICDS centres—has been phenomenal in recent years, covering all the community development blocks in the country. However, the actual outreach and coverage in respect of early childhood education (ECE) component has been rather poor. This is evident from the fact that the gross enrolment ratio (GER) of 10.3% in 1990 has improved to 16.9% in 1997/98. In addition, the coverage is very uneven across different part of the country (Department of Education, 1999). The number of children attending pre-primary schools was estimated at 2.98 million in 1998/99.

The current Tenth Five-year Plan (2002-2007) focuses on a right-based approach to the development of children with major strategies envisaged to reach out to every young child in the country, to ensure survival, protection and development. The Tenth Plan also recognizes the increasing need for support services for crèches and daycare centers for children of working and ailing mothers, especially in the context where more and more women are coming out for employment, both in organized and unorganized sectors.

Given the integrated nature of ECCE, the major responsibility for this stage of child development rests with Ministry of Women and Child Development (MWCD). Various other ministries like Ministry of Health and Family Welfare (MH&FW), Ministry of Human Resource Development (MHRD), Ministry of Social Justice and Empowerment (MSJ&E), are also involved in one way or other in provisioning of ECCE services, each bearing their respective sectoral responsibility for particular age group of children in the delivery of nutritional, health and educational components. Given this multi-sectoral arrangement and the fact that ECE is acknowledged as the first step in the education ladder, the Department of Education had also launched several initiatives dovetailed to its primary education programmes. The extent of coordination between Department of Education and the MWCD is evident from several initiatives like synchronizing the timings of the ICDS centers with primary schools so as to free the girl children from the burden of sibling care and enable them to attend primary schools, relocating the ICDS centers in the primary school premises as far as possible, introducing the component of school readiness as initial part of primary education curriculum, continuing with play based methodology in grade 1 and 2 etc.

Very recently, the total responsibility of ECCE has been shifted from the Department of Education within MHRD to the newly created Ministry of Women and Child Development. This has been possibly done due to the fact that the largest programme of ECCE, the ICDS, is being implemented by this Ministry. The ICDS programme is being expanded both quantitatively as well as qualitatively. By



transferring the ECE component to this Ministry, it is hoped that the coverage will expand and more children would be able to receive the care and education envisaged under the ICDS programme.

Beginning with 33 projects in 1975, ICDS has expanded to 6,113 sanctioned projects in all 35 States/Union Territories in the country. Each project covers a block (the smallest administrative unit). Of these, 5,635 are currently operational with 744,887 *Anganwadi* Centers (ECCE centers) on September 2005. Though the programme mainly covers rural and tribal population, it is also operational in urban areas through 523 ICDS projects to cater to the population living in slums and underdeveloped areas. The ICDS offers a package of health, nutrition and preschool education services to children, from prenatal stage to the age of 6 years and to pregnant and lactating mothers, following a life cycle approach. Some ICDS centers, which are typically for 3-5-year-olds for preschool education, have been extended to include crèches for the younger children. But the number of these crèches is insignificant.

Corresponding to the range of ECCE programs and initiatives there is a variety of training provisions in ECCE, as well. These range from the two-year integrated Nursery Teachers' training program (NTT) which aims at preparing teachers for the preschool stage (children aged 3-5 years) and for the first two grades (age group 6-8 years) of the primary stage. In addition, the curriculum of higher/senior secondary stage of education (+2) in Central Board of Secondary Education, National Institute of Open Schooling and many State Education Boards have also included ECE as an area of vocational education.

The National Council of Teacher Education (NCTE) has also undertaken the task of accreditation of the institutions offering preprimary and nursery teacher training courses. Currently, there are 124 NCTE recognized preprimary and nursery teachers training courses with an intake capacity of 5,938 students in the country. These institutions are functioning in fifteen States. However, because of the norm, these courses are not available in as many as many as twenty States/UTs, which do not have even a single recognized preschool/nursery teacher education institution. While minimum educational eligibility criteria ranges from no bar (as in case of ICDS community workers) to primary standard (as in case of crèche workers) to high school pass or to class XII (as in case of IGNOU and Integrated Preprimary and Primary Teachers Training), there exists marked variation in duration of training too. This varies from a few days (in case of several NGOs which run their own courses) to fortnight (as in case of ICDS) to relatively longer time frame (as in two years) for the integrated training. The National Council for Teacher Education (NCTE), which is a statutory body, has laid down the norms and standards for two programs, namely Preschool and Nursery Teacher Education Programs. These norms laid down by NCTE are now expected to impact on quality.

Primary education

The states are free to develop their own curricula and instructional materials within the framework developed at the national level by the NCERT. To cope with this, a strategy has been developed to impart Minimum Levels of Learning (MLL), i.e. the development of competency-based teaching and learning to suit local situations. This

approach integrates various components of curriculum, classroom transaction, evaluation, and teacher orientation.

At the primary stage, the focus of the curriculum is on: development of basic skills of literacy and numeracy; study of the environment in terms of physical and social phenomena; participation in activities which would develop productive skills, creative expression and habits of healthy living (Department of Education, 1999).

Primary and secondary education: suggested time allocation and estimated number of hours allocated to each teaching subject (1985)

Subject	Suggested time allocation (%) and estimated number of hours allocated each subject					
	Lower primary (Grades I-V)		Upper primary (Grades VI-VIII)		Secondary (Grades IX-X)	
	%	Hours per year	%	Hours per year	%	Hours per year
Language(s)	30	240	32	320	30	300
Art education	10	80	10	100	8	80
Mathematics	15	120	12	120	12	120
Socially useful productive work	20	160	12	120	12	120
Environmental studies	15	120	–	–	–	–
Health and physical education	10	80	10	100	8	80
Science	–	–	12	120	12	120
Social sciences	–	–	12	120	12	120
Contemporary India	–	–	–	–	6	60
Total	100%	800	100%	1,000	100%	1,000

Source: Adapted from NCERT, 1985. 'After taking into account the number of days required for holding terminal examinations, school functions, etc., at least 200 days in a year should be available for effective instruction. [...] A lower primary school should function for five hours a day out of which four hours should be available for instruction. For the upper primary and secondary schools, the duration of the school day should be six hours, out of which five hours should be kept for instructional work' (p. 21).

Note: The structure of the education system showed above is followed in eighteen States/Union Territories.

Primary education: suggested time allocation and estimated number of hours of instruction per year (2000)

Subject	Suggested time allocation and estimated number of hours per year					
	Lower primary (Grades I-II)		Lower primary (Grades III-V)		Upper primary (Grades VI-VIII)	
	%	Hours per year	%	Hours per year	%	Hours per year
Language(s)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Art education	–	–	–	–	n.a.	n.a.
Mathematics	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Art of healthy and productive living (includes: art education, health and physical education, and work education)	n.a.	n.a.	n.a.	n.a.	–	–
Environmental studies	–	–	n.a.	n.a.	–	–
Health and physical education	–	–	–	–	n.a.	n.a.
Science and technology	–	–	–	–	n.a.	n.a.
Social sciences	–	–	–	–	n.a.	n.a.
Work education	–	–	–	–	n.a.	n.a.
Total		720		720		900

Source: Adapted from NCERT, 2000. 'After taking into account the number of days required for organising evaluation activities/tests/examinations, school functions, etc., a minimum of 180 days in a year should be available for effective instruction. [...] A primary school should function for five hours a day out of which four hours may be set aside for instruction. For the upper primary and secondary schools, the duration of a school day should be six hours out of which five hours should be kept for instruction and the rest for the other routine activities. The duration of a class period may be around 40 minutes.'

