INSIDE THE SCHOOL
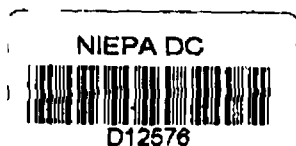
a synthesis of case studies

of classroom processes

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From the DPEP districts in the states of Andhra Pradesh, Assam, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra and Tamil Nadu

ACKNOWLEDGEMENT

सत्यमेव जयते

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WHY THIS REPORT?

I n recent years several attempts have been made to improve the quality of the teaching-learning process. Particularly DPEP states have attempted to bring about positive changes in the classroom by renewing textbooks, training teachers on a large scale, establishing sub-district resource centres, seeking community support and other modalities. States have been more or less successful in their attempts on different counts, and there is a great deal to be learned from each state's experience.

The primary purpose of this document is to bring to light the positive practices followed in many schools all over the country. It is hoped that sharing these "good practices" will enable other schools and support institutions to foster them also. Moreover, the purpose of this document is also to highlight issues which remain to be addressed. While major progress is visible in classrooms all over the country, there are many issues which need to be tackled urgently. The need to develop better student evaluation systems, strengthening teacher training and sub-district resource centres and creating a dialogue on pedagogic issues are some of the tasks ahead. It is hoped that this document will enable states to address these.

Sumit Bose
Joint Secretary, Elementary Education

अचला मौलिक
Achala Moulik

A MESSAGE TO THE STATES...

Quality improvement of schools is a major issue for elementary education in the present context. It is not enough just to provide schools, but it is necessary to ensure that children learn. Moreover, the quality of the school and the teaching-learning process impacts not only students' achievement levels, but also student attendance and drop out. It, therefore, becomes the most critical issue for the efficiency of the school system. Universal Elementary Education is possible only if schools are successful in retaining students and in promoting learning.

This particular synthesis report highlights various issues related to school quality, particularly classroom transaction. It brings to light issues related to textbook development, teacher training, academic resource support, community participation, decentralisation and a host of state initiatives. These are indeed central to elementary education. I hope that states will take cognizance of the emerging points of action and move on to make their schools more meaningful institutions of learning.

Achala Moulik
Secretary, Elementary Education & Literacy

CONTENTS

This report attempts to document and investigate effective classroom processes in schools from phase I DPEP (District Primary Education Programme) districts as well as from one former APPEP (and now DPEP) district. The purpose is not to evaluate these processes but instead to explore them, to see what has worked well and what has not, and to take the discussion forward for future initiatives. The report is based on eight case studies of schools in different states and discussions in a seminar in which the same were presented. In each case study a few schools have been studied in some detail. The case studies revolve around some well functioning schools in different states, as identified jointly by the State Project Office (SPO), DPEP and the researchers. Since only a very small number of schools have been studied in each state, no generalizations have been attempted. The aim is to explore how these particular schools function and what are the practices that prevail in the actual classroom transactions in these schools. It needs to be mentioned that this report does not seek to identify the existing "average" or "norm" in each state, but rather to see how far the well functioning schools have progressed and why. An attempt is also made to identify underlying contributors to success.

There are several reasons for following this particular approach. One goal is to document the positive pedagogic practices in schools that function well, which in turn can be shared and discussed. It is hoped that many schools may in fact choose to follow some of these 'tried out practices'. The second reason is to identify underlying strategies which foster positive classroom practices.

Here it is understood that across a state, schools internalise and apply processes and inputs differentially, based on their capacity at a point of time to absorb as well as

implement these inputs. In such a situation the maximum understanding of strategies that work can be gained only by going to those schools that have internalised them well. Finally, in trying to locate weak areas in classroom processes, well functioning schools offer special insights, for it can be assumed that what is not taking place in these schools is not likely to be taking place in others. It then becomes possible to locate new areas where more in-depth work is needed with teachers and schools.

A major constraint of this study is that it does not have a documented reference point, i.e., a baseline survey for comparison. It is therefore hard to say with any accuracy what has changed since DPEP. However, some attempts have been made to understand the changes that have taken place in DPEP by interviewing teachers and documenting their perceptions with respect to above. But we acknowledge that in the difficult task of understanding changes without a base line, sometimes the case studies as well as the synthesis appears to construct a hypothetical picture (often negative) of what the "traditional" pedagogy must have been. We can only request the reader to bear with this limitation.

This synthesis report draws from case studies of schools in phase I DPEP districts from 7 states namely Assam, Haryana, Kerala, Madhya Pradesh, Maharashtra, Karnataka and Tamil Nadu. Andhra Pradesh was also included for study because considerable inputs have been given through the Andhra Pradesh Primary Education Program (APPEP) in activity based teaching-learning. Case studies of different states have been conducted by different researchers during August-September, 2000. Because of the explorative nature of the study, all researchers did not concentrate on all facets of the classroom processes equally. The attempt was rather to study state specific pedagogic issues as manifested in the selected schools.

After the case study reports were completed, a post study sharing workshop was organised from 3rd-5th January 2001. Each case study was presented by the researcher, followed by a panel discussion with the representative of the state concerned, the researcher and an external resource person as panelist. Presence of the state representatives along with the researchers helped in bringing out the

nuances of each case study, clarifying issues and throwing light on new aspects. Important issues that emerged during these discussions have been incorporated in this report. A positive fall out of the seminar was that some states identified action points. For example, Tamil Nadu decided to share this study with the DIET faculty. In fact the state recently organised a workshop on classroom observation from 28th February to 2nd March 2001 based on the study. In this workshop Block Resource Coordinators (BRCs), Assistant Education Officers (AEOs), District Institute of Education and Training (DIET) faculty and SCERT representatives participated and deliberated upon the need, importance and ways of classroom observation.

A WORD ABOUT THIS SYNTHESIS

As stated earlier, this synthesis does not attempt to make categorical statements about states. This is particularly true for states such as Karnataka, where the case study has explored the Nali Kali approach, which is confined to a few schools only. Similarly in Maharashtra only practices in "Active Schools" have been documented. Likewise, attention has been paid to EGS schools in Madhya Pradesh since these appeared to be a major state priority. The attempt in this synthesis is to elicit significant strands that appear in various case studies during observations of schools and conversations with teachers, and draw some implications for the future. The synthesis also draws upon the post study sharing workshop and uses extracts of discussions to highlight certain issues. The point in this synthesis is not to assess where a state stands, but rather, to identify emerging questions and points of action. However, we do hope that the material in this synthesis will be used by states to identify some of the issues that they need to address in their context.

OBJECTIVES

The objectives of the case studies were:

* To identify, document and disseminate positive practices adopted in

schools.

* To understand emerging trends of change in pedagogic processes, i.e. in the classroom transaction, teachers motivation & skills and children's learning, in the context of state interventions.
* To document how DPEP's pedagogic vision at the state level translates at the district, block, cluster and school level.
* To identify enabling conditions for well functioning schools (in terms of state and school level interventions).

SELECTION OF SCHOOLS

Since this study sought to document positive practices, the states were requested to suggest any one district which in their view had done well in terms of pedagogical interventions (districts bordering state headquarters were, however, to be avoided). The same process was repeated for block selection - the District Project Office (DPO) was requested to suggest the best block for the study. The researcher then had discussions at the district and block levels to identify one or two clusters in the selected block. Subsequently, the Cluster Resource Centre (CRC) meeting was attended by the researcher in identified cluster(s) and some idea gained about the situation of different schools by talking with the teachers. It was left to the researcher to make the final selection of schools based on his/her own perception and the local situation. It was broadly decided that in a block, two well functioning schools would be observed in detail along with two average schools. In addition the researcher was free to see a greater sample of schools in the area. Schools selected have been indicated at annexure A.

DESIGN

Initially, for the purpose of literature survey, the states were requested to provide to the researcher all the main documents related to pedagogical interventions, which included:

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* A set of text books (old and revised)
* Teacher training modules
* A set of teaching learning materials (TLM), if any, prepared at the state level
* Reports of training/workshops held related to TLM, textbooks etc.
* Background information about the selected district
* Any other relevant documents

The researcher was required to have meetings at the state level with related persons at SPO, members of the State Resource Group (SRG) and State Council for Educational Research and Training (SCERT) as needed. The idea was to understand the thrust of the state in terms of pedagogical improvement, the major interventions made since the inception of the project as well as the state's evolving vision and future perspective. Such a meeting was also to be held at the district level, with persons from DPO, District Resource Group (DRG), DIET etc. The intention was to understand how much of the state's vision had been internalized by the district and as well as the district's own initiatives. During the actual course of the field visit the researcher was also required to elicit the perceptions of the Block Resource Centre (BRC) & CRC resource persons in the above regard. In each cluster the researcher interacted with the teachers and the CRC co-ordinator in the cluster meeting.

The researcher was required to spend 2-3 days in the well functioning schools identified for detailed observation (the focal point of the whole exercise) and about one day in the average schools. Researchers were requested to document actual classroom processes in detail, observing teachers, children, conduct of a lesson, teaching learning material, classroom decor, and so on. They were also required to interact in detail with teachers and to understand how training and other inputs had been received by the teachers, what were the significant learnings, as well as how well these inputs could actually be applied fruitfully in the actual school situation. Some interaction with the community was also to be attempted.

In each state the researcher interacted with:

State level structures	SCERT, SPO, SRG
District level structures	DPO, DIET, DRG
Block level structures	BEO, BRC, Block Resource Group (BRG)
Cluster level structures	CRC, Cluster Resource Group (CRG), SIs
Schools	Teachers, children and the community
Concerned NGOs at all levels	

TOOLS AND INDICATIVE QUESTIONS

Classroom observation, interviews and focus group discussions constituted the tools for this study. Broad indicative questions to be used as reference for discussions at different levels were finalised in a two day meeting in July 2000 with some of the researchers. These are enclosed as annexure B.

REPORTING

The individual reports became available in October 2000. A three day post-study workshop was subsequently organised, and each researcher was requested to present the major findings of his/her report, which were then discussed in detail. State representatives and external resource persons also participated in the workshop.

STRUCTURE OF THIS REPORT

This synthesis report is a result of the above processes. The report is structured into four major sections. The first section, describes the nature of activity and the teacher-child interaction as observed in the classrooms. The second section looks at the classroom context created to facilitate the teaching learning process. The critical elements of the classroom context explored in this section include textbooks, teaching learning materials, classroom organisation and planning. The

third section looks at the nature of school facilities and infrastructure, and how these impinge upon the classroom. The final section delineates the enabling conditions for improving classroom transaction.

STRATEGIES FOR LEARNING

In the case studies an attempt was made to understand the nature of the teaching learning process adopted in the classrooms. It was found that an emphasis on activities, use of materials other than textbooks, use of local contexts, space for the child to articulate himself/herself, a closing of the gap between the teacher and the child, as well as innovative, efficient classroom organisation and opportunity for peer learning are some of the common elements of the teaching learning process in all these states. However, the meaning, form and manifestation of these elements differs from school to school in different states, depending upon the understanding that has emerged about the nature of the learning process, the nature of the child and the role of the teacher.

For example, the understanding of *what an activity is* in the schools of Kerala and Tamil Nadu appears to be quite different. In Tamil Nadu an activity seems to be an adjunct to the main lesson ("main teaching") whereas in Kerala it constitutes the lesson itself. There are a host of other dimensions on which the activities differ across schools, including the importance, type and use of teaching learning materials, the nature and extent of children's articulation and expression encouraged in the classroom, use of peer learning etc. This differentiated picture exists because of the underlying differences in assumptions and understanding about basic pedagogic principles, as well as the teachers' capacity to apply their understanding in the classroom.

In this section we explore the teaching-learning situation, i.e., activity created in the classroom and the nature of teacher-child interaction within it.

HUES OF 'ACTIVITY'

It is fascinating to see how the concept of activity has evolved in different schools in various states. Somewhere it has evolved as an interlude to textbook based teaching, peripheral to the main classroom transaction, with a focus on memorisation and drill. Elsewhere it has evolved into a means of creating

interesting and meaningful learning situations/contexts for children, central to the classroom transaction, wherein children are encouraged to explore, discover and find their own answers... answers which may be different from the teacher's answer. In some schools it has also become a way of giving individual attention to children and a way of providing material based tasks for them, more diverse and interesting than the textbook.

Let us explore these varied manifestations in some detail. We begin by looking at two examples of classroom transaction in a school each in Kerala (school 1) and Tamil Nadu (school 2).

