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Small Schools : Issues in Policy and Planning

Yash Aggarwal

National Institute of Educational Planning and Administration
17-B, Sri Aurobindo Marg
New Delhi, INDIA
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YASH AGGARWAL

National Institute of Educational Planning and Administration
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ABSTRACT

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The two most important characteristics of educational development in India are the quantum jump in terms of access and persistence of low quality of primary education. While, Indian system of education is one of the world's largest in terms of the number of schools, students and teachers employed, it ranks much below in terms of performance indicators of internal efficiency and learners achievement. Important factors which are often ignored in the study of school effectiveness are the settlement structure, size and age structure of the population and its density. In the Indian context, approximately half of the settlements have population less than 500 and hence large primary schools are not viable. Even though nearly half the primary schools in the country had less than 75 students and majority of these may not be economically viable, the studies dealing with the unit costs, spatial distribution, internal efficiency, student flows characteristics and planning and management issues associated with the small schools are generally lacking.

This paper examines the relationship between the settlement structure, schooling facilities and identifies factors affecting the success or the failure of small schools. Based on a case study of one of the educationally backward districts in Assam (Darrang district), the paper identifies imbalances in the provision of infrastructure, teachers deployment and examines related planning and management issues.

Although, it is difficult to generalize on the basis of the findings of the study, it is handicapped by the availability of representative empirical data from across the country, but it has identified a number of policy and programming implications. Quality improvement poses a very serious challenge in the context of smaller schools. The focus of educational planning should now shift from supply to demand side management and The study also highlights that schools with low enrolment are most deprived, prone to a variety of academic and administrative handicaps. The study also demonstrates that small schools are not necessarily located in smaller habitations. It also highlights the need for rationalizing school locations through extensive micro-planning exercises. The study also shows that there is a significant excess capacity in smaller schools and hence various options should be explored before opening of new and upgradation of existing schools.

The study highlights the need for intensive efforts to promote research and improve the quality of database on primary education. There is a need for developing alternative models of schooling, which necessarily may not be viewed as cheap alternatives. There are miles to go before the country can claim to be within the threshold of universal primary education of comparable quality across the country.

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A. SMALL SCHOOLS: ACCESS, QUALITY AND EFFICIENCY CONCERNS

1. Education For All: The Question of Universal Access

Removing supply side constraints by expansion of educational networks to provide universal access to primary school going age group has been the main strategy adopted by many developing countries in the last four-five decades. India is no exception in this endeavor. In the Indian context, the development planners while recognizing the limitations and inadequacies of the inherited colonial system of education also emphasized the significance of improving the quality and relevance of primary education for the masses[1]. Thus, the issues of limited access, low quality and lack of relevance of primary education, low quality of teaching workforce, high drop-out and repetition rate at primary grades were duly recognized as the primary area of concern in the First Five Year Plan (1952-57) and continued to be so in the subsequent plans. Till now, the country has implemented eight five year plans and a few annual plans. In terms of investment priorities, the bias towards expansion rather than addressing the issues of quality and relevance at the students and teachers level in a serious manner is clear as the performance of implementing agencies was measured by the extent of additional enrolment rather than by their efforts for increasing retention and/or the quality improvements brought about in the system[2]. The end result is the provision of nearly universal access measured through the ubiquitous presence of an entity called *'primary school'* either within the habitation or at a walking distance from it[3]. The educational needs of out-of-school (working and non-working) children in smaller habitations, to some extent, are being met by alternative modes of education including part time non-formal education programme[4].

[**] Senior Fellow, National Institute of Educational Planning and Administration 17-B, Sri Aurobindo Marg, New Delhi – 110016

[1] Government of India (1952), First Five Year Plan, GOI, New Delhi.

[2] The fact that 95-98 per cent of expenditure on elementary education is accounted for by the salaries of the teaching and other staff, shows that little is invested for strengthening the classroom processes which have significant effect on the quality of learning. The fact that this share is rising over time is another matter of serious concern.

[3] The All India Education Surveys conducted by the NCERT provide data on the access to primary schools.

[4] The scheme of NFE was conceived in 1979-80, scaled up in 1987 based on the recommendations of NPE, 1986 and the corresponding POA. It was further revised in 1993 and covers the educationally backward states and urban slums, hilly, desert, tribal areas and areas of concentration of working children in other states as well. In 1995-96, the total number of NFE centres in the country was 0.28 million. For details see, MHRD (1996), *Annual Report 1995-96, Part I*, MHRD, New Delhi. Pp. 34-35.

India today boasts of its system of education being the second largest in the world with nearly 590 thousand primary and 171 thousand upper primary schools, about a quarter million non-formal education centres, about 1.75 million teachers and 110 million students study in primary classes in the recognized schools (1995-96). As per 1991 Census estimates there were about 115.6 million children in primary school going age group in the country[5]. The latest educational statistics indicate a GER of 105 per cent for primary classes (93.3 per cent being for girls and 114.5 per cent for boys)[6]. The number of students in primary classes in India is larger than the total population of the neighbouring Bangladesh.

No doubt, the system can claim it to be one of the largest, but can it make similar claims as far as the efficiency, quality and achievement of learners are concerned? It is perhaps among the least developed educational systems of the world and is characterized by high order of disparities in the quality of access, retention and achievement. Studies have shown that it takes about 8.5 years to complete the primary school cycle, which represents a massive waste of scarce teaching and non-teaching resources[7].

Baseline Assessment studies on learner's levels of achievement, conducted in 42 districts in late 1993, for the World Bank assisted District Primary Education Project established that even when the learners are able to reach the terminal year of primary education, the achievements are depressingly low across the board. Learner's achievement in educationally advanced states like Kerala and Tamil Nadu are not much different from educationally backward states like Madhya Pradesh and Assam[8]. More than half of the children admitted to Class I never reach Class V. In the educationally backward state of Rajasthan and Bihar, seven out of every ten students drop-out before reaching Class V[9]. Considering the national aggregates and the present trends, it is not difficult to conclude that of the 32 million children estimated admitted in 1996-97 in Class I, as many as 15-18 million (a number six times the population of Singapore) will never be able to reach Class V.

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[5] The data on the number of school going age group is computed from *Social and Cultural Tables*, Census of India, 1991.

[6] For details see *Selected Educational Statistics, 1995-96,* MHRD, New Delhi

[7] World Bank (1996), District Primary Education Project II, Staff Appraisal Report, World Bank, Washington.

[8] NCERT, (1994), *Research Based Interventions in Primary Education: The DPEP Strategy,* NCERT, New Delhi. Also see World Bank, (1997), *Primary Education in India*, World Bank, Washington.

[9] Government of India (1996), *Ministry of Human Resource Development: Annual Report, 1995-96*, Part I, MHRD, New Delhi pp. 257.

The school buildings are deteriorating for want of routine maintenance and the availability of basic teaching-learning materials is far from adequate. The problems get further compounded as the distance of the school from the urban centre increases. What could be the reasons for this depressing state of affairs? Is it the result of misplaced priorities? May be, part of the problem is due to opening of a large number of non-viable primary schools within the formal administrative framework and financial support to rum them in an efficient manner, sometimes leaving it to the village community to manage it. Schools located in inaccessible areas are themselves inaccessible to educational administrators and have all characteristics of social, economic and educational deprivation.

It would, thus, be pertinent to examine the structure of educational network and school topologies in relation to their enrolment size, facilities, teachers and the effectiveness of classroom interaction. Surely these are not new concerns. There is generally a lack of detailed institutional database on primary schools which has prevented a detailed analysis. Micro studies based on a sample of a few schools were not taken seriously by the policy planners and administrators. However, the new database created through project DISE (District Information System for Education) will help in probing the quantitative and qualitative dimensions of some of the issues highlighted above. Since there are no time lags in the availability of data through DISE, its can be effectively used for decision making and formulation of intervention strategies.

The present paper examines a number of issues relating to the school enrolment size and its distribution by classes. The paper also examines the distortions in enrolment pyramid which are the outcome of conceptual problems with definitions, school inefficiencies and data enumeration problems. A number of suggestions are also made for correcting some of these imbalances. More specifically, the paper focusses on the following:

a) to analyze the basic features of small primary schools, their location and distribution in space.

b) to analyze the enrolment pyramid, imbalances in the enrolment by classes and examine its implications for the pedagogy, classroom interaction, planning, management and monitoring of programmes for the quality improvement in primary schools;

c) to analyze the need for teachers rationalization, provision and maintenance of equipment, facilities, condition of buildings etc.

d) to analyze the policy implications especially keeping in view the condition of small primary schools.

The case study presented in this paper uses the primary school data from Darrang district in Assam. It is also one of the DPEP districts. The analysis will also help the DPEP to design the intervention strategies in the light of the evidence presented in the following discussion.

2. Network Expansion: How Real?

The two most important characteristic of educational development in India are the leap in the quantity and the deterioration in the quality of primary education. As new and new habitations are brought within easy access to primary schools, new schools are built and more teachers are hired, the planning and management of education becomes more complex. This leads to proliferation of institutions which are remotely linked to district/block level administrators. While these reforms are meant to increase the availability and improve the quality of primary education, they often result in education that is less effective and more costly.

In their effort to control the development of education, the state governments had formulated grant-in-aid rules which provided guidelines for opening of schools, management functions, statutory requirements that each institution must satisfy before recognition is granted by the state[10]. This was considered necessary as, besides the government, a variety of other agencies are also imparting primary education including private bodies, trusts, voluntary agencies and religious and ethnic minorities. Despite the existence of these rules, the government and non-government initiative in primary education has undergone significant changes. The trajectory of educational development in India is characterized by transfer of the management functions and control of primary education from the government to local bodies; from the local bodies to state take-over, proliferation of unrecognized schools which are subsequently taken over by the state government etc. The stated objective of all these reforms is to bring about improvements in the quality of primary education, which is still elusive. As a result of the recent 73rd and 74th amendments to the constitution, the management control of school education will again be transferred to duly elected local bodies.

The opening of new primary schools remains an important mechanism of generating additional employment for the educated youth in and around the place of their residence and it found greater acceptance among the district/state development agencies and their political leadership. The expansion of primary education system has thus contributed considerably to employment generation in the public sector and it

[10] The central government continues to provide the policy framework for the development of economy in general and that of education in particular. Governance of school education is essentially a state subject though the central government can also legislate in matters related to school education but it has not been done so far. The role of the central government acquires significance as it controls most of the resources for development planning. The state bears the entire burden of Non Plan expenditure.

continues to be so even today[11]. The low priority of the central/state administration to the quality improvement efforts is clearly reflected in the intra and inter-sectoral allocation of resources for primary education.

The state sponsored expansion of primary education has been so phenomenal over the years that the concerns for quality and relevance were relegated to the back seat and the state governments became victims of their own policies. Over the years, at the time of opening of new schools, the government ignored its own guidelines for provision of facilities, equipment and other basic necessities, knowing very well that these deficiencies will be difficult to plug-in at a later date. The present system leaves little financial resources to upgrade facilities and additional provision of essential teaching-learning materials. A dichotomous situation prevails on the ground with a few islands of *excellence* and a vast hinterland of *fractured institutions*. It is, therefore, not difficult to find schools with latest technological inputs like VCRs, televisions and computers and the schools without blackboards, and blackboards without chalk and duster; schools without teachers and teachers without schools.

The large scale expansion is not without reason or logic. Within the government sector, setting up of a new school is easy as compared to its maintenance due to the dubious classification of expenditure as Plan and Non-plan[12]. For setting up new schools, the state governments receive considerable support from the central government through the Plan schemes, special transfers and grants from the Planning Commission/Finance Commission. Thus, once a *structurally deformed and a fractured primary school* is created, it is not possible to set it right as the expenditure on most of the items of improvements are to be met out of the Non-plan expenditure, the funds which are always scarce and difficult to get[13]. Although these inadequacies became known in the earlier phases of development planning, the process of expansion, even at the cost of maintenance and sustainability, continues to attract greater resources even till today. The All India Education Survey, 1986 indicated that one in every three primary school was a single-teacher school and as many schools with one or no instructional classroom. Besides teaching-learning problems and other drawbacks, teacher in a single-teacher school will certainly find it difficult to open school for the minimum prescribed working days in an academic session. What happens when the teacher goes on leave or on official duty to perform some other function like collection of data, flood relief work, making arrangement for the visit of

[11] An additional 2 million teachers are now working in the elementary education system as compared to their numbers in 1950-51. It is now employing the largest number of educated manpower as compared to any other development sector of the economy.

[12] Meeting non-plan budgetary requirements is the responsibility of the state government and meets it from its own accrual and also from the money transfers under the awards of Finance Commission. The Plan component is funded through centrally sponsored and other schemes.

[13] There are many issues of significance in the Plan and Non-plan classification of expenditure which have a bearing on the development of capital stock and its maintenance. The centre-state relations in the funding of development expenditure and allocations through the Finance Commission and also through the Planning Commission have serious implication for the development of education in the country. However, a detailed discussion of this issue is outside the purview of this paper.

a dignitary? The teachers are also required to spend considerable time for attending meetings at cluster, block or district level.

Besides other centrally sponsored schemes, the Government of India initiated a special programme during the Seventh Five Year Plan for assisting the states (Operation Blackboard) to clear the backlog of buildings, teachers and teaching-learning materials for primary schools in dire need of such items/facilities. During the period 1987-88 to 1992-93, the scheme was implemented in 91.5 per cent of blocks comprising 91 per cent of primary schools and an assistance of Rs. 8.53 billion was provided to the states for the implementation of the scheme[14]. The situation seems to have improved after the implementation of Operation Black Board (OBB) on a large scale but what happens if the teacher does not know how to use the teaching aids or if the teacher decides not to use these aids in the classroom interaction? What if the two teachers in a remote school take turns to open school? What will the teacher do if he is chartered to assist the district administration for office or other administrative work? What will class I teacher do when most children in the classroom are aged 3-5 years? These children are brought not for teaching purposes but to ensure that their elder brothers or sisters attend school. The school functioning also gets affected by the natural calamities like floods, typhoons, rains and snow.

The malaise is far from over by merely supplying the teaching-learning materials through programmes like OBB. There are still single-teacher schools? What prevents the states from opening new single-teacher schools or transferring teachers from one place to another? The number of such schools is still large and continues to expand with the hope that some day additional facilities will be created. The Tenth Finance Commission also examined the issue of rehabilitation of infrastructure and suggested three areas for upgradation grants to state governments. These were: extension of facilities for girls' education, provision of toilets for upper primary schools and universal provision of drinking water facilities in all primary schools[15]. Now every state is preparing plans to extract the maximum grants through the Finance Commission awards.

It is also expected that a minimum package of inputs like teachers, buildings, students, materials and other facilities for teaching-learning processes are necessary for formal classroom type interaction between the teacher and taught. However, these are not sufficient conditions. The teachers must be prepared and willing to use the facilities created for improving teaching-learning process. The supply side response to the quality improvement will not lead to any meaningful learning.

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[14] Annual Report (1993-94) Ministry of Human resource development, Government of India, New Delhi.

[15] Report of the Tenth Finance Commission.

3. Settlement Structure and Age Pyramid

Besides the natural resource endowments and the economic base of a region, there is a close relationship between its topographic features, settlement pattern and the nature of social services required. Therefore, as a starting point, it is essential to understand the spatial dispersion of population, especially the school going age group children. The age distribution in India is typical of population with moderately high fertility, with a high proportion of population in the younger age brackets. 38 per cent of India's population is below the age of 15 years[16]. The higher the dependency rate, the larger is the number of children which a family has to support.

