

SITUATIONAL ANALYSIS  
OF  
GIRLS' EDUCATION IN INDIA

*Prepared by:*

Andrea Rugh

Creative Associates International, Inc.  
5301 Wisconsin Avenue, NW, Suite 700  
Washington, DC 20015

*Prepared for:*

U.S. Agency for International Development  
New Delhi, India

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## EXECUTIVE SUMMARY

### BACKGROUND

This paper reports on the situation of education for girls in four low female literacy states of India, Bihar, Madhya Pradesh, Rajasthan, and Uttar Pradesh, and two high female literacy states, Kerala and Tamil Nadu. The purpose of the study was to:

- o summarize the present status of girls' education
- o describe current efforts to improve education in low female literacy states
- o analyze strengths and weaknesses in the current situation of elementary education
- o identify possible areas of intervention to improve the situation of girls' education

The study was conducted in the period between October 3 and November 14, 1994 by reviewing the available literature on India, visiting five of the study states, seeing programs in the field and talking with individuals directly and indirectly involved in girls' education. The study was limited to the pre-primary and elementary stages (Classes 1 through 8) in both formal and nonformal programs. The study period was too short for a definitive study of girls' education and therefore the conclusions should be taken as tentative.

The situation of girls' education is analyzed in terms of India's goals for the Universalization of Elementary Education (UEE) which include by the year 2000: enrolling all children to the age of 14, retention through Class 8, and achievement of Minimum Levels of Learning (MLL).

### FINDINGS

#### Status of girls' education in the low literacy states

There is more variation in the status of girls' education between districts within each of the states than between the low literacy states themselves. In all the states the most disadvantaged groups are girls in rural areas having scheduled caste or tribal status, but there are also major variations among these groups.

**Access.** Official figures state that gross enrollment rates of 6-11 year olds has reached 85 percent and of 11-14 year olds 50 percent (these figures include 25 to 30 percent over- and under-age children). At present girls make up 45 percent of the total

enrollment in India in lower primary and 42 percent of the enrollment in upper primary. Though these proportions are high overall, the gender gap is still considerable in the study states and in selected districts of other states.

Officials say that 95 percent of the population is within 1 kilometer of a lower primary school and 84 percent of the population is within 3 kilometers of an upper primary school. Nonformal education is expanding quickly in areas where no opportunities exist. Trends in other developing countries suggest that girls' participation will increase in a situation where there are expanding opportunities with no other inducements. Field observers in the low literacy states report that girls are enrolling in primary school in ever-increasing numbers. Most feel it is only a matter of time until schooling becomes a norm for the majority of children. The exceptions are those whose remote residence makes it difficult to provide education services, or whose extreme poverty make them unable to attend school. What also prevents some parents from enrolling children, according to reports, is the lack of tangible benefits they see in education when measured against the opportunity and other costs of sending children to school. A major part of the problem is the low quality of the program, especially in Class 1. Field workers say that when parents decide to send girls to school, most are able to make adjustments in household work so they can attend. This choice is easier when schooling is close to the girls' home, takes place in shortened time periods and is scheduled flexibly.

**Retention.** A greater problem than enrollment to many observers is keeping children in school long enough to acquire literacy and numeracy skills. By the end of lower primary, 50 percent of the girls have dropped out, and by the end of upper primary 68 percent have dropped out compared to 47 percent and 59 percent for boys. The problem is aggravated by the late entry of girls, poor attendance which is estimated in some studies to be no greater than 50 percent, poor performance, and possibly repetition. Sex-segregated work patterns are such that in an emergency girls will necessarily be called upon to fill in for ailing or overworked females in the household.

For girls the biggest dropout occurs between the time they enroll in Class 1 and before they reach Class 2, and when they reach puberty at Class 4 or 5. Anecdotal evidence suggests that the early dropout is due to large extent to the unattractive program that is offered. (As one field worker noted, "We don't know how to teach Class 1 yet. When children want to go to school they can be very forceful!"). Since girls often enter school late when they are 8 or 9, dropout due to puberty can vary from Class 3 to Class 5. Girls drop out at this time for several reasons: because they are considered sexually vulnerable, because most schools do not have toilet facilities, and because menstrual management does not allow prolonged periods away from home.

Another important factor is probably the poor academic performance of girls which preliminary analyses of DPEP studies are showing is significantly poorer than boys' academic performance. The reason for the poor performance is not yet clear, but it may relate to girls' marginalization in classes made up of a majority of boys. It may be possible to increase the retention of girl students with better quality early primary programs, with toilet facilities in school, with more attention to why their performance is poorer than boys, and with programs that are scheduled more flexibly and condensed in time duration. From Class 6 on there are also likely to be major problems with access to educational opportunities because so few schools exist at this level.

**Achievement.** There is no point in enrolling girls or keeping them in school if the program is poor. Despite the poor quality of Class 1 teaching which was evident in all the schools that were visited, even when Class 1 teachers had received special training, most children who reached Class 3 were beginning to read reasonably well and by Class 5 they could read quite well. Most children therefore probably acquire the mechanical ability to read and write if they complete Class 5. (NFE officials say that dropouts retain very few of these skills, probably because they were poor performers while still in school). However, as the DPEP achievement tests are showing, children are acquiring very few other competencies expected of the lower primary stage: comprehension, understanding of scientific concepts, basic problem solving and other higher order thinking skills. As noted above, girls are showing lower achievement than boys. Moreover, girls' enrollment, attendance, and retention may depend to greater degree upon the quality of the program than that of boys who may be sent to school even when quality is poor because parents anticipate employment benefits from their schooling.

Quality depends on a number of factors coming together in an appropriate way so that beneficial learning takes place. At present because so much depends on teachers' capabilities and motivation, the quality of the program varies significantly from school to school. Training programs usually expect teachers to convert what is learned into the realities of the classroom. The majority of teachers teach multi-grades and little support is offered the teacher to cope with these types of classes. Improving the quality of schooling programs is perhaps the most difficult task these low literacy states face.

#### **Efforts to improve primary education in low literacy states**

**Similarities.** The efforts underway in the four low literacy states to improve the condition of primary education are more similar than different. Each of the states coordinates its reform activities under a single organization: in Madhya Pradesh under the supervision of the Rajiv Gandhi society, in Rajasthan under Lok Jumbish, in Bihar under the Bihar Education Project and in Uttar

Pradesh under the UP Education for All Project. Their funding modalities usually consist of shares contributed by a donor agency or agencies, the GOI and the state government.

Their program designs based on national UEE objectives of elementary access, retention and achievement with a strong emphasis on girls' participation are also similar. The similarities result from at least three sources: the mobilizing role of the center in initiating policy frameworks and reform movements in education and gender equalization; the willingness of outside donors to contribute to the costs of reform; and the solid base of experience that semi-autonomous and autonomous bodies have developed through efforts to improve the conditions of education over the last several decades.

They approach UEE objectives with decentralized decision-making, monitoring and planning through the VECs, construction and repair of schools, the up-grading of facilities such as providing toilets and water, and the provision of NFE centers in areas which are insufficiently served by schooling opportunities. They provide incentives in the form of books, supplies, uniforms, and in some areas, mid-day meals and stipends. They approach quality through organizing their efforts around MLL with special training for teachers and the development of new textbooks and assessment instruments. They are restructuring training around DIETs and strengthening inservice training.

The largest initiative, now underway in selected districts of 8 states (including 19 districts in Madhya Pradesh), is the District Primary Education Program (DPEP). The innovative aspect of this program is the effort to decentralize decision-making and monitoring of schooling to Village Education Committees (VEC) and Panchayati Raj councils. Gender is strongly emphasized in the program design. DPEP is modelled on the experiences of its predecessors, including Bihar Education Project and Lok Jumbish in Rajasthan. Under the supervision of the Rajiv Gandhi society, Madhya Pradesh is beginning to implement a DPEP program. As was true for all the initial DPEP states, it started its program with a series of studies (including a gender study) to find out about conditions existing in the state.

**Differences.** Much of the difference between states is in the detail, sequence and emphases of implementation. For example, as a result of previous UNICEF funding, Madhya Pradesh is expanding efforts in "Teacher Empowerment Training" and to do so has built up an extensive set of District Institutes of Elementary Training (DIETs) and Block Resource Centers (BRCs). Madhya Pradesh is also strengthening the ECE component by offering pre-school options to its districts. Rajasthan has developed textbooks up to Class 3, some innovative school designs that do away with the need for expensive boundary walls and are adapted to local climate conditions, and an extensive administrative and management

infrastructure under the supervision of a number of NGOs. Bihar has been converting its old Elementary Teacher Training Institutes into inservice DIETs and concentrating on preparing teachers to teach MLL. The State has an exemplary Mahila Samakhya Organization where, among other community activities, village women monitor schools, ensure that girls attend, and start their own nonformal programs. BEP also solicits ideas for micro-projects related to education reform from individuals and NGOs. Uttar Pradesh is operationalizing the idea of "school complexes", a cluster of schools around a "model" school as a way to up-grade instruction, has an award system for outstanding VECs, and is experimenting with a work program for upper primary girls to see if they can earn some income while in school and continue after they graduate.

The two comparison high literacy states of Tamil Nadu and Kerala probably do not have much in the way of program activities upon which to model reforms in the low literacy states. Their different histories and economies, and longer experiences with education, including early missionary efforts, make their conditions quite different from the low literacy states. One factor however which may be important in Kerala, and to lesser degree in Tamil Nadu, is the large ratio of non-government managed schools which may encourage higher quality schooling. Achievement tests in the schools of these states, sponsored under DPEP, however, suggest that the children are still not learning as much as they should.

#### **The strengths and weaknesses in the current situation**

##### **Strengths**

Program designs in the four states appear to be basically strong and comprehensive. The difficulty will come in implementation but it is too soon to know yet how it will work out.

**Commitment.** There is strong commitment for girls' education at national, state, and district levels, but varies at local levels

**Policy.** A comprehensive policy framework exists for targeting the education of girls and scheduled groups in the National Education Policy (NEP). The Program of Action (POA) provides an equally strong mandate for implementation .

**Resources.** Resources seem readily available for non-recurrent costs of reform in primary education. However, recurrent budgets appear to be insufficient to cope with the large expansion required in lower and upper primary if UEE is to be achieved.

**Leadership.** Autonomous and semi-autonomous bodies are available to provide leadership for reforms and to energize other agencies to provide quality inputs for primary education.

**Technical capacity.** Technical capacity exists for most aspects of

the education sector in a number of talented national and state level educators from both public and private sectors.

**Education coverage.** The stress on enrollment has paid off with good lower primary coverage through formal schools and nonformal education centers in most areas.

**Infrastructure.** Considerable and extensive infrastructure in the form of institutions and staff exists to carry out reforms in training, materials development, supervision and monitoring.

**Decentralization.** Though in their infancy, efforts to decentralize control of primary education to village, block and district levels seem exactly what is needed. The difficulty will be in adjusting the right mix of local responsibility and autonomy with standards that ensure quality results.

**Coordination of effort.** The coordination of education efforts under DPEP, Lok Jumbish and the Bihar Education Project should make it easier in each of these states to plan, bring to scale and achieve results efficiently and effectively.

#### **Weaknesses**

In addition to these important strengths, there are important weaknesses. Some are beginning to be addressed by the new reform programs but as yet have not become apparent in the system.

**An unwieldy education bureaucracy.** The education system has difficulty providing efficient, effective programs because it is overwhelmed by bureaucratic rules and procedures, burdened by paperwork, and staffed with employees who have little incentive to take initiatives. Reform efforts are organized through semi-autonomous or private bodies to by-pass this stagnating situation. In the long run this approach avoids the main problem which is inefficiency in the main education provider. As yet this problem is not being addressed by any of the reform efforts.

**A late start in addressing questions of quality.** The past emphasis on enrollments and neglect of quality has resulted in a badly deteriorated education program. The problem may be compounded in nonformal programs where the course is condensed and the teacher may be less capable. While discussions of quality issues is sophisticated at the center, they are less so in each successively lower level of the system. The greatest gap is a weak sense of "system" including such elements as a) the lack of emphasis on outputs like student learning and more emphasis on intermediary inputs such as teacher attendance and motivation; b) a failure to lodge responsibility for results in appropriate parts of the hierarchy; c) an absence of structured linkages among educational components such as curriculum and training, or between related programs such as ICDS and primary schooling; and d) the absence of

institutionalized mechanisms for feedback and evaluation that automatically lead to reforms. MLL, as a clear statement of learning objectives, begins to address some of these issues but not all of them.

**Remaining rigidities in the way education is viewed by bureaucrats.** Many reforms require a flexible approach to address the special needs of beneficiaries. Formal education need not await a building; training should not be oriented only to single class instruction; instruction can take many forms including some elements in traditional approaches; schooling needs to be flexibly timed; delivery systems may have to vary; more schooling may need to be lodged under vested-interest management. Decentralized decision-making has the potential to address some of these problems. NFE also appears flexible enough to resolve some school-going problems of girls.

**Not realizing the potential of the ICDS pre-primary program.** Other countries begin learning activities at the age of 5. Since girls in the low literacy states will probably continue to drop out before the end of primary, an added year of appropriate learning at the pre-primary level can give them more solid basic skills. ICDS pre-primary learning programs need to be strengthened and stronger links need to be forged with primary programs to ensure the enrollment of girls.

**Neglect of the important upper primary program.** Education opportunities are much fewer for upper primary students. If schools can not be provided on a large scale for this stage then programs should be extended through mobile teachers, open schooling, or other flexible delivery systems. Thought needs to be given to such accessibility questions as distance, safety, and the cultural acceptability of upper primary schooling for girls.

#### **Options for interventions in the area of girls' education**

The efforts now being mounted in the four states have considerable potential to resolve many weaknesses of the schooling system outlined above. All the projects and programs emphasize the enrollment and retention of girls, and all promote MLL as a way of improving quality. The state designs appear strong even though it is too early to predict whether it is possible to implement such ambitious plans which depend upon a major mobilization and coordination of resources and a revolution in the way decision-making takes place.

At this time, funding for the development costs of reforms appears adequate in all the states. The situation is in such flux, however, that what is true today may not be true tomorrow. State governments will eventually face funding problems in capital and recurrent costs for system expansion to meet UEE goals, an area of financing which is usually low on the priority list of donors.