[eg1]   *School I*

Ratna Kumari had yesterday narrated some stories about Gandhiji. One of the stories was about the visit of a mother and child to Gandhiji. In this story the child plays with the snake and Gandhiji reassures the mother that the snake will not harm the child. After storytelling children had made various things from the story with the help of banana leaves. I could see some of these products on the table. These were spectacles, ring, snake etc. Based on her interactions with the children, yesterday Ratna Kumari had planned for today in her teaching manual. She intended to take the children back to yesterday's story and focus upon some words. She also intended to use these words for grouping children. She had therefore written each of these words 5-6 times on strips of paper. Other than preparing these strips she had collected wrappers of sweets to be used for making different things in the class. Some of the main activities to be undertaken were:

* *Story telling session*
* *Recognising the written form*
* *Making objects with help of wrappers*
* *Counting, greater than, less than*
* *Oral addition of small numbers*
* *Drawing*

Yesterday Ratna Kumari had asked children to write anything about the story on slates. Today the first thing she did was to see each child's slate. She patiently spent time hearing what each child had written. She did not reprimand anyone for writing incorrectly. On the contrary, she encouraged them to write more. After this she began the class by discussing some words that had appeared in the story. She also

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wrote these words on the board in Malayalam. (The English representation of these words would be Card, Ornament, Bangle, Father, Child, Ring & Garland). Five of these words: Bangle, Father, Child, Garland, Ring were written on strips of papers which she distributed. Each word had been written 7 times. Now each child had to try and identify the word written on her strip of paper and find children who had the strip with the same word written on it. For example, if the word on the child's strip was "Bangle" then the child had to find other children with the strip with "Bangle" written on it and these together would constitute a group named "Bangle". Children started comparing their strips and forming groups. About four children could not find their way into any group and stood in the center looking lost. Ratna came to their rescue and asked them to go to each group and match their strip and see if the shape of lettering was the same. Two children went on their own but the other two were patiently escorted by her to different groups to do the matching. Finally all of them settled down. In each of the groups so formed, the children had to tell stories to each other about Gandhi. Children were allowed to ask questions and discuss with each other. In one of the groups a child was saying,

"A child was playing alone in his room when he noticed the snake coming towards him. The child got scared and started to move away from the snake. The snake followed the child. After sometime the snake lost interest and turned away. The child now wanted to befriend the snake and moved towards him. At this very moment the mother entered the room. She shouted on seeing the snake and the snake ran away."

In another group the story being told was:

"A child was eating appam in the Verandah. A crow saw him eating and flew down. The crow asked the child for some appam but the child refused. The disappointed crow flew away but soon came back and snatched some appam. The child then requested the crow to sing a song. The moment the crow opened his mouth to sing the appam fell to the ground."

The teacher was moving from one group to another encouraging children to tell stories. Each group was later given points depending upon the number of stories told. Maximum points were given to the group which told the highest number of stories, especially about Gandhiji.

The teacher then asked the children to come and sit closer to the board. She once again discussed yesterday's story narrating parts of it. Then she picked up small sentences from it and wrote them on the board while speaking. Children were

keenly observing the script on the board as if associating the written with spoken. The sentences written on the board were about the child giving away a bangle, ring and earring.

Children were really enjoying this exercise. She then asked the children to sit in their original groups and write the sentences. After writing, pairs of children exchanged their slates to check. Again Ratna Kumari did not reprimand any one for writing incorrectly. She went on to the next activity which involved children in making different things from wrappers or sweets. Children made a number of things such as butterfly, garland, chain, doll, peacock's tail and so on. Ratna heard each child describing what he/she had made. She encouraged all of them to make more. 3 children got tired of making things and went to the bench to sleep. She went to each one of them asking what went wrong....

Later in the day with the help of children, for each group she listed on the board the names of various items prepared and the quantity of each item. For example for the group named 'Mala' the following data was put up on the board.

Item	Quantity	Total number of items
Dolls	4	4
Garland	1	
Earring	1	
Bird	1	

A similar exercise was done for other groups. She then encouraged children to come to the board and count the number of items prepared by each group and then write the total. For example, one child counted the items of Mala group as 4 Items and wrote 4 on the board. After the total number of items had been written for each group, the teacher helped the children in articulating the maximum and minimum number of items prepared. Children were now beginning to get tired and were loosing interest. Ratna now changed the activity and asked them to draw In their slates. Though the task was to draw anything from the story, children went beyond it drawing peacock, house etc.

Mukkuthala Lower Primary School, Kerala

Jeg 2]   *School II*

Evidently the main body of the lesson had been completed earlier and they were doing the exercises given at the end of the chapter. They were doing an exercise which required the students to read aloud four disconnected sentences which had

a profusion of "nas" of all kinds. The four sentences had been written in neat and big sized handwriting on the black board. To begin with the teacher read out each word syllable by syllable using the multipurpose stick to point to each letter on the board and the children followed her in chorus. The method consisted of the teacher reading out a word, say 'vannam'; this is followed by disintegrating the word into syllables - va-in-na-im; this is where each letter written on the board is read, and finally, concluded once again as vannam. Then the next word, till the end of the sentence is reached. At the end the entire sentence is repeated together so that the meaning of the line is evident. This Is done over and over again so that the children virtually remember all the four sentences verbatim.

In between the teacher makes a digression from the main objective of the lesson to generate some interest in the classroom. For example the last of the four disconnected sentences is - manam mikka vanna malar malai - probably selected for the repeated use of ma and na. This segment of a sentence has a number of words which give an opportunity for digression into discussion on smell, colour, flower, garlands etc. The teacher uses picture cards evidently made by her to show flower, garland etc. She asks children to name some flowers that grow in their gardens, how they make garlands, where are the garlands used, etc. Children are relieved to be free from the verbal drill of having to yell meaningless sounds and participate in these discussions enthusiastically. Garlands are used in marriages - bride and the groom wear malas, they are also used in puja etc.

The teacher then tries to get the children to arrive at the appropriate words for flower and smell. Children use the term "pu" for flower and a colloquial word for smelling which i fail to catch. The teacher promptly corrects them by asking them to use the more classical terms of "malar" and "manam".

The interlude draws to a close and the teacher now asks children to come one by one to the board to read the four sentences. By now all the sentences were firmly imprinted on the memories of the children and they seem to read with some ease. They recognise the words and read the sentences. The teacher senses the problem and she insists that they spell out each syllable and construct the words they are reading. Once again the entire drill is repeated - this time conducted by the children. Each child goes through the ritual of reading the word, then constructing it syllable by syllable and then repeating the word going on to the next word and finally reading the sentence aloud - all the while the rest of the class is following in chorus. That takes a lot of time but the rigour of the drill firmly plants the syllables

and words and the sentences in the child's memory. In the process the teacher figures out that the two previous slow learners in the class are fumbling when asked to read letter by letter. Some effort is spent on them.

Children return to the class after the break and the teacher announces that they will work in groups. Two groups are formed, one consisting mainly of boys and the other of girls. As the work proceeded I could see some movement between the two groups - some girls joining the boys and the vice versa. The boys get a packet pulled down from the 'disco pandal' consisting of letters. The boys are expected to make words with them- it turns out that the words are the same as the ones they have just read on the black board. The girls get a different set, consisting of words with which they have to form sentences again as in the black board. I presume this activity is to reinforce what they had learnt through rote and drill just a little earlier. All the same the children take to the activity enthusiastically. All children are involved and I note that they take turns to do the words and the same child does not do all the words or sentences. The leader of the group who is only too happy to emulate the teacher ensures this. The teacher herself is sitting in a corner with some card sheets, scissors and sketch-pens and busy cutting the cards and writing . on them.

Kilravanthavadi Primary School, Tamil Nadu

The above examples provide useful insight into two different manifestations of the concept of activity. There are some similarities in both the examples: an effort has been made to adopt an activity based approach to teaching sentences and words; there is also a noticeable attempt to focus not on the teacher but on the child; moreover, a fair participation of children in classroom transaction is found in both schools, and in the end the children in both the classrooms learn to relate to the sentences and words. However, there are also marked differences in the nature of learning in the two classrooms. This would be worthwhile to explore both in terms of the nature of the activity conducted and in the terms of underlying beliefs and assumptions.

Activity: central or peripheral?

In the second example there is an overwhelming presence of drill to make children memorise the sentences which is then combined with effective reading exercises.

This appears to be the "main" teaching learning process. An "activity", where children talk about familiar events with a certain amount of freedom, is something which the teacher intersperses with "mainstream teaching" i.e., the more conventional path of drill and memorisation. The "activity" really looks like an attempt to add variety and to evoke the interest of children. However, these timely interruptions — in the form of discussion or card activities do succeed in breaking the monotony of the drill exercise. It may also be emphasised that though "activity" only supplements mainstream teaching, it does find space in the classroom.

In contrast, we find that in the first example the teacher is in continuous dialogue with children on the story narrated and discussed a day before. Thus the activity is the "main" lesson itself, and appears to have been planned quite carefully over more than one day. Words and sentences elicited from children are woven in interesting situations for children to encounter the script form. Reading, writing, articulating proceed together. If one looks at the whole day minutely, it is found that the teacher is presenting the same words in different interesting contexts. She uses them for grouping, in her conversation with children, in the craft class, and then finally in mathematics. The children never get bored. Here "activity" is not an interlude or a random sequence of physical / mental movements but is the central learning process.

In other words "activity' in the first example forms the core of the learning process, while in the second example more traditional style learning and "activity" coexist with an activity peeping in off and on to relieve the monotony of "real" learning.

The underlying assumptions

In the above examples, an analysis can also be made of the teachers' assumptions about the learning process. For example, one can examine the two examples against the question whether learning is linear, with a "right" answer to a question, or whether it is a more exploratory process. A leaning towards the former assumption in school 2 is evidenced by the little space children find to articulate their views and perceptions in general, and particularly, in their local language, where expression is further stilted by an attempt to make them identify the standard language words. On the other hand,

in school 1 we notice that the teacher gives considerable space to children and creates situations to engage their creative potential. Children are encouraged to create their own stories. The teacher in the first school, in contrast to the one in the second school is not restrained by the ghost of 'correctness'. She does not reprimand children for writing incorrectly or for deviating from the task assigned.

Activities in the second school remain closely linked to textbooks which bind the teachers within certain limits, so that the teacher is forced to arrive at one answer as given in the book. However, in the first example, the teacher does not appear to experience such limitations and has the freedom to go beyond textbooks. So if instead of Gandhiji's story the child wishes to tell another story, he is allowed; if he desires to make something else out of wrappers other than the objects that appeared in this story, he can. Also, we note that the teacher moves lucidly from language to craft activity to mathematics i.e. she uses the same context for language and mathematics. The teacher here goes back and forth linking the story told on the previous day with the subsequent activities. It appears that the teacher does not believe in rigid division of knowledge into subjects and is therefore extremely comfortable using the same text to develop language skills, mathematical abilities and so on. Such flexibility with an underlying sense of direction is not forthcoming in the second example, where the learning context is changed rather abruptly. Thus though the activities in both classrooms have been planned, in case of the first school the planning is flexible enough to accommodate children's creativity, but the same freedom and flexibility is not visible in the second example.

Teachers have organised and planned these activities on certain assumptions, and it seems that the underlying beliefs and assumptions about how children learn that govern the classroom transaction are very different in the two examples. For instance, the two teachers make different assumptions about language learning and teaching. Hence they adopt drastically different teaching methodologies. In the former school a series of creative activities are built around a text allowing children to create, innovate and express themselves. In the latter school the space for the child is predefined and strictly regulated by the teacher. The emphasis is on learning correct standard Tamil words and alphabets rather than articulating and expressing oneself. The researcher who visited the second school in Tamil Nadu, in his post study presentation said that:

In the teacher centre meeting I asked the teachers the purpose of teaching Tamil. The most common replies were to speak correct language and to spell correctly. To my surprise creative writing and expressing oneself were not considered a reason for teaching Tamil. Later on, when I studied the curricular statements I found an overwhelming emphasis on correctness of language. There is also a belief that simple structure letters have to be taught first. This results in contrived texts which in turn makes it difficult to create interesting teaching learning situations.

Moving away from the traditional mode

Let us now try and understand what is happening in other schools. In an Andhra Pradesh school (school 3) one notes the use of activity as a means to interact with children. Here it appears that the role of activity is not merely that of supporting the mainstream transaction, but the teacher appears to be moving away from the traditional lecture based teaching to more open and exploratory ways of learning.