Table 1: Distribution of Villages by Population Size, India

State/U.T	Less than 500	500 to 999	1,000 to 1999	2,000 to 4999	5,000 to 9999	>=10,000	Total
Andhra Pradesh	32	19	16	20	4	1	100
Bihar	**50**	**23**	**16**	**9**	**2**	**0**	**100**
Gujarat	27	27	28	15	2	0	100
Haryana	22	26	28	20	3	0	100
Himachal Pradesh	**90**	**7**	**2**	**1**	**0**	**0**	**100**
Jammu & Kashmir	**51**	**26**	**16**	**6**	**0**	**0**	**100**
Karnataka	42	27	19	10	1	0	100
Kerala	0	0	1	6	18	74	100
Madhya Pradesh	**59**	**27**	**11**	**3**	**0**	**0**	**100**
Maharashtra	35	31	23	9	1	0	100
Manipur	**73**	**13**	**9**	**4**	**1**	**0**	**100**
Meghalaya	**92**	**6**	**2**	**0**	**0**	**0**	**100**
Nagaland	**61**	**22**	**13**	**4**	**0**	**0**	**100**
Orissa	**66**	**21**	**10**	**3**	**0**	**0**	**100**
Punjab	36	30	23	10	1	0	100
Rajasthan	**52**	**24**	**16**	**7**	**1**	**0**	**100**
Sikkim	**53**	**31**	**14**	**2**	**0**	**0**	**100**
Tamil Nadu	16	20	29	28	6	1	100
Tripura	15	48	30	32	7	1	100
Uttar Pradesh	47	27	18	7	1	0	100
West Bengal	42	25	20	12	2	0	100
A. & N. islands	**83**	**11**	**5**	**2**	**0**	**0**	**100**
Arunachal Pradesh	**93**	**4**	**2**	**0**	**0**	**0**	**100**
Chandigarh	25	25	21	29	0	0	100
Dadra & N. Haveli	24	23	39	10	4	0	100
Delhi	8	17	35	33	7	0	100
Goa, Daman & Diu	30	15	25	22	8	0	100
Lakshadweep	14	0	14	57	14	0	100
Mizoram	70	18	9	4	0	0	100
Pondicherry	43	29	16	10	2	0	100
All India	**49**	**24**	**17**	**8**	**1**	**0**	**100**

Source: 1981 Census. Note: The 1981 population census was not conducted in Assam.

[16] Census of India, 1991, Social and Cultural Tables, Registrar General of India.

Even within the district, large variations in the settlement pattern can be observed. In India, nearly one fourth of villages are small in size (population less than 200 persons) and nearly half have population less than 500. The villages with population less than 100 are the most deficient in facilities like primary school, health centre, post office, electricity, water supply and transport linkages. The educational advancement of the states like Kerala and Tamil Nadu and under-development of human resources in states like Rajasthan, Uttar Pradesh and Madhya Pradesh are illustrative of the special problems of social and economic development faced by areas with dispersed population. While census of India does not collect data on settlements, the All India Education Survey data is based on settlements. Ever since it inception, the AIES results are always available after a lag of five to ten years with the result that their practical utility is limited. Data from sixth All India Educational Survey conducted in 1993 are still awaited. Table 1 provides the distribution of villages classified by their population size.

The states with large share of small villages include some of the most educationally backward states like Bihar (50 per cent), Himachal Pradesh (90 per cent), Orissa (66 per cent), Madhya Pradesh (59 per cent) and Rajasthan (52 per cent). The states will large habitation size include Kerala, Tamil Nadu and Maharashtra. The former is a typical sample of economically, socially and educationally backward and the latter of the better-off states on the same measures of social and economic development.

4. Small Schools: A Long Term Necessity

There are threshold levels below which the formal type of educational institutions often become non-viable in terms of their unit cost and are sometimes difficult to sustain in the long term for want of enough students in all classes. But provision of primary schools, even in such cases, is justified purely on social considerations[17]. Despite this, primary schooling facilities are available in nearly 50 per cent of all habitations, the remaining being small enough not to justify an independent school. The Fifth All India Educational Survey indicated that only 80 per cent population had access to primary education within their habitations and the remaining 20 per cent population is served through schools located at various distances.

A primary school with few students in each class will hardly be able to sustain and attract the resources it requires to compete with large size high quality schools. In fact, the smaller the institution, the greater the per unit resources it requires to achieve the standards of education. It also runs the risk of not being noticed or inspected at all. Teachers will be able to function effectively only if they are trained in latest techniques for handling small and diversified group of children and have the skills to

[17] Each state has evolved norms for establishment of primary schools. In habitations, where an independent school is not justified, a cluster of habitations is provided with a school so that a child from the remotest point can easily walk to the school. The norm varies from one kilometre to one and a half kilometre of walking distance.

handle multi-grade classes. In rural areas, the teachers handle a large number of first generation learners as compared to urban schools. The job of teaching is far more complex in remotely located schools due to heterogeneity of learners, inadequate and poor quality of school facilities, lack of interaction with peer group of teachers and learners, and isolation due to poor connectivity. A teacher in a small and isolated school remains unaware of the major developments in other parts of the state/district for the major part of the academic year. They hardly get any incentive for teaching under the most difficult circumstances. Studies have shown that many teachers were themselves the first generation learners[18].

The foregoing analysis of the settlement pattern shows that ***the task of universal access is still unachieved in states/districts with large proportion of smaller habitations***. Therefore, small schools (formal/non-formal or any other alternative learning centre) are almost a long term necessity in large parts of the country. Since, the rural settlement pattern does not change significantly over time, the proliferation of smaller schools or other modes of imparting education where the learners are small in number will continue to influence decision regarding access. Related to this is the increased marginal cost of reaching hitherto uncovered settlements through the existing modes. Even if all children in the primary school going age group are enrolled, the number of small schools in educationally backward states are likely to increase in the next few years. This is particularly true in the context of low acceptability of alternative modes of education like Non Formal Education (NFE). In the discussion that follows, we shall confine to formal schools alone.

5. Factors Affecting the Performance of Small Schools

Small schools have their own advantages and disadvantages. India has reached a stage of network expansion, where opening of new formal primary schools is becoming economically unviable and may be unsustainable in the long run. A large scale expansion of access to unserved habitations will require a large number of such schools. Some of the factors against the establishment of small schools are:

5.1 Factors Against the Small Schools

Economies of Scale

Among the various factors that operate against the small schools, the prominent is the economies of scale. The economies of scale emerge from the provision and utilization of fixed assets, facilities, playgrounds and equipment. In large schools, classes can be established with optimal size that is conducive for better classroom interaction, whereas this is not possible in smaller schools. There may not be enough students to have an independent section for each class and thus multi-grade teaching may become necessary. The marginal cost of enrolment of children increases as more and more smaller habitations are provided independent schools. Similarly, the per unit operating costs also tend to increase considerably in small schools.

[18] Aggarwal Yash (1994), Baseline Assessment of Learners Achievement: Karnataka, NIEPA.

Geographical Isolation

There is enough evidence to show that distance decay function operates in terms of the provision and maintenance of social services like basic education and primary health facilities. The smaller villages/habitations are also more vulnerable to natural clematis and other breakdowns in the delivery systems. It is always the small habitations where the supplies are not maintained regularly, the textbooks do not reach in time, the school inspector seldom visits the school, the primary health centre is always devoid of the essential life saving drugs. It is only the rural areas which face continuous spells of rain and drought. Thus, there is a built-in disadvantage for some rural areas due to location and settlement characteristics.

Difficulties in School Administration

The small school located in a far off place is likely to remain isolated. Reaching such schools for inspection and supervision as well as for other administrative purposes poses a special problem. The small habitations, in view of their isolation, are likely to be the last on the distribution list for school supplies. The supplies include textbooks, stationery, school uniforms etc. Some small schools even do not get supplies till the end of the session. There is no one to complain to. In certain areas, many habitations remain cut-off from the mainstream due to floods, typhoons and rains. The administration can not ensure the timely supplies under such conditions. The schools affected due to such calamities continue to suffer for want of essential supplies like textbooks, exercise books and items of stationery. Incentives also do not reach in time thereby reducing their utility at places where these are most needed.

Capacity Building and In-service Training: Difficult to Organize

There is little contact between the school and the administration except during the period when teachers gather monthly at the pay centre. Programmes of in-service training for the teachers in small schools are to be organized taking into consideration the school cycle. The schools can not be closed due to teacher training or their involvement in other programmes.

Grievances Redressal

The teachers working in isolated places find that their grievances are not easily looked into by the district and the state administration. Discussions with school teachers working in smaller habitations away from the central place reveal that the department does not respond to their grievances. The department does not come to their rescue when they face problems/conflicts with local politicians, village chiefs and other interest groups. The teachers unions are the only mechanism through which they seek relief.

Establishing large residential schools may be considered as an alternative to small schools. Residential schools are more preferable for the high school and higher levels of education when the children are grown up and can look after themselves. For the primary classes such efforts could be counter-productive as the unit cost could be

considerably higher as compared to operating small schools. Moreover, parents may not be willing to part with their children at the age of five or six years.

5.2 Factors Favouring Small Schools

Travel Time

The pupils save considerable time in reaching schools which are located at the convenient distance from the settlement. There are problems of access and travel in hilly, isolated settlements having poor transport facilities and adverse weather conditions. In certain areas, schools may temporarily become out-of-reach of the students due to rains, floods or due to other types of seasonal disruptions and extreme weather conditions. In such circumstances schools located within the habitation will be less affected. Besides the travel time, additional expenditure may also occur on long distance transportation which the poor families may find difficult to afford. While transport costs may be subsidized by the state governments, these do enter in the costs although the source of finance varies.

Local Needs

Small schools may also be justified when the mere presence of the school in the locality acts as a motivating factor for the parents to send their children for education. This is particularly relevant for promoting girls' education where the parents do not want their daughters to travel long distances for attending the primary schools.

Cultural Homogeneity

The community in smaller habitations is culturally more homogeneous as compared to larger villages. It is this cultural homogeneity that binds various population groups together. This is particularly true of the schools in the tribal areas.

Better Management and Control

When the school caters to a small geographical area, the interaction between the teacher and parents is better as compared to large schools where anonymity prevails. A small school is likely to be more attached to the community rather than the large school. This type of congenial atmosphere is very helpful for the first generation learners, children coming from poor families and working children. The local community may also take interest in the management and functioning of the school.

Local Contributions

In the small schools, small contributions by the community are easily noticed and appreciated. The community may thus become more sensitive to the problems of the school located in their settlement.

Quality of Classroom Interaction

The quality of classroom instruction, particularly at the primary stage can be improved considerably in smaller schools with the active involvement of the teacher and a greater emphasis on the activity based teaching making use of the low-cost teaching-learning aids produced from locally available materials.

Thus, it is difficult to conclude that small schools must not be established. In fact, in certain cases, alternative choices may be limited. What is necessary is that if a choice is to be made to set up a small school, then adequate facilities and academic inputs may be provided so that the school is not handicapped and deprived of certain facilities because of its size and location. Further efforts are needed as mere provision of facilities is not a sufficient condition. This will have to be followed by further efforts to strengthen the teaching-learning processes and shifting the focus from traditional teaching to activity and Minimum Levels of Learning (MLL) based learning. Unless the teachers and students use the teaching and other aids in the classroom interaction, the provision and availability of such facilities will be meaningless. All these aspects have great bearing not only on the qualitative aspects of primary education but also have considerable influence on the school efficiency. Flexibility and accountability mechanisms are necessary for the successful implementation of decentralized policies.

6. How Small are Small Schools?

There can be different criteria for defining small schools due to conceptual problems. For certain regions, a school with enrolment of 150-200 may be considered a small school, whereas in another situation, the same school size may be considered large. As mentioned earlier, one of the factors influencing the school size is the settlement structure and the density of population distribution and the participation rate of the children of relevant age group. Large habitations with low participation rate may have small schools as compared to a settlement of the same size but having a higher participation rate.

In this paper we have classified those schools as small schools where the total enrolment in the primary school is 60 or less. The cut-off point was based on the premise that as a matter of policy all schools should have at-least two teachers, preferably one of them being a woman. The third teacher is to be appointed when the school enrolment increases to 100 or more. Thus, in terms of the viability of the school, the enrolment must be sufficiently high to keep both the teachers engaged. Ideally a two teacher school can cater to the need of about 100 students by following multi-grade teaching practices. However, due to topographic and other consideration such an ideal situation may not be possible in areas which are sparsely populated. The cut-off points are only indicative as there will always be some borderline cases having the same characteristics as the small schools but have been excluded due to marginal differences at the cut-off points. The intervention strategies must take care of the border line cases.

In view of the large expansion of schooling facilities in small rural habitations, a number of small schools have come up in the country. Their number will further increase as some of existing unserved habitations get covered through new primary schools. Thus, small schools are not only present in the small countries with dispersed population but are a reality even in a large country like India also where most of the

rural hinterland can be provided access to small schools. Table 2 presents the distribution of rural schools by enrolment size:

Table 2: Distribution of Rural Schools by Enrolment Size in India, 1986

Serial No.	Students Category	Number of schools	Per cent schools
1	<=25	38,156	8.0
2	26-50	97,646	20.5
3	51-75	1,01,878	21.4
4	76-100	83,077	17.5
5	101-150	79,721	16.8
6	151-200	39,155	8.2
7	201-250	18,737	3.9
8	> 250	17,453	3.7
Total		4,75,823	100

Source: Fifth All India Education Survey

It is observed that 28.5 per cent of all rural school were having less than 50 children in all classes and 50 per cent schools had 75 or less children in the school. The average enrolment is approximated at about 75. Only 7.6 per cent of all rural schools were having enrolment greater than 200 and most of these are likely to be in the states of Kerala, Tamil Nadu and Maharashtra all of which have large habitations[19]. The state level data from the sixth all India Education Survey may yield further information about the extent of small schools in various parts of the country. There is no other published data available on the size distribution of schools. As mentioned earlier, the data generated through DISE has the potential of stratification and generating aggregations on school size.

7. Why Small Schools Can Fail?

There is a significant overlap between the location of small schools and the habitation size. While precise data is not available, it is normally observed that the small schools tend to be located in a single or a cluster of small habitations. Demand management in such habitations is emerging as an important issue that needs attention of the policy planners and programme implementers. It is generally assumed that population groups are internally homogeneous and the goals of education are the same for all of them. Therefore, a common curricula will be able to meet the educational requirements and other expectations of all social and economic groups. However, in practical life, the reality is somewhat different. Individual households/children perceive different types of benefits from primary education. For some, it is the beginning of the long journey

[19] The Indian states do not publish data on the size distribution of schools. Although, the main focus of All India Education Survey is on access and availability of teaching-learning materials, it does not produce any state level tabulations on the size distribution of schools. How can planning for the deployment of teachers and other resources be decided without adequate analysis of schools in terms of enrolment size?

of the educational ladder and for some others, it is perceived as having some useful contribution for the growth of the child. Some perceive that whatever schooling facilities are available, it should prepare children for the world of work and equip them with the skills needed in the labour market. In this context the content of the primary education and the delivery mechanisms acquire significance.