[n.a. = not available].

The elementary education system in India is the second largest in the world, with about 82% of the children aged 6-14 enrolled. The emphasis, however, is not on enrolment alone, and equal attention is paid to retention and achievement. An estimated 95% of the rural population now has access to primary schooling facilities within a walking distance of one kilometer; 84% of the population is served by middle or upper primary schools within a distance of three kilometers. Gross enrolment ratios (GER) have remained relatively static during the 1990s. This is particularly true of the figures for boys at the primary level (age group 6-11 years). Corresponding figures for girls show an increase of about 6%. On the whole, as against a GER of 90.3% (98.5% for boys and 81.5% for girls) in primary education, the net enrolment ratio (NER) is only 71.1%—77.7% for boys and 64% for girls.

According to provisional figures, in 2000 GER was estimated at 95.7% in Grades I-V (104.9% for boys and 85.9% for girls), 58.6% in upper primary (66.7% for boys and 49.9% for girls), and 81.6% in Grades I-VIII (90.3% for boys and 72.4% for girls). The total enrolment in Grades I-V was estimated at 113.8 million pupils, and at 42.8 million in upper primary. The total number of teachers was estimated at 1.89 million and 1.32 million, respectively; the pupil-teacher ratio was 1:43 and 1:38, respectively.

GER during the 1990s by gender and level of primary education

Year	I-V Primary (6-11 years)			VI-VIII Primary (11-14 years)		
	Boys	Girls	Total	Boys	Girls	Total
1991-92	112.8	86.9	100.2	75.1	49.6	61.35
1992-93	95.0	73.5	84.6	72.5	48.9	67.5
1996-97	97.0	80.1	88.8	65.8	49.2	58.0
1998-99*	100.9	82.9	92.1	65.3	49.1	57.6
1999-00*	104.1	85.2	94.9	67.2	49.7	58.8
2000-01*	104.9	85.9	95.7	66.7	49.9	58.6
2001-02*	105.3	86.9	96.3	67.8	52.1	60.2

Source: Department of Secondary and Higher Education, 2004. (*) Provisional.

Drop-out rates at the primary level are shown in the table below (Department of Secondary and Higher Education, 2004):

Drop-out rates, 1990 to 2000

Year	Primary education			Upper primary education		
	Boys	Girls	Total	Boys	Girls	Total
1990/91	40.1	46.0	42.6	59.1	65.1	66.9
1991/92	41.0	45.2	42.8	54.3	62.0	57.5
1992/93	43.8	46.7	45.9	52.8	65.2	61.1
1999/00	38.7	42.3	40.3	52.0	58.0	54.5

The number of children who regularly attend school and complete the first cycle of education still needs to be improved substantially. For a number of reasons, many children do not complete primary education. There are wide disparities among different states. For example, while almost all children enrolled in the initial grades of primary education complete at least four or five years of schooling in the states of Kerala, Goa and Mizoram, the figures concerning school drop-outs in certain other states continue to be very high. Thus, an important goal is the reduction of drop-out rates in Grades I-V and Grades I-VIII from 36.3% and 56.5% in 1994 to 20% and 40%, respectively. These rates were set as targets to be achieved during the Ninth Five-year Plan period (1997-2002). In 1999/2000, the drop-out rate was estimated at 40.2% in primary classes and 54.5% in upper primary.

The repetition rate is not very high—around 5-8% on the average. This is possibly due to the policy of automatic promotion in initial grades followed in most of the states. Low repetition rates may, however, be leading to lack of attention to learner achievement and in turn affecting the learning levels of the children as well as their motivation to attend regularly (Department of Education, 1999).

Secondary education



There has been a steady expansion of secondary education. Between 1986 and 1993, the enrolment growth for secondary and higher secondary was 32.45% and 37.72%, respectively. Girls' enrolment increased greatly, registering an increase of about 51% at the secondary level and 54% at the higher secondary level. In addition to expansion, secondary education is being strengthened through various schemes for improving education in: science, vocational areas and work experience, population education, culture, values, computer literacy, education technology, yoga, physical education and sports. A number of programmes have also been formulated for promoting enrolment of girls, SCs, STs, and disabled children.

In Grades IX and X, the scheme of studies includes the following subjects: two languages (Hindi or English must at least be one of the two languages); mathematics; science and technology; social science; work education or pre-vocational education; art education; and physical and health education. It is assumed that an academic week consists of 45 periods of 40 minutes duration each and, given margin for vacations, public holidays and other contingencies, a minimum of 30 working weeks will be available for actual instructional transaction. According to the NCERT Secondary School Curriculum 2002-2004 (Vol I, Main Subjects), the suggested number of weekly periods per subject in Grade X is the following:

Secondary education: suggested weekly lesson timetable

Subject	Suggested number of periods in Grade X
Language I	7
Language II	6
Mathematics	7
Science and technology	9
Social science	9
Work education or pre-vocational education	3
Art education	2
Physical and health education	2
Total weekly periods	45

Source: Secondary School Curriculum 2002-2004 (Vol. I, Main subjects).

Note: It is assumed that an academic week consists of 45 periods of 40 minutes duration each and, given margin for vacations, public holidays and other contingencies, a minimum of 30 working weeks will be available for actual instructional transaction. In the case of work education or pre-vocational education, students are expected to have some additional 2 to 6 periods outside school hours. Hindi or English must be at least one of the two languages.

The centrally-sponsored scheme Vocationalization of Secondary Education, in operation since 1992-93, provides for diversification of educational opportunities so as to enhance individual employability, reduce the mismatch between demand and supply of skilled manpower and a viable alternative for those not intending to pursue higher education. The scheme provides for financial assistance to the States to set up an administrative structure, conduct area-vocational surveys, prepare curricula, text books, work books, curriculum guides, training manuals, teachers training programmes, strengthening technical support systems for research and development, training and evaluation. The scheme so far has created a massive infrastructure of 20600 Sections in 7300 Schools thus providing for diversion of about 1 million students at the +2 level.



Based on the recommendations of the various review groups/committees, the existing scheme at the +2 level is being revised and a new scheme of Vocational Education and Training (VET) has been formulated. The scheme of VET shall be a distinct stream, intended to prepare students for identified occupations spanning several areas of activity.

The number of secondary and higher secondary schools increased from 7,416 in 1950/51 to 102,183 in 1996/97 and to an estimated 126,047 in 2000/01. The participation rate of girls at the secondary/higher secondary stage increased from 13.3% to 36.3% between 1950 and 1996. The teacher-student ratio, which was 1:21 in 1950/51, increased to 1:33 in 1996/97 and was estimated at 1:32 in 2000/01.