[eg 3]   **School III**

The teacher sat on the floor alongside the children and the lesson on introducing the letter U with the help of a poem was taken up. He explained the poems introducing the letter in an interactive way, asking questions about the picture, events described in the poem and giving ample opportunity to individual children to participate in the discussions. The children's responses were often in their own language, i.e. in Tamil or Teiugu. The teacher knew both Tamil and Telugu languages and was constantly reiterating the words in Telugu. Chitoor being a border district, many of the schools had a mixed language group.

After introducing the poem, picture words containing the letter introduced given below the poem were taken up. Here again the teacher asked a variety of questions about the picture words and built the discussions around the children's responses.

The teacher subsequently wrote the particular letter on the floor in several places and gave children containers with stones, shells and seeds to arrange over the letters.

Neeruvoy School, Andhra Pradesh

for identifying these as flying objects could in itself have become an interesting exploration.

One hopes that children will gain some clarity during this guesswork anyway. But as far as the teacher is concerned, much needs to be done in terms of a deeper understanding of the learning process, and developing a repertoire of activities around it. First of all, it is not very clear if the teacher himself is capable of articulating the difference in flying of an aeroplane, paper and sun. Secondly, even if he can after some reflection analyse the difference, it is not clear if he can construct an activity around the responses given by children.

Each child's pace of learning

In the "Active Schools" in Maharashtra, the Nali Kali approach in Karnataka, and in the schools in Assam the concept of activity appears to have evolved in close conjunction with material based tasks and classroom organisation, especially in multigrade/multilevel teaching situations, an issue to which we return later in the next section.

In the Nali Kali method in Karnataka (see annexure C for details of the programme), children are grouped according to "levels" of learning, and each child is engaged in an activity as per his / her level. Graded material for various levels of learning is available in abundance, and has replaced the textbook. Let us look at some examples:

[eg 5]
In the first group, one girl Vijayakumari was in the 106th step. She was copying down words from a card, reading each word loudly and she wrote down 15 words. The remaining 3 children of the group were playing a game pertaining to the 106th step. Each one had a card in which some words were written in an assorted fashion, some were common in all the three cards, some only in two and some in one. Vijayakumari, from her card, would pickup one word and utter it. The other three children had to look into their cards and whoever found the word in his card, would keep a tamarind seed on it. Like this the game continued, and whoever had all the

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words in his card covered with tamarind seeds first was declared the winner. Then all of them moved towards the waliboard and wrote the words in their allotted boxes.

The second group was assisted by the teacher. Children were learning to join vowels to consonants. Some had learnt to add 3 vowels, some 4 and each needed help. Different cards were given and they continued their work. The teacher asked them to write words on the waliboard. All of them were busily engaged.

The third group had picture cards with them. They were writing the missing letters looking into the pictures, where, below each picture, a three letter word with one letter missing was written. Children supplemented the letters. Then they wrote down these words in their notebooks.

The fourth group which required the teacher's help partially was a slow learners' group. They were in the ladder of learning alphabets. They had learned hardly 10 alphabets. Out of 8, four children, Mahadev Prasad, Vinutha, Niranjana and Srinivasachari were learning the second set of alphabets (25th Step), two children Mahesh and Vinutha were still practicing the first set of five alphabets. The teacher explained that these two attended school irregularly. The remaining two children had completed the sets of alphabets (29th step) and were framing words.

Ragibobunana School, Karnataka

A principle of learning that Nali Kali appears to be based upon is the recognition of each child's pace of learning, as against grouping of children into grades in terms of age only. Teaching learning materials graded as per learning levels are available, and children are organised in groups so that each child can access teaching learning materials as per his/her learning level. The child moves/learns at his or her own pace, in a self directed manner with some teacher and peer support. Thus at particular steps, the child may spend a very long, or very short time, depending on his, or her need. A faster or slower pace of learning is accommodated without stigma of failure. Largely, group based teaching-learning is practiced especially for language and mathematics. Other than group activities whole class activities like undertaking surveys, story telling etc. also find space in the classroom, specially for environmental science. Moreover, learning appears to be viewed as actively engaged in by the child, rather than "imparted" by the teacher, and self learning is central to the classroom process.

Is learning a "ladder"?

A feature of the Nali Kali approach is that the child moves on "up" in a learning ladder. Mastery of a given step is a pre requisite for moving on to the next one. Evaluation activities are built in after every few steps. The advantage gained in this approach of allowing each child to learn at his or her own pace is mitigated by the highly structured material used to engage children in group and self learning situations. Though the structured ladder approach helps a single teacher in managing and ensuring meaningful classroom transaction in several classes concurrently, it binds the children and teachers within the limits of the material itself. There is little space for the child or even the teacher to explore beyond this material. For instance, in the above example the fourth group's world of learning is limited to a set of 5 alphabets. It could be argued that for a child who is a linguistic adult, i.e. can express himself fluently and well by the time he comes to school, this limit can indeed be stifling and suffocating. Neither the teacher's nor the child's creativity is enhanced, and learning appears to have been artificially circumscribed by the "activity".

How much freedom a teacher has to decide her style of teaching, the teaching learning materials used, classroom organisation is indeed an important issue. In the post study workshop, this was a major point of debate. Participants from states, notably Assam and Karnataka, were of the view that teachers needed a great deal of structured input, as many of them lacked requisite skills. Once the teacher had a clear structure, he could use his time gainfully. The counter view was that a (centrally) highly structured approach could block professional growth among teachers and may prove to be an obstacle in creating enriching learning opportunities for children wherein they are engaged in constructing knowledge on their own.

Learning or coping?

In Assam children are grouped not according to learning levels but according to grades and the emphasis is on engaging children in self learning tasks. Here is an example from Assam:

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[eg 6]

The teacher was busy with the class I students who were reciting rhymes that dealt with the number concept and also the concept of subtraction. All the other classes were engaged in group activities using self-learning cards - class II was doing language (word composition), class III was doing science while class IV was doing social studies in groups. All the group leaders took initiative in completion of the group activities. The teacher kept two sets of cards on the nearby table - one set of cards containing questions, the other set containing answers. The group leader took a card from the question set and the group tried to answer the questions. After they had completed the answers, the leader takes the corresponding answer card and the group compares the answers with the question card. The teacher moved around to help out.

Dighaltari Ratan L.P.S., Assam

In this situation the "activity" appears to stem not so much from the nature of the teaching learning process, but as a response to the difficult task of dealing with multigrade situations, and in an attempt to organise children better and more productively. To this aspect of the classroom we return in a later section. Here it may be pointed out that the pedagogic strategies underlying the activity, inspite of innovative teaching learning materials and classroom organisation, remain rather simple. There are "right" and "wrong" answers, and children need to arrive at the right ones, as defined by adults.

Striking a compromise between new and old

In "Active Schools" in Maharashtra the children are engaged in activities built around textbook lessons especially in the form of supplementary cards. For example, if there is a lesson on rivers in the textbook, then the card for this lesson will have additional information on it about local rivers and so on. Other than working with cards children are engaged in group self study, co-curricular activities, reading corners, exhibitions etc. The timetable for the day is carefully divided into self learning tasks, teacher assisted tasks and peer group tasks.

[eg 7]

In Maharashtra, in one of the schools, it was announced that there will be a competition to see which child reads 1000 books first. A big colourful box was kept

in the school. Each child after reading a book had to write a summary of the story and drop it in the box with his name and class. This exercise had an amazing effect on the children. You could see all of them reading, telling stories to each other, discussing characters, even in the recess period!

(an experience of Maharashtra School highlighted in the newsletter Issues in Primary Education)

While such activities are used to motivate children to explore situations outside the classroom, a fair part of classroom teaching does revolve around the textbooks. The Maharashtra team during presentation in the post study meeting shared:

"We are trying to make a shift to activity based teaching in stages, we do not want it to be a drastic/sudden change from traditional teaching. Activities, group work are being interspersed with teacher centred classroom transaction."

In the school observed in Madhya Pradesh the concept of activity appeared to have evolved in the form of paying individual attention to children sitting in groups. In some schools it is also looked upon as a means of generating interest.

[eg 8]

The I & II grades were sitting in circles on durries adjacent to each other. No sub groups had been made. The teacher was alternating between the two grades every 5-7 minutes, almost with clockwork precision. He would come and sit in the middle of the circle of children. (I did not see any table or chair for the teachers in the classrooms). I joined the II-graders. He had made large plywood number cards, which he was using with the children for counting. He was making the children count the dots, read the number on the other side and write it on the slate. Group teaching looked more formalised. He was handling the whole group of 8-9 children together and not in parts. He was making each child count turn by turn. He would say, "Rajesh you tell - how many dots?" ; "Rani you tell, is he right?"......

Primary School Paankhet, Madhya Pradesh

With the use of material and grouping techniques the teacher seemed to be attempting to create a learning situation. But except for engaging children individually, the potential of group work remains unexploited. Moreover, within the framework of group work and individual attention, the underlying assumptions of learning process remain in the form of "right" answer, which children may help each other find, otherwise, the teacher will "provide" it.

To sum up, it appears that teachers are still learning the nature and role of "activity" and its relation to the learning process. The different styles observed reveal the underlying beliefs and assumptions of the teacher about the nature of the teaching learning process. While in some schools "activity" is playing a central role in classroom transaction, in others it is supporting the textbook based teaching. It appears that in the school observed in Kerala the teacher has arrived at a great deal of clarity about the nature of learning process. This allows her to organise her classroom flexibly and usefully. Teachers in various schools seem to grapple with issues of learning and activities to promote learning in their own way, depending on the depth of their own understanding. These examples bring out the need for a continued dialogue with teachers on these basic issues.

EVOLVING RELATIONSHIPS

Along with the changing trends in classroom transaction highlighted above, the case studies report that a warm, friendly and a more open relationship between the teacher and child is evolving. Teachers themselves appear to be experiencing a shift in the way they relate to the children. A teacher in Kerala says:

> **In our time our teacher would come and dictate a sermon on Gandhi but today on occasion of Gandhi Jayanti children are exploring, reading material on their own and then writing something.**
>
> *Mrs. Ratna Kumari, Teacher, LPS Mukkuthala, Kerala*

Such changes are very much a part and parcel of the new activity based pedagogy. Frequent participatory need based training and new textbooks which emphasise the centrality of the child in the teaching learning process appear to have played a key role in changing the role of the teacher in the classroom, thereby bringing

about significant changes in the teacher-child relationship. A teacher recollects the essence of a training programme attended as :

> **D**rawbacks of the old policing system in the school became obvious. The disadvantage of the alphabet approach, lectures and stick method were apparent. I understood the importance of establishing a relationship with children and also of creating a natural atmosphere in the class based on their interest. I also began to grasp the nature of the child, the learning process... In short the whole thing was about what to teach and how to teach.
>
> *Mr. Laxman, GLPS, Vadakkumurry, Kerala*

This teacher appears to relate changes in his behaviour to the understanding he developed about the nature and potential of the child, the nature of the learning process and his own role. The greater the clarity among teachers about these processes, greater appeared to be the chances of creating open ended activities and developing a warm and friendly relationship.

In this sub-section we illustrate some emerging trends of this changing relationship.

Bridging the distance

The case studies reveal that the distance between the teacher and children is shrinking with the teacher increasingly reaching out to children. This is especially true when children do group work and typically the teacher moves from one group to another giving individual attention to children who need it. A teacher in Andhra Pradesh shares: -

> **I**nitially I used to think that a teacher has to be strong and powerful and has to maintain a distance from children. But now my views have changed and I have a close and warm relationship with children. Activity based methods and games have facilitated this change in me.
>
> *Mr. Rambabu, Teacher, Neeruvoy School, A.P.*

There are several instances in the reports where children touch and feel the teacher and the teacher responds. In an MP school we see glimpses of a developing closeness between the teacher and the child, going beyond classroom transaction. The physical distance is gradually vanishing and the teacher becomes a part of the activity. Children just do not hold each other's hand but the teacher's hand too.

[eg 9]

The children were completely at home with him, pulling his sleeve, leaning over him, and not feeling afraid even when they could not answer. The guruji knew about the learning progress of each child. He appeared to know about their homes too, and at times asked about Hirawati's uncle, or Motilal's visit to a mela, or where Bilasia got her rangeel batti (hair band). As some child would start getting too much sun he would ask her to come and sit on the other side. A lot of caring and affection for children was exhibited in this teacher's manner.

EGS : Mach-ha tola, M.P.