Most of the people living in smaller habitations are those who are ***left-outs*** of the mainstream of social and economic development. The smaller habitations are also poorly connected, lack adequate infrastructure and are isolated to a great degree. Most households in smaller habitations are also characterized by limited resource base and have little education/literacy in the older age groups. In all probability, most of the workforce is engaged in primary/extractive activities as agricultural labour or small and marginal farmers. The small villages continue to dominate the illiteracy scene in the country as 78 per cent of the villages with literacy less than 10 per cent in 1991 were the small villages with population up to 500 persons (Table 3).

Table 3: Distribution of Villages by Literacy, India

Village size	Villages with literacy <10 per cent	Total villages
<=100	13,019	50,283
101-200	9,111	53,111
201-300	6,006	50,762
300-500	6,886	90,201
500-1000	6,450	145,192
>1000	3,254	191,108
Total	44,726	580,657

Source: Computed by the author from Census data.

Who are the people living in these habitations and what are their expectations from the development process in general and that of the education sector in particular? What are the expectations of these households from their young children? The success of the primary education in these areas will be determined by the extent to which primary education can satisfy the expectations and also the immediate necessities of the poor households living in the smaller and remote habitations. While everyone, including the poor households recognize the need, importance and long term benefits of primary education, few may have the ability to meet direct and indirect costs of education in the absence of food, clothing and shelter so vitally needed for subsistence. With low incomes and high dependency ratio, the relative burden of cost of education is higher as compared to the small and well endowed families. Thus, the poor families with high dependency rate, both in rural as well as in urban areas, are at greater disadvantage.

Most households who have seen and lived the life of insecurity and bondage for centuries, see education as a passport for entry into organized labour market with assured income and security of service. This dream can be fulfilled only if the

household can support a minimum of 12-15 years of education of the child. Anything less than that does not fulfil their expectations but few have the capacity to meet the direct and indirect cost (including the opportunity cost) of education for such a long duration. This is particularly true of the population living below the subsistence level and with little or no capital assets. For the poor families, especially those living below the poverty line, the opportunity cost of keeping the child in schools is high and unbearable.

The other type of expectation from education is that the child should be able to learn the basic skills and contribute to the family's income. This does not happen through the formal education system which prepares children for vertical mobility in the educational hierarchy. Terminating education after five to eight years of learning does not provide the necessary skills needed for the word of work. In fact, there is a general feeling that after few years of education, the child is neither fit for the world of work nor is willing to work in the family enterprise due to high expectations.

While there have been many attempts in the past to align the curriculum with the requirements of the rural masses but it is still far away from the real needs of the rural masses. What type of education is relevant for the masses is a question which has not been addressed seriously by policy planners. There is little evidence/surveys in the form of needs assessment of primary education for different strata of the society. How should such an education be delivered? While it is good to have a uniform curriculum across the nation/state, what will be its utility if more than half of children fail to follow it and leave the system within the first few months only.

In the formal education system, instead of learning by doing the child concentrates on the techniques to attain high scores in the term end examination which opens up avenues for further education but not necessarily sharpen skills needed in the small household sector and unorganized labour market. For many urban middle and upper class students and their families, the school is seen more as a *certifying and labelling* agency rather than a real centre of learning. Supplementary teaching by the parents, other members of the household and through private coaching compensates for the school deficiencies and inefficiencies. The urban areas have easy access to supplementary teaching, whereas in the small rural areas, it is difficult. It is next to impossible, if the teacher lives at a long distance from the rural school. The educational system is designed to provide the same type of education to all children through a standardized stereotype curriculum designed at the state level. No consideration is given to the development of individual's personality, development and pursuit of their talent and aptitude for sports, arts, nature, science and other subjects.

The market is responding to these challenges in its own ways. The proliferation of unrecognized institutions at all levels and in all types of geographical areas is a clear reflection of the expectations of the masses. Many of these schools/institutes impart skill oriented courses like computer operators, data entry operators, secretarial

practices, technicians, mechanics, electricians, salespersons, hotel management etc. These type of courses are preferred by those who want to enter the world of work even through these are not recognized by the central or the state governments. Recognition is no consolation, if it does not enhance the employability of the graduates. Some private unrecognized primary schools, often operating in all types of habitations with little or no resources, are also able to attract students from poor families merely because of the promise that the children will be taught English from the beginning. Many people consider that government schools/Department of Education is no different from other departments of the state/central government and attribute carelessness and absence of serious studies in government schools.

The content and rigidities of the formal education thus satisfy the demands of a fraction of the learners. The rest turn out to be *drag-ons* and *drop-outs*. The curriculum, content and pedagogy will thus play a vital role for the success of small schools in rural hinterland. This raises a vital question about the decentralization of curriculum development, design and transaction method.

There was a view point that since many rural students fail to clear the term end examinations, particularly in the first few years of schooling, they should be given some time to adjust to the school environment. The no-detention policy was thus accepted by the government as a remedy for this problem. Now most of the states have one or the other form of no-detention policy for the first few years of schooling. To some extent this may have resulted in an increased enrolment but to what extent it has affected the learning process is not clear? Again it is significant to distinguish between the enrolment and learning. What is the objective? Is it to have increased enrolment or better learning or both? This approach to quality improvement is nothing else but putting the cart before the horse.

In order to promote rural education, many state governments have formulated rules by which each newly appointed teacher is compulsorily required to serve for a few years in a rural area. The idea seems to be good. Nevertheless, an important issue is who should teach the deprived and difficult to reach groups of children - the fresher or the experienced teachers? To what extent the unwilling teacher will help in improving the quality of education in a school where commitment of high order and understanding of the real situation is essential? How would such unwilling teachers be supervised? The rural schools are more inaccessible and remote from the district administration. Should the teachers be made to serve in rural areas by compulsion or are there other options like incentives for the experienced teachers to work in rural areas. The incentives could include special pay, hardship allowance, allowance for children's education etc.

The foregoing discussion clearly points that due to variations in settlement structure, the school size also varies across the country. The massive expansion to provide universal access has also contributed to the establishment of a large number of small schools. The success or the failure of small primary schools is not merely determined

by the availability/non-availability of facilities but also by a number of exogenous factors. Some of these are outside the control of the educational planners but a systematic planning and a positive strategy based on commitment and reward system can minimize their negative impact on the functioning of rural schools. Ability of the system to respond to the needs and perception of different sections of the society will continue to play an important role in the success or the failure of the system. It is in this context that the proposals for a decentralized curricula for primary schools should be viewed.

1991 is available. Table 4 shows literacy rates for different age groups. It is evident that literacy is highest in the age group of 10-14 and it declines progressively with increase in age. This also shows the progressive contribution of education to the increase in literacy. It appear that maximum gains in literacy were recorded between 1975 and 1985.

Table 4: Age Specific Literacy Rates in Darrang District, 1991

Age group	Literacy rate		
	All persons	Male	Female
10-14	57.9	61.84	53.61
15-19	55.1	61.70	48.32
20-24	46.8	58.23	36.38
25-29	39.5	51.78	28.09
30-34	36.2	47.64	23.70
35-39	35.3	46.56	21.36
40-44	32.2	45.59	16.09
45-49	32.2	46.73	13.90
50-54	26.0	40.17	9.23

Source: Computed by the author from Social and Cultural Tables, Assam (Census of India, 1991).

The rapid and consistent increase in female literacy is evident. The gap between male and female literacy has practically been reduced in the 10-14 age group. For the age group 45-49, the female literacy was less than one third of the corresponding value for the male literacy.

For 1991 census, some doubts about the coverage and quality of data enumeration have also been expressed. As will be discussed later, similar issues also arise from the comparison of population data generated through census and that of the enrolment data generated through DISE. In view of this, the indicators like GER and NER may not be very reliable. However, the population data on the number of age-specific children calculated through school census surveys may be more reliable and usable. The district administration does not use this data fully.

The primary education consists of four years followed by three years of upper primary education. Most of the schools impart education for primary classes. Some schools are composite schools i.e. primary and upper primary or high schools with primary section. Most of the primary schools are co-educational. The academic session begins in the month of January every year. The state follows a no-detention policy for the first three years of primary education. In the financial year 1992-93, the share of budgeted expenditure on education was 27.6 per cent of the total state budget. The corresponding all India average for all the states/UTs was 23.4 per cent[23]. Thus the state is allocating sufficiently large proportion of its recurrent budget for the

[23] Selected Educational Statistics, 1993-94, MHRD, Department of Education, New Delhi.

development of education and yet it continues to be one among the educationally backward states. This dichotomy may be the result of inefficient utilization and high waste of scarce resources.

There are no examinations and a child could be detained only if he/she has not completed a minimum required attendance during the academic year. The state has periodically taken over the unrecognized primary schools set up by the individuals, NGOs and other agencies. In addition to recognized primary schools, there are a large number of private unrecognized schools also (called venture schools). Estimates of enrolment in these schools are not available. There is a growing demand for state take-over of these schools. If the proposal is accepted, the state exchequer will be burdened with additional 6,000 teachers and a large number of schools which may not necessarily be serving the un-served habitations/settlements. What is more important is to provide access to areas still outside the educational network.

Recent data on the settlement structure for the state/district was not available. Even 1981 data on settlement structure was not available as census was not conducted in the state in 1981. Therefore, the only alternative source was to use the All India Education Survey data for 1986. Even AIES does not publish data on settlement pattern for various districts. The 1986 settlement structure for the state of Assam was as follows:

Table 5: Settlement Structure, Assam, 1986

Settlement size	Number of settlements	Per cent distribution
<100	2,496	7.8
100-299	7,728	24.3
300-499	6,610	20.8
500-999	9,464	29.8
1000-1999	4,371	13.7
2000-4999	1,088	3.4
>=5000	45	0.1
Total	31,803	100

While 7.8 per cent settlements were very small (population less than 100), 45 per cent had population varying in the range of 100-499. About 30 per cent settlements were having population ranging between 500-1000. There were very few large size settlements (population exceeding 5000 persons). In none of the 2,496 small settlements (population less than 100), a primary school will be viable. These settlement might be closer (less than 1 Km) from other habitations having primary schooling facilities. The other alternative may be to provide NFE centre in these habitations.

The district of Darrang consists of 6 educational blocks and four towns/urban areas with a total of 1,499 primary schools (Fig 1 presents the district map). In addition there are other levels of educational institutions in the district, the data for which has not been analyzed here. The TLC has yet not started in the district. The educational requirements of the out-of-school children are met by NFE scheme. The coverage under NFE is reported to be very low. Estimates obtained from DISE indicate that only 37 per cent of villages had NFE centres in 1995-96. But the exact enrolment, attendance and the contribution of these centres in terms of levels of learning attained by the learners is never assessed. To what extent the learners having attended the NFE centre were able to get admitted to the formal system is not yet known. The district boasts of a well connected network of primary schools both in the tribal and non-tribal areas. Despite these, the development of education in the district is constrained by a number of factors.

Table 6 presents the key indicators of educational development for all educational blocks in the district.

Table 6: Key Indicators of Educational Development, Darrang District (1995-96)

Block	RS	S20	GER	STS	OBB	REP	MREB
Sipajhar	100.0	79.1	94.5	4.6	85.5	26.5	72.3
Kaligaon	99.3	74.0	71.3	12.6	86.6	26.5	55.6
Dalgaon	100.0	74.6	34.2	17.8	63.9	27.3	66.3
Majbat	99.5	74.6	58.8	12.1	87.4	29.5	59.6
Udalgiri	99.6	81.3	NA	9.0	83.4	30.6	49.3
Khaiarabari	98.9	79.3	87.2	19.3	77.5	32.9	72.3
Mangaldoi Town	0	85.7	NA	7.1	71.4	18.6	64.3
Tangla town	0	100.0	NA	0	77.8	20.2	100
Udalguri Town	0	100.0	NA	0	16.7	26.9	100
Kharupetia Town	0	100.0	NA	0	77.8	16.6	33.3
Darrang District	97.0	77.8	NA	12.4	80.6	28.6	62.4

RS per cent rural schools
S20 per cent schools more than 20 years old
GER Gross Enrolment Ratio
REP per cent repeaters in primary classes
OBB per cent schools covered under OBB
MREP per cent schools requiring major repairs
STS per cent Single-teacher schools

Most of the primary schools in the district (77.8 per cent) were established atleast 20 years ago. Only 10.3 per cent of schools were established in the last 10 years[24]. All the schools in the urban areas were more than 20 years old. Thus most of the schools in Darrang district have a long history of their existence.

The data presented in Table 86 shows the following:

- About 80 per cent of primary schools in the district were covered under OBB.

[24] While interpreting these results, it should be borne in mind that non-response to this item was high. More over, the data pertains only to the provincial schools. There are some schools which are not recognised but are imparting education for primary grades.

- Despite large coverage under OBB, 12.4 per cent schools still continue to be single-teacher schools.
- Repetition/detention of primary school students appears to be a major problem in all schools of the district. The average repetition rate for the district was 28.6 per cent. There are large number of schools having much higher repetition rates.
- The block of Khairabari has the unique distinction of having the largest share of single-teacher schools and also has the highest (32.9 per cent) repetition rate. 28 per cent of primary schools in the district were small schools.

The official enrolment data suffers from many inadequacies. In order to compare the educational statistics supplied by the DPEP and the data on the school going age group children (whether attending school or not), the following table is presented.

Table 7: Darrang District, Children Attending School, 1991

Description	6-9 age group	10-12 age group
All-persons	33.5	52.7
All-male	35.3	56.5
All-female	31.6	48.7
Rural-all	32.4	51.4
Rural-male	34.3	55.3
Rural-female	30.6	47.3
Urban-all	58.8	79.0
Urban-male	60.2	83.3
Urban-female	57.2	74.9

The data presented in the above table shows that only 33.5 per cent of all children in the primary school going age group (6-9 years) were reported to be attending school. The corresponding ratio for the children corresponding to upper primary classes was 52.7 per cent. The higher attendance rate for 10-12 years age group shows that many children in this age bracket may be studying in primary classes due to late entry/admission. A child of seven or eight years entering the school in grade I will still be in grade 4 when he attains the age of 11/12 years. It is interesting to know that gender differentials in school attendance are not large.

The data on enrolment, teachers, classrooms and sections is presented in Table 8. The number of classrooms are about half of the number of teachers. Therefore, on an average, two teachers share the same classroom[25]. Similarly, there is no correspondence between the classrooms and the sections. In rural schools, all four

[25] Discussion with state officials indicated that Assam implemented the OBB in a different form. Instead of two rooms, only one room was part of the package.

sections/classes are held either in the same room or some classes are held in the open or in the varandah.

Table 8: Selected Educational Data, 1995-96

Block	Students	Teachers	Class Rooms	Sections	Pupil Teacher ratio
Sipajhar	16301	760	268	883	21.5
Kaligaon	21515	764	344	1137	28.2
Dalgaon	16277	440	233	810	37.0
Majbat	17620	439	228	789	40.1
Udalgiri	24478	677	355	1276	36.2
Khaiarabari	25943	668	309	1238	38.8
Mangaldoi Town	2495	107	39	76	23.3
Tangla town	1928	53	16	47	36.4
Udalguri Town	1299	44	23	40	29.5
Kharupetia Town	1975	33	22	44	59.9
Darrang District	129871	3985	1837	6340	32.6

The average PTR varies from 21.5 per cent in Sipajhar to 59.9 per cent in Khrupetia town. The latter being 2.8 times the former. Such large variations in PTR is a cause of concern. The former is the outcome of low enrolment and the latter can be attributed to large school size and overcrowding in the classrooms. The average PTR for the district is 32.6. The average PTR could be quite misleading and poor indicator of teachers adequacy unless accompanied by some indicator of dispersion around the mean value. Additional information on the value of coefficient of variation will help understand the dispersion around the mean value.