Assessing learning achievement nationwide

While there is some source of data on changes in quantitative dimensions of education such as enrolments, numbers of teachers, institutions, facilities, etc., the gathering of information on qualitative dimensions like the conditions of facilities and particularly, the levels of attainments of students from different streams of school managed by the states and governments across the country on a common scale has not been attempted so far.

In the past, there have been instances of survey of pupils' achievement at the end of primary education, covering systems of education in different states. But, similar comparative studies of students' attainment at other levels and across different curricular patterns followed by different boards of education have not taken place in the country.

However, the District Primary Education Programme (DPEP) has developed a uniform Educational Management Information System. In addition, an independent benchmark survey of educational attainments and teacher information is mandatory to launch the programme. Mid-term assessment of student achievement after three years of project implementation and a final assessment after the completion of the project in each district have been carried out using common competency-based attainment tests in language and mathematics. Hence, a wealth of information about the changes in educational attainments with the district as unit of analysis at three different points of time is available for the period 1993-2001. However, this information deals with primary education only and refers to districts covered under the DPEP.

The DPEP scheme has been implemented in a phased manner in some 242 districts. Prior to implementing the scheme, the Baseline Assessment Studies (BAS) were carried out in the year 1997 in all the project districts under reference with a view to obtaining the benchmark data in terms of students' achievement, both in language and mathematics at the end of the initial and the penultimate stages of primary schooling. Subsequently, after three years of the implementation of the DPEP interventions, another round of achievement survey, which is popularly known as Mid-Term Assessment Survey (MAS) was undertaken in the year 2000 in all those districts.

As mentioned, the school-based evaluation system will be augmented by undertaking periodic achievement surveys using standardized tests in language,



mathematics, sciences and social sciences at the end of every educational stage in order to ensure the maintenance of standards and planning interventions for quality improvements.

Higher education

The higher education system has grown steadily since independence. From twenty-five universities in 1947, this number increased to 216 by 1994/95. This figure includes thirteen central universities, 164 state universities and thirty-six university-level institutions. The number of colleges rose from 700 to 8,613. Enrolment figures for the same period show an increase from 0.2 million to 6.11 million students, with approximately 300,000 teachers. Although there has been a spectacular increase in student enrolment, the coverage of the relevant age group (18-23 years) is relatively low—about 6%.

In 1994/95, about two million female students were enrolled in higher education programmes with their participation at the post-graduate level accounting for 35.6% of the total enrolment. The preference continues to rest with the arts and humanities courses, which represent 40.4% of enrolment. Commerce courses attract an estimated 21.9% of the enrolment; science courses, 19.6%; engineering and technology, 4.9%; law, 5.3%; and other faculties, 5.6%.

Of the 8,613 colleges, 974 provide education in professional disciplines like engineering (352), agriculture (170) and medicine (638)—including *ayurvedic*, homeopathic, pharmacy, etc. Others provide education in arts, physical sciences, humanities, social sciences, etc.

As mentioned, there are three levels of qualifications: undergraduate (bachelor's degree); post-graduate (master's degree); and pre-doctoral and doctoral. At the undergraduate and post-graduate levels, diploma courses are also offered. At the undergraduate level, the duration of courses varies between one to three years; post-graduate diplomas are normally awarded after one year's study.

Bachelor's degree programmes in arts, commerce and sciences last three years. In some places there are honours and special courses available. These are not necessarily longer in duration but indicate greater depth of study. Bachelor's degree programmes in professional fields (agriculture, dentistry, engineering, pharmacy, technology and veterinary medicine) generally last four years-five years in the case of architecture and five and a half years in the case of medicine. A bachelor's degree in law can either be taken as an integrated degree lasting five years or three-year course as a second degree. Master's degree programmes normally last two years. They could be coursework-based without thesis or research alone. Admission to post-graduate programmes in engineering and technology is done on the basis of Graduate Aptitude Test in Engineering or Combined Medical Test, respectively. A pre-doctoral programme, i.e. Master of Philosophy (M.Phil.), is taken after completion of the master's degree. This can either be completely research-based or can include coursework as well. A doctorate is awarded two years after the M.Phil. or three years after the master's degree. Students are expected to write a thesis based on original research.



The University Grant Commission (UGC) is responsible for co-ordination, determination and maintenance of standards, release of grants. Professional Councils are responsible for recognition of courses, promotion of professional institutions and providing grants to undergraduate programmes and various awards. The Central Government is responsible for major policy relating to higher education in the country. It provides grants to the UGC and establishes central universities. The Central Government is also responsible for declaration of institutions as 'deemed to be university' on the recommendation of the UGC. State governments are responsible for establishment of State universities and colleges, and provide plan grants for their development and non-plan grants for their maintenance.

The universities are various kinds: with a single faculty, or multi-faculties; teaching or affiliating, or teaching cum affiliating, single campus or multiple campuses. Most of the universities are affiliating universities, which prescribe to the affiliated colleges the course of study, hold examinations and award degrees. Many of the universities along with their affiliated colleges have grown rapidly to the extent of becoming unmanageable. Therefore, following the National Policy on Education of 1986, a scheme of autonomous colleges was promoted. In the autonomous colleges, whereas the degree continues to be awarded by the university, the name of the college is also included. The colleges develop and propose new courses of study to the university for approval. They are also fully responsible for conduct of examination. Some 138 colleges have been functioning as autonomous colleges in eight states.

In recent years, the UGC focused its activities on restructuring undergraduate courses to make them more relevant and to provide a work experience component for them. Efforts have been made to develop a curriculum for women's studies at the undergraduate and post-graduate levels. Financial support is offered to universities seeking to conduct research in women's studies. The UGC has been granting greater autonomy to universities. In this context, more than 100 universities have become autonomous institutions.

There has been a phenomenal growth in the number of technical education institutions during the last four decades. The number of recognized technical education institutions at the first degree level was thirty-eight in 1947/48, whereas the number of approved degree-level institutions by 1995/96 has increased to 414 and the number of polytechnics to 1,026. Similar expansions have taken place in other sectors of technical education.

Six Indian Institutes of Technology (IIT) have been set up—at Bombay, Delhi, Kanpur, Kharagpur, Madras and Guwahati—by the Government of India under the Institutes of Technology Act (1961). They are institutions of national importance, with the objective to advance knowledge through quality education and research, in both pure and applied sciences, and in engineering and technology. These institutes offer engineering courses at graduate and post-graduate levels and also provide adequate facilities for advanced research.

Four Indian Institutes of Management (IIM) were set up by the Government of India at Ahmedabad, Calcutta, Bangalore and Lucknow with the objectives of providing education, training, research and consultancy in management. The IIMs offer post-graduate programmes, fellowship programmes, management development



programmes, post-graduate diplomas in computer-aided management and organization-based programmes. The Government of India has recently approved the establishment of two more IIMs, one at Indore (Madhya Pradesh) and the other at Calicut (Kerala).

According to provisional figures, in 2000/01 higher education institutions included 7,929 colleges for general education, 2,223 colleges for professional education, and 254 universities—including 16 central universities, “deemed universities” and institutions of national importance.