Funding, if it becomes a viable option, should necessarily be in a program mode because of the way DPEP is organized and because it is the most efficient way for the supervising NGOs to address education problems comprehensively, and according to their own realities.

Beyond what is presently being implemented, and some systemic weaknesses, the enrollment, retention and achievement of girls can be enhanced with more attention to the quality of the education program being offered, especially in the early years of schooling. Specifically what will be needed to reach UEE objectives will be:

- o strengthened pre-primary programs
- o expanded opportunities for upper primary schooling
- o improved quality and consistency in education programs
- o flexible delivery systems for hard-to-reach populations

Some of these requirements can be met cost-effectively using technologies that are available worldwide, but are not extensively used in India at this time, such as:

Interactive Radio Instruction (IRI) for pre-school and primary school subjects, formal, nonformal, and distance-learning; IRI can provide consistently high quality programs and model new methods of instruction for teachers;

Annotated teachers' guides which develop a systematic link between instructional materials and the methods of instruction and help model new methods for teachers;

SRA-like materials for classrooms to expand the range of teacher support materials, especially for multi-grade classes, and provide more practice to consolidate children's skill levels.

Institutions, including CIET, NCERT, and SCERT, exist that can adapt these technologies to the requirements of various programs, languages and to MLL objectives. The massive size of India's education system requires more structured ways to support teachers and ensure standards of quality in instruction.

## **I INTRODUCTION**

### **1.1 Background**

The World Conference on Education For All (EFA) held in Jomtien in 1990 reviewed the state of education for children of over 80 nations. Participants declared basic education a world priority and pledged their countries to work toward the goal of universal education. As part of its EFA agenda, India restated its constitutional commitment (Art. 45) to provide free and compulsory education through formal or nonformal programs for all children up to the age of 14. In addition India pledged to ensure universal achievement of at least Minimum Levels of Learning (MLL) in elementary education.

In December 1993 New Delhi hosted an EFA follow-up summit of Nine High Population Countries.<sup>1</sup> These countries adopted the Delhi Declaration which calls for ensuring a place in school for every child, and extending literacy and adult education within the context of an integrated strategy of basic education for all. The document called for committing more national and local resources to basic education and improving the management of those resources. At this conference, the Prime Minister of India Shri P.V.Narsimha Rao pledged that his country would increase its spending on education from the then current rate of 3.9 percent to 6 percent of its GNP before the next century.

### **1.2 Study purposes**

The present study has been contracted in support of the USAID Mission Strategy for FY 1994-2000. A key element in the strategy for sustainable development in India is to accelerate broad-based economic growth and to stabilize population growth. Because the low status of women in India has implications for broad-based economic growth and the adoption of family planning concepts and services, the Mission has adopted as one of its program initiatives, increasing women's control over their productive and reproductive lives.

Education is perhaps the most important means of empowering women to exercise their rights in the home and society. An educated woman tends to have greater self esteem, higher social status, and is more likely to make decisions that promote the welfare of herself, her family and society.

Education also promotes the development of the community. Studies confirm that educating children delivers a higher rate of return

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<sup>1</sup>These countries include Bangladesh, Brazil, China, Egypt, India, Indonesia, Mexico, Nigeria and Pakistan.

(28% in one study<sup>2</sup>) than investment in other development areas. Educating women increases economic and social returns in all sectors. The benefits include higher levels of economic productivity, decreased infant mortality, improved family health care and nutrition, later marriage, smaller families, and lower birth rates. Returns on development investment in primary education are greater for girls than for boys. Each added year of schooling for a mother adds a 5-10 percent decrease in mortality among her children. Worldwide primary leavers have an average 5 children as opposed to 7 for those with no schooling. Educated women have higher income potential and increases in maternal income has been found to have a greater beneficial impact on children than increases in paternal income. Educated mothers are more likely to send both boys and girls to school thus contributing over the long term to goals of universal education. A mother's education has twice the impact on children's participation in education as a father's education.<sup>3</sup>

In the context of the Mission's goal of sustainable development and its population and women's empowerment initiatives, this study is intended to help the Mission understand the current situation of girls' education in India. Specifically the study has four purposes:

- o to summarize the present status of girls' education
- o to describe current efforts to improve education in low female literacy states
- o to analyze strengths and weaknesses in the current situation of elementary education
- o to identify possible areas of intervention to improve the situation of girls' education

In addition, annexes describe details of current initiatives underway in the study area, the main actors implementing reforms, and international experience with similar issues of girls' education.

### 1.3 Study focus

The study focuses on four of the seven Indian States where girls' enrollments are the lowest in the country: Rajasthan, Bihar, Uttar

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<sup>2</sup>Judith S. McGuire and James E. Austin, Beyond Survival, Children's Growth for National Development, UNICEF, New York, 1987, p. 11.

<sup>3</sup>Creative Associates 1994, Educating Girls: Investing in Development, pp 1-4.

Pradesh, and Madhya Pradesh. These four focal states contain 40 percent of the population of India and three-quarters of its illiterates. They are compared with the two South Indian States of Tamil Nadu and Kerala where girls' participation in education programs is high. Statistical data below for the states are presented in the order of their female literacy ratios from the lowest, Rajasthan, first to the highest, Kerala, last.

Though the high and low literacy states are compared, a note of caution should be sounded. Because of their very different histories and economies, it is unlikely that the South Indian States can be taken as a model for what might happen in the low literacy northern states. The South has had much closer and longer contact with colonial outsiders, including missionaries, who established infrastructure in those areas sooner. Southerners lived in coastal areas with considerable natural resources and rainfall, and with economies which became diversified at an early period. They were protected by mountain ranges from invading armies of the north. By contrast the Northerners were isolated in the interior in a mostly feudal, hierarchical, paternalistic environment based on a single agricultural economy and frequently overrun by marauding armies.

The study is confined to early childhood and elementary (Classes 1-8) education, both formal and nonformal, for children in the age group 0 to 14. The study was limited in this way for three reasons: First, India enjoys such a multiplicity of education programs and organizations involved in education that time constraints made it impossible to understand more than mainstream providers. Second, the early childhood and elementary years are the important years in establishing functional literacy and numeracy. Third, statistics show that girls who complete these stages are more likely to continue on to higher education levels where more of the development benefits from education are likely to be felt.

#### **1.4 Study method and sources**

The study was conducted in four parts:

- o Creative Associates ran a literature review of documents relating to experience with girls' education and successful interventions worldwide.
- o Review was made of a substantial number of documents that have been produced in India. These included research studies, policy documents, project papers and descriptions, curriculum frameworks and books, monographs and pamphlets documenting the extensive experience of Indian education in the more than 40 years since Independence.
- o Visits in the capital Delhi were made to interview

government officials, staff of semi-autonomous bodies which support education, NGOs, PVOs, multi-lateral and bilateral donors.

o Field visits were conducted to relevant institutions in the four low literacy states and Tamil Nadu. Organizations were selected for visits where there are now or potentially might be efforts to improve the quality and availability of early childhood and elementary education for girls.

## 1.5 Report organization

The report is organized into six parts including this introduction. Part 2 gives a description of the development context of India and specifically of the study states. Part 3 describes the structure of India education including the main institutions and participants that provide educational services in India. Part 4 summarizes girls' education in India including a brief review of legislation concerning women, key indicators of participation, some recent trends, constraints on girls' educational participation, and international experience with similar issues. Part 5 summarizes current initiatives to improve access to, retention in and the quality of education in India, with special reference to girls' education. Finally Part 6 analyzes critical components affecting girls' education and identifies options USAID or other donors might adopt to improve both quality and access.

## II THE DEVELOPMENT CONTEXT IN INDIA AND THE STUDY STATES

### 2.1 Background

India is one of the largest and most complex countries in the world. With respect to the delivery of education services its most important characteristics are its geographic size, its large and diverse populations, many of whom live in grinding poverty, a multitude of languages and a social-cultural milieu that historically has discouraged segments of the population, especially girls and certain castes and tribes from seeking educational opportunities.

With a land mass of over 3 million square kilometers, India is the largest country in the sub-continent. It is bounded on the northwest by Pakistan, on the north by China, Tibet, Nepal, and Bhutan, on the east by Burma, on the south by Sri Lanka, and on the south-west, and south-east by the Indian Ocean. Its land mass comprises 2.4 percent of the world's surface while its population accounts for 16 percent of the world's population.

In looking at Indian statistics it is useful to distinguish diversity from disparity. The first has positive connotations while the latter may indicate that a problem exists. The four low-literacy states of this study tend to be characterized by

disparities in indicators from what is the norm for India. The two comparison high-literacy states tend to lie at the positive end of the scale with favorable indicators. In some cases the divergences between the two groups suggest clues to factors affecting the educational participation of girls.

## 2.2 Population

India is the second most populous country in the world after China with a population estimated in 1993 to be 896 million. The populations of the study states vary from 140 million in Uttar Pradesh to 29 million in Kerala. The annual growth rate between 1981 and 1991 was 2.1 percent overall with an inter-state variation ranging from 1.3 in Kerala to the highest of 4.1 in Delhi. The overall sex ratio is 93 females to 100 males but varies from a low of 88 in Uttar Pradesh to a high of 104 in Kerala.<sup>4</sup> This figure is often used to indicate the relative status of women, since it reflects a number of factors about the treatment of females.

Table 1: Key Population Indicators for Study States (1991)

States	Tot.Pop (000,000)	Annual growth	Density per sq km	Rural pop%	SC% to total	ST% to total
India	865	2.1	267	77	16	8
Rajasthan	44	2.5	128	79	17	12
Bihar	86	2.1	497	88	15	8
Uttar Pradesh	140	2.2	471	82	21	0.2
Madhya Pradesh	66	2.4	149	80	15	23
Tamil Nadu	56	1.4	428	67	19	1
Kerala	29	1.3	747	81	10	1

Source: Census of India 1991

The vast majority of the Indian population lives in the countryside with only about one quarter living in urban areas. The study states vary in ratio of rural population from 88 percent in agricultural Bihar to 67 percent in more densely populated Tamil Nadu. Overall India has a density of 273 persons per square kilometer with the study states varying from 128 in sparsely populated Rajasthan to 747 in the densely populated state of Kerala. The population data, through the consistent example of Kerala, support the commonsense notion that it is easier and more cost effective to provide education services to urban, densely settled regions where overall population is comparatively smaller.

<sup>4</sup>The sex ratio however may be unreliable. Field researchers note among other biases that parents under-report girls who have married and left their parents' home.

## 2.3 Fertility Indicators

Other significant statistics included birth and death rates, fertility, and infant mortality rates. The crude birth rate for India as a whole was 29 per 1000 population. States varied from a crude birth rate of 36 in Uttar Pradesh to 18 in Kerala. The crude death rate for India was 10 with a state variation from 13 in Madhya Pradesh and Uttar Pradesh to 6 in Kerala. Life expectancy for the country as a whole was 60 years.

Though the mean age (18-20) of female marriage was about the same across the states, the fertility rate varied from the norm of 4 for India as a whole, to a high of 5.5 in Uttar Pradesh and a low in Kerala of 2.2. The infant mortality rate for India was 79 and varied enormously among the states from 104 in Madhya Pradesh to 17 in Kerala. All these figures, again through the example of Kerala, vary consistently with the premise that development indicators correlate significantly with the education of females.

Table 2: Key Birth Indicators for Study States (1991)

States	Sex ratio* (1991)	0-6 Sex ratio* (1991)	Crude birth (1992)	Crude death (1992)	fem age marr.** (1990)	fert rat. (1991)	infant mort (1992)
India	93	95	29	10	19	4.0	79
Rajasthan	91	92	35	10	18	4.8	89
Bihar	91	96	32	11	18	5.3	72
Uttar Prad	88	93	36	13	18	5.5	98
Madhya Pra	93	96	34	13	19	4.7	104
Tamil Nadu	97	95	20	8	20	2.6	58
Kerala	104	96	18	6	19	2.2	17

\* females per 100 males

\* female mean age of marriage

Source: Census of India, 1991

## 2.4 Economy

The economy of India also shows important variation in both the type of production and in the income levels of its peoples. Among the study states, most of those in the low literacy group are significantly involved in agriculture, while the high literacy states have more diversified economies. Of the study states, Bihar has the lowest annual per capita income at Rs. 1802 contrasting with the highest, Tamil Nadu, having Rs. 2732. Both are below the Rs. 2975 that is the average for India as a whole.

In the early eighties it was estimated that almost 40 percent of the population of India fell below the poverty line and that there were almost 40 million working children. The study states vary

considerably in the ratio of the rural population that falls below the poverty line with the highest ratio in Bihar at 43 percent, closely followed by Madhya Pradesh with 41 percent, and the lowest ratio of 16 percent found in Kerala. These figures are consistent with claims that poverty negatively correlates with obtaining an education.

Table 3: Key Economic Indicators for Study States (1991)

States	Per cap income (1990-93) *	%Rural pop below pov	Work participation rates		
			T	M	F
India	5599	32	37	52	22
Rajasthan	4517 (11)	25	39	49	27
Bihar	2940 (15)	43	32	48	15
Uttar Prad	3932 (13)	30	32	50	12
Madhya Prad	4419 (12)	41	43	53	33
Tamil Nadu	5690 (5)	na	43	56	30
Kerala	4626 (9)	16	31	48	16

\*Source: State Directorates of Economic and Statistics. National average by CSO. Triennial average. State rank in brackets out of 15.

Figures for workforce participation vary little among the study states for males where around 50 percent workforce participation is the norm. Women's work participation, however, varies from a high in Madhya Pradesh of 33 percent to a low in Kerala of 16 percent. This at first appears to be a contradiction to the expectation that there is a relationship between education and work force participation but a second look shows that Kerala has a higher percentage of women working in the categories "other than household industry" and "other services" when compared with any of the other states.

## 2.5 Culture groups

India has one of the most culturally diverse populations of the world in terms of ethnicity, language and religion. Indians speak more than 500 languages of which 16 are recognized officially. The 3 main language groups are Indo Aryan, Indo-Burman, and Dravidian. Even the officially recognized languages are spoken in a number of dialects. Impressive as these figures are, however, they do not adequately reflect the variations between and within states. These variations pose difficulties in education programs where not all children are schooled in their mother tongue and instructional materials must be developed in a number of languages, many not even having the same system of writing. Most children have to learn more than one language in more than one script before they complete the elementary years.