9. Identification of Small Schools

The enrolment size of a school determines many of its operational parameters like the unit recurrent costs, number of teachers, classrooms and other facilities required to impart primary education. In the broader context, it also influences the network structure of upper primary and higher levels of educational institutions and their linkages with primary schools. In India, there is a paucity of research on the primary school size and the nature of its implications for establishing educational networks, planning and management of education. Therefore, in this section, an attempt is made to identify the small schools so that their characteristics could be examined in relation to other schools of the district.

There were 511 small schools (with enrolment <=60) having a total enrolment of 23,693 students and 1,046 teachers. Eight of these schools had an enrolment of even less than 20 students in all the primary classes taken together (Refer Table 9).

The distribution of small schools as presented in Table 9 shows that the small schools are essentially confined to rural areas alone, while urban areas had only a few small schools. Overall, 34.1 per cent of all schools were classified as small schools i.e.

having a total enrolment of 60 or less. The maximum number of primary schools (589) fall in the enrolment range of 61-100. These schools account for 39.3 per cent of schools and 36 per cent of total enrolment. The above table also shows that there were only 32 schools with enrolment in primary classes exceeding 220. The urban schools are generally larger in size as compared to rural schools.

Table 9: Distribution of Schools by Enrolment

Enrolment category	Number of schools			Enrolment
	Rural	Urban	Total	
1-20	7	1	8	126
21-60	499	4	503	23,567
61-100	583	6	589	46,131
101-140	232	5	237	27,779
141 - 220	116	13	129	21,674
221 - 300	15	10	25	6,422
>300	1	6	7	2,479
Total	1,453	45	1,498	1,28,178

The small schools, on an average, have 46.4 students as compared to the overall average of 85.5 students per school. The average size for schools other than small schools is 105.76 students.

10. School Locations: How Realistically Determined?

Although there are national norms which provide for the opening of primary schools based on the norms of population size or the distance from the nearest school, various states have evolved their own operational norms. These norms have been adjusted for areas having special problems of access. In addition to the nature of terrain and other topographic features, the settlement structure of the area plays an important role in determining the nature and type of primary schools to be provided. Unfortunately, the latest data on access to primary education collected through Sixth All India Educational Survey (1993) is not available as yet. Therefore, the population characteristics of a settlement/village in relation to enrolment can not be examined at this stage. However, it is assumed that wherever access to schooling facilities has been provided, the location of schools and the type of facilities to be provided is decided using the state norms.

Deciding the number of schools and their location in a village is an important aspect of micro-planning. There is no data on the villages without primary schools and to what extent the villages/habitations without schools are served by schools within a walking distance of 1 km. from the village/habitation.

Preliminary analysis of the DISE data indicated that many villages were having more than one school, some had as many as six schools (Table 10). On an average, one out of every three villages has more than one primary school. Four villages were found to have six schools each. One village had five schools and 15 villages had four schools each. As many as 250 villages had two schools each.

Table 10: Distribution of Villages by Number of Schools

Number of schools in the village	Number of villages
1	675
2	250
3	63
4	15
5	1
6	4

The presence of more than one school within the same village can only be justified if there are many clusters of population which are widely separated from each other or the population of the village is large enough to justify more than one school. However, if no systematic planning for school location is carried out, the imbalances in the location of schools will emerge and may lead to wastage of scarce resources. It is, therefore, pertinent to examine the nature and type of schools in villages with more than one primary school. Many questions that arise in the context of villages having more than one school are:

- to what extent multiple primary schools in a village are justified?
- to what extent the multiple schools are located optimally to meet the requirements of dispersed population groups and do not run the risk of having overlapping catchment area?
- to what extent multiple schools were established following the norms prescribed by the state government for opening of primary schools? Or have the schools tended to proliferate without any relationship to demand for additional schools in the village?
- to what extent the earlier attempts of provincialisation of primary schools have contributed to the present imbalances in the location of primary schools. These imbalances will be characterized by excess capacity at certain locations and unsaturated demand and lack of proper schooling facilities at other locations.
- Did the government consider the demand and supply factors while deciding on the provincialisation of the existing schools and/or the location of new schools? Are the new schools being opened in already served

locations so as to meet the local pressure for providing employment to the village youth?

- What lessons can be learnt from the past experience?

The present study will not be able to provide answers to all these questions. However, it is expected that for opening of a second school in a village due consideration is given to the existing capacity, facilities and other issues related to functional access. The unplanned expansion and the large scale state take-over of the schools, especially when these are not optimally located, can complicate the problems and will have long term consequences for the development of primary education in the state. Some entrepreneur may be tempted to open a school in his/her own house or in an already served village, having little scope for the second or third school, knowing well that it will be taken over by the state one day and all the teachers employed will become permanent staff of the state government. Incidentally, there is no registration or other administrative or legal requirements for opening a school. Private unrecognized schools/crèches operate from all types of locations and environments. The provincialisation of private schools can definitely prove to be a windfall for some individuals but can be a great burden for the state exchequer[26]. This is what has happened in Assam. This assertion is also supported by the subsequent analysis which shows that most of the small schools are not established in the recent years but have a long history of existence.

The question of non-viability of schools which have been operating for over thirty years, especially in an area of educational underdevelopment, raises many questions of policy and planning. More important question is what should be done now with these schools? Should these be allowed to continue as it is or there is some way of rationalization of school locations. The state will have to evolve a policy by which all the stakeholders are involved and a satisfactory solution is found.

11. How Old are Small Schools?

As a matter of curiosity one would like to know when were the small schools established. Is there any systematic design to their establishment? Is smallness the result of school having been established recently or is it all pervasive? What is their future? Some of these questions are examined in the following analysis.

The analysis of data by the year of establishment shows that about 78 per cent of the present day small schools were established after 1950. A largest number of small schools were established in 1970s (32.7 per cent). This period coincides with the large

[26] Provincialization is a process of state government taking over the private unrecognised schools. In Assam, any persons can open a primary school. As the number of unrecognised primary schools increases, the pressure on the state government is built to take over these schools. Once, the state government takes over, the teachers and other staff get the same facilities as the government teachers and other employees.

scale provincialisation of primary schools. After 1980, practically very few schools were established or provincialised (7.2 per cent). It is quite possible that initially the number of small schools may be large and with the increase in enrolment, these schools no longer belong to the category of small schools. It is also possible that many of the present day small schools were viable when these were established but the subsequent events led to a decline in their enrolment.

What is the future scenario? Can we expect a decline in the number of small schools? The indications are that their number might increase in the next few years if the present system of opening/recognition of the newly established schools continues. With the increased emphasis on the expansion of primary education facilities to smaller habitations, the number of small schools may increase considerably. The fresh round of provincialisation for which there is a considerable demand in the last few years will also lead to an increase in the number of small and non-viable schools. The number of small schools under government management may also increase due to proliferation of unrecognized primary schools in rural as well as in urban areas. Private schools attract more children not necessarily because of high quality of education but largely benefit from the negative attitude towards government schools. Therefore, the enrolment in some schools may decline further.

What are the options for the government under such circumstances? Should it close down schools where adequate coverage is available through private schools? Should it allow such schools to continue to operate even though these may be small in size and non-viable in the long run? A clear perspective on such issues needs to be evolved now. The situation is not very far off in the future.

12. Small Schools do not Necessarily Serve Small Villages

As mentioned earlier, it is not necessary that small schools function only in small villages. If the principles and the methodology of school location is not followed, the imbalances in the spatial location will become pronounced and small schools will be found even in large habitations as well as in urban areas. Since the government of Assam did not play any role in the establishment of *Venture schools*, their location is far from optimal. In fact, the entrepreneurs are more active in villages which are already well served.. Some private schools were found to be running parallel to the government schools. What will happen to such cases after the provincialisation? There will be more than one school in the same village, may be across the same street, and none of these may be viable in the long run.

It is felt that the policy of provincialisation has to be selective. The contribution of the schools operating in unserved habitations can not be compared with the schools running parallel to the government schools and especially when both the schools are located in close proximity to each other. Who would be real gainers from the latter situation? Let the private school continue in the private sector, so that competition builds up in primary education and the consumers get the best deal. State take-over

will eliminate the competition altogether which in the long run may turn out to be counter-productive. The government must concentrate its resource for serving the unserved areas.

In order to probe further into the above issues, a cross-tabulation of the total number of schools and the number of small schools was prepared for all rural schools in the district. The results are presented in Table 11. The cases where one or more school is existing but none of these belong to the category of small schools have been excluded. The table, therefore, includes only those villages where there is atleast one small school.

Table 11: Distribution of Villages with Small Schools

No of Schools	Villages with small schools			Total Villages
	1	2	3	
1	**217**			217
2	110	**41**		151
3	19	11	**8**	38
4	7	3	4	14
5		1		1
6	3	1		4
Total	**356**	**57**	**12**	**425**

The data in Table 11 presents an interesting picture as far as the location of small schools is concerned. Consider the following:

- There were 217 villages having one small school.
- There are many villages where two or more small schools exist. 57 villages had two small schools each. 12 villages had even three small schools.
- 41 villages had two small schools.
- Eight villages had three schools in each villages and all the three were small schools.
- 110 villages had two schools each and one of these was a small school.
- 11 villages had three schools out of which two were small schools.

How does one justify these types of imbalances in the location of primary schools especially when there are two or more schools in the same village and all of them turn out to be small schools?

Details of enrolment in one of the villages having six schools were examined (Table 11). One such village is BHUKTABARI. All the six schools in the village had a total of 594 students and 37 teachers. The average PTR for the village comes to about 16. This is considerably lower than the prescribed norm.

Table 12: School level Data for the Selected Village, 1995

School code	Enrolment	Teachers in position	Trained teachers	Classrooms	Per cent students in class I to primary school students
100401	142	10	8	2	39.5
100402	112	7	5	2	27.7
100403	69	5	3	1	58.0
100404	138	8	7	2	50.0
100405	81	4	3	1	54.3
100406	52	3	2	1	46.1

For none of the schools listed in Table 12, there is any justifiable relationship between the number of teachers, classrooms and the enrolment size. None of the schools had all trained teachers. In none of the schools the number of classrooms was more than two. The enrolment pyramid for all but one school is highly distorted. In three schools, the number of students in class I is more than half of the total number of students in primary classes. What type of scenario does this represent? It is not difficult to conclude that none of the six school represent a healthy school. It is an interesting case where primary schools may have been opened with exogenous considerations other than the real demand. The position with respect to other villages with multiple schools may not be much different from this.

If this is the scenario in a village with six primary schools, then how do we expect a different scenario in smaller villages which do not have enough children to support a viable school? The illustration presented above thus shows that small schools are not necessarily located in small villages and is also indicative of the deep rooted malaise in primary education in one of the educationally backward states[27]. Further investigations show that the villages having two or more schools also have small schools. It also points to the fact that the locations of the schools is not based on established techniques of location planning but are determined in an ad-hoc manner or through a process on which the state/district administration may have little control.

The foregoing analysis clearly points to the need for a policy decision about the existing small schools and the various scenarios that may arise in future. Rationalization of school locations will be necessary due to the following reasons:

- To correct the historically obtained distortions in the school locations;
- The large scale expansion of primary schools in the private sector will also pose new problems and challenges for the existing government schools: and

[27] Since this type of data is not available from other parts of the state/country, no comparisons are possible at this stage.

- Provision of access in unserved areas will necessarily mean higher marginal costs as well as smaller schools.

Rationalization of school locations can bring about considerable economies and saving of precious resources. The resources released by such rationalization can be used to provide facilities in unserved habitations. Rationalization must be attempted at the micro-level so that the location of the schools in relation to the settlement pattern can be studied in greater detail. The micro-studies can also be used for rationalization of school location so as to reduce the number of smaller schools to the minimum. The state should also evaluate the impact of *venture schools* on access before these are provincialised indiscriminately. The use of computerized spatial mapping techniques to study the location characteristics in relation to settlement structure will greatly help the educational administrators in decision making.

13. Enrolment Profile and Related Characteristics

The small schools as defined for the purpose of this study are those having a total enrolment of 60 or less students. What are the areas of concentration of small schools? Are these confined to some selected pockets of the district or are ubiquitously present? What is their enrolment distribution and other related characteristics? How old are these schools? What is the distribution of enrolment by classes? In order to examine these questions, the block level data on small schools was tabulated (Table 13). The 511 small schools had a total of 23,694 students which accounted for a total of 22.7 per cent enrolment. There are some variations in the proportion of students in small schools.

Table 13: Selected Data on Small Schools, Darrang 1995-96

Block	Schools				Students			Per cent students in small schools
	Small	Others	Total	Per centsmall	Small schools	Other schools	Total	
Sipajhar	92	128	220	41.8	3939	12500	16439	31.5
Kalaigaon	108	170	278	38.8	4840	16679	21519	29.0
Dalgaon	70	132	202	34.7	3264	12825	16089	25.5
Mejbat	72	126	198	36.4	3502	13833	17335	25.3
Udalguri	85	193	278	30.6	4131	19982	24113	20.7
Khairabari	80	205	285	28.1	3871	21117	24988	18.3
Mangaldoi Town	2	12	14	14.3	43	2450	2493	1.8
Tangla Town	0	9	9	0.0	0	1928	1928	0.0
Udalguri Town	1	5	6	16.7	47	1252	1299	3.8
Kharupetia Town	1	8	9	11.1	56	1919	1975	2.9
Total	511	988	1499	34.1	23693	104485	128178	22.7

The block of Sipajhar had 41.8 per cent primary schools (two out of every five) included in the category of small schools and tops the list of blocks in terms of the

share of small schools to total schools in the block. This is followed by Kaligaon block with 38.8 per cent small schools which accounted for 29 per cent of enrolment. The share of small schools to total schools exceed 35 per cent in three blocks namely Sipajhar, Kalaigaon and Mejbat. The distribution of teachers by school category for various educational blocks is presented in the following table.

Table 14: Share of Teachers in Small Schools, Darrang 1995-96

Block	Teachers in			
	Small schools	All type of schools	Per cent teachers in small schools	Per cent students in small schools
Sipajhar	235	755	31.1	31.5
Kalaigaon	227	752	30.2	29.0
Dalgaon	121	438	27.6	25.5
Mejbat	135	434	31.1	25.3
Udalguri	166	674	24.6	20.7
Khairabari	151	663	22.8	18.3
Mangaldoi Town	5	107	4.7	1.8
Tangla Town	0	53	0.0	0.0
Udalguri Town	4	44	9.1	3.8
Kharupetia Town	2	33	6.1	2.9
Total	1046	3953	26.5	22.7

There were 1046 teachers working in small schools and accounted for 26.5 per cent of all teachers. Not all teachers working in primary schools were trained. Overall 61.5 per cent teachers were trained in the district (Table 15). The share of trained teachers in small schools was less than those working in other schools.

Table 15: Trained Teachers in Small Schools

Type of school.	Trained teachers	All teachers	per cent trained teachers
Small schools	1049	0628	59.87
Other schools	2936	1822	62.06
All schools	3985	2450	61.48

The share of trained teachers in small schools was 59.87 per cent as compared to 62.06 per cent in other type of schools. In order to improve the quality of teaching-learning processes in small schools, the pre-service training should also be accompanied by intensive in-service training. While the state has planned such programmemes, the paucity of data does not permit a detailed analysis of in-service training.