According to the Tenth Five-year Plan (2002-2007) target, a minimum of 10% of the relevant age-group (17-23 years) is to be enrolled in higher education, up from the level of 7% in 2002-03. The strategy could be to use both the conventional and open learning systems to reach this goal. The use of information and communication technology and maximum use of existing infrastructure will be essential to help in building a more inclusive higher education scenario. During the Tenth Plan, the emphasis is on the development of universities and colleges through strengthening infrastructure, quality and excellence, access with equity, etc. With a view to ensuring quality in higher education, the assessment and accreditation by the National Assessment and Accreditation Council (NAAC), an autonomous organization under the UGC, has been made obligatory for all universities and colleges.

Special education

In 1994, about 35,000 children in over 9,000 schools benefited from the scheme for the integrated development of disabled children. A much larger number in fact receive the attention of special teachers and learning materials. The scheme offers complete financial assistance to State governments, Union Territories and voluntary organizations for creating required facilities in schools. The UNICEF-assisted project, Integrated Education for the Disabled (PIED), is designed to intervene similarly. Stressing the need to integrate children who have handicaps into mainstream education, the 1992 POA calls for concerted attempts to ensure that all educational institutions provide for the special needs of the disabled and handicapped. It also recognizes the need for widespread efforts to sensitize administrators, teachers, children and the public in general.

“The coverage under these schemes constitutes less than 12 percent of the corresponding age groups requiring these services. [...] On the whole, educational facilities for the handicapped are extremely insufficient and they have not kept pace with the advances taking place in this sphere” (Bordia, 1995, p. 434).

The 1986 NPE proposed the establishment of special schools which could cater to children with special talents and give them the opportunity to progress at a faster pace, irrespective of their economic constraints. The scheme aims at setting up one such co-educational, residential secondary school in every district of the country. Approximately 340 *Navodaya Vidyalayas* have come into existence and the government plans to open fifty more every year. These schools have a positive bias in favour of girls and currently about 1,200,000 students are enrolled on the basis of merit.



Private education

Information is not available.

Means of instruction, equipment and infrastructure

Textbooks remain the principal instructional material in the classroom. Thus, they assume great importance, especially in contexts where, for most students, they are often the only reading material available. Therefore, efforts have been made to ensure widespread availability of this critical educational input. Given that the Indian education system enrolls more than 100 million students in primary schools alone, it is significant that virtually all primary students have textbooks, with most receiving them in a timely manner, and at fairly affordable prices (the average price of a primary textbook is about Rs. 8 or about US\$ 0.25).

Textbook publishing is almost entirely in the hands of state agencies. The private sector also participates in varying degrees. In most states, it is the SCERT that is responsible for textbook development, with a Textbook Corporation or a Textbook Bureau that actually publishes them. Typically, states publish textbooks for all the subjects, in all the relevant languages. Some states publish hundreds of titles, including books in more than ten languages. It is in the printing and distribution aspects that the private sector is more involved, as in the case of states such as Uttar Pradesh, Maharashtra and Tamil Nadu. Some states, such as Madhya Pradesh, have constituted regional depots and maintain computerized inventory control to ensure efficient distribution of textbooks.

With the textbook development and publishing capabilities in place, attention is now being turned to improvement in the quality of textbooks. The Yash Pal Committee, set up by the Government of India in March 1992, is comprised of experts who held extensive consultations across the country. In its report *Learning Without Burden*, the Committee has recommended to decrease the cognitive load in textbooks and curricula. Extensive studies pertaining to the readability of Indian textbooks have been undertaken by national institutions, such as the NCERT and the Central Institute of Indian Languages (CIIL), and their outcomes are being utilized to improve textbooks' content.

With the introduction of the Minimum Levels of Learning (MLL), the focus has shifted from information-based textbooks to competency-based ones. A number of states are developing new MLL-oriented textbooks and are preparing textbooks that are learner-friendly and promote child-centered, activity-based learning. One significant development is the introduction of trials, whereby experimental textbooks are field-tested before being introduced on a large scale.

Textbooks for higher education are produced almost entirely by the private sector. The universities or institutions concerned specify their curriculum and recommend desirable texts. Indian publishers often receive financial assistance from the National Book Trust (NBT) for the publication of university-level textbooks, in particular for medical textbooks. However, a significant proportion of higher



education textbooks are either imported or are Indian reprints and/or editions of foreign texts.

Under the centrally sponsored scheme of Educational Technology, television sets and radio-cassette players are made available to upper primary and primary schools. So far, 62,000 colour television sets and 0.36 million radio-cassette players have been made available to schools. With a view to introducing computer literacy, the Computer Literacy and Studies in Schools (CLASS) Scheme was introduced in 1984/85. About 4,000 higher secondary schools are involved.

Libraries are available in only one-fourth of primary schools in comparison to more than 90% of secondary and higher secondary schools. Many states implementing basic education projects (e.g. Rajasthan, Uttar Pradesh, Andhra Pradesh, Assam) have developed and disseminated supplementary reading material, in addition to launching projects to initiate classroom libraries. Facilities in private schools are better and teachers have greater access to libraries than in government schools. Effective utilization of teaching and learning resources, however, remains limited to a small number of schools.

Launched in 1987/88, the Operation Blackboard Scheme aims to bring all primary schools to a minimum standard of physical facilities by providing them with: at least two reasonably large all-weather rooms, along with separate toilet facilities for boys and girls; at least two teachers with, as far as possible, one being a woman; essential teaching and learning materials—including blackboards, maps, charts, a small library, toys and games for work experience. Central assistance has been fully provided to all the targeted primary schools and the coverage is now being extended to upper primary schools. Primary schools with enrolment of more than 100 students and two teachers are now being provided with a third teacher.

So far, 530,000 schools have been covered under this scheme. The number of teachers posts sanctioned is 152,000—of which 143,000 posts have been filled—while the target number of classrooms to be constructed was 263,000—of which 172,000 have been constructed. The total expenditure on this scheme was Rs15,152.9 million from 1987 to March 1995, and it reached Rs2,632.6 million during 1995/96.

Recent studies concerning students' learning achievement at the primary level in selected districts (1994) revealed that charts, maps and globes are available in the blocks covered by the Operation Blackboard Scheme. However, the proportion of teachers using these aids was only one-third, or fewer.



Number of educational institutions/schools, 1991 to 2002

Year	Primary	Upper Primary	Secondary/Higher Secondary
1990-91	560,935	151,456	79,796
1995-96	593,410	174,145	99,274
1996-97	603,646	180,293	103,241
1997-98	619,222	185,961	107,140
1998-99*	626,737	190,166	112,438
1999-00	641,695	198,004	116,820
2000-01	638,738	206,269	126,047
2001-02	664,041	219,626	133,492

Source: Department of Secondary and Higher Education, 2004. (*) Provisional.

Adult and non-formal education

A major initiative to expand access to education is to promote distance education. To this end, the Open School system also provides alternative schooling to neo-literates who have acquired functional literacy, so they may continue their education at their own pace. The National Open School (NOS) and the State Open Schools provide alternative means to acquire secondary-level education in a flexible manner.