In a Haryana school too, children are not afraid to ask the teacher questions. They comfortably reach out to him, touching him. The Haryana case study reports:

[eg 10]

Children were drawing. In between they would get up to ask something from the teacher. They would go up to him and address him by touching his hand drawing attention to their questions.

Govt. P.S., Satroad - main, Haryana

In the above example, the children's confidence in responding to the teacher's queries without fear of being reprimanded for an incorrect answer, coupled with the teacher's concern for them seems to result in a trusting and warm relationship.

In the schools of Kerala this closeness was visible in some of the most ordinary classroom transactions be it a group activity or a whole class activity. Since the nature of transaction is such that it encourages children to articulate their views and raise questions, it inevitable creates spaces for an open and friendly dialogue between the teacher and child thereby reducing the distance.

[eg 11]

Laxman asked the children to find the poem written by the poet OMV in their textbooks. Some children immediately ran to the teacher showing him their page in the book. "Later in the day children rushed to him asking about me, who am I? What do I do? They were coaxing him to introduce me to them".

G.L.P.S., Vadakkumurry, Kerala

In the above examples we see an emotional bond evolving between the teacher and child, a bond which permits the child to rush to the teacher, feel him and touch him. In the Nali Kali schools of Karnataka the whole concept of classroom organisation helps in reducing the distance between the teacher and the child. Depending upon the need of a particular group the teacher interacts with it, giving space to have one to one dialogue with each child of the group.

[eg 12]

The students formed six small groups, each group sat in a small circle. Four groups belonged to ladder I and were in different steps, 9 children in the preparatory stage (between 1 to 9 steps). They needed the teacher's help. So the teacher sat with them.

L.P.S., Kodagahatti, Karnataka

A space for a two-way communication between the teacher and child was visible in most other schools that were studied. One also noticed positive changes in the nature of the dialogue, wherein the child questions the teacher or dares to disagree with him.

In an example quoted from Kerala study on page 33 the teacher seems to be respecting the views of the student, the teacher has not thought of all these answers. She also does not agree with all of them, yet she gives them space to articulate their views. She includes them while summing up.

Other than this developing warm relationship, some structural changes in the classroom seem to have contributed a great deal in reducing the distance between the teacher and child. In both the Nali Kali schools of Karnataka and active schools of Maharashtra children mark their own attendance every day. It is as if they are accountable to themselves for coming to school and that the teacher is not keeping check on their presence or absence. Another substantial change took place due to self

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learning cards in the classrooms (Assam, Maharashtra, Karnataka). Children were made responsible for their own learning using these cards. We thus increasingly find that children are joining hands with the teacher in attempting to create enriching learning environment in the classroom.

Diminishing influence of the rod

Traditionally, the rod or a wooden stick has often been used by teachers in bringing order in class and sometimes even for actually hitting. The case studies bring to light the changing and diminishing role of the rod. There is a growing realization among teachers about the negative consequences of physical punishment/use of rod or even the presence of the rod in the classroom. A teacher shares her experience with the District Project Coordinator in Kerala:

One day a child, in a fit of temper told me that he does not like me and will kili me. I kept brooding over his statement and finally discussed it in the school resource group meeting. A colleague offered to visit this child's home. It was found that this child was afraid of the rod, and it is because of the rod... he does not like me. A rod which I had never used on him or others. It was merely used bring the class to silence. After that day I never carried a rod into the class and I started feeling that my relationship with children was much more comfortable than before.

Example from the Kerala Report

In many schools of MP, Kerala, Assam, Haryana, Karnataka, AP rods are either not seen or are only used as pointers on the board. But a sporadic use of the rod persists in some schools. It seems that when teachers lose their patience, they do sometimes try and control the class with the help of rod. This can sometimes coexist with an otherwise empathetic attitude towards children. For instance, the Haryana case study showed a teacher making serious attempts to develop a friendly relationship with children, but off and on losing control. So after a set classroom activities in which he and the children appeared to be on pretty friendly terms, when he took children to the ground, he carried the rod in hand to control the children.

Teachers' creativity

Apart from the way in which they view and treat the children, teachers themselves appear to be changing in some interesting ways. The case studies revealed that teachers are beginning to develop and create new materials/activities in order to generate children's interest. Let us look at an extract from the Tamil Nadu report:

[eg 13]

The teacher explained to me at the end that a few days ago a boy had come to the school with the contraption (a projector) and it had occurred to her that words could be tried instead of the cartoon and film slides. They had tried it out and it had worked. The contraption was crude, the slides only reproduced what was clearly printed in the textbook, they could be read only with great difficulty and most of the time the lens was out of focus. But the excitement it generated among the children and the sense of satisfaction and achievement it gave to the teachers compensated for ail that.

P.S., Kitravanthavadi

Teachers in other states were also found to be creative and sometimes they were struggling against all odds. In Kerala we find a teacher being creative inspite of poor infrastructural facility and having to handle two sections of standard 3. The case study reports:

[eg 14]

Laxman had collected all information on Olympics from magazines and newspapers. He also collects a special issue brought out by the daily newspaper for children. This issue has puzzles, activities etc. He not only uses all this for curricular transaction but also shows children how different types of news is written. The children use this knowledge and information in developing school/class-newspapers.

G.L.P.S., Vadakkumurry

All these efforts play a central or supportive role in the teaching learning process,

and sometimes they generate new learning situations not anticipated by the teacher. However, a point to be thought over here is that if teachers themselves behave creatively and do new things, this can be a precursor to their in turn encouraging the children to do the same. For instance in the Tamil Nadu example quoted above, the teacher is trying to teach words through an improvised projector, not in itself a very remarkable activity. But, as the researcher says:

It occurred to me that this created a very rich and exciting educational situation giving opportunities for children to learn and practice more than one skill. More important, the very crudeness of the contraption made its principles accessible to all children who cared and there could be no doubt that many a child would be trying out his or her own version of it.

Thus as teachers innovate, possibly fumblingly, they (often unintentionally) act as role models and give certain signals. This in itself could foster children's tendency to "try out" also. Moreover, as a teacher accepts innovation and learning herself, it is likely that she will accept it in the children also.

Changing views on errors

A fascinating area of the teacher-child interaction is the nature of dialogue that takes place around "errors" of children. These case studies found that in schools in some states, especially in Kerala, errors are being looked upon as a necessary step in the whole learning process. Thus we find that in the example on page 9, the teacher patiently spends time hearing what each child had written. She does not reprimand anyone for writing incorrectly. On the contrary she encouraged them for writing more.

In Haryana and M.P. too the teachers are beginning to change their attitude towards mistakes of children. Instead of scolding they seem to be encouraging peer learning. Let us look at some examples.

[eg 15]
"Naan Bai too bata?" (Naan Bai, you tell?)
"...bata de Naan Bai...chal accha Motilal se poochh le." (...tell me .. Ok, ask Motilal)
"Motilal too bata?" (Motilal, you tell?)

"Ye kya hai, Motilal, bata de?" (What is this Motilal, tell me?)

He went on like this for a good 15 minutes. When a child answered wrongly he did not chide her but asked the next child. Upon receiving the correct answer he went back to the erring child and asked her once again.

<div align="right">

EGS, Mach-ha tola, M.P.

</div>

This changing view on errors is important in the cognitive as well emotive context. In both senses, it frees the child to be active and to learn. It aids a warm relationship, which in turn aids learning.

Sensitivity to varied pace of learning

How much the child's own learning pace is respected is also an important issue. The teachers, instead of giving repetitive exercises such as copying the same word again and again are beginning to either introduce the word in different interesting contexts or are giving children tasks according to their levels. While Nali Kali schools of Karnataka and alternative schools in Madhya Pradesh make individual learning pace central to the whole classroom transaction, one notes in other schools also there is an increased sensitivity among teachers towards the differences in the pace of learning in children. Either the teachers group children according to levels or identify the needs of children during whole class teaching and later organise tasks according to their levels or help them personally. An example:

[eg 16]

"Matching the columns with woolen thread is a big hit with children. Calling them individually to the board to read the cards helps the teacher to identify the slow learners and pay special attention to them. About three children out of a class of about 15 are slow, and I suspect that two of them have some hearing problem. The teacher helps the slow learners to read and is quite encouraging. She helps them to read letter by letter.

<div align="right">

P.S., Kitravanthavadi, Tamil Nadu

</div>

The above examples do give us a feel of some of the positive changes in the dynamic relationship between the teacher and the child. However, the studies have also revealed certain areas of concern, which we now discuss.

Differential attitudes

In spite of substantial positive shifts in the teaching learning process in many of the schools studied, attitudes towards girls remained an area of concern in some schools though no case study identified instances of gross discrimination. For instance, in Haryana in one of the schools there were separate sections for girls and boys. Even in schools of Kerala where a great deal of reflection appeared to have taken place on issues like the nature of child, and the learning process, glimpses of bias in favour of boys was visible. The Kerala case study says :

In the little time I spent in this class I could not help but notice teacher's complete attention towards boys who were sitting in front of him. He would cursorily off and on acknowledge the presence of girls by nodding towards them. He never expected them to answer when he asked questions. Girls also did not take much interest and some of them started drawing in their copies.

Mukkuthala P.S., Kerala

A certain degree of bias became evident when grouping was done the Tamil Nadu case study reports:

[eg 17]
"Children return to the class after the break and the teacher announces that they will work in groups. Two groups form, one consisting mainly of boys and the other of girls".

P.S., Kilravanthavadi, Tamil Nadu

Negative attitudes towards tribal children were sometimes found to persist:

When the teacher was getting children to read the lesson, I noticed that she skipped at least two children, mentioning that they would not be able to read. It seemed as though it happened everyday. I found out that such children were invariably tribals.

P.S., Bholgarh, Madhya Pradesh

We also find teachers continuing to move towards children who reward them the most, i.e. bright children. Some examples:

[eg 18]

Guruji made her repeat this exercise again and again, patiently, almost like an uncle. Then he left her with a sum, but within moments her attention had wandered off and she just sat with her slate until the guruji came back to her 10 minutes later. Its not that she hadn't grasped what he had told her. With a little prompting she immediately started attacking the sum correctly; but like most small children, she needed him at the back of her all the time. She was one of his star students it seemed. He told me she is a regular student and therefore she learns quickly. After she did 2-3 sums with the above-mentioned method, he handed her a set of cards and asked her to add by counting them. During this whole period of about half an hour, except for working with this girl, the guruji did not do any systematic work on mathematics with the rest of the grade II children.

EGS : Mach-ha tola, M.P.

Teachers favouring brighter children was also reported by the Kerala case study:

[eg 19]

Repeatedly the same children were being asked to come forward and present/sing which disappointed many others who were waiting for their turn.

P.S., Vadakkumurri, Kerala

Thus, with some exceptions, we find a warm and friendly teacher-child relationship emerging. Teachers themselves report these changes in perception and behaviour. There are however, important issues regarding deprived children, which need to be discussed and tackled often.

CREATING THE CLASSROOM CONTEXT

In the previous section we have explored the nature of classroom transaction and the evolving teacher-child relationship. In this section we explore the classroom context, i.e., critical elements which make a certain kind of transaction possible. The classroom situation is invariably affected by this context: it either helps the teacher in creating a learning environment or hampers it. Thus appropriate teaching learning materials are most useful, and the lack of the same can be a drag for the most creative situation. We look now at these classroom supports: what are they, how are they used, when do they help and when they cease to do so. These include textbooks, teaching learning materials, evaluation tools, classroom organisation and planning.

CHANGING ROLE OF TEXTBOOKS

Textbooks have always played a critical role in the nature of classroom transaction, and for this reason a change in textbooks has been an important part of changing the teaching learning process. The quality of the textbooks is of course very important, but so is the rigidity or flexibility in its use. The studies reveal that to affect changes in the teaching learning process, textbooks also underwent many changes in most of the states. Further, schools varied in the rigidity with which they adhered to the textbook.

In Kerala integrated textbooks for classes I & II were developed creating space for children, giving freedom to the teachers to innovate and experiment. However, textbooks appeared to be just a beginning or initiation point leading to use of a variety of texts from journals, magazines, dreams of children and so on.

[eg 20]

The discussion was on health and hygiene. Children first narrated a poem from the textbook about a boy who ate and drank too much without restriction. Since the poem was funny children were really enjoying themselves. Later they discussed the

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problems of over-eating and staying unclean. Children pointed out the importance of eating hygienic food and drinking clean water. Role of a doctor in case of pain was also pointed out soberly by a child. When the need for cutting nails was being discussed one child got up and wanted to tell a story about nails. The story went like this:

"We cut nails and keep them. Later when we sleep they come back and stick in their original place. So we have to cut them again".