Despite the diversity of its populations, India is a secular state which grants equality to all its citizens regardless of caste, creed, language or gender. The constitutionally recognized disadvantaged groups for affirmative action are scheduled castes (SC), scheduled tribes (ST) and females. Nearly a quarter of the population belongs to the scheduled groups. The constitution authorizes the state to take special actions to ameliorate their conditions through policies, programs, reservations in educational institutions and jobs and promotions in proportion to their presence in the population.

Scheduled tribes tend to be scattered in small settlements over large geographical areas in forest and plain areas. They have their own languages and cultural practices that make it difficult to adapt to a normal schooling program. STs constitute 8 percent of the population (68 million), and vary in the focus states from 23 percent of the population in Madhya Pradesh to one percent or less of the population in Uttar Pradesh, Tamil Nadu and Kerala. Madhya Pradesh has about a quarter of the ST population in India. Scheduled castes tend to be more prominent among the urban working classes. They constitute 16 percent of India's total population (139 million) and vary from 23 percent in Uttar Pradesh to 10 percent of the population in Kerala. Having few members of educationally "resistant" groups among its populations, Kerala has advantages over states like Madhya Pradesh or Uttar Pradesh where there are large populations of scheduled groups.

### III EDUCATION IN INDIA

#### 3.1 Background

Girls' education needs to be viewed against the backdrop of education programs in India as a whole.

India has a long history of educational achievements. After Independence the pace of education accelerated. In the 40 years between 1951 and 1991 there were a number of spectacular achievements. The literacy rate almost tripled from 19 percent to 52 percent and enrollments in elementary education increased more than 5 times from 22 million to 136 million. Now gross enrollment for 6-11 year olds has reached 85 percent and for 11-14 year olds 50 percent. In the same period the number of lower primary schools more than doubled, increasing from roughly 210,000 to 585,000 schools in 1991.

Despite these achievements, India recognizes that there is still much to be accomplished. The enrollments of girls and disadvantaged groups, especially rural children and scheduled castes and tribes, have not kept up with the pace of change (see below). Another major problem is dropout where it is estimated that only about half the children who enroll in Class 1 reach Class 5, and less than a third reach Class 8. The majority of those who drop out are girls

and children in rural and tribal areas. A final area of concern is the quality of the education program and whether it teaches children all they need to know to live up to their full potential as adults.

### 3.2 The Education Structure

Education is delivered through a network of institutions at the center and in the states. The center has responsibilities for national aspects of education including quality standards, manpower planning, research, human resource development and the coordination of international funding. The Central Advisory Board of Education (CABE) takes the lead in developing and monitoring education policies and programs. It was instrumental in developing the formative National Policy of Education (NPE) in 1986, and the revised NPE and Program Of Action (POA) in 1992. The states take decisions about the organization and structure of education in their locales.

#### 3.2.1 The stages of education.

The national system of education consists of standard Classes 1 through 5 for the lower primary and 6 through 8 for the upper primary. Secondary education has two cycles, standards 9 through 10 and 11 through 12. Beyond these stages, there is higher education offering a variety of degrees ranging from one to four year programs. In addition there is vocational and technical education beginning at the post elementary stage and nonformal and open schooling systems running parallel to the formal system.

In national documents of 1986, the GOI pledged to provide education opportunities to all children up to the age of 14. After the Jomtien conference on Education for All (EFA), India renewed its commitment by pledging:

- o expansion of early childhood care and development,
- o Universalization of Elementary Education (UEE)
- o drastic reductions in illiteracy to 20 percent or less in all targeted groups including females,
- o provision of opportunities to maintain the skills of those who have become functionally literate,
- o creation of structures and processes which empower women and make education an instrument of women's equality,
- o improving the content and process of education.

The present report focuses on the main programs that provide

education services to this 0-14 age group. These include Early Childhood Care and Education (ECCE), formal elementary programs, Nonformal Education (NFE), and Open Schooling. These structures are divided into the learning stages: pre-primary, lower primary and upper primary which correspond roughly<sup>5</sup> with the age groups 0-6, 6-11 and 11-14, if children follow the expected norms of entry into and completion of recognized stages of education.

**Pre-primary.** The National Policy on Education (NPE), 1986, defined the objective of pre-primary education as the total development of the child from 0 to 6, with stress on children from underprivileged groups and those who are first generation learners. The institutions that provide pre-primary education include the Integrated Child Development Scheme (ICDS), creches, ECE balwadis and day-care centers and schemes run by government and non-government organizations. There are also pre-primary schools, many of which are sub-standard, and managed locally or by state organizations.

The largest 0-6 program is ICDS which in its comprehensiveness has become the model for government-funded ECE institutions. It provides health, nutrition, education, immunization, supplementary nutrition, early childhood stimulation, and maternal and child health services. The objectives of the program include preparing children for primary school; providing support services for girls in primary education and supporting working women from low income groups. A recently added adolescent girl program identifies promising individuals to assist in the ICDS centers and helps them to continue their studies.

The ICDS target groups are the urban and rural poor. Anganwadi workers canvas areas surrounding their centers to identify needy recipients: poor children in the 0-6 range and pregnant and lactating mothers. In 1990-91 ICDS was running 339,000 centers with approximately 15 million children and 2.7 million mothers. In addition there were an estimated 13,515 pre-primary schools catering to 3.9 million children. ICDS plans to increase its coverage to 150 million children with a total 700,000 centers by the year 2000. New initiatives are planned in all of the study states to increase the number of pre-primary institutions and to strengthen the pre-school learning activities of the centers and their links with primary schools to ensure the entrance of 6 year olds into the formal system.

**Universalization of Elementary Education (UEE).** The National Policy of Education (NPE) (1986) and the Program of Action (POA) (1992) placed the universalization of elementary education as a priority of the GOI. Girls and disadvantaged groups were targeted

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<sup>5</sup>These age groupings are only approximate since many children may have delayed schooling or repeated classes.

for special attention. The UEE strategy is to provide:

- o access to elementary education for all children up to 14 years of age
- o universal participation of children till they complete the elementary stage through formal and non-formal education programs,
- o universal achievement of at least minimum levels of learning (MHRD, Development of Education in India 1993-4:16)

Targets by the end of the century aim at enrolling approximately 153 million children<sup>6</sup> in the 6-14 age group (there are now 136 million children enrolled) in elementary education. At the same time a strenuous effort is being made to reduce the disparities between genders, regions, minorities, socio-economic groups, and urban and rural populations.

**Four major elements in the UEE strategy are:**

- o a shift in planning focus from disadvantaged states to disadvantaged districts through the District Primary Education Program (DPEP)
- o a renewed effort through Operation Blackboard to provide equipped and staffed schools within a short distance of elementary age children to encourage enrollment and retention,
- o the introduction of Minimum Levels of Learning (MLL), a competency-based program to improve the quality of elementary schooling<sup>7</sup> and
- o a monitoring system consisting of local committees to oversee the functioning of primary schools, and an assessment system to improve the efficiency and effectiveness of the elementary program.

Formal elementary education in India is based on 5 years of lower primary (also called primary, or junior basic) and 3 years of upper primary (also called middle or senior basic). Table 4 shows the number of schools, enrollments and teachers in the two primary stages of elementary education.

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<sup>6</sup>This figure however includes only 82 percent of the 6-11 year olds and around 60 percent of the 11-14 year olds instead of the full coverage called for by EFA.

<sup>7</sup>MLL have been spelled out for lower primary and will be extended to upper primary to complete the elementary stage.

With few isolated local exceptions, lower primary schools in rural areas are coeducational, and often the upper primary schools as well. It is mainly in urban areas where sex-segregated schools are sometimes found, and there at least partly because enough students exist to warrant the construction of separate facilities for boys and girls; in many cases both sexes study together. Only a few traditional locales demand separate- sex schools for boys and girls, and then often only when the children are older than lower primary age. In coed schools the teachers also tend to be from both sexes.

Table 4: Elementary schools, enrollments, and teachers (1990-1)

Type of institution	No.	Students	Teachers
Lower primary/jr.basic			
India total	558,392	99,118,320	1,636,898
Rajasthan	30,231	4,513,247	
Bihar (89-90)	53,252	8,565,263	
Uttar Pradesh	76,545	13,940,000	
Madhya Pradesh	66,849	7,994,000	
Tamil Nadu	29,979	7,760,000	
Kerala	6,772	3,160,000	
Upper primary/middle/sr basic			
India total	146,636 (1:4)*	32,282,999	1,059,295
Rajasthan	8,629 (1:3.5)	1,318,734	
Bihar	13,170 (1:4)	2,120,000	
Uttar Pradesh	14,582 (1:5)	4,470,010	
Madhya Pradesh	13,977 (1:5)	2,653,000	
Tamil Nadu	5,624 (1:5)	3,160,000	
Kerala	2,911 (1:2)	1,870,000	

\* Ratio of upper to lower primary schools in parentheses

Source: Selected Educational Statistics, Department of Education, MHRD, New Delhi 1992.

According to Department of Education rules a child enters Class 1 at the age of 6 and, though practices vary from place to place, usually moves automatically through the grades until Class 5 when a promotion examination is taken. A child usually cannot move on to Class 6 without passing this exam. The exam is generally prepared by district officers and administered by their staff. Children usually take school exams between Classes 6 and 7 and between Classes 7 and 8 before they face another major promotional exam at the end of Class 8. Schools which include the entire elementary program to Class 8 or to the end of Class 10 may not have outside administered promotional exams until the last year,

and instead are likely to have internal exams at the end of certain years depending upon the school administration.

In reality, children who are both underage and overage enter Class 1. Girls in particular, especially in rural areas, are likely to enter school late, by age 8 or 9 rather than 6. Similarly, teachers report that children repeat classes and are not always promoted automatically, especially when they have not attended school regularly.

Government schools are criticized overall for the poor quality of the instruction they provide. Most parents who have the means and the opportunity to send their children to private schools will do so even when it requires considerable sacrifice. This option is usually not available to rural parents even though increasingly private schools are also appearing in the countryside. Generally speaking, the problem is one of tedious, largely rote instruction, with books either not designed adequately for the conditions of the classroom or the development level of the children, and teachers who are overwhelmed by the difficulties of too many children, too many classes, and feelings of grievance against the bureaucracy that hires them. All the study states are working on these problems to improve the quality of teaching/learning.

**Non-Formal Education (NFE).** Non-formal elementary programs under government auspices started during the Sixth Five Year Plan (1980-85). The nonformal sector currently includes two major initiatives aimed at children in the elementary age range. The first is a network of NFE centers specifically targeting 9-14 year olds and the second is an initiative of distance education through the Open School system which until now has targeted 10-20 year olds but is expanding downward to include younger children.

NFE centers are designed as an alternative channel to reach children of primary school age who for some reason have not been able to take advantage of the formal system. These children include girls, those who are in the work force, those not covered by the formal education system and those from poorer classes. The program offers greater flexibility in timing and pace of learning. A new curriculum stresses relevance to learners needs, interests and the local environment, and varies from location to location. The program provides learning that is comparable to the formal system so that participants who pass standardized tests can move into an appropriate place in the formal stream. Part-time teachers from local areas are recruited and trained to staff the NFE centers. Over 400 voluntary associations participate in the program.

There are now almost 300,000 NFE Centers in India, with 80,000 of them solely for girls, reaching 6.8 million out-of-school children including 2.9 million girls (43 percent of total enrollment). In the study states of Madhya Pradesh and Rajasthan, officials note that the large majority of participants in NFE programs are girls.

NFE is perhaps the fastest growing program in all the study states. Because the program does not require expensive construction of buildings and instructors are either unpaid or paid a minimal amount, it is comparatively easy to open programs quickly in areas not covered fully by the formal system. NFE has the potential to solve most of the remaining problems of access to elementary education in the study states, either as a long-term measure where children continue to need flexible hours and courses, or as an interim measure until formal programs are provided. The major problem with NFE, according to educators, is the often variable quality of the education it provides. This poor quality can come from inadequate materials and instruction, a casualness about attendance, and the general perception that the program is second-rate.

**Distance learning.** The National Open School (NOS) program, after the signing of the Joint Initiative on Distance Education during the Delhi Summit in 1993, established new programs for those of elementary school age. Already in 1990, the NOS was given the authority by the GOI to examine and certify students up to a pre-degree level. After the Summit a distance education component was added to the District Primary Education Project (DPEP), and the National Open School system developed an innovative project to provide alternative schooling to four groups of learners: 1) neo-literates who have acquired functional literacy through the Total Literacy Campaign<sup>8</sup>, 2) dropouts with rudimentary literacy skills, 3) dropouts from NFE programs with literacy skills, and 4) NFE learners with marginally better skills.

The new program which is expected to start in January 1995 will eventually benefit 2 to 3 million neo-literates, including girls among rural, urban, and disadvantaged groups. The program will include a 3 stage curricula of preparatory (equivalent to Class 3, primary (equivalent to Class 5) and elementary (equivalent to Class 8) and is said to pride itself on offering a range of courses and options in a format which can be delivered by a variety of means. This program if combined with close supervision on a periodic basis (as in mobile teachers) could help to expand now severely limited upper primary opportunities for girls.

### 3.2.2 Education inputs

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<sup>8</sup>Launched in 1988 the National Literacy Mission aims at reaching 80 million adults in the age group 15-35 by 1995. Currently 275 districts in India have been covered by Total Literacy Campaigns (TLCs) with a coverage of 60 million participants and an expectation this number will rise to 100 million. Approximately 100 districts are covered by Post Literacy Campaigns (PLCs) and 22,000 PL Centers are being established to provide reading materials, continuing education and remedial teaching to consolidate literacy gains.

**Financing.** Education is funded largely by central and state governments in Plan and non-Plan outlays. The 1991-2 Plan expenditures of the government as percentage of total budget for the states was 8.26 percent. The Center's contribution to these Plan expenditures though small increased during the Seventh Plan to 40 percent and was only slightly lower (38 percent) in the Eighth Plan. In Non-Plan expenditures which are mainly for teachers' salaries and maintenance, the Center pays 5 percent and the states 95 percent.