The Government, in pursuance of its objective of providing school education opportunities to disadvantaged sections through flexible, comparable, open learning and distance education facilities, in 1990 vested the NOS with the authority to examine and certify students up to a pre-degree level. Currently, these schools have an estimated 0.25 million students. There are 485 such schools and accredited institutions offering general education and forty-two for vocational studies. These institutions play a vital role in enabling people in rural areas, the urban poor, women, scheduled castes (SCs) and scheduled tribes (STs), working adults and school drop-outs to avail themselves of flexible schooling that permits them to study at their own pace, time and convenience. The main features of this system of open learning are:

- a three-level curriculum with a learning continuum: preparatory, equivalent to Grade III; primary, equivalent to Grade V; and elementary, equivalent to Grade VIII;
- a variety of courses and options;
- multi-channel delivery.

Despite enormous strides in school education, 28 million out of 153 million children in the age group 5-14 years are still out of school. Of these, 14 million are working children who cannot attend school on a full-time basis. Hence, non-formal education (NFE) is seen as a vital aspect of India's current educational strategy, as it can reach out to working children, school drop-outs, girls and those who cannot attend full-time schools due to several socio-economic factors. Under the NFE programme there are three types of centres:



- co-educational centres, financed by the union government (50%) and state governments (50%);
- girls centres, mainly financed by the union government (90%) and in part by state governments (10%);
- non-formal education centres run by NGOs, entirely financed by the union government.

In addition, a number of innovative experimental projects implemented by various organizations (in particular, NGOs) receive funding from the Ministry of Human Resource Development. Since its inception two decades ago, the NFE programme has consistently grown in size and coverage. In particular, significant expansion of the programme took place during 1990s in terms of number of NFE centres and the number of children enrolled. By 1997, there were 279,000 NFE centres covering about 7 million children in twenty-one states. Of these, 240,747 are run by state governments and 37,808 by more than 500 NGOs. Five states—Uttar Pradesh, Bihar, Andhra Pradesh, Madhya Pradesh and Orissa—account for 81% of NFE centres. The spread of NFE programme is moderate in Rajasthan and Assam. Coverage is very limited in Jammu, Kashmir and north-eastern states (Department of Education, 1999). These centres usually operate for two hours a day, at a time convenient to the learners. Each centre is run by an instructor who takes care of the various groups of learners at various grade levels.

The NFE course is condensed into four semesters (two years in total) and specially developed teaching-learning materials and stationery are provided to children free of cost. Compatibility with the formal school system is ensured through a focus on Minimum Levels of Learning (MLL). There is a provision for testing and certification of children of NFE centres to facilitate their entry into formal schools. Implemented through state governments and voluntary organizations, the NFE programme draws on a high level of community participation and is characterized by flexibility, relevance and a decentralized administrative structure.

Adult education is seen as an imperative for the growth of the individual and the nation. The National Literacy Mission (NLM), set up in 1988 with the goal of helping 80 million persons achieve literacy by 1995, has adopted the Total Literacy Campaign (TLC) as the dominant strategy for achieving its goals. This has resulted in a rich and varied experience that has become an international resource. The Mission was extended to cover 100 million illiterates by 1997, that is, by the end of the Eighth Plan period.

The 1991 Census revealed that the current rate of literacy is 52.2% for the entire country—39.3% for females and 64.1% for males. The Census also showed that, for the first time, the number of literates exceeded the number of illiterates in India and that female literacy had increased at a faster pace (110%) than male literacy (18%) over the period 1981-91. Overall, the literacy rate recorded an increase from about 19% of the population aged 5 and above in 1951, to 52% of the population aged 7 and above in 1991. The rate of female literacy also rose noticeably—from 9% in 1954 (age group 5 years and above) to 40% in 1991 (age group 7 years and above).



The literacy rate among SCs has increased from 25% in 1981 to 38% in 1991. Correspondingly, the literacy rate among STs has increased from 17% in 1981 to 30% in 1991. In spite of these improvements, the levels of literacy among SCs and STs are distinctly lower than that of the population as a whole, and gender disparity is conspicuous among SCs and STs. The female literacy rate varies from 8% in Barmer district of Rajasthan to 94% in the Kottayam district of Kerala.

Recent estimates indicate a significant rise in the literacy level. According to the National Sample Survey estimates, the literacy rate has increased by about twelve percentage points in a period of six years, from 52.2% in 1991 to 64.2% in 1997 (Department of Education, 1999).

The NLM represents a national and political commitment to a systematically planned approach to adult education, which envisages a full coverage of the adult population. Under the Mission, TLCs have been adopted as the major programme for universalizing adult literacy. These TLCs are now operational in 394 districts throughout the country, out of which 130 districts have entered the post-literacy phase. By March 1996, 86 million learners had been enrolled in the programme and 53.2 million persons were reported to have acquired literacy skills.

As many as 146 TLC projects, including 38 approved in 1994/95, have so far been sanctioned involving 141 voluntary agencies to cover around two million persons. Approximately 22,000 post-literacy centres have been established to provide access to appropriate materials, including books, periodicals and newspapers. A programme for remedial teaching, continued education and application of basic educational skills forms the core strategy of post-literacy efforts.

It has been observed that wherever a TLC is in operation, there is a greater demand for education of children in the age group 5-14 years. Though children of this age group are not covered by TLC, many children attend such classes along with their parents. Therefore, some states have opened NFE centres for children successfully completing the first phase of TLC, so that they could achieve minimum levels of learning and enter the formal school system. Close linkages between NFE, TLC, open schools and formal schools are being strengthened.

During the Eighth Five-year Plan (1992-97), the major thrust was on encouraging enrolment in Open University and distance education institutions. The Indira Gandhi National Open University (IGNOU) is the major Open University in the country and offers innovative and flexible university education targeted specifically at disadvantaged groups, women and people living in remote areas. In 1993/94, the university's total enrolment was approximately 230,000.

The Census 2001 report indicates that India has made significant progress in the field of literacy since 1991. The overall literacy rate as per the 2001 census is 64.8%. The female literacy increased by 14.4 percentage points to 53.7% in 2001. Out of 865 million people in the 7+ age group, 561 million are now literate, of which 224 million are women. The most significant development, however, has been the marked improvement in the literacy levels of the disadvantaged sections of the society like the SCs and the STs. The literacy rate of the SCs has increased from 10.3% in 1961 to 54.7% in 2001. The increase of the literacy rate of SC males was from 16.9% in 1961



to 66.6% in 2001 and for females it increased from 3.3% in 1961 to 41.9% in 2001. In respect of the STs, the literacy rate increased from 8.5% in 1961 to 47.1% in 2001. The increase in literacy rates for males was from 13.8% in 1961 to 59.2% in 2001 and for females it increased from 3.2% in 1961 to 34.8% in 2001.

As per the Census 2001, 45 districts in the country have a female literacy rate below 30%. Hence, it was decided to target these 45 low female literacy districts for improvement in female literacy. As most of these districts are concentrated in the States of Uttar Pradesh, Bihar, Orissa and Jharkhand, special innovative programmes have been taken up in these districts for promoting female literacy. (Department of Secondary and Higher Education, 2004).