The teacher told him that she thought that the body created nails and they grew rather than the cut ones sticking back.

Later on, while discussing ways to keep healthy, children gave the following responses

"For good health we drink Horlicks"

" No Boost is better than Horlicks"

" We should drink goat's milk, it gives resistance. My grandmother puts onion in goats milk and gives it to me when I have a sore throat. It cures my cough instantly."

"Give Paracetamol when the child is unwell"

" We should clean our teeth"

"We should cut our nails and keep our hands clean"

"We should use chappals slippers otherwise feet get dirty"

Later the teacher summed up the ways to keep healthy, taking into account their observations.

Then came a poem about "Where to go when you fall ill." Since the poem was from class I all the children fully participated and later wanted to do a role play of doctor and patient. Two children wanted to become the doctor. So the teacher took a slip of paper and on either side wrote the names of these two. She tossed it like a coin. As the paper fell on the floor one child was elated because his name had come on the upper side which meant that he would become the doctor. The other child was holding back tears since it was a fair decision taken. He went back to his seat quickly and after some time started crying. Later the teacher conceded and allowed him to become the doctor. During the role play the children actually pretended to come with pain and fever and the doctor examined them pretending to use a stethoscope. Prescriptions of paracetamol and predictions of reduction in pain were given confidently by the doctor.

GLPs Vadakkumurry School, Kerala

In the above example the teacher does begin from the lesson in the textbook. However on one hand, the textbook itself is creative and on the other, classroom transaction is not limited within the boundaries of the lesson. It is the discussion among children which becomes central. A lot of space is given to the children to articulate their views which are later consolidated by the teacher. The textbook and the teachers' guide book provide space for such discussion to take place, they are so designed that the teacher also finds it easy to go back and forth.

In contrast to the freedom and space offered by the textbook in this example, we find that in school 2 in Tamil Nadu the teacher gets restricted within the boundaries of the textbook. In the example discussed on page 11, he allows the children to have a discussion on smell, flowers etc. but the moment they use colloquial words he tends to go back to standard language, insisting that they use them. Similarly in case of school 3 in Andhra Pradesh, the teacher does use newspaper cutouts but he does not base his curricular transaction on them and goes back to textbook teaching.

In Madhya Pradesh, while textbooks continue to be used in formal schools, in EGS centres these have been replaced by graded workbooks. It seems that textbooks do indeed play a very crucial role in determining the nature of classroom transaction. It is due to this that wherever any initiative has been taken to change classroom transaction textbooks/materials too underwent considerable changes. The importance of the textbook is also illustrated by the fact that in the Nali Kali Programme of Karnataka, textbooks were completely replaced by sets of graded material. In fact, in the post study workshop, people working closely in Nali Kali expressed a view that textbooks needed to be replaced completely if learning was to be organised differently. In the same workshop it emerged that in Active Schools of Maharashtra, the day was split into two: one half based on the textbook, the next on other teaching learning materials. In Assam though textbooks remain central, extensive supplementary materials in form of cards/books were developed to facilitate a more enriching teaching learning interaction in the classrooms.

OUTSIDE THE TEXTBOOK

Extensive use of teaching-learning materials (TLM) other than textbooks for

classroom transaction was observed in the eight studies. Some of the TLMs that the researchers encountered were cards, charts, equipment such as a balance made from low cost materials and even an improvised projector! The nature and use of material as well as its importance in the classroom varied from school to school. In some schools, such TLMs appeared to have completely replaced textbooks, (specially in Nali Kali) while in others it was used as a support to textbook teaching. In many schools TLM was looked upon as an effective tool to address the multigrade situation.

Just as teachers appeared to conduct activities depending on how they thought children would learn, and also how well they could create these situations, TLMs too were used in varied ways. The greater appeared to be the clarity about the nature of the learning process and the potential of the child on the one hand, and the teacher's skill in creating activities to foster it on the other, the more appeared to be the possibility of exploring/manipulating any material to the maximum. Let us look at two examples:

[eg 21]   **School-I**

In class 3 the teacher had given a few newspaper cuttings pasted on cards. The cuttings had stories and cartoons in black and white. Children paired up into twos and threes and looked at them trying to comprehend the story from the pictures. Written matter was in small letters, hence most of them didn't attempt to read them. Some of them opened their own textbooks and were seen browsing the stories in the textbook. The teacher subsequently came and enquired about the stories in the newspaper cutouts. Some of the children talked about the individual pictures but they didn't get the complete story. Then the teacher himself explained some of the jokes and stories and then he kept the paper aside.

Now the lesson on Andhrakesari depicting the life of Prakasham In class 3 language book was taken up. As the teacher explained the lesson a number of details were coming up: the Prakasham town where the leader was born, the Hyderabad city where he lived, the Madras high court where he worked etc. Though the children repeated after the teacher all the details as he was explaining, the teacher seemed to doubt whether the children were actually making connections. He took the children to the place where the map was hung and identified the places that figured in the lesson on the map and showed it to the children. It was not clear as to how much the

children understood about maps but they seemed happy to discover the words written in their textbooks on the map too.

Class 3, Neeruvoy School, Andhra Pradesh

[eg 22]

In class 4 in the morning the teacher had told the children about the dream she had seen yesterday night. After narrating the dream she asked each child to write about the dream he or she had seen and remembered on that day. The children then sat in groups and narrated their dreams to each other. Notebooks were also exchanged and the write-ups were read in groups.

Mukkuthala Lower Primary School, Kerala

We find that in the first school the teacher uses newspaper cutouts of a story and later uses a map. After initiating a dialogue on cutouts he abandons this material and goes back to the textbook and remains confined to it for some time. This is followed by an attempt to use a map in the end. The discussion on newspaper cutouts seems to be somewhat separate from the mainstream classroom transaction with the textbook. Moreover, the potential of the newspaper material for further discussion remains unexploited, perhaps because the teacher does not really know how to use it. For example, its use in groups to promote peer learning, as well as the potential for digressing to various important issues such as the nature of newspapers, children's own views etc. are not attempted. The researcher shared with us during the post study meeting:

> *Development and use of teaching learning material is not carefully planned. The material is not durable but flimsy. It is not clear who will use it or how it will be used. Also I noticed that sometimes just one child is involved in TLM production (chart) while others don't have anything to do.*

In the latter example the "dreams" of the teacher and children constitute the material for discussion and classroom transaction. Infact, it becomes difficult to separate the content, material and transaction, all three being interlinked and interdependent. The point being made here is that the use of materials, whether these are highly sophisticated and tangible or consist simply of a "dream" is once again a function of the teacher's understanding of the learning process, the child, nature of curriculum, textbooks and material. There appears to be no special magic

that one or another kind of teaching learning material contains, and almost anything can be used creatively for the learning process, while highly sophisticated material can be used indifferently.

Sequential graded materials

Moving to schools in other states, in the Nali Kali schools in Karnataka, sequential graded material in the form of cards/tasks have completely replaced the textbooks in classes 1 and 2. The material is such that it provides the child with the freedom to do the task according to her learning level, and can also be used by the child relatively independent of the teacher. An example from Nali Kali:

> **[eg 23]**
>
> **The third group consisted of slow learners, who were still in the first ladder i.e., had learnt to count upto 20. The teacher helped three of the children in solving addition problems of single digits through an exercise with tamarind seeds. Three other children were learning to write the numbers by arranging tamarind seeds on the numbers written boldly on cards. The teacher was helping them arrange the tamarind seeds and then write the number on the wallboard. The remaining two were writing the numbers from 1 to 20 on the wallboard.**
>
> *Ragibonunana Hally Higer Primary School, Karnataka*

In this example, graded materials help the child to tackle the task at hand, independent of the teacher, i.e., on her own. Sitting in a group according to his/her level, the child, with the help of concrete materials like tamarind seeds/cards can move from one learning level to another. Such material is definitely of great help to the teacher in a multigrade situation wherein he is engaged in managing more than one class. Also, the variety of material and the large number of activities pitched at different levels may be succeeding in holding the interest and attention of children much better than a textbook. Thus we note here, three major points:
* TLM is organised in the form of a "ladder" so that the child moves from one level to another. This includes material for evaluation.
* Availability of "self learning material" organised in a way that children can learn

on their own or in groups. This can be specially useful in multigrade situations
* A variety of material helps the teacher in holding children's attention, stimulates
their interest and allows the teacher to conduct many activities.

Self learning cards

In Maharashtra and Assam, though the textbook still plays a key role, self-learning
materials and cards have been developed to supplement it. Particularly, the self-
learning material in Assam has helped single teacher schools. For instance Samal
Sambhar, detailed resource material books, have been developed. These can be used
by teachers or even children on their own for activities as per each lesson. Relevant
materials are also available in learning corners. An excerpt from the Assam report:

[eg 24]

*The Dighaltari Ratan Primary School is a single teacher school with more than 100
children in five classes from nursery to standard IV in a single long hall. The youngest
children in Kasrenl (nursery caiss) are busy reciting rhymes and the teacher helps them
gradually switch over to the number concepts. Class II, III and IV are engaged in group
activities using self-learning cards - class ii is working on language (word composition),
class iii is practising science and class IV is focussing on social studies in groups.
Group leaders in each class are managing the sessions quite systematically. There are
two types of cards - one type contains various diagrams and questions and the other
answers. The group leaders take the question cards and distribute among the group
members. Children find the answers with each others' help. The leader gets the answer
sheets for comparison and corrections are done in everybody's card. The teacher
helps whenever necessary.*

*Class IV, after working on social studies switches over to general science, with
question paper cards that have a diagram of flowers. The teacher arrives in the group
with a china rose in hand, which he had just collected from garden and initiates the
discussion. He dissects the flower in hand into its various parts as petals, stem,
stipules, androclum, gynoeclum etc. The children interestedly compare different parts
of the flower with the diagram in hand. The teacher explains to them the names of the
different parts of the flower. Then he exhibits all the parts on the bench separately and
moves away. Children continue to work on this theme quite enthusiastically. They*

match different parts of the flower with their own diagrams and discuss the nomenclature. Then they take the second type of question cards and match the names of the different parts in diagram with their respective names on the other side. The leader then brings the third type of cards containing various questions relating to the function of each part of the flower and they all start working on them. This is followed by matching with the answer cards, when the teacher again turns up for guiding them.

Dighaltari Ratan Primary School, Assam

Though the grouping of children is gradewise, self-learning materials based on textbooks help in engaging the different grades in meaningful tasks. The materials allow the teacher to spend some time with each class and then leave them with a set of materials and move on to the next class. In the above example, in class 4 the teacher initiates a discussion about the flower and then the children are engaged in card-based activities like matching, identifying different parts of the flower and so on. Such activities generate group and peer learning as all members jointly try to find answers and solutions. Participation of children in managing classroom transaction is also immensely increased. A cautionary remark is however in order: the material is textbook based and it therefore confines the teacher and the children within the limits of the book. Also, the material does not offer the child multiple entry points and merely directs him towards just one answer.

Who uses the TLM?

In Tamil Nadu a lot of visual and activity material is found in classrooms, usually colourful reproductions of lesson exercises. Largely, the material is used for demonstration by the teacher. The material meant for children is also not always interactive, in the sense that children cannot use and manipulate it. Here are some examples:

[eg 25]

She (the teacher) takes out a coloured chart, pierces a hole through it and hangs it on a nail on the wall. The chart has colours and names of the colours written on it. The teacher points to each colour and asks the class to identify the colour,

which is done in a chorus. Then the laborious exercise of reading out the names of the colours. Then a new calendar like chart is taken out and once again a hole is pierced in it for hanging.

<div align="right">

Elattur Primary School, Tamil Nadu

</div>

[eg 26]
He (the teacher) has some pictures drawn on a card sheet and displayed. He recounts the story - 'this is a boy who had been asked by his mother to fetch some sugar from the market. On his way back he tripped on a stone and the sugar fell into a puddle. Can he pick it back?' 'No sir' comes the answer in chorus. 'Why?' asks the teacher. 'Because sugar dissolves in water' say the children. The teacher asks the children to confirm this statement by putting a spoonful of sugar in a glass of water. Not all children are attentive. Some especially in the last row are busy discussing and disputing more interesting things in their lives.

<div align="right">

Mepthruveda Hanur School, Tamil Nadu

</div>

In the first example the content of the book has merely been put up on the chart while in the second, the teacher before proceeding to go to textbook teaching of solution, solvent, soluble etc. tries to build in a context which the children can relate to. This is done through demonstration, which does help in evoking the interest of some children.