After Independence non-governmental sources of funding decreased from about 32 percent in 1950-51 to 11 percent in 1983-84. Now elementary education is almost entirely funded from state and central government sources. External funding for elementary education during the Eighth Plan is expected to cover only about 4.22 percent of the anticipated expenditure.

Spending on education as a proportion of GNP rose from 1.2 in 1950-51 to 3.9 this year. The goal is for expenditure on education to rise to 6 percent of GNP. The share of elementary education increased from .46 percent of GNP in 1950-51 to 1.72 in 1989-90. Currently the proportion of the entire education budget spent on elementary education is 46 percent.

Studies by DPEP<sup>9</sup> of state finances for education conducted in 6 states, including Tamil Nadu and Kerala, showed that in all but one (Maharashtra), the trend was for continually increasing deficits in revenue accounts. The effect on education budgets was not known because of a lack of correspondence between the revenues and budgets. In Kerala the education budget remained about the same between the Seventh and Eighth Plans and in Tamil Nadu it declined from 7.2 to 3.6 percent. In Kerala expenditures on elementary education have decreased because of declining populations of school age children. The studies conclude that to achieve UEE in Kerala will be possible by the Year 2000 without excessive expenditure but the state will still need additional resources to improve the quality of education. By contrast, for Tamil Nadu to achieve UEE goals will require an impossible 12.8 percent annual rate of growth in real terms. Though the study was not conducted in most of the states of concern in this report, it does suggest that there may be serious budget limitations to achieving UEE, especially in states which have not yet seen declining birth rates.

**Elementary school facilities.** As Table 4 above shows there are currently 558,392 lower primary schools and 146,636 upper

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<sup>9</sup>In discussion of the study, someone observed that the DPEP budget when compared with the center's contribution was so small that they wondered whether there was a need to seek external funding.

primary schools in India. Planning norms aim at putting a lower primary school within 1 kilometer and an upper primary school within 3 kilometers distance of all settlements over 300 population and in settlements with populations over 200 in hilly and desert areas. To achieve this objective during the Eighth Five Year Plan, 35,000 schools will need to be constructed in the country as a whole.

The GOI claims that already 95 percent of the population is now served by a lower primary school within 1 kilometer and 84 percent of the population by an upper primary school within 3 kilometers distance. Field studies coming from some of the disadvantaged states and districts show, however, that many people live in small scattered settlements where school facilities are not available and that "habitation" (a cluster of homes) should perhaps be the unit upon which provision of a school or NFE center is based. Even when a school exists in a village, it may be inaccessible to those who live on the physical peripheries or it may be overcrowded and not have enough places for all children of the village. Generally speaking, as already noted, the larger the town or village and the more complete its infrastructure, the more likely that there will be adequate provision of lower and upper primary schools. The implication which is borne out in actuality is that the most disadvantaged populations in terms of facilities are those living in rural, sparsely scattered settlements.

Table 4 above shows also that there are significantly fewer upper primary schools when compared with lower primary schools. In India as a whole the ratio of upper primary to lower primary schools is roughly 1 to 4.<sup>10</sup> Bihar and Rajasthan have roughly the same ratios but Uttar Pradesh, Madhya Pradesh, and Tamil Nadu have even lower 1:5 ratios. Only Kerala meets the 1:2 ratio that is the goal of UEE for the year 2000. This means that at the present time access to upper primary is severely restricted in most areas because of lack of facilities.

The gap between the availability of lower and upper primary schools is especially severe in rural areas of the study states. In 1986-7,<sup>11</sup> in Rajasthan 64 percent of schools were rural lower primary compared to 17 percent rural upper primary; in Bihar the number was 72 percent to 16 percent, in Uttar Pradesh 68 to 14 and in Madhya Pradesh 72 to 12. These states are not too different from Tamil Nadu where the ratio is 66 to 10 but compare unfavorably with the highest enrollment state of Kerala which is 45 to 27. Generally

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<sup>10</sup> By secondary the ratio is 1 secondary to 2 upper primary schools.

<sup>11</sup> The statistics are taken from the Fifth All India Education Survey, 1989, which is the only place figures are broken down by rural and urban location.

speaking, rural children will have difficulty continuing on to the upper primary stage because few schools of that level are available. Girls have an even more difficult time attending stages higher than lower primary, and few therefore will reach a level where they can qualify to become teachers.

The average size of the enrollment in lower primary schools also differs from state to state. In India as a whole it is 178. In the four study states it ranges from 120 in MP to 182 in UP. The two higher literacy states have much larger average lower primary enrollments with 259 in Tamil Nadu and 467 in Kerala.

The situation is similar in upper primary schools, where for India as a whole the average enrollment is 220. In the four study states, enrollment ranges from 153 in Rajasthan to 307 in Uttar Pradesh. The two higher literacy states have much larger average upper primary enrollments with 562 in Tamil Nadu and 642 in Kerala. The significance of school enrollment size is that, as has been discovered in some countries of the world, the tendency exists for achievement levels to increase as the size of enrollment increases.<sup>12</sup>

**Elementary school management.** Where states differ the most is in their management structure of the lower primary. Rajasthan's lower primary schools are mainly (90 percent) managed by local bodies. Bihar's lower primary schools are almost all government managed. Uttar Pradesh has over 90 percent local body schools and Madhya Pradesh's schools are 80 percent government and 15 percent local body. The mix in the high enrollment states includes in Tamil Nadu about 80 percent government and around 16 percent private subsidized, and in Kerala roughly 40 percent government and 60 percent subsidized private schools.

At the upper primary stage the situation differs a little. 90 percent of Rajasthan's and Bihar's upper primary schools and a high ratio (80 percent) of Madhya Pradesh's upper primary schools are government managed. In Uttar Pradesh, local bodies continue to be the main managers in over 50 percent of the schools, but private unsubsidized schools take a larger share (35 percent). The mix in the high enrollment states includes in Tamil Nadu 60 percent government and nearly 30 percent private subsidized schools, and in Kerala roughly 40 percent government and 60 percent subsidized private schools.

The significance of school management type is generally believed to

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<sup>12</sup>As far as I know these correlations have not been attempted for India. The assumption is that a larger school may have more and better facilities and is unlikely to be multi-grade. Larger schools are also inclined to be located in urban areas where teachers have better qualifications and parents may be educated.

come from the degree of interest and commitment that goes in to supervising the daily functioning of the schools. Assisted and local body schools usually have an oversight committee that supervises their functioning, whereas government-managed schools tend to be poorly supervised, have inadequately qualified teachers and are not monitored by the community. It is generally believed (though not tested) that there is a scale of quality that varies according to type of management from government-run schools at the low end through government-assisted local or privately-managed schools to fully private schools. There are likely to be variations within these categories of schools, but the prevailing principle seems to be that some sort of "vested interest" management is superior whether of local bodies, private groups, parents or others. For this reason, one of the aims of DPEP is to shift the sense of ownership of government schools to village committees to ensure that they work better. In some villages local women from Mahila Samakhya groups take on the responsibility of monitoring schools.

The different types of management also imply different funding and procedural arrangements. Government-managed schools are completely run and financed by the state government through district and block offices. Local-body and other assisted schools are financed by the state government while teacher recruitment and monitoring is governed by the group that takes responsibility for the school. The group applies for a grant-in-aid and upon fulfillment of criteria including a contribution of 5 percent of the operating costs, they are given a grant of the remaining 95 percent which goes mainly for the cost of teachers' salaries. These schools are required to abide by government rules about teacher recruitment, salary level, amount of fee that can be levied to parents, etc.

According to observers, the growing trend even in rural areas, when parents can afford it, is to send children to small fee-leveling private schools where the curricula is in English medium and the teachers tend to be better qualified graduates who cannot find work in other fields and thus apply for teaching positions.

**Teacher recruitment, supply and appointment.**<sup>13</sup> States lay down their own minimum qualifications for teachers. For example Madhya Pradesh and Tamil Nadu require that primary teachers have 12 years of schooling and a two-year diploma in elementary education. Kerala requires 10 years of schooling and two years of training. Training appears, however, to have no discernible impact on student learning. Preliminary results from DPEP baseline achievement tests show no relationship between the amount or kind of training a teacher has and student performance scores. This finding suggests

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<sup>13</sup>These observations come from a recent DPEP study of teacher policy, training and motivation in DPEP states which only include K, TN and MP of the current report's 6 study states.

that all training courses need to be reviewed and either abandoned or overhauled, and that any new courses need to be closely evaluated for their impact. All the study states are revising their training at the present time. Most are shifting their emphasis to inservice training that is more relevant and practical for the classroom.

Similarly, recruitment varies from state to state so that in Kerala and Tamil Nadu the state recruits teachers and in Madhya Pradesh, the district recruits teachers. Some officials in the field believe it is better to decentralize recruitment at least to the district level where it is possible to assess local needs for staffing and appoint appropriate teachers who live close to their place of work. Teacher absences tend to be more frequent when teachers are assigned far from their homes and numerous posts lie vacant in remote areas. Most states do not provide allowances for teachers who are assigned to remote areas even though their transport may be costly.

Other problems related to teachers identified through the DPEP studies include political interference in transfers and the absence of substitute teachers when teachers take leaves for ill health and maternity. Transfer policies vary among DPEP states from fixed periods of from 3 to 6 years in a post in several states, to transfer on demand in Tamil Nadu, Kerala, and Madhya Pradesh. Some states do not allow teachers to work within 25 kilometers of their homes and require that they transfer periodically to prevent them from becoming too involved in an area. Often residential quarters are not provided for teachers who come from a distance. Many of the arbitrary ways of dealing with these issues affect female teachers more than male teachers since they find it more difficult to live away from home, to commute long distances, to qualify for appointment in training institutions and for teacher candidacy, etc. The states lack consistent policies concerning these issues.

The government reserves teaching positions for females and scheduled groups, but at present they are all under-represented in the teaching profession, often because there are not enough qualified candidates to fill the positions. This is at least partly due to the few numbers of women and scheduled groups who qualify academically in rural areas and in particular the lack of accessibility of these groups to upper primary and secondary schooling. As Table 5 shows, in Bihar and Uttar Pradesh less than 20 percent and in Madhya Pradesh only 24 percent of lower primary teachers are females, while in Kerala more than 60 percent and in Tamil Nadu more than 40 percent are female. The picture is not much better at the upper primary stage and in some cases (Bihar) it is considerably worse. The GOI guidelines under Operation Blackboard recommend that 50 percent of the new teachers recruited be females.

Table 5: The Proportion of Female Teachers in Study States (1991)

States	%Female teach to total	
	Lower P	Upper P
India	29	32
Rajasthan	27	27
Bihar	19	3
Uttar Prad	18	20
Madhya Prad	24	26
Tamil Nadu	41	48
Kerala	66	64

Source: Selected Educational Statistics, Department of Education, MHRD, New Delhi 1992.

A problem in most states is lack of planning to balance the supply of and the demand for teachers. While some states like Madhya Pradesh are able to balance supply and demand, others appoint untrained teachers because of a shortage of trained teachers and yet others, such as Bihar, Kerala and Tamil Nadu, produce up to twice the number of trained teachers required. These imbalances are costly because they require that states with shortages take the expensive route of qualifying inservice teachers, and in states with a backlog of teachers, training benefits are lost because of delays in appointing teachers. The problem is complicated by a proliferation of private training institutions which in the absence of clear policies about training standards often provide sub-standard preparation for teachers. The body that provides teacher training standards for adoption by state authorities is the National Council for Teacher Education (NCTE), but their recommendations are often ignored.

**Teacher training.** The NPE in 1986 called for improving the work conditions of teachers and the quality of the training they receive. As a result, District Institutes of Education and Training (DIETs) were set up in 346 out of 462 districts in the country to provide preservice and inservice training for elementary teachers, and the staffs of NFE and adult education programs. The Eighth Five Year Plan (1992-97) calls for 450 functioning DIETs by the end of the plan period. Though the DIETs are responsible for both preservice and inservice training, at this time inservice training, according to the DPEP study, is not systematic, needs-oriented, or regular. Another means of upgrading the qualifications of inservice teachers is through open-learning distance courses.

The DPEP study of teacher training suggests that there are some major problems to be overcome in teacher training. The first is

what seems to be the arbitrary locus of control over training. Some states put the control of training and examination of primary school teachers under secondary education boards which do not have the expertise to deal with the preparation of primary level teachers. Similarly there is often no policy regarding the staffing of elementary teacher training institutions (ETTIs) either with regard to teacher-student ratio which varies from 1:12 to 1:40 (DIETs are supposed to be 1:15 or 7 staff for a student body of 100), or to the qualifications of instructors who are mostly taken from the secondary side. The master trainers are usually those with university degrees in education who have neither experience in primary teaching nor knowledge of the upgraded curriculum. The Institutes of Advanced Studies in Education (IASEs) are responsible for training the staffs of ETTIs but they are not well prepared to carry out this task.

The states also need plans for improving the quality of teacher training in DIETs and upgrading the facilities that are available. In one district of Madhya Pradesh, for example, there was no library in the ETTI and no textbooks were available either for the staff or trainees for the entire school year. At present in all the study states steps are being taken to make the DIETs more operational.

None of the DPEP states had policies on inservice training, and in their absence some courses seemed to be governed more by the pressures of teachers trying to upgrade their skills to reach selection grades than out of concern for quality. The main inservice programs up to now have been sponsored by MHRD (PMOST and SOPT) from DIET funds and those of other projects as a result of MLL, NCERT and Teacher Empowerment initiatives. Madhya Pradesh has developed subdistrict block resource centers (BRCs) on an experimental basis but they also do not have a coherent policy on teacher education. Uttar Pradesh is organizing its inservice training around the "school complex" idea, where one school with better resources and staff serves as the focus point for improving the instruction in a cluster of approximately 10 schools.

**Teacher motivation.** The DPEP studies attempted to evaluate teacher motivation which is an important factor in the quality of the education program. They used the proxies "satisfaction with the conditions of service", "career advancement opportunities" and "self-esteem or satisfaction with the status of teaching". Most beginning teachers receive about Rs 1200 a month with, in Kerala and Tamil Nadu, an additional allowance for rural and hilly areas. Though are not provided residential quarters, they do receive house rent in urban areas. All states have pensions, gratuities, group insurance and medical facilities.