Teaching staff

The professional skills of teachers in all categories of educational institutions—except the unrecognized ones—are determined by the regulations of the State Education Departments and examining bodies. The level of professional skill required is fixed in terms of academic and professional qualifications which are taken into consideration for granting recognition and affiliation. Therefore, institutions of various types set up in the public and private sectors adhere to the norms prescribed by the states.

Pre-school teacher education prepares teachers for teaching pre-school classes (i.e. nursery and kindergarten). The minimum qualification for admission into the pre-school teacher education programme is a secondary or a higher secondary examination (i.e. ten or twelve years of education). The duration of the course is one to two years. Pre-school teacher training institutions are mostly unaided, private institutions. In the case of courses for nursery and primary teachers, State Education Departments prescribe a minimum percentage of marks in the qualifying examination as a requirement for admission. Some universities have also fixed a minimum percentage of marks in the B.A./B.Sc. examinations for admission to the Bachelor of Education (B.Ed.) course.

Elementary teacher education trains teachers mainly to teach primary classes (Grades I-V). The minimum qualification for admission into the elementary teacher education programme is either ten or twelve years of education. Recently, most states have prescribed twelve years of education as the minimum requirement, though some of them still maintain the entry qualification of having passed the secondary school examination. The duration of the programme in most states is two years, while in others it is one year. Elementary teacher training institutions are of three types: government, privately aided and privately unaided. Recently, District Institutes of Education and Training (DIET) have been set up in all the states. An important feature is that, besides providing pre-service teacher education, DIETs also provide in-service education to teachers. In 1996, the number of such institutes was 424 (around 500 in 2004). They are fully financed by the central government. On the other hand, the total number of elementary teachers' training institutions is 1,179.

Secondary teacher education institutes prepare teachers to teach classes at the upper primary and secondary levels (Grades VI-XII). The minimum qualification required for admission into the secondary teacher education programme is graduation



in science, social sciences, humanities, commerce, agriculture, etc. A large number of post-graduates also seek admission to these training institutions. Secondary teacher education is offered by secondary colleges of education which are affiliated to different universities. Some university departments also offer a secondary teacher education programme, and the minimum qualification for admission to this programme is graduation. These institutes are of three types: government, privately aided and privately unaided. In 1996, there were 586 secondary colleges of education.

Four Regional Institutes of Education (RIE), constituent units of the NCERT, offer a four-year integrated course for secondary teachers. The minimum qualification for admission into this programme is higher secondary, i.e. twelve years of education. Recently, the University of Delhi also started a four-year integrated programme in elementary education leading to the Bachelor's degree in Elementary Education.

Teacher education institutions follow the quota policy of the Government of India with regard to the disadvantaged sections of society, such as SCs, STs and Other Backward Classes (OBCs). At present, 15% of posts in education departments and teacher education institutions are reserved for candidates belonging to the SCs. Likewise, 7.5% of posts are reserved for candidates belonging to STs. Recently, 27% of posts in all services including teaching have been reserved for candidates belonging to OBCs.

Teachers for special schools (mostly single disability schools or those catering to children with multiple disabilities) are trained under the guidance of the National Institutes for the Handicapped, as well as by some non-governmental organizations with courses accredited by the Rehabilitation Council of India. A number of universities have also started offering B.Ed. and M.Ed. courses in special education.

In order to be recruited as a lecturer in a university or college the following qualifications are required: (a) qualifying in the National Test conducted by the University Grants Commission (UGC) or any agency approved by it; and (b) a master's degree with at least 55% in marks or the equivalent grade and a good academic record. At the higher education level, forty-five Academic Staff Colleges are involved in teacher training. University departments also organize orientation programmes and refresher courses.

Pre-service training of teachers for the different levels of education

Level of education	Type of training	Admission requirements	Duration of the course	Diploma/ degree awarded
Pre-primary education	Private Unaided	12 years of schooling	One to two years	Certificate (pre-school education)
Primary education	Government Private Aided Private Unaided	10-12 years of schooling	One to two years	Certificate/diploma in elementary education
Secondary Education	Government Private Aided	Private Unaided Graduation	One year	Bachelor of education



Primary education teachers, especially in Grades I-III, are expected to teach mainly literacy, numeracy and life skills. Besides these, the teacher is required to have knowledge of the process of a child's growth, development and learning. At the secondary stage, a teacher is expected to be familiar with adolescents' psychology and social processes, in addition to knowledge of school subjects. The curriculum for primary teacher education is developed by state governments/state boards of teacher education and is reviewed from time to time. The curriculum for secondary teacher education developed by universities is also reviewed and updated periodically, in light of changes in the school curriculum, advances in pedagogical science, societal demands, technological advancements and changes in the socio-economic structures of the country.

The NCERT has developed model curricula for elementary and secondary teacher education. State governments and universities may adopt or adapt them in their teacher education programmes. The NCERT revises these curricula from time to time. The 1991 curriculum for both levels had the following components:

Foundation courses (20%):

- Education in emerging India;
- Educational psychology.

Stage of relevant specialization (30%):

- Elementary education and teacher's functions;
- Language teaching: (teaching of mother tongue; teaching of English language);
- Teaching of mathematics;
- Teaching of environmental studies (science);
- Teaching of environmental studies (social studies);
- Teaching of health and physical education;
- Teaching of art;
- Teaching of work experience.

Additional specialization (10%):

- Science teaching/social studies teaching/pre-school education;
- Elective (one): adult education; non-formal education; social education; tribal education; multigrade teaching; population education; special education; educational technology.

Practicum (40%):

- Practical Work;
- Internship in teaching (in primary and upper primary classes).

The pedagogical component represents 80% of the curriculum, which lays a great deal of emphasis on teaching through child-centred, activity-based and co-operative learning approaches. Enriching the trainee's knowledge of the content of school subjects is also an important objective of the curriculum. The components of the secondary teacher education curriculum are the same. There are, however, variations depending on the stage for which the teachers are prepared.

States follow different recruitment procedures. In some states, the recruitment is made on the basis of the candidate's performance in a competitive examination. In some other states, recruitment is made on the basis of the academic and professional background of the candidate. The merit of each candidate is determined on the basis of his/her score in the examinations he/she has passed in addition to previous teaching experience, if any. In some other states, a combination of the two procedures is adopted—i.e. performance in a competitive examination and merit determined on the basis of academic credentials. The performance of candidates in an oral interview examination is also considered.

The teaching profession has the largest number of members compared to other professions in India. In 1994/95, about 4.3 million teachers were working at the different levels of the education system. Of these, 2.7 million (66%) were working in primary and upper primary schools (Grades I-VIII) and 2,018,050 teachers were in government schools. Of the 1.5 million (or 34%) teachers in secondary and higher secondary schools (Grades IX-XII), 609,121 were in government schools. During the period 1990-95, the total amount of teachers at the different levels of education increased from 4.0 million to nearly 4.3 million, marking an increase of 6.5%. Gender analysis of the teaching profession indicates that there are three times more males than females. Although the number of female teachers has increased, their share in the total teaching force is very small—particularly in rural, remote and educationally backward areas. The number of women teachers in schools increased from 1,141,015 in 1987/88 to 1,343,667 in 1993/94.