Reflecting on the nature of TLM being used, the researcher shared with us in the post study meeting:

The material has a visual rather than a manipulative role. Teachers are possessive about their material and send a clear message that it cannot be messed around with. Further the role/use of material is limited within the boundaries of textbooks and curricular statements which seem to over-emphasise the need to memorise and learn definitions of soluble, solvent etc. instead of focussing on experimentation in the classroom. In example 2 had the children been allowed to experiment instead of the demonstration by the teacher, it would have perhaps evoked more interest. Material that can actually be used by children promotes a more interactive and active learning style.

Picture cards in classrooms

Materials in the form of charts, posters and picture cards are visible in Haryana and Andhra Pradesh and to some extent in Madhya Pradesh. However their potential remains to be fully exploited. Let us look at an example from Madhya Pradesh.

[eg 27]

Picture cards were spread out. Children were identifying the pictures and naming them - ga-gadha, chha-chhatri, a-ajagar, ha-hai............(donkey, umbrella, python, plow). Guruji was not addressing the children as a group, but individually or in twos and threes. The entire conversation was in the local dialect. He was talking to three children sitting next to him. He was writing letters on the slate - ga - the child had to identify the letter and match it with the picture card ga-gadha. Two children could identify easily, the third one was hesitant and distracted. Guruji patiently repeated his question, calling the children by their names again and again -

EGS, Mach-ha-Tola, Madhya Pradesh

Though the picture cards appear to evoke interest and help in classroom transaction, their use is quite limited and repetitive. In this instance it involved merely recognition of the picture, and identification of the initial letter of the object shown on the card e.g. pha-phal (f-fruit). No effort was made to discuss the word except for a repeated emphasis on a specific letter. Also there was no attempt to talk about the pictures on the cards, many of which would have been of great interest to the children, such as, 'bear', 'parrot', ' bus' and so on. We once again notice that TLM independent of an understanding of nature of activity and learning process, succeeds in generating only limited learning opportunities for children.

An interesting point that has emerged in the case studies is that the use of cards has proliferated in many states. Cards appear to be materials that can be handled easily by children, exchanged among them, thus promoting group work, combined in several permutations and combinations to provide a plethora of situations with a relatively small base of material, and can also be replaced easily by the teacher

himself/herself. These cards, if sequentially ordered as in case of Nali Kali or Maharashtra, can also help the teacher in handling a multigrade situation and creating meaningful learning conditions for different levels.

Environment as teaching learning material

Some of the most interesting uses of "teaching learning materials" came from creative use of materials that existed within the environment, in nature or otherwise.

> **[eg 28]**
>
> **Children and the teacher together were measuring the circumference of the tree outside. They were using a string to measure. Later the length of the string was measured with scale. Prior to this activity the children had measured the length of the board, chair, table. First they tried to guess the length and then measured it.**
>
> *Mapla Lower Primary School, Kerala*

The TLM grant

The grant of Rs. 500/- has been a great help in procuring/developing TLM. Our studies revealed that the grant has helped the teachers in procuring charts, pens, chalks, magazines, posters, puzzles etc. In some states raw material is bought and then depending upon activities, teaching learning materials in form of flash cards, games, puzzles etc. are developed. In case of Karnataka the entire set of graded material is prepared by the teacher in the training programme. In Tamil Nadu and Madhya Pradesh also the teachers themselves try to prepare cards, models etc. Compared to the above states, in Haryana and Maharashtra the material is mainly ready made either supplied centrally or purchased by the teachers.

The case studies reveal that wherever the teachers had made the material themselves, they understood it, used it frequently with confidence and replaced it as per need. However, it must be pointed out that sometimes material production can become very time consuming and routinised, as in the case of the development of flash cards, dot cards etc. Such material is generally required in large numbers and does

not involve any creative input from the teacher. So it would be wrong to undermine the potential of readymade puzzles, dominoes and picture cards.

Where are the library books?

Widespread use of library books as TLM for classroom transaction was not seen in any state except to some extent in Kerala. Some states have initiated the system of having a separate library period. However, in absence of any link with curricular transaction the potential of library books remains unexploited. Also in some states like Tamil Nadu and Kerala paucity of adequate reading material has been strongly felt by teachers.

EVALUATION TOOLS

The case studies found that while teachers had been empowered with teaching learning materials, they had limited tools for student evaluation at their command. Some changes, however, were visible including development of new evaluation tools. The Kerala case study reports:

> **[eg 29]**
>
> *Teachers felt that with changes in the teaching learning process, a corresponding change in the evaluation system was needed. The state level workshop then addressed a few basic questions on evaluation like : What is evaluation? Why is it required? What is the purpose? For whom is it required? For teachers, parents or children? If required how should one evaluate? A new technique of evaluation and grading was developed after trialling a series of activities in the field. Teachers were trained and evaluation tools were developed by them in the CRC meetings.*
>
> *In BRCs also the issue of evaluation was debated at length. The new grading system also came under serious critique by trainers. At one BRC after deliberations the trainers arrived at the following conclusions:*
>
> *- A learning activity is an evaluation activity*
>
> *- Present grading indicators do not always help in assessing the experience of the children*
>
> *- Term exams are needed to satisfy the parents*

- Evaluation is a part of every learning activity.

Based on this understanding teachers developed their evaluation tools in CRC meetings.

In Madhya Pradesh, under the quality watch programme, in Shahdol district an effort was made to evolve evaluation tools different from the conventional ones. The effort was first initiated by the DPO and later taken up by teachers. An attempt was made to introduce non text based open ended, interesting questions which would provoke the children to think. Here is a glimpse of some of the questions asked:

[eg 30]

- Identify the picture shown and talk to the teacher about it (class 1)

- Find the missing number (class 2)

58	0	60		

- Write any 5 number less than 50

- If we sit in a field with eyes closed, what all sounds will we hear? (EGS level I)

The MP case study reports limited but significant departure from the conventional evaluation methodology. The case study also reports on the significant changes that have taken place in the marking and assessment system.

[eg 31]

The marking in the question papers had been done quite carefully. Undue strictness had not been shown towards spelling mistakes, or even grammatical errors - teachers had given more importance to what the child had tired to convey. There was a clear bias in favour of the children rather than against them - 10-15% extra marks had been given in most of the cases. An EGS guruji who had been quite generous in marking, said with a disarming smile, "I did not want to disappoint them, they would start crying. They are writing exams for the first time in their lives..." This type of sensitivity on the part of the teacher is laudable. It is a turn round from the "over strict" marking styles in a majority of formal schools.

About examinations in EGS schools, the case study reports:

[eg 32]

There is quite a lot of flexibility about the timing of conduct of these exams. During the evaluation month a certain period is specified in which the teacher can plan the assessment at his/her own convenience. Another significant exercise that the DPO undertakes after each round of assessment is to study the answer sheets of children to get an idea as to which questions most children could answer, which ones a large number could not and which were not attempted properly by anyone. This gives them leads to the so called "hard sports" or areas of learning in which children face difficulties. These in turn become an issue for CRCs to take up. In addition to this the district team also tries to see if some questions were inappropriately framed, specially if most of the children could not attempt them. This use of children's evaluation exercise for their own evaluation as well is indeed remarkable.

In the Nali Kali programme of Karnataka evaluation is interspersed with main transaction at regular intervals. This means that after the child completes a few steps he undergoes evaluation. The Nali Kali cards are of four types :
   a) My achievement
   b) Memory game
   c) Games to win
   d) Evaluation

Evaluation thus is an integral part of the whole process, to be interspersed at regular intervals while moving up the ladder. There is no stigma of failure and evaluation is not looked upon as a means to pass or fail children, but as a means to assess the child's learning level, which in turn helps the teacher in deciding the next activities for each child.

As noted above, in spite of all these efforts, student evaluation still remains an area of concern in most states studied. Particularly, evaluation tools for the teacher to understand a student's problem and address it are not easily visible. If individual attention to students and relevant classroom transaction is a goal, then these can be important aids. This is identified as a major area for further work.

As teachers have attempted to shift from textbook based, lecturer oriented teaching where the child is a passive recipient to a more active, exploratory learning style with extensive use of TLM, they have felt the need to bring about changes in classroom organisation also. A change in the nature of the teaching learning process, i.e., the changing nature of activities, particularly the concept of working in groups, is often accompanied by a parallel change in organisation of time and space. Teachers have sought, with more or less success, to increase the learning time available through better classroom organization.

The case studies reveal interesting variations in the nature of classroom organization across schools. On one hand we see a highly structured, pre-designed classroom organisation, in built into the teaching learning programme. On the other hand we find an open and flexible framework, moulded in the required form as and when considered appropriate by the teacher. Let us look at two examples to understand these two different kinds of classroom organisation.

[eg 33]   *School 1*

The students formed six small groups. Each group sat in a small circle. Four groups belonged to ladder I (equal to grade I) and were on different steps. 9 children were in the preparatory stage (between 1 to 9 steps). They needed the teacher's help, and the teacher sat with them.

The second group of six were in the 20th step. They had learnt 5 alphabets. They were given picture cards containing 4 pictures and their names were also written but one letter was missing in each case. The children were busy in writing the missing letter. The third group consisting of 4 students was playing a word game (33rd step), where they were supplying the missing letter in words. The fourth group of 5 children were playing a game framing words.

In the second ladder (equal to grade II), 10 children were on the 14th step where they was forming words and 10 children were on the 24th step, evaluating their achievement using different cards.

Out of the six groups, one group was guided by the teacher completely, two groups were guided partially by the teacher, another two groups were managed by

leaders and one group which was very advanced, managed themselves.

Kodagahalli's Lower Primary School, Malavalli Taluk, Karnataka

[eg 34]   **School 2**

About 6-7 children sat on one bench. On each bench strategically one or two bright children were sitting who are also the group leaders.

Laxman asked the children to find the poem written by the poet O.N.V. Kurup in their textbooks. Some children immediately ran to the teacher showing him their page in the book. The teacher asked them to sit in groups of two or three and read the poem and decide how to sing. Children started consulting each other. Some were practicing how to sing least concerned about the noise from the other class. There were others who did not read. After some time the teacher then asked a group of 3 girls sitting in the first row to come and sing the poem. Turn by turn children in groups or alone came and sang.

After the group singing the teacher sang himself in a melodious voice...catching each child's attention. Some children were also reading in the book while the song was being sung. After he finished, he asked the children to come and sing any two favourite lines of their's.

The teacher then asked the children whether they had heard songs similar to this poem. Subsequently, boys who remembered other related poems were invited to come forward and sing. Many other children joined in the singing, since it was a poem of class 2 which most of them remembered.

After this exercise, the teacher wrote four lines about Kerala on board and asked the children to add more lines to it. These lines were about 'the village full of trees, fields, cuccoo birds. The text after these four lines was left open for children tocontinue on their own by adding new lines.

For this task he divided the children into groups (7-8 children in each). The grouping was done randomly and some groups were asked to sit outside. Before starting group work all children copied the lines from the board. Four of them, finding it difficult to write sitting on a bench, stood up and used the teacher's table for support. Soon the children started working in groups. in some groups the children were really discussing and adding lines while in others no communication was there. May be the groups should have been smaller. After group work the whole class came together and each group presented. The children who had presented in the morning came forward. One group had added 24 lines. Children had added lines about their village telling

about the animals, flowers, hills, lakes, festivals so on.

Children later exchanged their copies to read and find out mistakes.

In the next activity the teacher gave one word to the children 'Kerala' and asked them to write all associated words with it. This task was also to be done in groups. Some groups finished very quickly and wrote many words ranging from coconut to fish but there were others who lagged behind. in two groups children knew the words, but were finding it difficult to represent them in script form. On the advice of the trainer who was accompanying me, the teacher asked those children who had finished writing to join and help the children of these two groups. Initially the children who had been asked to help were shy and did not wish to share their words but soon started helping by telling new words and later by helping them in writing. All the groups got a chance to present their words. As one group presented the others counted the total number of words. Some of the associted words for Kerala written by children were coconut, lakes, flowers, fish. The group who got the maximum words was given a prize. In the end the teacher distributed long strips of paper on which children had to write, poems.

GLPS Vadakkumurry School, Kerala

These two examples reveal that "group work" contains several ways of organising children. It can be rigid or flexible, it can be more or less teacher assisted, it can be interspersed with "whole class" teaching and it can contain fewer or more elements of working as a group. Significantly, the above two examples differ greatly in the amount of freedom the teacher had in organising groups, the nature of the task performed in the groups, and the classroom context in which these tasks were formed.