Career advancement opportunities are low for primary teachers who usually remain primary teachers throughout their careers. They have little opportunity to move up even within the primary hierarchy to

become headteachers, supervisors, district officers or primary teacher trainers. In general, teachers reported that they are able to meet most of their families' needs with their salaries and considered their socio-economic status as moderate. Teachers in Tamil Nadu, Madhya Pradesh and Kerala felt their status had improved over the last ten years, but in all the DPEP states, especially in urban areas, a large proportion (one-third to one-half) felt their status had declined. The main problems teachers face are multi-grade teaching and absenteeism of students and a number felt that the syllabus was too difficult. - More than half the female teachers reported personal problems including harassment by male teachers, the lack of separate toilets for women, and the lack of residential quarters in schools.

**Instructional materials.** State Boards have the authority to choose the school textbooks they want, and as a consequence there are numerous developers of textbooks and other instructional materials. Some states have bodies that develop local textbooks and others adopt nationally produced textbooks. At the center, NCERT (see below) has taken an active role in developing textbooks, but there are also state bodies such as SCERT (the state equivalent of NCERT) which have developed their own books, and even NGOs such as Eklavya in Madhya Pradesh and Lok Jumbish in Rajasthan. Lok Jumbish, for example, has developed textbooks up to Class 3, and the Central Government has adopted these books up to Class 2 for general use. Up until recently books were produced and distributed without trial, but now they are required to be evaluated for a year before being put into general use.

Studies contracted under DPEP of the design, production and distribution of textbooks found a number of areas that needed improvement. Problems included the multiplicity of agencies involved in the production of textbooks, difficulties in financing publication, a fixing of publication prices by printers in what becomes a non-competitive market, serious delays in distribution, reimbursement problems in the giving of free books, lack of professionally trained personnel and lack of up-to-date equipment, frequent changes of textbook, lack of autonomy and dependence upon other agencies for approvals, and the poor design of the books.

### **3.2.3 Institutions involved in improving school inputs (also see the section on donor supported efforts)**

**Research and development.** The National Council of Educational Research and Training (NCERT), established in 1961, is mandated to provide academic support to improving the quality of education in India. The Ministry of Human Resource Development (HRD) calls on NCERT for assistance in formulating and implementing policies and programs in the areas of school and teacher education. Its functions include research and development, inservice and preservice training, and extension and dissemination. In this effort it develops curriculum, instructional materials, training

materials, and teaching kits; conducts educational research, organizes pre and inservice teacher and other staff training; disseminates improved education methods, and research findings and acts as a clearing house for ideas and information about school and teacher education. Many of these activities are carried out by staff in its 17 field offices located in all states and union territories. NCERT has been involved in designing and implementing policy and baseline studies in DPEP states.

NCERT publishes textbooks in English, Hindi and Urdu. It has produced the National Curriculum Framework with syllabi and curriculum guidelines which are forming the basis for the development of instructional materials under the new reforms. These materials undergo testing in schools before wider dissemination. They are available on a non-profit basis and therefore tend to be cheaper than textbooks published commercially. NCERT also publishes workbooks, teachers' guides, general books for children, supplementary readers and several education journals.

NCERT has 7 constituent units including: The National Institute of Education (NIE), the Central Institute of Educational Technology (CIET), 4 Regional Colleges of Education at Ajmer, Bhopal, Bhubaneswar and Mysore, and Pandit Sunderlal Sharma Central Institute of Vocational Education in Bhopal.

**Curriculum reform.** To realize the achievement objectives of UEE, comprehensive efforts are underway to improve the academic skills of children. NCERT initiated curriculum reform with the development of the framework outlining the minimum skills expected from those who complete the lower and upper primary stages. This was followed by a detailed set of objectives by class and subject called the Minimum Levels of Learning (MLL). Now there are many efforts underway at center and state levels to build instructional materials, tests and teacher training around MLL. Student textbooks based on MLL will be introduced in the next year or so in most of the study states. Baseline studies using standard tests are being conducted in selected districts to determine current achievement in Classes 2 and 4 or 5 depending upon which is the upper class in a school. Initial reports show extremely low levels of learning overall, though with considerable variation between schools.

**Media.** The POA called for effective utilization of the media for promoting education and providing delivery of education programs. The Central Institute for Educational Technology (CIET), a NCERT component, produces audio and video tapes for use in pre-primary and primary programs. According to a CIET pamphlet more than 90 percent of the population is covered by All India Radio (AIR) and more than 72 percent of the population by Doordarshan, the official television network. AIR carries messages supporting the educational participation of children, especially girls.

CIET produces ETV programs that air for 45 minutes 5 days a week to

a target audience of rural primary schools, and on one day for teachers. According to CIET the programs can be viewed in a number of states including, among others, Bihar, Madhya Pradesh, Uttar Pradesh and Rajasthan. However in visits to rural schools in these states, no television sets were present, and even if they had been, many of the schools were either not hooked up to electricity or the power was cut.

CIET has two television studios, ENG units, editing, dubbing, duplicating and graphic facilities, 16 and 35mm cameras—with animation capability, 2 sound studios, an auditorium, seminar rooms and engineering maintenance workshops, among other facilities. Their library contains 8,000 films on science, social studies, and arts appropriate for various age groups. They have over 1000 audio tapes on subjects ranging from nursery rhymes to a package for teaching Hindi as a first language. The latter, according to them, was used successfully in 400 schools in Rajasthan between 1979 and 82, and experimentally in Hoshangabad district of Madhya Pradesh.

#### IV GIRLS EDUCATION

##### 4.1 General indicators

An indicator that is frequently used to summarize the differential treatment of females in Indian society is the gender ratio. Little more than a decade ago, in 1981, the country's population stood at 683 million with a ratio of 935 females to every 1000 males. Even though the population increased significantly in the decade since the 1981 census, female rates of survival declined by 8 points to 927 in 1991. The most alarming rate of change is among the age group 0-6 where the sex ratio has decreased by 17 points. Indeed, females have higher death rates than males in all ages from birth to the age of 34, with trends decreasing after this age. The problem is aggravated in rural areas where death rates for female children below 4 years of age are twice the urban rates.

Among the 15 major states in India accounting for 96 percent of the population in 1991, variations in the gender ratio range from a low of 865 in Haryana to a high of 1040 in Kerala. Of the 44 districts with a sex ratio of less than 850, half are in Uttar Pradesh. A continuous belt of districts located in Uttar Pradesh, Rajasthan, and Madhya Pradesh have a sex ratio below 850. There are only isolated incidences of districts with sex ratios that exceed 1000 in, among other states, Kerala, the hill districts of Uttar Pradesh and compact tribal tracts of Madhya Pradesh where bridal prices are paid by the husband's family, and in five southern districts of Tamil Nadu.

The skewed sex ratios are generally accounted for by the strong preference among many families for sons and the subsequent high abortion rate of female fetuses (reported in one hospital to be

7,999 out of 8,000 abortions), the underfeeding of girl children, more malnutrition and thus less resistance to disease among females, and less recourse to medical facilities for illnesses of girl children. A major contributing factor to the preference for boys is the high cost of the dowry that custom requires a woman's family to pay to a man's family at marriage in large parts of India. Modern techniques making it possible to detect the sex of a child before birth add to the problem.

#### **4.2 The legal framework**

In general India has very progressive policies regarding females and the education of children. Directive principles provide for free and compulsory education for all children up to the age of 14 including ECCE (Art 45), equal rights to means of livelihood (Art 39a), equal pay for equal work (Art 39c), just and humane work conditions and generous maternity leave (Art 42). Policies also call for equal rights and opportunities for all citizens in political, economic and social spheres (Art 14), and in matters of public appointment (Art 16). They prohibit discrimination on the grounds of religion, race, caste and sex (Art 15). Policies especially target women for favorable affirmative actions (Art 15) and condemn practices derogatory to their dignity (Art 15a and c). Special legislation for children forbids them to work in hazardous categories of work (Employment of Children Act 1938) and disallows parents from pledging the labor of their children in return for loans or advances (Pledging and Labor Act 1933).

A minimum age of marriage has been set for girls at 18 and for boys at 21. In India, 75 percent of females living in rural areas who have ever married were married by the age of 19. A number of committees and commission have passed resolutions targeting women with regard to problems of child marriage, and other domestic issues. Other issues they have tackled include seeking to remove female poverty and problems women face as a result of lack of skill development.

#### **4.3 Literacy indicators**

India represents 40 percent of the global gender gap in literacy. Overall in 1991 the literacy rate of females stood at 39 percent compared with 64 percent for males. Generally speaking a person's group affiliation is associated with their likelihood of becoming literate. Table 6 shows literacy rates for the study states. The rates for India indicate the standard while rates for Kerala indicate an ideal. Significant variation exists between (and also within) states. In the study states, female literacy rates range from 20 percent in Rajasthan to 86 percent in Kerala. Overall, in the low literacy states the gender gap varies between about 20 percent in Madhya Pradesh and Uttar Pradesh, to 30 percent in Bihar and Rajasthan.

Rural children and especially rural females fall seriously behind in terms of literacy indicators. Where the national literacy rate overall is 52, it is a higher 73 for urban populations and only 45 for rural populations. Overall in India rural females have a literacy rate of 30 percent compared to 58 percent for rural males, and 64 percent for urban females against 81 percent for urban males. Thus urban females are twice as likely to be literate as rural females and they are even comparatively better off than rural males, though they lag behind in every other category. In addition, while the rural-urban gap in male literacy declined between 1981 and 1991, it has increased among females.

The study states vary in female rural literacy rates from a low of 12 in Rajasthan to a high 85 in Kerala, and in male rural literacy from the lowest 48 in Rajasthan to the highest 93 in Kerala. On the urban side, female literacy rates vary from a low 50 in Rajasthan to 89 in Kerala compared to male rates of 69 in Uttar Pradesh compared to 96 in Kerala. All the higher literacy figures are found in Kerala and most of the lower figures are found in Rajasthan.

Table 6: Key Literacy Indicators in Study States (1991)

States	Tot Literacy			Rural			Urban		
	T	M	F	T	M	F	T	M	F
India	52	64	39	45	58	31	73	81	64
Rajas.	39	55	20	30	48	12	65	79	50
Bihar	38	52	23	34	48	18	68	78	56
Uttar Prad	42	56	25	37	52	19	61	69	51
Madhya Prad	44	58	29	36	51	20	71	81	59
Tamil Nadu	63	74	51	55	67	42	78	86	70
Kerala	90	94	86	89	93	85	92	96	89

Source: Census of India 1991

Using literacy rates as an indicator, scheduled castes and tribes also lag seriously behind other populations. Females are the most seriously disadvantaged with literacy rates of 24 and 18 respectively, compared to 50 and 41 for males from the same groups. Both SC and ST groups are offered special incentives in order to reduce their educational disparities. These are distributed through the Department of Social Welfare and the Department of Tribal Welfare where separate funds especially allocated for these purposes make incentive coverage of SC/ST groups higher than for non-SC/ST populations. Depending on the state, these programs may include free school supplies, uniforms, textbooks, payment for each day's attendance in school, and residential ashram schools where a richer environment is intended to compensate for their

disadvantaged backgrounds.

It is estimated that at present in India there are 19 to 24 million out-of-school children ages 6-14 of which 60 percent are girls.<sup>14</sup> This is 22 percent of the world's total out-of-school children. There are also special incentive programs to encourage more girls' (and sometimes boys') participation. In India as a whole 28 percent of schools and 16 percent of school-going children receive a mid-day meal; about half the schools and 12 percent of children receive a uniform<sup>15</sup>, and 60 percent of schools and 23 percent of students receive textbooks. 77 percent of the beneficiaries are rural children. Girls constitute 41 percent of those receiving the meal and the textbooks, and 50 percent of those receiving uniforms. The scheduled groups receive these benefits in higher proportion than their numbers in the population: SC groups comprise 20 percent of the meal beneficiaries, 33 percent of the uniform beneficiaries, and 25 percent of the free textbooks beneficiaries, and ST groups 13 percent of the meals and 12 percent of the uniforms. (1986-87 figures, Fifth All India Educational Survey, NCERT, 1991).

The study states also offer special incentives for children to go to school. For example Uttar Pradesh is experimenting on a small scale with a scholarship scheme that provides Rs. 12 per month (with attendance norms) for lower primary and Rs. 20 for upper primary girls and scheduled groups and will follow up the experiment with a rigorous evaluation of its impact on participation. Bihar offers free textbooks to girls and will give them to all children in its project areas in the coming year. Rajasthan will be giving uniforms, books and supplies to all girl students in four Lok Jumbish blocks. Tamil Nadu gives mid-day meals, books and supplies to all rural children, and Madhya Pradesh places a small sum of money in a bank account for each girl and when she completes her schooling she receives the amount with its compounded interest.

#### 4.4 Participation indicators

4.4.1 Enrollment. In 1991-92 in India there were 102 million children enrolled in the lower primary stage of whom 42 million (42 percent) were girls.<sup>16</sup> In the same year there were 34 million children enrolled in the upper primary stage of whom 13 million (38 percent) were girls. Girls' enrollments increased from 28 percent

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<sup>14</sup>There are also approximately 122 million illiterate adults in the 15-35 age group of which 62 percent are women.

<sup>15</sup>Officials said that uniforms are no longer being given in many areas now, and there does not seem to be strict enforcement of uniform rules in rural schools.

<sup>16</sup>These statistics are from MHRD sources.

in 1951 to 39 percent of total enrollments in 1991. However, the number of out-of-school girls increased during this period because of population increases. Now girls are estimated to comprise 45 percent of the total enrollment in lower primary and 42 percent of the total enrollment in upper primary which indicates that they are fast catching up in the country as a whole with enrollments of boys. If girls maintain and increase their proportion of the enrollment, then future strategies will need to look more closely at the question of why the remaining children are still out of school regardless of their gender. This problem has not yet come to the study states, however, where the gender gap remains wide, showing that there is much left to be accomplished in these states.