14. High Recurrent Cost for Small Schools

Although the small primary schools are justified on social considerations, data on the unit costs of operating such schools is generally not available. The analysis of educational expenditure shows that teacher's salary is the major component of recurrent cost. In some states, it even accounts for 95-98 per cent of the total expenditure. While a detailed study of unit costs is beyond the scope of this paper, an approximation will be worked out considering the teacher's salaries to be the prime cost of running a primary school, other things remaining constant. Thus, the PTR in various schools can be used as a proxy of the unit cost. As a first step, the PTR for small and other schools was calculated separately (Table 16)

Table 16: Average PTR in Small Schools

Type of school	Average PTR
Small schools	22.65
Other schools	35.90

Since the average PTR for small schools is considerably lower than the average for other schools, the per unit operating cost is higher in small schools as compared to other schools. Thus, a relatively large share of teaching resources are absorbed by the small schools. The small primary schools accounting for 34.1 per cent of all primary schools had only 22.7 per cent students and employed 36 per cent teaching resources. ***Considering the teachers salary to be the principal cost, the recurrent cost per student in a small schools in Darrang is approximately 60 per cent higher as compared to other schools in the district.***[28] The per unit capital and maintenance costs are much higher in small schools as compared to other schools. The per unit capital cost will also be much higher for the schools having excess capacity in relation to the buildings and other facilities. Despite higher per unit costs, the small schools suffer from many inadequacies and inefficiencies.

Too Few Female Teachers

There are few female teachers working in primary schools in the state. Overall, the share of female teachers in primary schools is about 21 per cent, which is lower than the state average of 23 per cent, both of which happen to be considerably less than the national average of 31 per cent in 1994-95[29]. The share of female teachers in small schools was also 21 per cent, which is comparable to the district average.

[28] This is based on the assumption that the average salary of teacher in rural area is the same as that of the teachers in urban areas.

[29] Selected Educational Statistics, 1994-95, Ministry of Human resource Development, Government of India.

15. Status of School Buildings

Over the years, there has been a considerable effort to improve the quality of school buildings. Three important issues in this context are:

i) the adequacy of classrooms;

ii) condition of classrooms; and

iii) regular and routine maintenance of school buildings.

While there are serious concerns on each count, the problems are far more serious in terms of the maintenance of school buildings. While the new classrooms are constructed under some Centrally Sponsored Scheme or under the Plan component of the five year plan, the maintenance expenditure is met out of the Non-Plan component which is entirely met out of the state exchequer. The maintenance component suffers as adequate allocations are not made under Non-Plan component. In the present analysis, the discussion will focus on the number and condition of classrooms especially in the context of small schools.

Adequacy of Classrooms:

The primary schools in Assam do not have adequate buildings for housing all the four classes separately. Even where the classrooms are available, there is no relationship between the number of sections, enrolment and classrooms. Small schools either have no classroom or a maximum of one large classroom which is used by all four classes. In one classroom schools, weather conditions permitting, some classes are held either in the open or in the *varandah*.

Instances of some small schools with three or more classrooms were also observed. The data presented in Table 17 shows that nearly 93 per cent of small schools had only one room for teaching-learning purposes. Some schools (2.5 per cent) were even without a single classroom. The inadequacy of school buildings continues to be a matter of serious concern even after the scheme of OBB was successfully implemented. As many as eight schools covered under OBB were also found to be without even a single classroom. Informal discussion with the state officials indicated that the state did not follow the prescribed guidelines of OBB scheme. Thus, the basic thrust of the OBB to equip all primary schools with two all weather rooms did not materialize in Assam.

The average classroom size for the small schools was 1.049 as compared to 1.289 for the other schools in the district. While many schools were without even a single classroom, some small schools were found to be having three or more classrooms. What would be the effective use of these classrooms when the total enrolment in primary schools does not exceed 60 students?

Table 17: Distribution of Classrooms, 1995-96

Number of classrooms	No of small schools	No. of other schools	Total	Distribution of small schools
0	13	13	26	2.5
1	473	815	1288	92.6
2	16	88	104	3.1
3	6	42	48	1.2
4	2	20	22	0.4
5	1	2	3	0.2
6		1	1	0.0
7		2	2	0.0
8		1	1	0.0
9		1	1	0.0
10		3	3	0.0
All schools	511	988	1499	100.0
Average size	1.05	1.29	1.2	

Condition of Classrooms:

Although one room is available for most of the schools, their condition is not satisfactory for lack of upkeep and routine maintenance. It is also reported that some classrooms constructed under OBB are of poor quality. The condition of classrooms for small schools, schools covered under OBB and other schools is examined below.

The results of the analysis showed that 63 per cent of classrooms in small schools covered under OBB require major repairs. While this is a serious reflection on the implementation of the OBB scheme and its achievements, it is quite possible that neither the existing classrooms in the primary schools were rehabilitated nor new classrooms were constructed. The inferior quality of construction under OBB may be another reason for the poor condition of classrooms. It may also be the result to lack of maintenance of school buildings. Since the district has frequent floods and heavy rains, some of the classrooms may be crumbling for want of routine maintenance.

16. Academic Supervision and School Inspection

There are many questions of academic supervision that need to be considered seriously for the small schools. How does one ensure that the teaching-learning activities are effectively carried out in small schools? In this context, the internal supervision and guidance by the headmaster; external inspection by the school authorities; and the role played by the Village Education Committee/Parent Teachers Association is significant.

In the small schools, the role of headmaster in providing academic leadership to other teachers is limited as it is the same teacher who not only performs the administrative

work but also spends considerable time in teaching. In a single-teacher school, the same teacher performs all the functions. In schools with two teachers, the role of the headmaster is also very limited. In such circumstances the role of external inspection, academic leadership and guidance by the education authorities and peer to peer learning acquires special significance. The DEO with the assistance of school inspectors and subject specialists undertakes inspection of schools and also assists the schools in achieving high standards of quality. The grant-in-aid rules of each state provide the necessary guidelines for school inspections.

The teachers in small schools also face a challenging task. They not only face the academic, pedagogical, structural and social isolation with little or no guidance. Once trained, or put in the classroom without training, they often work without academic and pedagogical reinforcement with little supervision from their supervisors or help from their peers and with little motivation to improve or change the style of their teaching.

Since the VECs were not established at the time of data collection, it will take some time before these bodies start functioning effectively. The recent 73rd and 74th constitutional amendments empower the local bodies for planning and management of school education.

To provide academic support and supervision of primary schools, school complexes have been established in some states. However, there are no school complexes in the Darrang districts. Under the DPEP, it is proposed to establish Block Resource Centre (BRC) and Cluster Resource Centre (CRC) for teacher training and other academic support to primary schools within a distance of about 8-10 km from it. However, when the data was collected, the BRCs and CRCs were not operational in the district.

While the quality of inspection of primary schools has been questioned by many, there is practically no system of regular academic inspection and it continues to be the most neglected part of educational administration. Each state has established the norms for supervision and inspection. Since there is no system of collection, compilation and publication of data on school inspection, little is known about the status and efficiency of the inspection system.

Notwithstanding the quality and follow up on inspection reports, many schools are not inspected at all for many years. Table 18 presents the share of small schools which were not inspected during the previous academic year. The inspection rates vary between rural and urban schools, small and large schools, and perhaps between the easily accessible and remote schools also. In all, 42.5 per cent small schools were not inspected at all. The corresponding value for the other schools was 34.2 per cent. Thus the small schools are more neglected as far inspection is concerned.

Table 18: Inspection of Small Schools

Block	Per cent small schools not inspected	Per cent other schools not inspected
Sipajhar	22.8	20.3
Kalaigaon	25.0	20.6
Dalgaon	21.4	15.9
Mejbat	75.0	51.6
Udalguri	64.7	54.4
Khairabari	55.5	41.0
Mangaldoi Town	0.0	0
Tangla Town	0.0	11.1
Udalguri Town	100.0	20.0
Kharupetia Town	0.0	0
Total	42.5	34.2

In each block, the share of small schools not inspected is generally greater than the corresponding share of other schools which were not inspected. In Mejbat block three out of every four small schools were not inspected. Thus, the small schools are ignored to a large extent during the inspection.

The foregoing analysis clearly shows that external supervision of the small schools is more neglected than other schools of the district. The small schools will normally require more academic and other administrative support as compared to other schools. If these schools are not visited by the educational administrators, their academic and administrative problems will continue to persist. Lack of regular inspection also reflects the low priority and apathy of the district administration towards the small schools. Can it be made mandatory that small schools must be inspected atleast once in a year? The inspection should not be confined to mere fault finding, but should concentrate on providing leadership to the small schools. To what extent this can be achieved will depend upon the new initiatives under DPEP.

17. Head Teachers

The final test of the effectiveness of the primary schools is the extent to which the broader objectives are realized through classroom teaching-learning processes. The headmaster plays a significant role in ensuring that teaching activities are carried out effectively in the school. However, the role of headmasters in small schools is different from their counterparts in the large schools. In the context of small schools, with one or atmost two teachers, the headmaster is more of a teacher and less of a manager. While in large schools, the headmaster may have to spend considerable time in administrative work, it is not so in small schools.

School headmasters were not posted /available in all schools. In all 3.2 per cent schools were without heads. However this ratio is higher in the smaller schools where 5.3 per cent schools were working without school heads.

18. Teachers Deployment

Teachers play a very important resource in educational programmes. The low levels of learning achievement among primary school students has remained a cause of concern ever since the beginning of planned development in India[30]. To ensure best possible quality in the teachers workforce, the teacher policies regarding recruitment, pre-service and in-service training, remuneration, transfer and posting and the job mobility play an important role in influencing teachers career and their continued commitment to the profession. Therefore, to retain a good teaching force, the government has to make sizeable investment in creation of facilities for pre-service teacher training, continuous review of teachers salaries, service conditions and incentives for the high performers. The review of teachers policies conducted as a part of the DPEP baseline assessment studies revealed that in Assam, the minimum qualification for entry into teaching profession was 10 years of schooling without initial training[31]. The state does not have a well defined policy for the posting and transfer of teachers and is essentially guided by the administrative convenience. It is estimated that a large proportion of teachers (about 40 per cent) are untrained. It is also observed that facilities for in-service training are insufficient in all the districts/state. In some districts, the need for training outstrips the supply at the DIETs and other state level training institutions.

Improving the administrative efficiency and rationalization of teachers' deployment have been the areas of concern for a long time. While each state has evolved norms for deciding the number of teachers that a school requires, significant imbalances in the actual deployment exist. These imbalances are the result of many factors like:

i) Teachers promoted to administrative positions, superannuating or leaving the teaching profession to take up other assignments;

ii) operational factors and changing profile of enrolment;

iii) imbalances in the demand and supply of teachers;

iv) aspirations of teachers to stay in towns and cities. This is particularly true of women teachers;

v) indecision on the part of educational administration to rationalize the deployment of teachers every year;

vi) some teachers escaping the rationalization decisions and continuing to stay on humanitarian and personal grounds; and

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[30] The first five year plan (1952-57) recognised the poor quality of learning among school leavers as one of the prime concerns. It suggested various measures to improve the quality of learning. However, over the years, the concern has persisted and no major dent could be made to improve the learning outcome. The recent DPEP baseline assessment studies have further thrown considerable evidence on the persistence of low levels of achievement among primary school students

[31] NCERT (1994), Research Based Interventions in Primary Education: The DPEP Strategy, NCERT, New Delhi. Pp. 17-22

vii) lack of adequate database on the teachers' qualification, date of joining, training and other important benchmarks.

Reducing imbalances in the teachers' deployment to the minimum must be a top priority of educational administration at the state/district level as it is not only the most expensive resource but is the key resource for the delivery of primary education. For this purpose the states should undertake periodic administrative reviews and rationalize the teachers deployment by transfers and new postings. The analysis in this section is based on the cross-sectional data and would help in identifying the existing imbalances of various types in the teachers' deployment. However, there is a need for developing a computerized integrated database on teachers as their number has considerably increased over the years and the manual systems are unable to respond to the diverse needs of data required by the educational administrators. In addition to day-to-day management, these types of databases will also help the states in developing models of teachers deployment, postings and transfers.

Since the number of sanctioned posts are linked to the enrolment size, considerable discrepancies and inconsistencies are reported in enrolment data. Various studies have shown that on an average the enrolment is inflated to the tune of 20-30 per cent. This is done to get more posts or to retain the existing number of teachers. The real enrolment in some cases is so low that the teachers fear that the school with low enrolment might be closed. Therefore, the very basis for determining the teachers requirement is suspect. However, under the existing system, there is no alternative mechanism to identify the teachers requirement.

Table 19 presents the data on the distribution of teachers by enrolment size for small schools where the problems of utilizing the teaching resources are far more serious.

Table 19: Distribution of Teachers Classified by School Enrolment

Teachers in position	Number of schools in each enrolment category							
	<=20	21-60	61-100	101-140	141-180	181-300	>300	Total
1	1	91	79	15	2	1		189
2	5	386	305	78	10	9		752
3	2	56	126	60	30	7		281
4		14	56	52	51	7	1	181
5		3	17	21	11	6	1	59
6			5	4	6	7	1	23
7				4	3	6		13
8		1		2	4	4		11
9		1		2		5		8
10		1			1	1		3
11						2		2
12			1			2		3
Total	8	503	589	238	127	57	3	1525

There were eight schools with a total enrolment of 20 or less. One of these schools had one teacher, five had two teachers and one had three teachers. Is the posting of two or three teachers in such schools justified?

The imbalances in the posting of teachers is quite evident from the above table. For example, there were 76 schools with enrolment varying from 21-60 but having three or more teachers. Three teachers are not justified for any of these 76 schools. The imbalances become more pronounced as the teachers distribution in schools of size 61-100 are examined. Of the 589 schools falling in this category, as many as 13.4 per cent (79 schools) were found to be single-teacher schools! Another 13.2 per cent schools were having four or more teachers. A similar position can be observed in case of other categories of schools also. Thus notwithstanding the average PTR, there are considerable imbalances in the actual deployment/posting of teachers. There are schools which have teachers in excess of their requirements as well as the schools without adequate number of teachers.

It is generally alleged that teachers get them posted in towns or schools which are easily accessible and are located at the periphery of towns or the place of their residence. On the other hand, the interior and inaccessible schools do not have adequate number of teachers even though these are required in terms of the established norms. There were 79 single-teacher schools with enrolment in the range of 61-100, each of which requires at least two teachers. There were 15 single-teacher schools where the enrolment is reported to be in the range of 101-140. These type of serious imbalances point to the need for equitable distribution of teaching resources.

The recruitment of teachers under OBB scheme envisages that two teachers will be provided to primary schools, one of which should preferably be a female teacher. The distribution of teachers in schools covered under OBB is given in the following table:

Table 20: Gender Distribution of Teachers in Schools Covered Under OBB

Male teachers	Number of schools with female teachers							
	0	1	2	3	4	5	>5	Total schools
0	1	8	10	4			1	24
1	74	164	19	6	3			266
2	467	90	27	7	4		4	599
3	134	58	14	3	2	2	2	215
4	52	12	4	1	2	1		72
>=5	15	8	3	4		3		33
Totals	743	340	77	25	11	6	7	1209

There are 83 primary schools which still do not have two teachers as provided under OBB. 61.5 per cent of schools covered under OBB do not have even a single female teacher and another 28.1 per cent have one female teacher.