Distribution of teachers by educational level, 1991 to 2001 (in thousands)

Year	Primary			Upper Primary			High/Higher Secondary		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1991	1152	492	1644	714	365	1079	931	450	1381
1992	1137	514	1651	709	376	1085	941	454	1395
1993	1110	513	1623	723	406	1124	953	492	1445
1994	1157	531	1688	746	410	1156	986	450	1481
1995	1176	558	1734	758	424	1182	1030	519	1549
1996	1190	566	1756	769	431	1200	1069	544	1613
1997	1226	597	1823	640	597	1237	1086	558	1644
1998*	1246	658	1904	814	464	1278	1168	579	1747
1999*	1236	683	1919	829	469	1298	1142	578	1720



2000*	1221	675	1896	820	506	1326	1184	577	1761
2001*	1213	715	1928	921	547	1468	1157	620	1777

Source: Department of Secondary and Higher Education, 2004. (*) Provisional.

The Fifth All India Educational Survey (1986) indicated that about 87% of primary and upper primary teachers were trained—i.e., they have acquired a primary or elementary teacher training certificate after a one- or two-year course or a bachelor's degree in education. There were, however, significant regional variations. The percentage of trained teachers at the primary and upper primary levels was more than 99% in the states of Haryana, Tamil Nadu, Chandigarh and Delhi. It was less than 50% in Arunachal Pradesh, Meghalaya, Sikkim, Nagaland and Tripura.

Of the total number of teachers working at the secondary and higher secondary levels, approximately 90% are trained, i.e. they have a bachelor's degree in education. The percentage of trained teachers at both the levels is the highest in Chandigarh (99.8% and 100%, respectively) and the lowest in Assam (30.7% and 22.5%, respectively). The number of male untrained teachers is greater than that of female teachers at all levels in the country.

The salaries of teachers are established separately by each state and determined on the basis of academic qualifications, training and experience. Most states follow the national guidelines for salary scales and have, for the most part, established a parity of salary scales between government and privately aided schools. In addition to the salary, a price-index linked "dearness allowance" is given to all teachers. Various other allowances are also granted to all categories of teachers to compensate them for the special stress under which they work—i.e. city compensatory allowance; house rent allowance; hill allowance; winter allowance; backward, remote and tribal area allowance; island allowance; etc. These allowances differ from state to state and, within each state, by different education stages. Entry-level salaries for trained primary teachers are only slightly higher than those for untrained teachers. The maximum salary for a trained teacher is three to four times his/her entry salary, and it is usually reached after sixteen to twenty years of service in most states.

In addition, most states provide a fixed medical allowance or a reimbursement for medical expenses, advances for house building and purchase of conveyance, and free education for the children of teachers, as well as retirement benefits, gratuity and group insurance. In the majority of states, there is also an incentive provision for some special categories of teachers. For instance, in Assam, Bihar, Gujarat, Maharashtra and Tamil Nadu, a certain percentage of elementary (primary and upper primary) female teachers working in rural and remote areas are given residential accommodation. In some states, physically handicapped teachers are offered conveyance allowance.

A sample study carried out in 1990 determined that 42% of primary school teachers teach two classes or more. About 50% of upper primary/middle school teachers report that they teach four or more subjects. More than 60% of teachers teach about 50 students on an average; 34% teach between 51 and 100 students; and about 5% more than 100 students. This means that, on an average, about 39% of teachers



teach more than 50 students at the primary school level. On the other hand, at the secondary and higher secondary levels the teacher-pupil ratio was 1:16 in 1994/95.

The above-mentioned study further found that about one-fourth of primary school teachers teach 31-35 class periods and a similar number teach more than 36 class periods a week. In middle schools, nearly half of the teachers teach 31-40 class periods a week, whereas 12% teach more than 40 class periods. Besides teaching, elementary and secondary school teachers have to spend a fair amount of time on co-curricular activities, especially in private schools. In addition, teachers have to organize relief work, collect census data, participate in family planning campaigns and population control drives, facilitate the smooth conduct of elections, etc.

In most states, the promotion of teachers in government primary and secondary schools is either on the basis of seniority or seniority-cum-merit. Acquiring higher qualifications also helps in promotion, provided that a departmental vacancy exists which suits the qualification of the candidate. In the case of teachers working in private and aided schools, the chances of promotion are rare because in privately managed schools there is a shortage of senior positions and only one or two persons have the opportunity to reach the level of head teacher. In secondary and higher secondary schools, a Trained Graduate Teacher (TGT) may become a Postgraduate Teacher (POT) if he/she obtains some higher qualifications—i.e. a master's degree in any school subject, depending upon the availability of a vacancy in the school. Teachers in government schools can aspire for higher administrative posts in the Education Department of the Government of India. Though a certain percentage of posts in the higher categories of education are reserved for teachers, avenues of promotion in the teaching profession are comparatively more limited than in other sectors such as industry, commerce and business.

Teachers are autonomous in the management of their own classes. They are encouraged to undertake experimentation and action research and are provided incentives, both at the state and national level. Every year, the NCERT conducts an All India Competition of Innovations and Experiments undertaken by school teachers and teacher educators. Teachers are invited to submit papers on the basis of the work done by them in their schools. As many as fifty primary school teachers and twenty secondary school teachers are given national awards. Similar awards are also available for elementary and secondary teacher trainers.

In the management of educational institutions, teachers may enjoy partnership in decision-making. The School Education Acts in some states have a provision for the membership of teacher representatives on the managing committee of the institution. For example, in the Delhi School Education Act and Rules (1973), teachers' representatives have to be part of the managing committee of every recognized school. To ensure parental support, many schools have either Parent-Teacher Associations or Mother-Teacher Associations. Parents are invited periodically to the school to discuss the performance of their children. In some schools—particularly private schools—parents support the teachers in the organization of co-curricular activities, art education activities and work activities by providing the materials required.



In every state, teaching and non-teaching staff have their unions/associations. These organizations have powers of collective bargaining to secure better service conditions for their members. State-level organizations have joined together to form federations. These federations negotiate with the central government to secure better pay scales and other service conditions. The central question under Indian law is whether a teacher can be equated to a “workman,” the latter being defined in the Industrial Disputes Act of 1947. In this respect, various suggestions to amend the Industrial Disputes Act and initiate reforms to grant teachers the same protection as other workers are being considered by the Ministry of Labour.

In-service training of teachers is offered at the central, state, regional, district and sub-district levels. At the national level, in-service training programmes are developed by the following institutions: the NCERT; the NIEPA; the Central Institute of English and Foreign Languages (CIEFL), Hyderabad; and the Central Institute of Indian Languages (CIIL), Mysore. At the regional level, there are Regional Institutes of Education located in the four regions of the country. One Regional Institute has been set up recently at Shillong for the states in the north-eastern part of India.