**4.4.2 Participation rates.** According to MHRD figures appearing in 1994, gross enrollment rates of 6-11 year olds are reported to have reached 85 percent, and of 11-14 year olds close to 50 percent.<sup>17</sup> These rates are misleading, however, because of a roughly 25 to 30 percent inflation due to over- and under-age children. The problem is compounded by the likelihood that enrollments disaggregated by sex, urban/rural, and other criteria will tend to have different inflationary rates. Girls, for example, tend to enter school late and will therefore have higher numbers in the over-age group than boys, and rural numbers are also likely to be inflated more than urban rates for the same reason. Unfortunately, except for certain local areas, it is difficult to find reliable age level statistics on enrollment.<sup>18</sup>

Table 7 shows gross enrollments in 1991-92 in lower and upper primary stages. The inflation of the ratios reflects the generally inefficient nature of the education system which i) enrolls children early or late causing problems in instruction to multiple-age groups, ii) includes repeaters who are not performing well but still use education resources and iii), especially true for older girls, indicates potential problems of dropout before skills are consolidated because of shorter time spent in school. Eventually the aim of the system must be to bring these figures closer into line with real ratios of the age group (but not at the expense of children who want schooling). Note in Table 7 that Kerala with close to universal enrollment at the lower primary level has enrollment rates more in line with what one would expect. This means that children are entering the system at the right age and probably passing through the class levels at a more efficient pace.

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<sup>17</sup>Though taken from the latest MHRD publication in 1994, they do not seem completely consistent with the 1991-92 data of Table 7.

<sup>18</sup>This is partly due to the fact that births and deaths are often not recorded and children and their parents may not know the true age of children.

Efforts to enroll more girls in the last decade has paid off in higher growth rates for girls' education compared with boys. However, the significant aspect of Table 7 is that there is still a gender gap among all groups and in all states. The gender gap in gross enrollment ranges from 30 to 50 percentage points overall in the low literacy states and an even wider 30 to 70 percentage points at lower primary for SC and ST groups. At upper primary the gap is somewhat less for the scheduled groups but this phenomenon is little consolation given the poor representation of both sexes at this level.— The size of the gender gap must be seen against the factor of late enrollment, where overage children probably inflate the girls' ratios more than those of boys, making the gender gap even wider in reality.

Table 7: Key Participation\* Indicators for Study States (1992-93)

States	Gross Enrollment**				SC G.Enrollment				ST G.Enrollment			
	LP		UP		LP		UP		LP		UP	
	M	F	M	F	M	F	M	F	M	F	M	F
India	118	93	81	53	128	92	75	44	127	89	87	72
Rajasthan	115	58	78	28	102	41	63	13	108	38	62	8
Bihar	106	56	52	22	100	44	38	11	104	68	40	21
Uttar Prad	104	72	73	36	86	40	53	16	97	60	57	23
Madhya Prad	118	88	89	54	122	89	92	28	93	59	44	15
Tamil Nadu	143	129	110	89	158	137	112	85	131	104	76	53
Kerala	98	97	106	104	113	110	118	115	131	125	91	90

\*Ratio of 6-11 year olds enrolled in LP and 11-14 year olds in UP

\*\*Estimated to include 25 to 30% over- and under-age children

Source: Selected Educational Statistics 1992-93 Dept. of Ed, MHRD, New Delhi, 1993

**4.4.3 Repetition.** Very little information is available on repetition rates, but evidence from other developing countries where careful studies have been conducted suggests that repetition may be a more important factor than it might seem from undifferentiated statistical data. A 1976 NCERT dropout study suggested what is probably still true, that there were more children repeating classes than actually dropping out, making dropout rates seem higher than they actually were.<sup>19</sup> In India, children are not supposed to repeat classes within the lower primary stage, but given the very high absenteeism reported variously in studies up to 50 percent,<sup>20</sup> and from teacher interviews, repetition does occur. Studies elsewhere in developing

<sup>19</sup>This is a phenomenon found worldwide.

<sup>20</sup>Rajasthan studies conducted by Lok Jumbish.

countries and preliminary analyses of studies being conducted under DPEP show that repetition is often a precursor of dropout for individual children. If repetition is more likely when a child is absent or performing poorly, then girls are probably suffering more repetition than boys in some of the study states because their absenteeism is greater and their performance poorer (see below).

**4.4.4 Dropout.** It is estimated that only about 50 percent of all students who enroll in Class 1 reach Class 5, and only 40 percent of those entering Class 1 reach Class 8. The girls' dropout rate overall by the end of elementary education is higher (68 percent) than boys' (59 percent). The record of dropout among scheduled tribes is particularly poor. ST female dropout reaches 81 percent compared to 76 percent for ST boys by the end of Class 8.

Table 8 shows the dropout rates for the study states. Bihar has the highest rate of dropout for girls (85 percent) and boys (77 percent). Not surprisingly, Kerala has the lowest rate at 17 for girls and 18 for boys. Kerala is the only state where males drop out at a greater rate than girls. In general dropout rates are higher for children of SC and ST background, with the gender gap reflecting the more serious nature of the problem for girls.

Recent figures from a sample of schools in Rajasthan report that the percentage of children of age 11 who complete Class 5 is only 37 percent compared with 56 percent for the nation as a whole. Overall in Rajasthan 55 percent of the children who enroll in Class 1 drop out before they complete Class 5.

Table 8: Key Dropout Indicators (Classes 1-8) for Study States (1988-89)

States	%Tot Dropout*		%SC Dropout		%ST Dropout	
	M	F	M	F	M	F
India	59	68	64	74	76	81
Rajasthan	63	73	67	84	72	86
Bihar	77	85	83	90	85	89
Uttar Prad	52	65	58	68	56	64
Madhya Prad	50	67	54	73	71	81
Tamil Nadu	41	51	52	61	51	60
Kerala	18	17	28	25	45	38

\*Percent dropout by Class 8 of those who enrolled in Class 1  
Source: Fifth All India Educational Survey, NCERT 1989.

**4.4.5 Achievement.** There is little point in enrolling in school or completing education stages unless expected learning takes place. The preliminary findings of the DPEP achievement studies which have

not been completely analyzed yet, show that overall very low levels of learning in language skills and math are taking place in all the DPEP states, including Tamil Nadu and Kerala. The highest scores (50 percent) are in word knowledge. Comprehension is very low and math is still lower. However, there is large variation by school and by individual. Individual factors which help predict achievement are socio-economic status, gender, opportunity to learn (various classroom activities identified by the child), children's aspirations for length of schooling and their future adult occupations, student reading of materials other than textbooks, and a child's mean attendance record. The most significant factors predicting 52 percent of the variance were gender, SES, and attendance. As SES and attendance increase, achievement goes up. Male gender shows a positive and female gender a negative relationship with achievement.

Using the technique of Hierarchical Linear Modelling, the analyses found that there were also important differences at the school level. For every added unit of female students in the school the achievement was reduced. This was also true for added units of female teachers and for schools that were multigrade. The researchers caution against drawing implications from these data before more analyses are made and before attempting to understand the complex factors that are affecting these results. It is possible, for example, that the way girls are treated in coed classrooms makes the difference. Observations in Uttar Pradesh classrooms showed that girls tended to be placed at the back of a room of boys and were never asked to respond to questions. Similarly, female teachers may have less academic training than male teachers, who, because of an inability to find employment elsewhere may be entering the teaching field with higher qualifications. In some schools there were high achievement results, and the researchers plan also to identify the factors which increase achievement in schools.

Over the years, other studies conducted in India have shown that children attending the pre-school anganwadi centers are better than non-ICDS children in the development of motor skills, language skills and psycho-social behavior, and do significantly better in tasks of listening, comprehension, object vocabulary, sequential thinking and time perception.<sup>21</sup>

#### **4.5 Policy initiatives to improve conditions of girls' education**

The education of girls has been a major policy concern in India. The National Policy on Education (NPE) and its Program of Action

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<sup>21</sup> Anandalakshmy 1986, Devadas 1986, Misty 1986, Sood 1986, Tarapore 1986, Bilquis 1987, Khosla 1985, Sahni 1984, all reported in the **National Evaluation of Integrated Child Development Services**, National Institute of Public Cooperation and Child Development, New Delhi 1992.

(POA), enacted in 1986 and later amended in 1992, clearly stressed the importance of removing the gender disparities that were evident in the statistics. The POA stated unequivocally in its introduction that the problem of universalization of elementary education was increasingly being recognized as a problem of the girl child, and called for reorienting the education system as a whole to promote women's equality and education. The POA notes (paraphrased) that, among other benefits, education could be an effective tool in empowering women by:

- o enhancing their self-esteem and self-confidence
- o building a positive image of women's contributions to society
- o developing their ability to think critically
- o fostering decision making and action through collective processes
- o enabling women to make informed choices in education, employment and health
- o providing information, knowledge and skill for their economic independence
- o enhancing access to information relating to their rights and entitlements and their participation on an equal footing with men.

To effect these changes the POA called for educational institutions to become active agents for the empowerment of women. It called also for gender and poverty sensitization programs, priority for recruitment of women, a common-core curriculum to promote a positive view of women, and required that funds be allocated for gender awareness and advocacy programs. It also underlined the importance of women's studies and recommended the setting up of women's study centers in major universities.

To achieve universal elementary education the document urged measures to reach the girl child. Girls who could not attend formal schools or who dropped out of school were to be provided with educational opportunities through NFE with special attention to designing program for out-of-school and adolescent girls to return them to the formal system or, alternatively, to qualify them for technical or vocational education. The document urged the use of innovative educational programs such as the Open School, distance learning, and support services for rural and urban disadvantaged girls to increase their participation and performance. In addition the POA required that at least 50 percent of teachers recruited in the future should be women, and that Total Literacy campaigns (TCLs) should pay special attention to women in the 15-35 age range and dovetail with NFE to reach girls in the 10-20 age group. The document also detailed numerous other activities to promote the status of women including media support, and the formation of implementing and monitoring bodies at center and state levels. As a whole these documents provide comprehensive policy support not only for the education of women but for an improvement

of their overall position in the society.

The priority placed on female education in the NPE and POA is reflected also in the Eighth Five Year Plan (92-97) and its supporting budget. In this plan the emphasis shifted from enrollment alone to enrollment, retention and achievement, recognizing that merely going to school was not worth while if the quality of the program was poor or if the child dropped out before acquiring skills. Another important shift was from stressing equal opportunities in education for both sexes to seeing education as an instrument for empowering women through the promotion of new values. This shift resulted in wider integration of gender in all planning for education reform, in review of textbooks and curricula, in gender sensitization of teachers and bureaucrats, and in promoting women for roles of responsibility in the new decentralization schemes.

#### **4.6 Constraints on the participation of girls**

Many studies have been conducted of the reasons for the poor enrollment and retention of girls at the primary level in India. Most of their conclusions are similar to those found in other parts of the world.

Although it is important to know the results of these studies, their conclusions need to be taken with some reservation for several reasons: a) attitudes are often difficult to determine especially among rural illiterate parents who have little familiarity with studies, b) perceptions of causal factors tend to be different and often contradictory depending on whether the person being asked the question is a child, a parent or a teacher<sup>22</sup> c) causes of non-participation usually can not be reduced to one or two reasons, and d) reasons tend to vary from place to place which means that micro- rather than macro-studies are required to address them. In addition, attitudes can change in a very short time period. Historically in many countries the education of girls has lagged behind boys in a predictable way that makes the gender gap at least partly a time-lag phenomenon rather than a problem that persists solely for socio-economic or other reasons.

**4.6.1 Factors affecting girls' participation.** Gender studies were contracted under DPEP as one of the start-up activities of the program. They were conducted in a number of circumscribed locales

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<sup>22</sup>In the area of Haryana, for example, where literacy rates are very low a study on the reasons for enrollment and retention showed a difference between teachers and students perceptions of why girls didn't go to school or dropped out. The family often stated school reasons and the teachers family reasons for the non education of girls.

to make it possible to micro-plan specific solutions to problems that were identified. Other objectives of the research included the training of local personnel in the methods of investigatory research and using the research as a way to sensitize local officials to gender issues.

The factors reported through the studies to discourage or encourage the participation of girls in schooling programs of DPEP districts were:

#### **Factors discouraging girls' enrollment**

- o daily domestic chores; time-consuming work of collecting water, fuel and fodder, and grazing animals
- o parents unable to pay the costs of schooling including supplies and clothing
- o parental illiteracy and apathy
- o child's assistance in the parents' occupation
- o care of siblings
- o early marriage

#### **Factors discouraging girls' retention**

- o (factors above)
- o large family size of girl
- o higher birth order

#### **Factors encouraging girls' participation**

- o better economic conditions of the family
- o parental literacy
- o parental motivation
- o positive attitude of teachers
- o incentives like scholarships, textbooks, uniforms, meals
- o flexible school timings
- o availability of support services

In the low literacy states the problem of enrollment and dropout for girls is aggravated by the fact that girls, more than boys, tend to enroll at a later age, and then leave school at puberty without consolidating their literacy skills. In Rajasthan, preliminary evidence from a recent study conducted for Lok Jumbish is suggesting that girls and boys both tend to drop out most often between Classes 1 and 2 because of the poor quality of a program that doesn't interest the children. Girls drop out again in Class 4 or 5 when they reach puberty because of the difficulty in menstrual management. Researchers there do not believe early marriage is as significant a reason for girls' dropout as menstruation, because though they may marry as early as 14 or younger, they do not move to their husband's home until 17 or 18. Boys who drop out near the end of the primary stage tend to do so because there is some kind of family emergency like the death of a

father that requires the boy to support the family.

At the upper primary, a major problem is the lack of middle primary schools, or if available, new questions that arise about distance and the cultural appropriateness of them for adolescent girls. Girls at this level may not be ready for distance learning unless it comes with a great deal of feedback and supervision. Nothing in the present primary program, which is highly teacher-dependent and rote, prepares a child to take his or her own responsibility for learning.

Studies in 1990-92,<sup>23</sup> showed that children are more likely to enroll in primary school if they have attended anganwadi centers. In rural areas 80 percent of a sample of males and 88 percent of a sample of females who attended ICDS Centers enrolled in primary school, compared with 13 and 15 percent respectively for those who did not attend such pre-school programs. In urban areas 82 percent of males and 83 percent of females who attended ICDS Centers enrolled in primary school, compared with 28 and 34 percent respectively for those who did not attend the pre-school programs. Thus the impact of ICDS centers was greater in rural than in urban areas but was significant in both. The same is also true for girls over boys but both are significantly impacted by attendance at the centers.