There is a need for reconsideration of the norms for determining the teachers' requirements. Can we move from enrolment to retention or attendance as the basis for determining teachers requirement. However, each state has to evolve its own method which not only takes into consideration the overall enrolment but also is based on the class level enrolment, retention or average attendance. Not only considerable savings in recurrent cost can be realized by rationalization of teachers deployment, but such a move will also help in improving the quality of classroom interaction by deploying the teachers optimally.

The share of female teachers continues to be low at the primary stage. The efforts to correct this situation by encouraging the appointment of female teachers under OBB have not yielded much. Continuous efforts need to be made to encourage women to join teaching profession. It is quite possible that women still prefer other jobs as compared to primary school teaching. The state administration should consider various possibility to increase the share of female teachers at primary stage. This would also mean a teacher training policy that will be able to attract enough women.

The findings of the study on teacher policies for the state of Assam identified many areas of concern. These included lack of policy on transfers and postings, lack of mechanisms for redressal of grievances of teachers. A positive response from administrators to resolve the problems of teachers can lead to significant gains in terms of commitment and motivation of teachers to their duties. An innovative experiment called *Shikshak Samakhya* project (or teachers empowerment project) in Madhya Pradesh has provided a powerful stimulus to the belief that large scale changes can take place within the educational system, if the grievance redressal is timely and teacher is motivated to transform the teaching environment and is supported in this endeavour. This experiment has succeeded in mobilizing teachers from all types of schools and involving them is peer group learning/training.[32]. The principles underlying *Shikshak Samakhya* have considerable appeal in educational terms- drawing on local surroundings and culture for its pedagogical materials, involving teachers themselves in learning/training by peer groups rather than by external experts and involving young children in activities which they enjoy. The programmeme is conducted with the full involvement of the local community and educational administrators. It is reported that besides other gains, there was a considerable improvement in the learning outcomes[33]. The project clearly demonstrates that even in small schools, enthusing and training the teacher can vastly improve the quality of primary education within the existing system and need not be expensive.

[32] The pilot project was launched by the UNICEF in the selected districts of Madhya Pradesh and was later extended to 23 districts.

[33] UNICEF (1995), *The Progress of Indian States: 1995*, UNICEF, New Delhi. Pp. 53.

19. Teaching Learning Materials

Given the poor condition of school buildings and other facilities, it is quite unlikely that the schools will have adequate teaching-learning materials (TLM). While efforts were made through the OBB to supply the essential teaching-learning materials, their availability and use in the schools is reported to be far from satisfactory. There is hardly any data on the use of teaching-learning materials in primary schools. Some sample studies need to be conducted to assess the pattern of the use of the teaching-learning materials. Such data can not be collected on complete enumeration basis. Therefore, the important dimensions of analysis with regard to teaching-learning materials are:

i) availability of usable teaching aids, equipment and consumable materials;

ii) willingness and ability of teachers to use teaching aids/materials;

iii) in the case of DPEP schools, each school is given a lump sum contingent grant. The availability and use pattern of this contingent grants;

iv) the ability of teachers to prepare and use teaching aids made from cheap and local materials;

v) frequency of actual use of materials/equipment in teaching-learning process; and

vi) the impact of the use of teaching-learning aids/materials on the quality of teaching and achievement of learners.

The present analysis will concentrate on the availability of usable teaching-learning materials. The following table provides data on the availability of blackboards, syllabus, math's kit and teacher's guides in the primary schools, all of which are considered essential for efficient functioning of a school.

Table 21: Schools Without Essential Teaching Learning Materials

Item/availability	Small schools without TLM	Per cent small schools without TLM	Other schools without TLM	Per cent other schools without TLM
Blackboard	200	39.1	277	28.0
Syllabus	496	97.1	958	97.0
Teachers guide	398	77.9	767	77.6
Math's kit	215	42.1	388	39.3

Note: TLM stands for teaching-learning materials.

- There are serious deficiencies as far as availability of teaching aids/materials is concerned (Table 21). This is true of all types of schools.
- The deficiencies are more pronounced in small schools as compared to other schools in the district. This is especially true of the availability of blackboards. 39.1 per cent small schools were without blackboards as

compared to 28 per cent schools without blackboards in the remaining schools.

- Two out of every five small schools did not have math's kit, practically none of the small school had syllabus, three out of every four small schools were without teacher's guide. The position is almost similar in other schools also.

The availability of a functional blackboards is a pre-requisite for any type of interaction between the teacher and students in the classroom. However, when more than one class is to be taught simultaneously, each section will require a separate blackboard. A minimum of one blackboard will be necessary for each class/teacher. A tabulation using the number of teachers and the availability of blackboards in the school was prepared (Table 22).

Table 22: Availability of Blackboards and Teachers in Position

Teachers	Number of schools having blackboards					
in position	0	1	2	3	>=4	Total
1	56	27	8	1		92
2	130	108	76	16	11	341
3	14	17	17	9	1	58
4		4	7	1	2	14
>=5			2	2	2	6
Total	200	156	110	29	16	511

Out of 92 single-teacher small schools, as many as 56 schools (60.9 per cent) were without even a single blackboard. 130 two teacher and 14 three teacher schools were without even a single usable blackboard. Even within the small schools, the non-availability of blackboards is more serious in single-teacher schools. Of the 58 three-teacher schools, as many as 14 had no blackboard and 17 schools had only one blackboard. Other types of imbalances are easy to see from the above table.

The data also showed that 27.4 per cent schools were without all the three types of essential teaching-learning materials i.e. blackboard, syllabus and teachers guide. The small schools are at a relatively greater disadvantage as compared to large schools as far as the availability of all these three items is concerned. 33.5 per cent small schools and 24.3 per cent other schools reported that all these three items were not available in the school. Obviously, a large number of small schools have nothing except teachers and students. What could be worse than this? It is these types of schools for which all quality improvement programmes are meant and yet the availability of essential items like blackboards and teaching aids/equipment continues to be extremely unsatisfactory in all types of schools but is especially in the case of small schools.

It is ironical that teachers are teaching without blackboards and teaching aids and yet it is perceived that such schools will be able to produce graduates of a quality

comparable to the best endowed schools. The focus has to shift from employment generation to that of equipping the schools with teaching aids and motivating the teachers to use these aids effectively. The district administration should prepare a list of supplies that must be provided to all schools.

20. Internal Efficiency of Small Schools

Internal efficiency of the education system refers to the rate at which those who enter the school in grade I are able to complete the primary cycle of learning within the stipulated time period. There are a number of indicators that are used to measure the internal efficiency of the school system. The important among these are: average years taken to complete the primary cycle, drop-out rate, repetition rate and promotion rate. Time series data is required for the calculation of some indicators of internal efficiency, whereas the other could be calculated from one years data.

The indicators of internal efficiency are essentially quantitative in nature but when these are examined in relation to the qualitative indicators like school working days, qualifications and commitment of teachers, time devoted for various types of classroom activities and level of learning etc. a clear picture of school effectiveness can be determined. After the introduction of MLL based teaching, the quality of education is expected to improve. MLL envisages that at least 80 per cent children should be able to attain 80 per cent of the prescribed competencies. Under DPEP, a comprehensive package of in-service teacher training, introduction of MLL and revision of curricula is being attempted to improve the levels of learning in primary schools.

Enrolment Pyramid (All Schools)

The enrolment structure is reflective of the school efficiency and the progress of various cohorts of students over a period of time. While cohort analysis is necessary for assessing the school efficiency, some indications are also available which can be derived from cross-sectional data. These estimates may be quite consistent especially when the intake rates do not change much over the years. The more cylindrical the enrolment pyramid is, the better is the school efficiency as far as retention and student flows are concerned. A wide base with steep gradients indicates fast depletion of enrolment as students progress along the hierarchy. The enrolment structure of primary education in the district is presented in the following table.

Table 23: Enrolment Structure

	Class I	Class II	Class III	Class IV
All students	60,651	27,366	23,060	18,388
SC	5,347	2,545	1,936	1,546
ST	20,670	7,993	7,124	5,532
per cent SC	8.8	9.3	8.4	8.4
per cent ST	34 1	29.2	30.9	30 1

The structure of enrolment presents a highly distorted picture. The share of class I enrolment to total enrolment is 46.95 per cent. Class IV enrolment is 14.2 per cent of the total primary school enrolment. This has serious implications for the teacher training and organization of other facilities in primary schools. The provision of facilities and teaching-learning equipment has to considerably biased for the class I students as compared to class IV/V students. While the analysis of cross-sectional data may not represent the true picture of the student flows, it does represent the extent to which the teaching resources get allocated for various classes at a given point of time. The enrolment structure shows that the teachers should be fully oriented for handling class I children. There is not much in the teacher training curriculum for teaching class I children. The long-term persistence of the distorted enrolment pyramid will result in the low retention of students in primary classes.

The distortions in the enrolment pyramid are also the outcome of inflated enrolment at Class I where the names of all eligible children are entered in the school rolls and never deleted even though the child may not have come to school at all. This inflates the share of class I students in the total enrolment of primary classes. If class I enrolment is corrected, the enrolment pyramid will become more cylindrical. The effect of artificially inflated enrolment can be disastrous for the school efficiency indicators. First, the drop-out rates tend to be inflated as compared to the actual situation. Secondly, all indicators based on the flow of students will show adverse performance whereas, in actual practice it may not be so.

SC enrolment:

The share of SC students was 8.8 per cent in class I and 8.4 per cent in class IV, the terminal year of primary schooling. The share of SC enrolment is commensurate with their share in the total population in the district. However, in terms of the enrolment structure, class I continues to have nearly half of the total SC enrolment.

ST enrolment:

The share of ST students at Class I was 34.1 per cent as compared to 30.1 per cent in Class IV. The share of ST enrolment to total enrolment is reported to be much higher as compared to their share in population. The share of ST population in the district was about 17 per cent whereas their share in the enrolment is reported to be 30-34 per cent. This aspect needs to be explored further for the possible discrepancies and data reporting errors. Either the population data is not correct or the schools have not supplied the data correctly as far as the enrolment of STs is concerned.

Enrolment Pyramid (Small Schools)

The share of SC and ST enrolment in small schools is lower than the corresponding values for the other schools showing that the small schools are established not

necessarily to serve the deprived sections of the society. Thus, there are other considerations governing the establishment of more than one school in a village.

Table 24: Enrolment Pyramid: Small Schools

	Small schools				Other schools			
	class1	class2	Class3	class4	class1	Class2	class3	class4
General	11,101	4,703	3,996	3,353	49,550	22,663	19,064	15,035
SC	692	273	194	155	4,655	2,272	1,742	1,391
ST	3,416	1,357	1,201	1,022	17,254	6,636	5,923	4,510
per cent SC	6.2	5.8	4.9	4.6	9.4	10.0	9.1	9.3
per cent ST	30.8	28.9	30.1	30.5	34.8	29.3	31.1	30.0

It is surprising that there were only 3,353 students in class IV in 511 small schools giving an average of 6.5 students of class IV per school? To what extent such schools will be viable and able to achieve the objective of E*ducation for All.* The enrolment pyramid for the small schools is presented below:

Structure of Enrolment of Small Schools:

The structure of enrolment of small schools is highly distorted. The number of students in class I are the same as the total of students in classes II, III and class IV. The structure is more skewed in the case of SC enrolment. The share of SC students in class I enrolment to total SC enrolment was 52.7 per cent.

Sometimes, the enrolment in class I is inflated merely to ensure that the teaching positions continue to be retained in the school, although the number of children actually attending the school may be far less. We shall further analyze this myth of enrolment in class I by considering the repeaters in the subsequent analysis. Some names continue to appear in class I enrolment register for years together. If this is so, the repetition rates should be extremely high in class I. This can not be justified on any ground as the state follows a no-detention policy for the first few years of primary education. Hence there are no examinations at the end of first and second year of primary classes. Therefore, one fails to understand as to why so many students repeat in class I?

Class IV enrolment in small schools:

As the total enrolment in small schools is less than 60, there would be many schools with few students in Class IV (Table 25).

Table 25: Distribution of Class IV Students

Sr	Enrolment range	Number of schools	Per cent schools
1	<=5	199	39.9
2	6-10	237	47.5
3	11-20	62	12.4

The foregoing analysis of enrolment structure of small schools has highlighted the malaise from which such schools suffer. Low enrolment, approximately 50 per cent students in class I alone and small number of students in class IV are some of the characteristics of small schools in the Darrang district.

Table 26: Average Enrolment by Classes in Small Schools

Classes	Small schools		Other schools	
	Mean	Standard Dev.	Mean	Standard Dev.
Class I	22.3	8.37	49.9	22.25
class II	9.4	3.76	22.8	14.10
Class III	8.0	3.30	19.2	12.37
Class IV	6.7	3.43	15.1	10.36

Number of cases: small schools 499, others 993

Although the averages could be highly misleading, these do represent the general profile and may have implications for planning and management of facilities like primary school. The profile of small schools is presented in Table 26.

On an average, a small school in the district has 46 children out of which 22.3 students are in class I, 9.4 in class II, 8 in class III and 6.7 in class IV. The corresponding averages for other schools in the district was 49.9 for class I, 14.1 for class II, 19.1 for class III and 15.1 for class IV.

21. Repeaters

In order to check the steep decline from Class I to Class II, the scheme of 'no detention' of children during the first few years of primary education was adopted. There are some variations in the implementation of the scheme by various state governments. In Assam, the scheme of no-detention is operative which prohibits the detention of students in the first two grades. The examinations are held at the end of third year alone. Hence, no students are detained on the basis of poor learning. However, there is one caveat that permits the detention of children. Any students who fails to attend a minimum prescribed attendance can be asked to repeat in the same class. It is this clause which is used to inflate the class I enrolment by showing a large number of students as repeaters.

For the last few years, a new tendency is emerging whereby the younger siblings are brought to the school and allowed to sit in Class I. They are not regular students of Class I but their names are entered in the school register and are allowed to repeat as many times as they fall short of regular admission age which is six years. The schools use this inflated enrolment to demand more teachers and facilities for the primary schools. The administration is fully aware of these trends but is unable to check the malaise as they fear any action to stop these children from coming to school will be counter productive and may lead to real fall in the enrolment/attendance of those

coming to school with their younger brothers and sisters. In the long run, this practice becomes counter-productive as the efficiency rates are considerable pulled down due to inflated class I enrolment. Indicators like GER, NER and drop-out rate will significantly change after the adjustments to class I enrolment are made.

Table 27: Repeaters in Darrang District

class	Small schools			Other schools		
	Enrolment	Repeaters	Repetition rate	Enrolment	Repeaters	Repetition rate
Class I	11,101	4,688	42.2	49,550	21,546	43.5
Class II	4,703	783	16.6	22,663	4,912	21.7
Class III	3,996	488	12.2	19,064	3,204	16.8
Class IV	3,353	230	6.9	15,035	1,383	9.2
Total	23,153	6,189	26.7	1,06,312	31,045	29.2
% repeaters in class I to total repeaters in primary classes		75.7			69.4	

A large number of students, in practically all schools, in the district were shown as repeaters. The repetition rate in small schools (26.75) was less as compared to other schools (29.2 per cent). The overall repetition rate for the district was 28.8 per cent. Thus, as far as the repetition rates are concerned, the small schools are in relatively better position as compared to other schools. The average repetition rate for class I was reported to be 43.3 per cent.