Looking at the two examples we find that in school I grouping is central to classroom transaction. Moreover, this grouping is predetermined, including the sequence of movement of a pupil from one group to the next. The learning routine for each child is individualised and work within the group is also individualised. Each child is at a specific unique step and has to finish to move on to the next step and then to the next group. Also, it is pre-decided that the groups will be either fully teacher assisted, partially teacher assisted, helped by peers or will be engaged in self-learning activities. In other words, groups are used to provide each child a task as per his or her learning level, and to help the teacher in focussing attention as per the individual child's needs. Full use is made within this of children's potential to learn

on their own and from peers. This arrangement is further matched with availability of appropriate teaching learning material.

In contrast to this in school II, grouping is much more flexible and open. The teacher originally has a loosely structured group of 6-7 children on each bench headed by a leader. Depending upon the need, he breaks this group further into smaller groups of 2-3 for recitation, then into a random grouping of whole class for constructing poems or word making exercise, and later redistributes a group of brighter children into groups that he thinks will benefit from their presence. He also intersperses this strategic grouping with whole class teaching. Here, the teacher appears to have an evolved understanding of group based teaching and takes on the spot decisions as to when to address the entire class as one unit, when to break it up into smaller units, what task to give to the different groups, the nature and size of groups, when to reorganise or redistribute groups, when to reassemble the class for consolidation and so on. In contrast to example 1 group work here is not confined to individual learning within the small group, but the emphasis is on learning from each other, constructing jointly, be it a poem developed by children or reciting a poem or writing associated words for "Kerala".

On discussion in the post-study workshop it was felt that though openness and freedom to organise as per need is very desirable, it may not help if the teacher has not yet developed an understanding of group based teaching and is ill-equipped to cope with the multigrade and multi level circumstances. In such cases a degree of structuring helps the teacher in ensuring some learning in all the classes. Also, it was felt that in the open approach sometimes the individual needs of the children get neglected whereas the structured Nali Kali classroom organisation bases itself on individual learning.

A critical issue in the two examples above is also that of the monograde context versus the and multigrade one. In both the contexts there appears to be an understanding that learning in groups offers unique opportunities for children to learn on their own and from their peers. However, grouping and classroom organisation as a whole takes on increasing importance in the multigrade situation, helping the teacher in structuring his and the children's time efficiently and productively. Here structured

grouping is seen as a way of building in self learning and peer learning into the classroom process, so that inspite of limited teachers, children are constructively engaged in learning activities, many a times independent of the teacher.

Let us now take a look at the nature of grouping in other states. Close to the Nali Kali approach, we find that in EGS centres of Madhya Pradesh, the children are divided into groups on the basis of learning levels. Teaching is group-based for language and maths, grouping is different for the two subjects. This allows the teacher to adjust the level of his/her response more accurately to children's specific needs. However, EVS is taught in whole class.

Between these two approaches of a high degree of centralised pre defined structuring and an extremely open and flexible framework, we also find mixed approaches being followed. Moving away from one extreme of structuring we find the classroom organisation of the active schools in Maharashtra structured to a lesser degree, interspersing whole class with group work, exhibitions and so on. Grouping is largely multi-ability for collaborative learning, and at times level-based for individualised learning. Self learning is done in groups for the first half of the day and whole class teaching for the second half.

[eg 35]

On 13-09-2000 I sat through classes 3 & 4 which occupy one room. Sh. P.N. Bhonsale is the teacher. In the morning session he distributed self-study cards to groups in both the classes. Cards of different subjects were given to different groups. There were six groups in class 3 and seven in class 4. Naturally cards of some subjects had to be given to two groups at a time. Each group worked for a period of 40 minutes on its respective set of cards and wrote down the answers in notebooks. These chapters had been taught earlier in the class and the self-study was meant to reinforce what had been learnt. The groups exchanged the cards at end of the period. In this manner one step of each subject was covered each day. The teacher moved around the groups helping those who had difficulties. The classroom was not large enough to allow all the 13 groups to spread out comfortably and they had to be a little cramped. Each group had a group leader, but his/her role appeared to be limited.

In the afternoon session the teacher taught General Science in class 3 and Geography in class 4. He did this by turns, giving approximately half an hour to each class at a stretch. He gave some writing work to the class he was not teaching.

Unni's Primary School, Lathur district, Maharashtra

Grouping of children in the classrooms observed in Tamil Nadu, Andhra Pradesh and Haryana is also structured loosely. In Tamil Nadu and Andhra Pradesh the schools visited were multigrade schools and the teacher was forced to handle more than one class. So for the teacher each class was a group (1 class) and within it if possible, sub-groups of different levels were organised. A teacher handling two or more classes usually engages one class, gives them a task and moves to the next class. Let us look at an example from Andhra Pradesh:

[eg 36]

In the other room, one teacher handled classes II and III. Class II was inside the room and class III was in the verandah that was an enclosed one and seemed almost like a room. Both the room and the verandah had blackboards. In class III, the teacher was teaching words with Ga othu - daggu, muggu, siggu. The teacher was asking questions about each word as he was writing, such as "do you put rangoli (muggu) in front of your house? How do you feel (siggu)? How do you cough (daggu)?" The children were responding to his questions appropriately. Before writing a few other words, he gave some clues and was making the children guess the words. Later, the children were made to come forward one by one and read each word while pointing it with a stick. Other children repeated each time, so there was quite a drill. At the end of it, the children wrote the words in their respective notebooks. While they were writing, the teacher moved on to the next group.

As the children were writing with concentration, about 3 to 4 children were doing things on their own. May be it was Buvana and Mastan who were writing some numbers from the chart hung on the wall. Two other children were very young and they had difficulty in identifying the alphabet.

Later, in the math class in class II, the teacher placed a few sticks and rubber bands in the middle of the group and asked them to make bundles of 10. The children took the assignment very seriously and each of them made one bundle, while the teacher moved over to class III where he had given some multiplication problems. Later the teacher returned to the class. The teacher

called each child to the front, mentioned a number and asked the child to give that many bundles of sticks. The children were given on one side and the children had to fill in ones, tens and the number.

Karur Primary School, Andhra Pradesh

The researcher remarks in the report

In classes II and III, the teacher had to frequently shuttle between the two classes. There were times when the children were under occupied, but the children did not move out of their places or talk much.

Reflecting on another classroom experience the researcher adds:

When the responses of some children were correct, the teacher moved on and soon the lesson was treated as completed. The needs of every child could not be taken care of, particularly when their levels were different. The class II children were left unattended most of the time. This class was the most neglected compared to other classes. The teacher later candidly admitted that they were not adequately equipped to deal with different classes and they needed to plan more.

In Haryana too one sees glimpses of group activities and group tasks which seem to promote peer learning. However, the criteria and purpose of grouping is not clear and appears to be adhoc.

[eg 37]

The teacher asked the children to sit cross legged in groups of five. He then gave the task, which was to write numbers.

Sathroad Main School, Haryana

Undoubtedly, techniques of grouping children, encouraging them to learn on their own and learn from each other, are important, specially in the multigrade situation. Since the teacher's task is complex, these techniques help him in maximising use of time. The case studies in all the states show that changes in classroom organisation have led to the following transitions:

* When children sit in groups and are allowed to freely interact with each other, not only does the atmosphere become more "joyful" but the prime purpose of learning gets a boost.
* With children put into groups and given responsibility of their own learning, not only are they engaged at a much higher level but the teacher is free from the responsibility of constantly minding the class and can do more useful activities such as observing & assessing children, providing help where necessary and planning for the next activity.
* The change in classroom organisation has facilitated a closer teacher-child relationship. The teacher now no longer stands at a distance near the blackboard, but sits with the children in a circle. It is no longer one-way, top down communication, but the teacher responds to children's needs and questions.

PLANNING

All the eight case studies show evidence of planning undertaken by the teacher for classroom transaction. The degree and nature of planning (rigid or flexible) varies from school to school and is usually a function of the nature of classroom transaction to be undertaken. The case studies also reveal that planning for classroom transaction is undertaken at different levels: at the level of teacher, school, cluster and state. Let us look at the nature of planning at all these levels.

Daily planning

Daily planning is undertaken by the teacher for the next day in terms of activities to be done, materials to be prepared and so on. If we look at school 1 in chapter I, we find that Ratna Kumari has broadly planned the activities to be conducted in her "my own teaching manual." In this manual she plans daily by listing out activities and after the day is over she records the reactions of children, the problems encountered by her in conducting the activity and based on this she then plans for the next day. The classroom observation shows that she had not only planned the activities but had also collected the necessary materials. A broad framework within which she plans daily and records is as follows:

Class [ ] Subject [ ] Date [ ] [ ] [ ]	Activities done, children's responses, how children felt and problems encountered
What abilities, do I intent to develop in children • • • • For attaining these abilities what activities I prepare. • • • • • • •	
	After reflection what are the areas that need to be focussed upon.

Though all case studies did not provide such direct evidence of planning by the teacher, it appears that the teacher had in fact planned and was ready with materials in most classrooms that were visited. In EGS centres, and in Nali Kali schools the teacher has to constantly review and plan based on the levels reached by children so that the necessary group formations can be undertaken.

A broad framework within which the teacher at the EGS centre daily plans, records and consolidates at the end of every week is:

Planning Format

     Subject : _____   *Month :* _____   *Week :* _____

     Group : _____   *Total no. of children :* _____

Sl. No.	The Lesson	Related Competencies	Description of TLM to be used	Description of Activities	Remarks (to be filled the end of the week)

Recording Format

Subject : _____   Group : _____   Week : _____

Sl. No.	Name of child	Lesson/exercise no.	Teacher's remark on the learning progress of child

In Assam, teachers and children jointly plan for classroom transaction. The case study reports:

[eg 38]

The teacher and children select the activities to be done in a day; prepare and collect materials for the activities; place the TLMs in the learning corner; repeat or change the activities if necessary. The important thing was that the whole planning and transaction was done as per the needs of the students in the class. If the students took more time to do an activity, the teacher did not insist on ending It within the fixed time of "the period".

In Haryana the planning is comparatively less structured and detailed. In one of the

schools visited, the researcher observed that the teachers of the two sections of class 2 had planned jointly for the day. They had listed out the topics, objectives and activities to be undertaken during the day and home work to be assigned. Case studies of AP and TN do not reveal the exact nature and degree of daily planning undertaken by the teacher. However, classroom observations, especially in multigrade schools indicate inefficient utilization of time.

Weekly planning

Some evidence of weekly planning is visible only in the schools observed in Kerala and EGS centres in MP. The MP study reports:

[eg 39]

The weekly planning registers duly updated were available in all EGS schools. The task is labourious, particularly for the single guruji schools. This register is supposed to keep detailed information about the units to be taught, the activities to be done, the TLM to be used and so on. The guruji said he had to spend one full day writing the records of 44 children. But it has helped in keeping the curricular progress on track. It has also helped in gurujis being conscious of the learning status of each child.

In Kerala weekly planning is done during the school resource group meeting where in teachers plan, review and discuss classroom problems. The Kerala study reports on the school resource group meeting:

[eg 40]

After Onam the schools had reopened on Monday. The teachers wanted to plan for the next week. The teachers sat together to review last week's work, discuss problems and then plan for the next week. For example, the class I teacher informed the other teachers that she was doing the theme of 'house' last week but could not complete because of holidays. She had tried to introduce '+', '-' symbols to children. Some children still feel uncomfortable with them so she intended to do some more activities. Other teachers too shared their problems.

Mukkuthala Primary School, Kerala

Monthly planning

The most critical and important level of planning that emerged in almost all the states is the one undertaken in the cluster level meeting. Teachers of the cluster come together on one day of the month to reflect, review and plan for the forthcoming month. In some states all the teachers come together, in others teachers of different classes meet on separate days. Irrespective of the modality, joint reflections on classroom transactions and planning for the month ahead are beginning to contribute a great deal in ensuring effective teaching learning inside the classrooms. For example, in Kerala broad activities are outlined in the cluster meeting and details are later filled in by the teacher.