The impact of ICDS attendance reported for tribal groups was even higher with 91 percent of males and 92 percent of females who attended ICDS Centers enrolling in primary school, compared with 11 and 7 percent respectively for those who did not attend the pre-school programs. The study also highlighted the importance of the pre-school learning part of ICDS and other ECE programs both in enrolling and keeping children in formal primary programs later. Thus studies of ECE programs in India suggest that they can have a significant impact on the educational participation of all categories of children, including girls.

In what seems to be a contradiction between attitudes and behavior, DPEP studies report that scheduled tribe parents express an overwhelming desire to educate their children, both boys and girls<sup>24</sup> and not in their own native language. However, education statistics show that once tribal children go to school they drop out in higher rates than other children. It seems possible that it is some problem they meet in school--such as the poor program, the

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<sup>23</sup> See the National Institute of Public Cooperation and Child Development's, **National Evaluation of Integrated Child Development Services**, New Delhi 1992: p.122.

<sup>24</sup> They also express a strong desire for their children to learn in Hindi and most teachers, including those who know tribal languages, say they teach in Hindi.

difficulty of learning in a strange language, or discriminatory practices, if parents' motivations are to be taken at face value.

**4.6.2 Internationally recognized factors.** The international literature identifies three types of factors affecting decisions about girls' schooling participation. They suggest that the following questions might be asked to ensure appropriate conditions for enrolling and retaining girls in school:

#### **Accessibility**

- o Is the schooling located within an accessible distance that is considered safe?
- o Do sufficient places exist for those who want to go to school?

#### **Acceptability**

- o Do community/parents feel education is beneficial for girls?
- o Do appropriate teachers staff the programs?
- o Is the learning environment culturally acceptable?
- o Do the hours/seasons of the program encourage female participation?
- o Do parents see a positive relation between the outcomes of schooling and adult opportunities such as marriage and work?
- o Are different needs of client groups respected?

#### **Affordability**

- o Are fees and costs of schooling affordable?
- o Are lost labor opportunities bearable?
- o Do families see outcomes as worth while in the long term even when girls move to a new household?

These questions in the context of India suggest that decisions about girls' education require a complex balancing by parents and children of the benefits and burdens of education. Demand for girls' education, for example, may be affected by combinations of poverty, domestic work load, what is culturally acceptable for girls to do, their greater usefulness around the house, and a perception that education is "not working" for a particular child or is not useful for girls in general.

On the supply-side, girls may be "driven" away from schools because not enough spaces are available, because the costs of fees, materials, and special clothing is too expensive, because of problems with teachers and peers, because a lack of facilities like toilets or boundary walls are felt differently by girls, because they are marginalized in coed classrooms, because of harsh disciplinary practices, or because of unsatisfactory, boring programs that cause them to be absent, perform poorly, repeat and dropout.

The "real" reasons for the non-participation of a child can be complex---and quickly reversible if parents become convinced that the benefits of education offset the burdens of sending a child to school. Trends in other developing countries indicate that as schooling opportunities expand,<sup>25</sup> girls' enrollments also increase without any other added inducements. But when opportunities are restricted, girls' enrollment stays low in favor of places for boys. Until the norm of schooling is established for both sexes, many rural parents may simply not even think about whether or how to educate their children.

**4.6.3 International experience in addressing the constraints of girls education** (see Annex for more details). There is considerable international experience in addressing the constraints on girls' educational participation. Some specially related to enrollment and retention include the following:

- o increased supply of school places (Bhutan, Egypt, Mali)
- o feeder schools for early primary until children are old enough to walk further (Bangladesh) with follow-up hostels (Bhutan)
- o technologies which reduce the time spent in water and fuel collecting (Burkina Faso and Nepal)
- o health services which reduce the periods when school children are ill and absent or when siblings who must be cared for are ill
- o improved nutrition with school meals (Jamaica)
- o recruitment of local female teachers and training others to qualify (Nepal)
- o abolishing uniforms in rural areas (Pakistan), or providing free uniforms (Bangladesh)
- o establishing day-care centers near schools for siblings (China)
- o flexible school schedules (Bangladesh, Colombia, El Salvador)

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<sup>25</sup>This is not to suggest that opportunities for lower primary education are available everywhere in the study states. Rajasthan for example estimates that about 10,000 habitations are not covered in that state. However, with the major effort going on in NFE at the present time, which doesn't depend on costly construction, opportunities are expanding quickly.

- o providing alternative schooling (Bangladesh)
- o media campaigns (Mali, Morocco)
- o providing scholarships (Guatemala, Nepal), and free books (Peru)
- o alleviating poverty (Bangladesh)

Some of these examples are similar to programs already being tried in the Indian study states such as, among others, increasing the education opportunities near a girls' home (Operation Blackboard and NFE programs), improving facilities of water and toilets (Rajasthan and Bihar), micro-planning and local decision-making to address specific problems of school-going (Panchayati Raj, VECs, DPEP), nonformal programs with condensed courses and flexible timings coordinating with the formal system (all states), school feeding programs (Tamil Nadu) and other incentives (all states).

Evidence from the study states suggests that the problem with girls' participation may be as much, if not more, a problem of the poor quality of the primary program being offered. Girls are more likely than boys to be affected adversely by poor quality programs because the motivation of parents to send and keep them in school may be less. For this reason, it is important to look at ways to improve the quality of programs to attract and retain girls and ensure that they acquire appropriate skills. Quality concerns that are important relate to student engagement in learning, the mode of delivery, and the content of instruction. Textbook availability (and quality) is also one of the most consistent predictors of academic achievement.

International experience with regard to quality concerns includes ways of speeding up learning, delivering it through improved means and providing consistency of quality. Some of these include:

- o special curricula that speed up learning and relate to girls' interests (without providing them inferior programs) (Nepal)
- o self-teaching multi-grade learning materials (Indonesia, Liberia, and the Philippines)
- o training in non-traditional occupations (Chile, Tanzania)
- o textbook improvement (many countries)
- o annotated teachers' guides translating new methods of instruction into practical lesson plans (Pakistan)
- o Interactive Radio Instruction (IRI) for remote areas and where teachers lack qualifications (Pakistan and Dominican

Republic)

- o improving student achievement through IRI (many countries of Africa, Asia, Latin America)
- o simple supplementary math, science, and reading materials based on SRA concepts (Pakistan)
- o programmed teaching materials (Bangladesh, Indonesia, Thailand, Liberia, Philippines)
- o practical teacher training (Haiti)
- o increasing access to inservice training (Swaziland)
- o IRI training of teachers (Nepal)
- o distance training of teachers (Sri Lanka)
- o training for school managers (Haiti, Thailand)
- o better information systems for planning and assessing innovations (Thailand, Honduras, Yemen, Pakistan, etc)
- o test item banks, automated testing (Zimbabwe, Indonesia)
- o solution-focused research (Burundi, Sri Lanka, Pakistan)

Again a number of these concerns are already being addressed in some or all of the study states.

Because it is difficult to affect many family constraints on girls' participation and because of the potentially transient nature of many of them, it is probably more effective to put resources into activities and programs that will attract and hold children in school over the long term and not to "waste" resources in short-term incentives that may be unnecessary except for the most resistant groups. Given access to opportunities, the bottom line in girls' education seems to be the point at which parents feel the benefits of educating girls are greater than the burdens of sending them to school.

## **V EFFORTS TO IMPROVE ELEMENTARY EDUCATION IN THE STUDY STATES**

### **5.1 Background**

In addition to the institutions already described above which are formally involved in elementary education, there has been strong involvement of private and government-assisted NGOs in the

education sector of India at all levels since Independence.<sup>26</sup> Until recently, however, most of their efforts have been narrowly focused or concentrated in limited geographical areas. The number of large and small NGOs involved in education is too great to describe any but the most prominent in each state, and indeed in the last two or three years, the new trend has emerged, particularly in the low literacy states of this study, to coordinate the multitude of education efforts under one supervising agency in each state. Any initiatives in the immediate future will have to come through these agencies.

The impetus for this development was the Panchayati Raj Act-- Amendments 73 and 74 of 1992 which provided for democratically elected bodies at the district, sub-district, panchayat and municipal levels. The Panchayati Raj bodies which must be composed of appropriate numbers of women (one-third members and chairpersons), scheduled groups, minorities, parents, and education officials, are given responsibility for preparing local development plans, implementing education programs and coordinating with such sectors related to education as health, social welfare and women and child development.

The Eighth Five Year Plan (1992-97) specified the district as the unit of planning for UEE and directed states to draw up district-specific plans through local bodies with defined activities, clear responsibilities, time-schedules and targets.

## **5.2 District Primary Education Program (DPEP)**

DPEP was initiated in 1993 as the primary education component of the Social Safety Net Adjustment Credit financed by the World Bank's IDA. Its primary function was to implement the strategy of district level planning. The program was based upon the experiences of its forerunners, the Bihar Education Project, Lok Jumbish, the Basic Education Project in Uttar Pradesh, the Andhra Pradesh Primary Education Project (supported by the Overseas Development Authority), the Shiksha Karmi Project (assisted by the Swedes) and Mahila Samakhya (assisted by the Netherlands).

DPEP emphasizes the mobilization of district, state and national level institutions in support of primary education. At the start of the program, districts were divided into 3 groups: high literacy districts, districts with high demand for formal education because of successful literacy programs, and low literacy districts where facilities and delivery are poor and awareness is low. The strategies for UEE differ in the three types of districts.

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<sup>26</sup>One estimate put the number of NGOs involved in development activities in Bihar alone at over 17,000. The Bihar Education Project identified 85 with which they work.

DPEP will focus on the 247 districts in India which have female literacy rates below the national level. In the first phase, DPEP targeted 44 low literacy districts in 8 states including, from the study states, Madhya Pradesh, Tamil Nadu, and Kerala (the others are Orissa, Assam, Haryana, Maharashtra, and Karnataka). Plans call for extending the Program to 110 districts by the end of 1997 at a cost of Rs. 195 million, of which Rs.172 million is to be raised from external sources. A general guideline followed by the Center which funnels external and government funds through the organizing agency in the state, has been to allocate Rs. 35 to Rs. 40 crore per focus district.<sup>27</sup> Though funding for DPEP is supposedly provided by external donors in a program mode where resources are merged, the previous association of specified donors with certain states and the preference of donors to be able to identify their own accomplishments has meant that most authorities tend to specify single donors when talking about funds in a given state.

### 5.3 Efforts in the study states

An annex provides more details of the efforts currently going on to improve education in the study states. This section summarizes the similarities and differences in the approaches of the study states as viewed from visits to them.

**5.3.1 Similarities.** The efforts underway in the four low literacy states to improve conditions of primary education are more similar than different in objectives and approaches. The similarities result from at least three sources: the mobilizing role of the center in initiating policy frameworks and reform movements in education and gender equalization; the willingness of outside donors to invest in the costs of reform; and the solid base of experience of local semi-autonomous and autonomous bodies involved in efforts to improve the conditions of education over the last several decades.

Each of the study states coordinates its reform activities under a single organization that exists outside of the main government education bureaucracy but coordinates with it: in Madhya Pradesh under the supervision of the Rajiv Gandhi Prathmic Shiksha Mission, in Rajasthan under Lok Jumbish, in Bihar under the Bihar Education Project, and in Uttar Pradesh under the Uttar Pradesh Education For All Project. The funding modalities for the agencies usually consist of shares contributed by a donor agency or agencies, the GOI and the state government. The GOI guarantees any repayment of loans made by external donors. The major donors contributing to the reform activities include: the European Union

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<sup>27</sup>Madhya Pradesh has then reallocated the funds to provide more funds to districts where needs are greater and fewer to districts where needs are not as great because of local conditions.

(EU) in Madhya Pradesh, the Swedish International Development Authority (SIDA) in Rajasthan, UNICEF in Bihar and the International Development Agency (IDA) of the World Bank in Uttar Pradesh.

Their program designs based on national UEE objectives of elementary access, retention and achievement with a strong emphasis on girls' participation are also similar. They approach these objectives with decentralized decision-making, monitoring and planning through the VECs, construction and repair of schools, the up-grading of facilities such as providing toilets and water, and the provision of NFE centers in areas which are insufficiently served by schooling opportunities. They provide incentives in the form of books, supplies, uniforms, meals and stipends. They approach quality through organizing their efforts around MLL with special training for teachers and the development of new textbooks and assessment instruments. They are restructuring training around DIETs and strengthening inservice training.

Table 9 summarizes the major efforts underway to improve elementary education in the study states. The main donor funder appears in parentheses after the name of the organization supervising the reform. Examples of the kinds of activities the organization engages in appear next, followed by some highlights of their programs.

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Table 9: State Efforts to Address Education Issues

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Bihar: Bihar Education Project (UNICEF)

Status: Started in 1991-2 in 7 districts; will expand to 20 by 1997-8; established 68,000 VECs

Comprehensive: construction, improved facilities, teacher training, ECE, NFE, MLL, VECs activated, incentives provided  
Highlights: Micro-projects, ETTI conversion and Mahila Samakhya

Rajasthan: Lok Jumbish (SIDA)

Status: Started in 1992 in 5 blocks, added 10 in 1993, another 10 in Jan. 1994, and 75 in June 1994

Comprehensive: construction, repair of facilities, teacher training, ECE, NFE, MLL, VEC coordination through NGOs

Highlights: NGO mobilizers, MLL Textbooks, innovative school building designs

Madhya Pradesh: Rajiv Gandhi society (EU), a DPEP state

Status: 19 low literacy districts (7 tribal) with 198 blocks and 28,000 VECs

Comprehensive: VEC activation, DIET conversion, gender studies/sensitization, teacher training, school support funds, NFE, construction

Highlights: ECE options, Teacher Empowerment, BRCs,

Uttar Pradesh: Uttar Pradesh Education For All (IDA)

Status: Covers all of 10 low literacy districts (8 have female literacy less than 17 %, 2 of 20% and 2 of 26%)

Comprehensive: NFE, construction, VEC coordination through teachers, ECCE centers and strengthening ICDS, scholarships, girls-only schools and NFE centers, MS, textbooks, MLL, DIETs

Highlights: "School complex" concept, VEC awards, work programs for UP girls, training using retired trainers

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**5.3.2 Differences.** The various states started reforms under the current agencies at different times and are therefore in different stages of implementation. Bihar's BEP, established in 1991, is the oldest, with Rajasthan's Lok Jumbish next in 1992. Madhya Pradesh and Uttar Pradesh are just getting underway. All, of course, experienced education initiatives under various non-government auspices prior to the establishment of their current agencies, but in general these initiatives were piece-meal, directed at special groups or education components.