In view of the large variations in repetition rates for various classes, a separate tabulation was prepared for repetition rates by classes and also for small schools separately (Table 27). The repetition rate for class I was the highest in all types of schools. In fact, the repetition rate for class I in smaller schools was a little less as compared to other type of schools in the district. By the time the children reach class IV, the repetition rate drops sharply to 6.9 per cent for small schools and 9.2 per cent for other type of schools. The high repetition rates in class I are the result of the underage children shown as students of class I.

Table 28: Repetition Rates by Gender and Caste in Small Schools

Class	All students		SC students		ST students	
	Boys	Girls	Boys	Girls	Boys	Girls
I	40.82	41.06	36.46	35.57	45.19	41.64
II	16.51	16.89	18.67	17.24	13.09	12.83
III	10.91	13.50	11.50	6.45	9.02	9.48
IV	7.15	6.31	8.60	7.69	4.85	6.40

Table 28 examines the differences in the repetition rates by gender and caste of the students. There is no clear trend in repetition rates for boys and girls in various classes. The repetition rates differ significantly among various caste groups. The SCs

have the lowest repetition rates at Class I level, the highest being for the ST population.

- The repetition rates for SC and ST students are lower in small schools as compared to other types of schools;
- the repetition rates are highest for SC students both in small as well as other types of schools;
- the differences in repetition rates for boys and girls are not pronounced. The gender differences are more pronounced in class IV.

Table 29: Repetition Rate by Gender and Caste, Other Than Small Schools

Class	All		SC		ST	
	Boys	Girls	Boys	Girls	Boys	Girls
I	42.77	44.24	34.26	30.63	46.48	48.50
II	21.38	22.03	19.35	18.36	20.30	20.18
III	17.16	16.50	14.57	15.99	14.89	16.67
IV	9.89	8.40	13.17	8.21	9.17	6.02

The persistence of high repetition rate for students in class I is a matter of serious concern. It is difficult to believe that nearly 40-50 per cent of the children in class I are repeaters. The repetition is low in small schools as compared to other schools, which is contrary to expectations. Is it that there are few young children in villages having small schools whose names could be entered in school enrolment register?

The preliminary analysis of the repetition rates for each school show large variations. **Table 30** presents the distribution of schools according to the class I repetition rates.

Table 30: Per centage of Repeaters in Class I, Darrang District (1995-96)

Repetition rate (per cent)	Small schools	Other schools	Total schools	Distribution of schools		
				Small	Others	Total
0-10	76	87	163	15.6	8.8	11.0
10-20	28	83	111	5.7	8.4	7.5
20-30	56	113	169	11.5	11.4	11.4
30-40	75	148	223	15.4	15.0	15.1
40-50	80	164	244	16.4	16.6	16.5
50-60	59	156	215	12.1	15.8	14.6
60-70	58	129	187	11.9	13.0	12.7
>70	56	109	165	11.5	11.0	11.2
Total schools	488	989	1477	100.0	100.0	100.0

Source: DISE data base, Darrang District, Assam

The following observations are of significance in this context:

- There were few schools with less than 20 per cent repetition rate. 20.3 per cent small schools and 17.2 per cent of other schools showed repetition rate of less than 20 per cent.
- 11.2 per cent of schools have recorded an unbelievably high repetition rate of 70 per cent and above in class I. There are small differences in this ratio for small and other types of schools.

Table 31: Class II Enrolment as Ratio of Class I Enrolment, 1995-96

Class	Small	Other	Total	Distribution of schools		
Interval	schools	schools		Small	Others	Total
0-10	8	6	14	1.6	0.6	0.9
10-20	58	61	119	11.6	6.1	8.0
20-30	68	163	231	13.7	16.4	15.5
30-40	85	215	300	17.1	21.7	20.1
40-50	81	185	266	16.3	18.6	17.8
50-60	67	109	176	13.5	11.0	11.8
60-70	42	90	132	8.4	9.1	8.9
>70	89	164	253	17.9	16.5	17.0
Total	498	993	1491	100.0	100.0	100.0

A major consequence of high repetition rate in class I is the low efficiency and dismal outcome in terms of performance indicators. Because of the high repetition rates, the promotion rate shows a steep decline. Although the cohort data is not available, the share of class II to class I enrolment, with all its inadequacies, was used as a proxy. The results are again alarming and show the following:

- There were eight small schools where enrolment in class II was less than 10 per cent of the class I enrolment.
- One in every four small schools had less than 30 per cent students in class II as compared to class I.

It could be argued that the special enrolment drive and other measures in the preceding year has lead to a sudden increase in class I enrolment. If it so, these trends will stabilize in about 1-3 years time. It can not continue indefinitely. The time-series data will be able to present the exact trend.

In order to check the manipulation of enrolment particularly in class I, schools showing abnormal performance indicators could be put on the watch list and observed more closely. Sample studies could also be carried out to establish the real nature of problems in class I enrolment.

22. Learners Achievement

The ultimate aim of primary education is that all the learners are able to acquire the basic competencies and skills irrespective of the location and the types of school. In the Indian context, these competencies are defined as Minimum Levels of Learning (MLL). For the primary students, it is expected that 80 per cent children will be able to attain 80 per cent competencies. Text books and instructional materials are under revision and the teachers are undergoing training in competency based teaching. The district of Darrang is also implementing this scheme as a part of DPEP package.

Generally, there is a criticism that children learn a little in the primary schools. Concerns about the quality of education have been expressed in the reports of various Committees and Commissions. The foregoing analysis has also established that small schools have generally lower enrolment, less facilities, do not get academic guidance from the district administration, lack teaching-learning materials, have larger proportion of untrained teachers and also have high repetition rates. In such circumstances, it is difficult to expect that their levels of learning will be comparable to those of other schools which are better endowed.

The evaluation of students is an important act of establishing the level of learning. The traditional method of term end examination has failed to establish real levels of learning. It is, therefore, essential that regular sample based evaluation studies are conducted. Such studies are more important in the context of small schools where recurrent cost is much higher as compared to other schools.

Studies on learners attainment were conducted earlier as a part of the baseline assessment studies (DPEP). While the results were tabulated by rural/urban, SC/ST and gender classification, no attempt was made to use school size as a classificatory variable. It is suggested that the data should be reanalyzed for small schools separately. The results of the study indicated that generally the levels of learners achievement are low in language and mathematics for which the tests were conducted.

A test of 40 items in Mathematics, based on Grade III curricula was administered to the students of Grade IV at the beginning of the session in all the four districts of the state. A similar test was also administered to assess the reading and comprehension of the language of instruction. The average score on mathematics and language for the learners from Assam is given in Table 32:

Table 32: Mean and Standard Deviation of Achievement Scores, 1994

Item	Mathematics		Language	
	Boys	Girls	Boys	Girls
Mean	20.17	19.54	21.58	20.85
S.D.	7.17	7.51	6.80	7.38
N	880	826	880	826

Source: Baseline Assessment Study, Assam, NCERT.

The above levels of achievement show that boys attainment is higher than the girls both for mathematics and language. Comparison with achievement scores of other states shows that Assam had achieved the highest levels. The findings of the tribal study for the district shows that **'parents education' and 'help received from family'** had significantly contributed to the achievement scores for mathematics and language. It was also observed that the spoken language (mother tongue) at home is different from the official medium of instruction for a large number of students. Thus, many students expressed the view that they faced difficulty in understanding the language of teachers in the class. This is likely to seriously affect the classroom interaction.

There were certain problems with the earlier baseline assessment studies which were conducted in the state during 1993-94. Consequently, a revised study was organized in 1995 and the results are expected to be available soon. In view of this, no conclusive observations can be made about the achievement of learners in small schools.

In the Indian situation, the textbooks continue to be the most essential input at the primary stage. Textbook is the only common teaching aid available to teachers and learners through which the given curriculum is transacted. There is a dearth of research inputs to facilitate informed decisions regarding appropriateness and sequencing of content to match the linguistic competencies of the target group. As a result neither any state nor the central agency has specified the language content to be used in the textbooks in linguistic terms. Norms of linguistic competencies of children are also not defined. Thus, the quality of textbooks and their readability can affect the learners understanding. In the context of multigrade teaching, the need for self-learning instructional material is crucial and the state should make efforts to get regular feedback from the learners and teachers based on classroom interaction.

C. SUMMARY OF FINDINGS AND POLICY IMPLICATIONS

The main objective of this paper was to examine the profile of small schools, which constitute a substantially large proportion of primary schools in practically all educationally backward states/districts of India. Since there is a paucity of school level data for most of the districts in the country, one of the educationally backward districts (Darrang in Assam) was selected as a case study to examine the profile of small schools and to identify the issues in planning and management of primary education. The school level data collected through the DISE for the year 1995-96 formed the basis of analysis in this study.

The study can not claim to have reached universally acceptable conclusions, as it is handicapped by the availability of large scale empirical data from across the country. Nevertheless, the case study, covering about 1500 primary schools of which 511 were classified as small schools (with enrolment of 60 or less children in primary classes), is able to highlight the major issues and to reach some conclusions having significant implications for the planning and management of primary education not only for the study area but also for a large number of districts having similar problems of access, retention and quality of teaching-learning .

The study area i.e. Darrang district is receiving financial assistance for the last two years under DPEP for revitalization of its primary education system. The schemes under implementation include civil works, opening of new schools, teacher training in activity based teaching, materials development, setting up of block and cluster resource centres, setting up of village education committees to promote decentralized planning and management of primary education. Special attention is also given to the spread of education among SC, ST and other deprived sections of the society. To improve the quality of delivery mechanisms, a massive exercise for capacity building of educational administrators is under implementation.

While these are valid concerns, the specific requirements of small schools were neither identified nor are being addressed fully through the proposed interventions. The foregoing analysis has provided extensive evidence to demonstrate that the small schools have their own peculiar problems and will have considerable implications for planning and management of primary education in general and on the efficiency of the education sector in particular. More focussed strategies/inputs are needed for improving the effectiveness of small schools in districts covered under DPEP. The findings will also help the project authorities to examine the relevance of on-going strategies and to re-examine the thrust of DPEP activities in the light of new evidence

The study examined the profile of all primary schools in the district in terms of their enrolment, number of teachers employed, their training, nature and type of school buildings, enrolment by classes and repeaters for various social groups including its

classification by gender. The data has various classificatory variables including management of the school, type of school, rural-urban location, Tribal/non-tribal, single/multiple teacher school, and whether covered under OBB or not. The data pertained to the academic year 1995-96 with 30th September, 1995 as the reference date.

The Size and Structure of Small Schools

While the economies of scale do not favour the setting up of small schools, their existence is justified only on social considerations. Considering the enrolment distribution, the schools having enrolment of 60 or less students were classified as small schools. The number of such schools was 511 and constituted about 34 per cent of all schools in the district. The average enrolment in a small school was 46.4 students as compared to an average of 85.5 students per school for the district as a whole. The average enrolment for the schools other than small school was 105.8 students. The structure of enrolment pyramid indicates that class I enrolment accounts for about 47 per cent of all students with the corresponding ratio for class IV was 14.2 per cent. It is this type of distorted enrolment pyramid for which the facilities and other inputs have to be provided. The uniform models of planning do not provide for area specific strategies.

Settlement Structure and Age Pyramid: Vital Determinants of School Size

The major factor influencing the size of primary is the pattern of settlement structure and their size distribution. The analysis of settlement structure shows that the present day educational backward districts/states have substantially large number of small size settlements. Thus, the small schools are here to stay and their number is likely to increase substantially as the schooling facilities are extended to uncovered smaller habitations. The analysis of age distribution of population has revealed that India has a relatively large share of younger population. The population under the age of 15 years accounted for 41.14 per cent of total population of the district. Thus, the base of the population pyramid is quite wide and is also expanding in terms of absolute numbers. In the coming years, excepting a few pockets, the country need to plan for increased intake at primary stage.

Search for Alternative Modes of Education

India has reached a stage of network expansion where opening of new formal primary schools in unserved locations will not only entail marginally higher per unit operating costs but may also lead to a situation where most of these schools may not remain viable and sustainable in the long run. Notwithstanding the higher unit operating costs, it is high time that various alternative modes, which are more appropriate to the requirements of learners in smaller and isolated habitations are developed. Otherwise how will the country be able to meet the needs of about 300,000 habitations with a

population less than 200? It is true that many of these habitations do have a primary school within a reasonable distance. Is that sufficient?

Strategies for Improving Access and Coverage

Within the formal structures, a number of alternatives are possible. These include: First, opening small schools in unserved areas so that children can access it easily and training the teachers to handle small classes in a multi-grade mode. Intensive and continuous training of teachers in the multi-grade teaching practices and use of low cost and locally made teaching aids will definitely be helpful in improving the effectiveness of small schools; secondly, opening large schools at convenient locations with boarding facilities for class III and class IV students so that children do not have to walk large distances. This will also ensure that class IV enrolment is not unduly small as compared to class I and Class II enrolment; thirdly, providing incomplete schools (branch schools) in those habitations where a complete primary school is not viable. After a few years of initial preparation, the students can be transferred to a neighbouring full scale primary school; and to admit students on alternative years so as to have viable class size. Considerable research is needed along the suggested lines so that a viable strategy is evolved.

Need for Curriculum Consistent with the Perceived Need

The assumption, that the population of school going age group children is homogenous in terms of their educational requirements, is not valid. The child population consist of those who aspire to achieve the highest levels of academic attainment and excel in their field of study, those who aspire to acquire professional/general education so as to facilitate their entry into world of work, others perceive education to improve the earning capability of the children who can not afford to invest in 10-12 years of school education. The farmer visualizes that their children should become better farmers and so is the perception of many others. In such a varied demand scenario, how can a straight jacket curriculum designed at the state level meet all types of demand? The small schools and smaller habitations are at a great disadvantage in this context as their expectations are entirely different from those of the urban elite. It is the urban bias in the curriculum that poses great problems for the first generation learners particularly in smaller and deprived habitations. The high drop-out and low retention is an outcome of the lack of relevance of curriculum to the perceived needs of the learners. What can be done to minimize such mismatches?

Imbalances in School Location Planning

A centrally administered and uniform model (not necessarily the central government) for planning and management of primary education is definitely ill-suited for a diverse country like India. The most fundamental factor affecting the network of primary education is the settlement structure in a given geographical area. While the

Indian states are organized on linguistic basis, there are large variations in the settlement pattern even within the state. The settlement structure provides the basic framework for the nature and type of facilities to be provided in a given area especially for the basic education.

The decision to open a new school or take-over of an existing school at a particular location has long term implications for accessibility, teachers deployment, school environment and operating costs. If the schools are not located optimally, not only the imbalances in access accentuate but many non-viable and unsustainable schools get established. Once the schools are established, the recurrent expenditure is met out of the Non Plan allocations. The state of Assam is already under tremendous pressure to raise resources to meet its commitment for Non-Plan expenditure. During the FY 1992-93, the budgetary allocation for education was 27.6 per cent of the total budget (revenue account).

Removal of Imbalances in Network Connectivity

There is always an intrinsic relationship between the location of primary, upper primary and other types of schools. It is no doubt true that primary education is the top most priority of the central/state governments, but the development of other levels can not be ignored for long as the size of the intake cohort at primary level to a large extent determines the demand for other levels of education in the subsequent years. As the base of the educational pyramid expands, there is an in-built momentum for expansion which requires increased access to other levels of education as well. The demand for higher levels of education also expands due to improved retention and transition rates at the levels immediately preceding it. Excepting Kerala where the size of entry level cohorts is decreasing, the demand for primary education is bound to increase due to both the factors mentioned above. The pressure will be more in the educationally backward states/districts.