At the state level, programmes are mainly offered by the State Council of Educational Research and Training (SCERT), the State Institute of Education, the State Institute of Science Education, the Institute of Advanced Study in Education, Colleges of Teacher Education and State Institutes of Educational Technology. At the district level, there are District Institutes of Education and Training and In-service Training Institutes.

In the context of the 1986 NPE, the Government of India formulated a national scheme for the in-service training of teachers (primary and secondary school teachers). The objectives of this scheme, known as the Programme of Mass Orientation of School Teachers (PMOST), were to sensitize teachers in the emerging concerns in education (UEE), the use of a learner-centred approach, as well as action research and enrichment of their knowledge in curricular areas and other thrust areas specified in the NPE. The duration of training was ten days. The programme was in operation from 1986 to 1990 and about 1.8 million teachers were covered by it. The training programme was strengthened by media support. Films relating to various modules constituting the training print package were telecast on the national network for the benefit of teachers in different parts of the country. Each viewing session was preceded and followed by discussion. The programme was implemented by the NCERT in collaboration with the SCERTs in different states.

After the PMOST, another programme known as the Special Orientation Programme for Primary School Teachers (SOPT) was launched in 1993/94 to improve the quality of primary/elementary education, as part of the strategy to achieve UEE. The main focus of this programme is on implementing the MLLs identified for the primary stage, training in the use of Operation Blackboard materials provided to primary school teachers, and encouraging teachers to adopt a child-centred approach. It is envisaged to cover 450,000 teachers every year. During the past few years, these two schemes of mass orientation have reached more than two million teachers. As with the PMOST, this programme is also strengthened by media support. Films on various themes covering the course design are shown to teachers during training programmes.



Special efforts are being made by the National Council for Teacher Education (NCTE) to train untrained in-service teachers. To ensure relevance and responsiveness of the teacher education system to the demand of teacher education on a continuing basis, the teacher education curriculum is being updated by the NCTE. A committee of experts has been set up to revise the existing norms and standards for the Bachelor of Education (B.Ed.) programme, to make it more relevant to the changed environment. The National Assessment and Accreditation Council (NAAC) and NCTE have entered into an agreement for executing the process of assessment and accreditation of all teacher education institutions under the jurisdiction of NCTE. This will ensure continuous improvement in quality and pursuit of excellence in the profession.

The NCERT is developing self-learning materials for teacher educators, keeping in view the emerging issues and concerns. A school-based in-service training programme is also being planned in order to develop a school-based training methodology. A revised teacher education scheme has been framed in the Tenth Five-year Plan for speedy completion of 'sanctioned' training institutes and for improvement of quality of pre-service and in-service training programmes. At the national level, the support of apex institutions like the NCTE, the National Institute for Education, Planning and Administration (NIEPA), the NCERT, Universities etc. is being enlisted to improve the quality of the teachers. The NCERT has recently formulated the Teacher Education Curriculum Framework. Under the joint initiative of the Ministry of Human Resource Development, the NCTE and the Indira Gandhi National Open University (IGNOU), a six-month programme "certificate in primary education" has been developed by IGNOU and recognized by NCTE, for the training of the untrained in-service teachers of NE states in distance mode. Several states have already benefited from this programme. (Department of Secondary and Higher Education, 2004).

Educational research and information

A large number of institutions across the country are involved in promoting and conducting educational research. During the last forty years, more than 4,000 research studies in the area of education have been completed. The bulk of these studies have been carried out at university departments. A majority of them are doctoral research studies, conducted by scholars who receive fellowships from the University Grants Commission (UGC), the Indian Council for Social Science Research and other national bodies. A major limitation of these studies is their relatively narrow conception and applicability, as they are carried out by individual scholars working under time and resource constraints.

The UGC promotes educational research by providing funds to universities and colleges. The Commission has been operating various schemes, such as centres of advanced studies, departments of special assistance and departmental research support. Under these schemes, selected university departments (which have capabilities in terms of qualified manpower) are encouraged to pursue research vigorously; for this purpose, the support is extended by way of providing equipment, consumable items, contingent expenditure, etc.



The National Council of Educational Research and Training promotes research on different aspects of education. The research activities of the Council are monitored by a specially constituted committee—the Educational Research and Innovations Committee (ERIC). The ERIC helps in identifying priority research areas and sanctions funds for research projects undertaken by the departments of the National Council.

To help develop a Management Information System at district, state and national levels, the services of the National Information Centre (NIC) have been used. The NIC has established a computer system for all state and district headquarters, linked to its satellite-based computer communication network—NICNET. This system will provide an invaluable database for education which will feed into the Management Information System. NIC's facilities were employed during the Sixth All India Educational Survey which, among other things, assessed availability of schooling facilities at each level or stage of education.

References

Bordia, A. India. In: T.N. Postlethwaite, ed. *International encyclopaedia of national systems of education*, p. 430-39. Second edition, Oxford/New York/Tokyo, Elsevier Science, 1995.

Department of Education, Ministry of Human Resource Development. *Development of education in India 1993-94*. International Conference on Education, 44th session, Geneva, 1994.

Department of Education, Ministry of Human Resource Development. *Development of education in India, 1995-96, with special reference to teacher education*. International Conference on Education, 45th session, Geneva, 1996.

Department of Education, Ministry of Human Resource Development. *Education For All 2000 Assessment: country report of India*. (Under the co-ordination of A. Singh). New Delhi, 1999.

Department of Secondary and Higher Education, Ministry of Human Resource Development. *Development of education 1999-2000. Country report of India*. International Conference on Education, 46th session, Geneva, 2001.

Department of Secondary and Higher Education, Ministry of Human Resource Development. *Education in the new century. National report of India*. International Conference on Education, 47th session, Geneva, 2004.

National Council of Educational Research and Training (NCERT). *National curriculum for primary and secondary education. A framework*. New Delhi, December 1985.

National Council of Educational Research and Training (NCERT). *National curriculum framework for school education*. New Delhi, November 2000.



National Council of Educational Research and Training (NCERT). *National curriculum framework 2005*. New Delhi, 2005.

National Institute of Educational Planning and Administration. Department of Education, Ministry of Human Resource Development. *Development of education in India 1990-92*. International Conference on Education, 43rd session, Geneva, 1992.

Web resources

All India Council for Technical Education: <http://www.aicte.ernet.in/> [In English. Last checked: October 2007.]

Central Board of Secondary Education: <http://www.cbse.nic.in/> [In English. Last checked: October 2007.]

Central Institute of Indian Languages: <http://www.ciil.org/> [In English. Last checked: October 2007.]

Department of Education, Ministry of Human Resource Development: <http://www.education.nic.in/> [In English. Some information in Hindi. October 2007.]

National Council of Educational Research and Training: <http://www.ncert.nic.in/> [In English. Last checked: October 2007.]

National Council for Teacher Education: <http://www.ncte-in.org/> [In English. Last checked: October 2007.]

National Literacy Mission: <http://www.nlm.nic.in/> [In English. Last checked: November 2006.]

For updated links, consult the Web page of the International Bureau of Education of UNESCO: <http://www.ibe.unesco.org/links.htm>