Much of the difference between states is in the detail, sequence and emphases of implementation. For example, as a result of previous UNICEF funding, Madhya Pradesh is expanding efforts in "Teacher Empowerment Training" and to do so has built up an extensive set of District Institutes of Elementary Training (DIETs) and Block Resource Centers (BRCs). Madhya Pradesh is also strengthening the ECE component by offering pre-school options to its districts. Rajasthan has developed textbooks up to Class 3, some innovative school designs that do away with the need for expensive boundary walls and are adapted to local climate conditions, and an extensive administrative and management infrastructure under the supervision of a number of NGOs. Bihar has been converting its old Elementary Teacher Training Institutes into inservice DIETs and concentrating on preparing teachers to teach MLL. The State has an exemplary Mahila Samakhyia Organization where, among other community activities, village women monitor schools, ensure that girls attend, and start their own nonformal programs. BEP also solicits ideas for micro-projects related to education reform from individuals and NGOs. Uttar Pradesh is operationalizing the idea of "school complexes", a cluster of

schools around a "model" school as a way to up-grade instruction, has an award system for outstanding VECs, and is experimenting with a work program for upper primary girls to see if they can earn some income while in school and continue after they graduate.

All the states have made special efforts to increase their nonformal programs in villages where either education opportunities were not previously available or where children were unable to take advantage of the formal program. The majority of participants in these programs are girls. .

The two comparison high literacy states, Tamil Nadu and Kerala probably do not have much upon which to model reforms in the low literacy states. Their different histories and economies, and longer experiences with education, including early missionary efforts, make their conditions quite different from the low literacy states. One factor however which may be important in Kerala, and to lesser degree in Tamil Nadu, is the larger ratio of private subsidized schools that may encourage higher quality schooling. Achievement tests in the schools of these states, sponsored under DPEP, however, suggest that the children are still not learning as much as they should.

Tamil Nadu, though one of the initial DPEP states has not yet set up a separate structure to organize reform efforts. The State started in 3 districts and has now expanded to 15 districts. By 1995 all will be covered. After completing gender studies for the 3 early districts they decided to put much of their early effort into ECE Centers including ICDS where they especially want to improve pre-school learning activities. They are also expanding NFE Centers from 32,000 covering 4 lakh children, to 1 lakh covering 15 lakh children. The expansion is made possible by a relaxation of government rules to allow those waiting for government jobs to work in the program for a small honorarium.

**5.3.3 Potential of these efforts.** Among the criticisms levelled in the past at the Indian education system have been: that it is too centralized, bureaucratic, and non-participatory, that there is little capacity for planning and management at field levels, that there are overlapping responsibilities and lack of coordination between departments, that there is political interference in the running of programs, that decision making and planning is not based enough on information and that the information in any case is unreliable. Many of these deficiencies in the education system have the potential to be improved through the current restructuring in the way education is planned, managed and delivered.

The restructuring addresses these issues in three ways, by:

- o decentralizing planning and decision-making to state, district and village levels,

- o coordinating resources under an umbrella organization in each state like DPEP,

- o setting up semi-autonomous implementing agencies at the state and local level who though working outside the education bureaucracy, cooperate with it and energize appropriate bodies to deliver the needed interventions.

Decentralizing decision-making to village level committees has the potential to resolve some of the irksome problems that the bureaucracy has been unable to address, namely those related to ensuring that teachers are present in school and teaching on a daily basis, developing flexible timings and conditions for schooling, repairing school buildings, and educating parents to the need for sending all children to school.

Coordinated planning makes it possible to ensure not only that there is no overlap in activities but that improvements in one component constructively support the others. Notable in this respect are programs directed at providing and improving the instructional skills of teachers--such as funding schemes for providing the incidentals required by teachers, restructuring the role of the DIETs, Operation Blackboard, Shiksha Karmi and Teacher Empowerment activities. Also the formation of a framework for MLL has helped to organize the efforts in all the states toward improving the quality of the program they will offer. This can come about as a result of trying the development of instructional materials, assessment instruments, and teacher training to clearly defined skills children are required to learn.

#### **5.4 The strengths and weaknesses in the current situation**

There are strengths and weaknesses in the current situation that can encourage or obstruct implementation of the goals of UEE.

##### **5.4.1 Strengths**

The strengths are:

**Commitment.** There is strong commitment for girls' education at national, state, and district levels. This commitment is not always as visible at the local level in certain districts.

**Policy.** A comprehensive policy framework exists for targeting the education of girls and scheduled groups in the National Education Policy (NEP). The Program of Action (POA) provides an equally strong mandate for implementation.

**Resources.** Resources seem readily available for the non-recurrent costs of reform in primary education. However, recurrent budgets appear to be insufficient to cope with the large expansion required in lower and upper primary if UEE is to be achieved by the year

2000.

**Leadership.** Autonomous and semi-autonomous bodies are available to provide leadership for reforms and to energize other agencies to provide quality inputs for primary education.

**Technical capacity.** Technical capacity exists for most aspects of the education sector in a number of talented national and state level educators from both public and private sectors.

**Education coverage.** The past stress on enrollment has paid off with generally good lower primary coverage through formal schools and nonformal education centers in most areas. The expansion of NFE has the potential to complete this coverage. Among the remaining groups, the coverage may also be inadequate for boys.

**Infrastructure.** Considerable and extensive infrastructure in the form of institutions and staff exists to carry out reforms of training, materials development, supervision and monitoring.

**Decentralization.** Though still in their infancy, efforts to decentralize the control of primary education to village, block and district levels seem exactly what is needed. The difficulty will be in adjusting the right mix of local autonomy and responsibility with standards that ensure quality delivery and results.

**Coordination of effort.** The coordination of education efforts under DPEP, Lok Jumbish, the Bihar Education Project, and the Uttar Pradesh Education For All Project should make it easier to plan, bring to scale and achieve results efficiently and effectively.

#### 5.4.2 Weaknesses

In addition to these important strengths, there are also important weaknesses. Some are beginning to be addressed by the new reform programs but as yet have not become apparent in the system.

**An unwieldy education bureaucracy.** The education system has difficulty providing efficient, effective programs because it is overwhelmed by bureaucratic rules and procedures, burdened by paperwork, and staffed with employees who have little incentive to take initiatives. Reform efforts have been organized through semi-autonomous or private bodies to by-pass this stagnating situation. In the long run this approach avoids the main problem which is inefficiency in the main education provider. As yet this problem is not being addressed by any of the reform efforts.

**Lack of coordination between government departments.** Programs dependent upon different government departments--Education, Health, Women and Child Development, often are not as productive as they might be because of difficulty in cooperating and coordinating their inputs.

**A late start in addressing questions of quality.** The past emphasis on enrollments has resulted in a badly deteriorated education program. The problem is often compounded in nonformal programs where the program is condensed and the teacher may be less capable. While discussions of quality are sophisticated at the center, they are less so in each successively lower level of the system. The greatest gap is a weak sense of "system" including such elements as:

- o the lack of emphasis on outcomes like student learning and more emphasis on intermediary inputs such as teacher attendance and motivation that are hard to monitor;
- o a failure to lodge responsibility for results in appropriate parts of the hierarchy;
- o an absence of structured linkages among educational components such as curriculum and training, or between related programs such as ICDS and primary schooling;
- o the absence of institutionalized mechanisms for feedback and evaluation that automatically lead to reform;

MLL as a clear statement of learning objectives, begins to address some of these issues but not all of them.

**Remaining rigidities in the way education is viewed by bureaucrats.** Reforms require a flexible approach to address special needs. For example, formal education need not await a building; training should not be oriented only to single class instruction; instruction can take many forms including some elements in traditional approaches; schooling needs to be flexibly timed; delivery systems may have to vary; more schooling may need to be lodged under vested-interest management. Decentralized decision-making has the potential to address some of these problems and NFE also appears flexible enough to resolve some school-going problems of girls but there are still components that have not caught up.

**Gap between the center and the field in their understanding of basic issues.** Part of the problem is that the center has not always communicated its understanding well to the states and districts. There are many research findings now available through the DPEP studies that need to be discussed and their implications understood at grassroots levels.

**Not realizing the potential of the ICDS pre-primary program.** Other countries begin learning activities at the age of 5. Because it is difficult to prevent girls in the low literacy states from dropping out at puberty, an added year of appropriate learning at the pre-primary level can give them more solid basic skills. ICDS pre-primary learning programs need to be strengthened and stronger links need to be forged with formal primary programs to ensure the

enrollment of girls.

**Neglect of the important upper primary program.** Education opportunities are much fewer for upper primary students. If schools can not be provided on a large scale for this stage then programs should be extended through mobile teachers, open schooling, or other flexible delivery systems. Thought needs to be given to such accessibility questions as distance, safety, and the cultural acceptability of upper primary schooling for girls.

**Limited availability of technologies to support and deliver education.** Decentralization and micro-planning imply a range of options to solve local problems. At present there is limited availability of technologies that can serve this purpose. Already the need for these technologies is being felt:

- o because many of those who are not now participating in education fall into the category "hard-to-reach populations",
- o because NFE and other interim efforts may not be up to standard, and
- o because highly qualified teachers may not always be available to staff the expansion of programs.

## **VI OPTIONS FOR INTERVENTIONS IN GIRLS' EDUCATION**

The efforts being mounted in the four states have considerable potential to resolve many weaknesses of the schooling system outlined above. All the projects and programs emphasize the enrollment and retention of girls, and all promote MLL as a way of improving quality. The state designs appear strong even though it is too early to predict whether it is possible to implement such ambitious plans which depend upon a major mobilization and coordination of resources and a revolution in the way decision-making takes place.

### **6.1 Points of intervention**

At this time, funding for the development costs of reforms appears adequate in all the low literacy states. As other states become part of the DPEP effort, however, more funding may become necessary. Most states have low female literacy districts and therefore though they are not as disadvantaged as the states of this study, they still have pockets of disadvantage. If thought of in terms of the poor quality education program that appears everywhere then all the states can be considered disadvantaged.

Where state governments will face funding problems is in capital and recurrent costs for system expansion to meet UEE goals, an area of financing which is usually low on the priority list of donors. Funding, if it becomes a viable option, should necessarily be in a

program mode because of the way DPEP is organized. This is the most efficient way for the supervising NGOs to address education problems comprehensively, and according to their own realities.

Beyond what is presently being implemented, and some systemic weakness, the enrollment, retention and achievement of girls can be enhanced with more attention to the quality of the education program being offered, especially in the early years of schooling. Specifically what is needed is:

- o strengthened pre-primary programs,
- o improved quality and consistency in education programs,
- o expanded opportunities for upper primary schooling, and
- o flexible delivery systems for hard-to-reach populations

## 6.2 Rationales for Supporting these Options

### 6.2.1 Support for pre-primary programs

**Rationale:** Studies in India show that children who participate in ECE programs are more likely to enroll in Class 1 than children who do not. Anecdotal evidence suggests that girls are more likely to enroll in Class 1 if they and their parents become used to schooling routines before the girls are old enough to contribute much to family labor. ECE programs tend to give children a sense of confidence when they join Class 1 and if the instructional quality is good can give girls additional schooling before they drop out at puberty. All four low literacy states are now strengthening pre-school learning programs as a means of involving children in schooling earlier. Few if any instructional materials exist for these programs and those who must teach them often have limited schooling themselves.

### 6.2.2 Support for lower primary programs in math, science, and language, and support for flexible ways to deliver these programs to, for example, comparable NFE programs

**Rationale:** Evidence suggests that a major problem of girls' retention is the poor quality of the current program. When parents do not feel schooling is worthwhile they are more likely to remove girls from school than boys. Achievement studies report very poor performance in math and language, especially among girls, and significant variations between schools. Schools in remote areas are difficult to staff and teachers in many schools are absent or late. NFE Centers attract a majority of girls because of their condensed courses and flexible hours. Officials complain that it is often difficult to find good staff for these centers. In the short-run it may be difficult to change the motivation and behavior of teachers on as large a scale as is necessary to effect major

qualitative changes in primary school programs. Children will continue to receive variable quality education depending on the skills and knowledge of teachers, unless ways are developed to deliver instruction with better and more consistent quality. Moreover, classes where multiple grades are taught suffer the problem of teacher-dependent materials--where children remain engaged in learning only when the teacher is directly instructing them. This cuts down on their learning time. The problem requires high quality programs that can be consistently delivered to children even when conditions are not optimum.

### **6.2.3 Support for upper primary school programs**

**Rationale.** The second major "access" point in the formal system comes at Class 6 of the upper primary stage. It is an important stage in consolidating functional literacy and acting as a bridge to higher stages of learning where more of the expected development and empowerment benefits are realized. Comparatively few opportunities exist for upper primary as compared to lower primary education. Without expanding these upper primary opportunities, many rural and scheduled-tribe girls will not be able to continue their educations beyond Class 5 (nor will they be able to qualify as teachers). New flexible ways of delivering upper primary education need to be provided for girls, who will tend to be more adversely affected than boys when facilities are not nearby. Children of the upper primary level still need considerable guidance and therefore may not be able to handle distance "correspondence" courses without a great deal of supervision and support. Though distance learning exists for the secondary level in India, there is no equivalent system for the upper primary as yet.

English teaching begins at Class 6. English is the medium of higher education in some faculties in India and is still much used in government offices and for communication between language groups. Rural children with poorer skills in the language are at a disadvantage when seeking employment that requires these skills. Few rural teachers know English well enough to teach it properly. When they do teach it they emphasize reading and writing skills and very little comprehension and speaking.

### **6.2.4 Support for teacher training**

**Rationale.** At present most of the burden for quality in the instructional program is placed on teachers who may be poorly trained and qualified. An enormous amount of teacher training is now going on at state, district, and local levels and much more is anticipated. The cascade method being used, while the only practical way to conduct such extensive training, has the disadvantage of not maintaining the same quality as it moves from a central training point to the classroom level. Another weakness is that it relies on the teacher to translate most of the concepts