A systematic analysis of the linkages between the primary, upper primary and high and higher secondary schools has not been undertaken in any state. It is important to identify the clusters of primary schools where the demand for upper primary education will increase as a result of expansion in primary enrolment. It is estimated that if the retention rate in the district of Darrang improves to 90 per cent at primary grade, the enrolment will double in the next four years. This will not only have the implications for the management of primary education but also for the intake in upper primary education which might increase manifold. To what extent the existing system is ready to bear the additional load due to improvements in internal efficiency of primary schools is not clear?

Poor Quality of Infrastructure

The states found it easier to establish new schools funded through plan schemes (also called centrally sponsored schemes) and saw it as an opportunity to expand

employment opportunities for the educated youth. However, once a structurally deformed school is established, it is not possible to set it right. The expenditure on Non-Plan component are fully met by the state governments, the growth of the Non-Plan expenditure has outstripped the growth of state revenue.

There is only one classroom in 92.6 per cent of schools. Some schools (2.5 per cent) were without even a single classroom. The routine maintenance of schools is also suffering as practically no funds are available for the purpose. The analysis of the condition of classrooms indicated that as many 63 per cent classrooms in schools covered under OBB require major repairs. Some damage to classrooms also takes place due to natural calamities like floods and typhoons etc. How these classrooms will be rehabilitated? The state does not have the resources in the Non Plan component. Programmes like DPEP or other special grants will be able to help revitalize the dilapidated classrooms.

Ubiquitous Presence of Small Schools

Some aspects of the location of primary schools in the district were also examined. The evidence indicates that small schools are not confined to any specific part of the district but were ubiquitously present. Contrary to the general belief, the *small schools are not necessarily confined to small villages/habitations*. Nearly one third of villages had two or more schools and many of which were classified as small schools. Some villages were found to have more than three schools and all the three schools were small. The imbalances in the location of schools appear to be of serious nature. How else could one justify the existence of more than one small school in the same village?

Private Schools: Phenomenon of Dis-satisfaction with Government Schools

The private un-recognized schools are proliferating in almost all parts of the country. These are no longer confined to the urban areas. The rural areas have also seen a large expansion of private primary schools in rural areas. The increasing demand for primary education does not necessarily reflect the better quality of education but is more a reflection of the dis-satisfaction with the government schools. It is thus a negative response. If the private schools continue to expand, very soon the government schools will start losing enrolment and may lead to a sharp increase in the number of small and non-viable government run schools. The recent data from Tamil Nadu shows a decline in enrolment in government schools because of large scale migration of children from government to private unaided and unrecognized primary schools. How should the government respond to this type of situation? Should it close down some schools, move them to new locations or let these schools remain in the fractured state?

Rationalization of School Location

Practical experience shows that it is very difficult to rationalize the school locations. It is a sensitive issue which may evoke adverse response from administration, politicians, local bodies and teachers unions. The only remedy at this stage is to undertake a comprehensive study and use the findings to rationalize the school locations by shifting the existing non-viable schools from villages having two or more schools to unserved locations, and also consider the impact of school location while opening new or for upgrading the existing schools. The school mapping exercise will also help in identifying the optimal location of schools in a given area. While doing so, all stakeholders need to be consulted and taken into confidence.

Small Schools do not Necessarily Meet the Requirements of SC and ST Students

There may be an argument that small schools are opened to meet the requirements of socially disadvantaged groups like SCs and STs. If this was the case, the share of SC and ST students to total enrolment should be higher in small schools as compared to other schools. The analysis of data does not support even this assertion. The share of SC and ST students in small schools is lower as compared to their share in other schools of the district.

High Per Unit Recurrent Cost of Operating Small Schools

The analysis has shown that, on an average, the recurrent per unit cost of the small schools is approximately 60 per cent higher as compared to other schools in the district. If the high repetition rates are also considered, the cost per graduate will be much higher in small schools as compared to other schools in the districts. Similarly, the estimates of capital cost are not available but it will also work out to be much higher for small schools when compared to others. While there is little scope to reduce the recurrent unit costs, some rationalization in the form of school location, upgrading, deployment of teachers, provision and use of teacher-learning materials is necessary. As the schools tend to reach the prescribed PTR their unit costs (recurrent) also stabilize.

School Efficiency

The fact that enrolment at lower grades is inflated poses a complete understanding of the grassroots situation a more difficult task. The effect of inflated enrolment at grade I can be disastrous for the indicators of school efficiency. For example, an inflated enrolment at Grade I will show high drop-out rate especially between Grade I and Grade II. It will also show distortions in the enrolment pyramid where the share of class I to other classes is very high. Similarly, all indicators of school efficiency like average years taken to complete the primary cycle of schooling, average per unit cost, repetition rate, drop-out rate and cohort survival rate will suffer. Reforms in the

collection, collation, analysis and reporting systems are therefore necessary for proper assessment of the ground reality.

Excess Capacity in Small Schools

The analysis has also shown that there is a considerable excess capacity in the system. It may not be possible to reach the optimal level of utilization for all schools but considerable part of it can be utilized to improve the access and coverage of children in the school going age group. The analysis of enrolment by classes shows that about 40 per cent schools had five or lesser number of children in class IV. Only 12.6 per cent schools had more than 10 children in class IV.

Extremely High Repetition Rates

While continuous efforts will be needed to optimally use the existing resources, the situation with regard to the internal efficiency of primary schools is equally depressing. The repetition rates are extremely high. In class I, the average repetition rate was 42.2 per cent. In small schools, repeaters in Class I account for more than 75 per cent of all repeaters in primary cycle. While some of the students may be genuinely repeating, most of it is attributable to conceptual problems. Students less than five years old are also treated as part of class I enrolment. The names of students once entered in the register are never deleted. The rationalization of enrolment data for the government managed schools will provide an estimate of the real capacity used and excess capacity available. Substantial number of school places will be released when the repetition rates are brought down. Each small school can cater to the requirements of 80-100 students without additional provision of a teacher (except single-teacher schools).

Decentralized Planning and Management of Primary Education

Given the settlement pattern, the provision of a formal full time primary schools will be difficult to ensure for all settlements. While a number of alternatives have been tried, their replication on large scale, effectiveness as an institution, modes of governance and the quality of learners attainment need to be examined in detail. The centrally sponsored scheme of NFE is one such effort. However, there are serious problems in its implementation. While there are about a quarter million centres operating in the country, their contribution is still not clear, particularly in the area of learners achievement. Many questions regarding formal approach to non-formal system, governance, curriculum design, transaction methodology, the training and effectiveness of instructors have persisted. Since the management of primary education will now be transferred to the Panchayati Raj institutions, mechanisms will have to developed by which each Panchayat may be encouraged to develop strategies for universal access and provision of primary education through alternative modes of education. A non-conventional approach will have to be adopted for this purpose. Instead of focussing on the inputs and incentives, a system of rewarding the

Panchayats for achieving the objective of UPE/UEE will have to be evolved. This should also take into account the quality of outcome. The choice is whether the system wants to exercise control on the inputs and processes without bothering about the outcome or the main concern is to achieve the goal leaving other aspects to the Panchayati Raj institutions.

Need to Re-define Concepts and Definitions

Part of the problem with enrolment data lies with the definitions and accounting procedure. There is a need to re-examine the concept and definition of enrolment as followed by the Indian education system. Enrolment does not mean that once the name of a students is entered in the school register, it should not be deleted from the school register even if the child does not come to the school at all. The need is to have data on the *children attending school*. Thus a more realistic definition should be used to reflect the real number of learners in the school system. Any child who has not attended school for more than 50 per cent of the working days of the school should be treated as non-attending. Children below the age of five years should not be treated as enrolled in any of the primary classes. The schools which show high variations between the number of children shown as enrolled and those attending should be on the administrations watch list. Their attendance should be monitored more closely. Quarterly data on sample basis from such schools should be collected to determine the real enrolment/children attending school and the trend over a period of time. Close monitoring of such schools will help identify their real problems.

Two Teachers in Small School: Whether Justified?

After the policy decision to provide a minimum of two teachers in all schools, there is no incentive to provide inflated data on enrolment. Practically, all small schools get covered under this provision. The third teacher is provided when the enrolment increase to 100. Therefore, all small schools by definition are two teacher schools. What is important is whether these small schools are justified or not? Are these serving the under-served habitations or just proliferating in areas already served? Are some schools established to meet some local pressures or to satisfy the needs of powerful population groups? What type of incentives/control will facilitate the expansion of schools in under-served areas?

There is another important policy issue emerging from the analysis. To what extent, the uniform policy of providing a minimum of two teachers in all type of schools is justified? Although teacher is the vital input for the school functioning, it is also the most expensive input. Consider a typical small primary school having an average enrolment of 46 students in all classes. The average enrolment in class I is 22.3 students, 9.4 students in class II, 8 students in class III and a mere 6.7 students in class IV. If the corrections for class I enrolment are made, it might be in the neighbourhood of 11-15 children. Till now, the financial assistance for additional teachers is being provided through the centrally sponsored scheme of OBB but what will happen when

the state will have to pay the salary of the teachers appointed under OBB? If the quality of learning is poor even when two teachers are available for teaching 46 students, then what will be the scenario when the system moves towards universal enrolment and retention? In view of the paucity of resources, the state must prepare a perspective plan for rationalization of the teachers in addition to examining the school locations as suggested earlier.

Some Issues of State Policy

One third of the villages have more than one primary school, many of which are non-viable. To what extent small schools are justified in villages having two or more schools? The state should evolve a clear policy on the expansion of schooling facilities to unserved and under-served areas. Ad-hoc planning will lead to further accentuation of the problem causing considerable loss to the state exchequer. The policy of provincialisation and its effect on the proliferation of small and multiple schools in the villages also needs to be examined. The state might be able to save considerable resources by rationalization the location of schools and by adopting a norm based methodology for opening new schools in served/unserved habitations.

The state follows no detention policy for first three grades. To what extent it has contributed to increase in enrolment and better learning is yet not clear. The main concern is not to show more enrolment but to improve the quality of classroom interaction so that all children cross the threshold of MLL.

As of now, there is no incentive or reward system by which better performing teachers are distinguished from the careless and uninterested teachers. The system should gradually move away from the supply side response to demand driven initiatives by the state government. Teachers working in isolated and inaccessible areas require better incentives and greater accountability.

Rationalization of Teachers Deployment

Teachers posting, transfers and rationalization is another major issues on which the state administration spends considerable time and energy every year, but still serious imbalances have continued to persist. These cost the state enormously both in financial terms as well as in terms of utilization of the teaching resources. A large number of single-teacher schools were found having enrolment justifying two teachers. Small schools with considerably lower enrolment were having two or more teachers. These type of imbalances in teachers deployment can be corrected easily and there is no reason why this should not be attempted on priority basis. A permanent code number should be assigned to each teacher and his/her career profile should be monitored.

New Approach Needed to Assess Teachers Requirements

How to determine the teachers requirement in a school? Should enrolment form the basis or some other alternative methods can provide better allocation of teaching resources. Knowing well that class I and II enrolment is highly unreliable, it should not be used to sanction the additional teaching positions. The number of sanctioned positions should be determined on the basis of enrolment in classes III and IV. Each district can determine an ideal ratio between the number of children attending school in classes III and IV to that of Classes I and II. The same ratio should be used to determine the teacher requirements. A school which has highly distorted enrolment pyramid will be at a disadvantage compared to schools with relatively balanced pyramid.

Review the Policy of Provincialisation

The state should also seriously review the policy towards provincialisation of venture schools. While such moves may be justified for the development of primary education in the state, at the same time it should not result in the proliferation of small and non-viable schools in locations which already have sufficient capacity. The available evidence has shown serious imbalances in the availability of schooling facilities. Many villages having two or more schools were also found to have small schools. Thus, small schools do not necessarily serve the small villages. The indiscriminate take over of the private schools in the past has also contributed to these imbalances.

Outdated and Limited Outreach of Inspection System

School inspection is the only means of external supervision of the school. Schools which are isolated and difficult to reach are the ones which require considerable support from educational administrators. In reality these schools are least inspected/ visited by educational administrators. 42.5 per cent of small schools were not inspected at all in the last academic session. The internal supervision which is usually carried out by the school head teacher is not very relevant in the case of small schools having one or atmost two teachers. About 5 per cent of small schools were even without designated head teacher.

Dearth of Teaching Learning Materials

The question of teaching-learning materials is as important as the availability of classrooms, teachers and other facilities. The available evidence is very shocking. The evidence further reinforces the contention that the inputs for running and maintenance of the schools to be provided from non-plan component of education budget are simply not available in schools of whatever type these may be. The availability of a functional blackboard is a pre-requisite for any meaningful interaction between the students and teachers. 39 per cent schools were without usable blackboard, 97 per

cent without syllabus, 78 per cent without teachers guides and 42.5 per cent without math's kit. Further 33.5 per cent small schools were without all three essential items namely blackboard, teachers guide and syllabus. How does one expect the classroom interaction to be effective if the basic necessities are not available in one out of every three small schools.

Most of the small schools are multi-grade. What should be the basic approach to classroom instruction in small schools? Should these continue to be multi-grade schools or some alternative can be worked out? There is a scope for considerable experimentation in this context. To what extent the teachers are trained in multi-grade teaching and how far this training is effective in classroom delivery is a question for which considerable research is needed.

Absence of Monitoring Mechanisms

There are generally no mechanism for monitoring of school performance indicators. The routine data collection, tabulation and analysis are characterized by many inadequacies and time delays. Low priority to monitoring performance indicators has also taken its toll. While all efforts were made to ensure that the quality of data collected through DISE is high, still there may be instances when the right information has not been supplied by the schools. Since, it is now possible to get back to the schools on the basis of analysis and consistency performed through the DISE software, the quality and availability of data will improve further as the system gets established on sustainable basis. The administration has to make efforts to strengthen the monitoring systems and undertake periodic exercises to review the progress of schools which show abnormal behaviour in terms of selected performance indicators. After the DISE is established as an annual reporting system, there is a need to undertake systematic updating. Considerable efforts are also needed to train the educational administrators in the use data for policy, planning and decision making at the district level. There is a considerable scope for expanding on the data items and also developing sample studies which could yield reliable estimates of most of the performance indicators.

The states need to evolve multi-layered verification strategy for establishing the reliability of the data. The department should verify the data for 5-10 per cent of schools. The states should also evolve a system whereby those schools which might not have supplied data are contacted. At the moment, there is no information on the non-reporting cases. Such schools should be persuaded to provide the data without fail. Some independent agencies may be involved in the sample verification of the data.

Research and Use of Educational Data

The educational information system also suffers from the lack of research in educational statistics. While a number of statistical procedures are available which

can generate accurate estimates of key indicators of performance, their applications to real situations in education sector are extremely limited. Complete enumeration of more than half million institutions is not only a time consuming process but involves considerable resources in terms of time and manpower. Moreover, complete enumeration is no guarantee that the results are more reliable/accurate as compared to estimates derived from sample studies. Should the MHRD and the state governments not promote the sample studies and gradually decide what could be the frequency of data collection on census/sample basis?

The foregoing analysis, with all its limitations, has thrown considerable evidence that has serious implications for policy, planning and management of primary education in the country. The small schools with all inadequacies and limitations are here to stay but their endowments in terms of teachers, facilities, buildings, equipment and other teaching-learning aids are characterized by serious imbalances. Rationalization of available resources and strong monitoring system for performance indicators will help the state make optimal use of scarce financial, physical and manpower resources.

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