[eg 41]

The meeting began with a discussion on the issues that had been raised in the last meeting and were not yet resolved in the classrooms. Some of these were:
* spelling mistakes in writing, especially the representation of vowel symbols
* inability of some children to frame questions
* difficulty in sequencing the narration.
Some of the strategies to be adopted in the forthcoming month were outlined. These included:
* diary writing by children
* introducing "my own rhyme book"
* organic writing
* muitievel activities
* encouraging group work to frame questions, giving more chances of presenting to children who face the difficulty
* literary club
* giving a story in form of picture puzzle and asking children to arrange it.
Later in the day the teachers selected themes, identified curricular statements (CSs), developed and planned activities for the month. They also planned one day in detail. The themes selected were 'Gandhi Jayanti', 'house', 'food' and 'health'. Teachers sat in groups of four. There were two class I groups and three class II groups.
Here I describe only one group work and their subsequent presentation which was

working on the theme of health. The group first identified the CSs which could be transacted through this theme. These were 1, 9, 10, 11, 13, 19, 20, 21, 22, 25, 26, 29, 30, 36, ... Some of these identified CSs in form of statements would be:

* *folk songs with action*

* *sentences*

* *write numbers up to 100 in ascending and descending order*

* *good health habits*

* *to read stories and children's song*

* *to recite lines*

* *difference between numbers*

    .

    .

   so on

Some of the activities to be done to fulfil the above CSs were also identified. These were:

Song, play related to hospital, conversation, writing, field trip to hospital, personal hygiene (checking in the class), observation, interview with doctor, discussion on diseases and so on.

This group then presented one day's teaching manual. The CS's identified were 1, 9, 13, 22, 25. The activities planned were:

* *wake up song*

* *words related to hospital or diseases to be used for grouping*

* *sentence making*

* *project on "Do our neighbours fall ill" - find out which disease affects them the most*

* *collect data*

* *present data in tabular form*

S.No.	Name of disease	Frequency (No. of people suffering from the disease)

* *which disease occurred most? Arrange the frequency in ascending and descending order*

Similarly all other groups presented on their respective themes.

Mukkuthala Cluster Meeting, Kerala

In Assam, AP, TN and Maharashtra the agenda for the meeting and the planning to be undertaken is to a greater or lesser extent predetermined and defined by the state level. The Andhra Pradesh study reports:

[eg 42]

The focus of the post lunch session was on planning and preparation of TLM for the lessons of the following month. The state had recently circulated a printed calendar containing the lessons to be taught in each subject for a particular month. Thus the lessons to be taught for the entire school year are spelt out in the calendar month wise. The teachers find it useful as it lists activities like work experience, creative activities that never found a place earlier.

The lesson planning session involved looking at lessons listed in the calendar for the coming month for classes III, IV or V and TLM for the same were prepared. These were subsequently shared with the larger groups for feedback.

The language books have a number of exercises at the end of the lessons and most of the materials prepared were cards and charts for those exercises. For example, cards and charts for matching the correct meanings/opposites, were made. Difficult words were written down for sentence making. Some exercises not given at the end of the book were also made.

The researcher observes "In the course of the deliberations there was no reflection on whether the materials made were meant for the teacher or the child, for the individual child or for a group of children to handle. The durability, reusability and multiple use of the material for different levels was also not looked into. Most of the teachers handle more than one class but there was no planning on how they will handle different classes simultaneously. Their discussion remained centred around lesson planning".

Pitchathur CRC meeting, Chittoor, Andhra Pradesh

In Karnataka in Nali Kali a year long plan is chalked out in advance and materials are also prepared in advance during teacher training. The time of the CRC meeting is therefore spent on discussing difficulties and explaining ways of addressing them.

eg 43]

The chairperson picked one chit alternately from the two boxes and the person whose name appeared had to give the feedback of their activities during the preceding month. This went on for an hour or so.

Then an interesting discussion ensued about developing decimal concepts. Mr. Devegowda demonstrated how the concept of less than one, can be developed by using decimal concept. Similarly, clarifications were sought on fractions and conversion of a fraction into decimal and vice-versa. I too intervened and helped Mr. Devegowda in clarifying their doubts. Then clarifications were sought on solving the problems of children in language learning using 'sadhana' cards in Nali-kali approach. Mr. Shesharaju clarified their doubts. Again, there was a discussion on achievement cards pertaining to 70th step in ladder II (language). Using this card, only 50% of the children develop the ability to frame sentences using words. After discussion, it was agreed that constant drilling is the only solution. There was discussion on developing concepts in science. Day and night, new moon day and full moon day, lunar and solar eclipses etc were explained on the basis of cause and effect relation.

Later in the day Sri Mallikarjuna Swamy, CRP, demonstrated an activity from the maths kit through which all the four fundamental operations, addition, subtraction, multiplication and division could be evaluated...

Kerugavalu CRC meeting, Karnataka

Though an attempt is made to share activities and discuss the problems, many teachers are not satisfied. They feel that in these meetings more careful planning should be done. A teacher shares with the researcher

The monthly meetings at CRC are routine and boring, change is needed in every monthly meeting, meticulous planning for the next month should be done. Two teachers should form a group, each group to be allotted a competency so as to cover all the competencies to be developed in all the three subjects for all the four classes. They should come prepared with suitable activities for the next meeting In this meeting teachers should group themselves according to the class/classes they handle and make activities which will displayed.

To sum up, the case studies reveal that planning is increasingly becoming a part and parcel of the teaching learning process in the classrooms. Cluster level monthly meetings are beginning to play a critical role in planning the month's activities Ms. Deepali Rani Singha, a teacher in Assam observes

The present process of lesson planning has helped us a lot in making our classroom interaction more effective. The monthly meeting is quite useful. This meeting provides us an opportunity to share ideas and also to learn from senior and fellow teachers.

A broad plan as to what areas have to be covered in the syllabus is usually chalked out in all states. In some states a more minute detailing out of all steps takes place, while in others a broad framework is outlined to be filled by the teacher. These practices need to be taken much further to enable teachers to optimise the potential of the classroom situation.

The case studies on which this report is based were concerned with actual classroom transaction and attempted to capture the teaching learning process, the pedagogy, teacher student interaction and the like. However, the teachers and children observed by the researchers functioned in a certain context, specially basic availability of teachers and infrastructure, which even though not the focus of the case studies, impacted the learning process. In this section we will try to capture through some illustrative examples how the availability of the required number of teachers, school infrastructure and other facilities affect positively or negatively the teaching learning process in schools. It needs to be mentioned that no attempt is made to comment on the large scale teacher or infrastructure availability in the particular states, because only a handful of schools have been seen in one district of the state. Rather than evaluation, the focus here is to see how teacher availability and infrastructure affect the actual classroom transaction

TEACHER AVAILABILITY

The case studies bring to light the crucial role that is played by the teachers in constructing an activity based classroom. It was found that in schools where adequate teachers (1 teacher per class) were available and where the PTRs were reasonable 1:35 or 1:40) it was possible to have an enriching teaching learning process. In such a situation the teacher could give individual attention to the learning of each child and consistently engage them in meaningful activities. In cases where adequate number of teachers were not available, particularly in multi-grade situations, it was far more difficult for the teacher to undertake diverse activities.

In the last two chapters we have seen that in the schools visited, especially in Kerala, Karnataka and Maharashtra, generating an activity based classroom was not

hampered by paucity of teachers. As illustrated in previous chapters, a number of interventions in materials, textbooks, classroom organization and planning were responsible for this. However one of the most critical conditions necessary for the success of all these interventions seemed to be the presence of an adequate number of teachers. In the schools visited in Kerala, PTRs (1:28-32) were moderate. PTRs were also reasonable both in Karnataka (1:30-35) and Maharashtra (1:12-38) and some of the schools visited had a teacher for every class. On the other hand PTRs in schools visited in Haryana (1:35-44), Tamil Nadu (1:23-62), Madhya Pradesh (1:22-41) and Andhra Pradesh (1: 25-32) varied between moderate and high, and multigrade teaching existed in many of the schools. This may be one of the reasons for the teachers' still struggling with activity based teaching in classrooms. The researcher who visited Andhra Pradesh observes a multigrade school and concludes:

The dynamics in the school revolved around coping with the many demands of a multi-class situation. It was a constant struggle for the teachers who were trying to reach out to several classes. It made me wonder how a single teacher could have coped with the demands of all the children through these months.

I briefly stopped at four other schools to get an overview of the happenings in the Mandal. The situation was much the same, large classes were combined due to absence of teachers, children were writing in their notebooks from the blackboard or reading in small and large groups. Coping with the day to day requirements of the class remains the priority, interspersed with occasional activity-based teaching.

In M.P even when the PTR was 1:44, the researcher felt that it was not doing justice to the new teaching methodology adopted in EGS centres. The researcher observes :-

One of the EGS schools in Pushparajgarh block had a single teacher and 44 children. This single teacher had to handle four grades (which will eventually become five) and six groups within these grades, in addition to three subjects. The amount of time he was able to devote to the different groups was obviously much lower as compared to 2-teacher schools. And the weekly planning on a childwise basis for 44

children was also a mammoth task for the teacher. In single teacher schools some compromise on the basic aspects of teaching learning is inevitable, and this does stand to jeopardise the overall issue of quality.

Schools observed in Assam (1:83-127) faced the most adverse situation, with serious multigrade situations (3 teachers in one school and a single teacher in the other). Teachers in these schools are coping up by either extensive use of TLM or self-learning materials or classroom organisation or community support. However, inspite of coping mechanisms, high PTRs and multigrade teaching does seem to adversely afect classroom transactions. High PTRs also appeared to affect classroom transaction in Haryana. Ms. Nirmal Kumari a teacher in Haryana says

It is easy to talk about new practices in training programmes but handling 80 children is not alike. The master trainers should try out in the classroom before prescribing anything to the teachers.

The researcher who visited Haryana observes:

For the last three years we have been trying to mainstream child centred education but our teacher student ratio is still 1:60. In such circunstances how is child centred education possible.

It is therefore necessary to address this issue of high PTR if we really wish to generate an enriching teaching learning process in our classrooms.

SPACE AVAILABILITY

The availabiity of adequate classroom space for children to sit, and for teacher to conduct the teaching learning activity in the way the teacher envisages and children like is a crucial factor in any school. The case studies show clearly that activity-based teaching learning is greatly hampered if classrooms are over-crowded and there is not enough space for children to sit in groups or move about freely. Linked with this are issues of proper lighting and ventilation and proper floors (because in majority of schools children sit on the floor).

The schools visited in Karnataka and Haryana were found to have reasonable space for different classes. The quality of construction of the building was observed to be fairly good. Over-crowding of classrooms was not an issue in these states, except in Kerala. In the schools observed in Kerala the space available for children to sit was quite inadequate. The case study reports: -

[eg 44]

It's a very small room for 58 children, separated by a cardboard partition from the next room. Since there is very little natural light Laxman has got the wiring done and has put up a bulb. There are benches without backrest for the children to sit.

Although these infrastructural problems did not deter teachers from conducting imaginative and constructive activities with children, nevertheless the cramped space did prove to be a constraint. Often a teacher would ask the children to push back the benches and come forward and sit on the floor for the activity.

The schools visited in Haryana were fairly large, with 5-6 rooms, and in one case even 19 (it had a middle section attached). This could be because the block as well as the schools selected by the district for the study were right in the vicinity of the district head quarters Hissar and may not be representative of the district or state in general. But in the schools visited, the general building conditions were good.

In Karnataka the schools observed in detail had sufficient classrooms, ranging from 5-9 (one with higher primary section attached). Some schools visited briefly also had single or two rooms, but the strength of children here was fairly small. Moreover, small schools are not the norm in Karnataka. In general, there was no crowding in any of the schools and in all, the activity based Nali Kali approach was going on comfortably. The case study reports:

[eg 45]

The school which had only 6 guntas of land and two class-rooms with two teachers for a long time has made a tremendous progress during the last four years. Four more class-rooms (each with a dimension of 22' x 15'), are added on and has five teachers posts sanctioned and all are working. Last year the school was adjudged the second best in the district and was awarded Rs.25,000/- cash prize. The entire amount was spent on getting 9 guntas of land just behind the school and levelled to develop as play-ground.

Amongst schools observed in Maharashtra some were fairly well endowed in terms of space and the number of rooms available, while others were single and two-room schools. But the Active School's pedagogy was going on in the smaller schools also, with a little space constraint. Teachers had managed to seat children in circles and they were moving from group to group facilitating. Schools observed in Andhra Pradesh and Assam were small, with one or two rooms and a verandah. Teachers had to manage a disproportionately large number of children in respect of the space available - classes had to be organised in the verandah. Within this space constraint they not only had to conduct activity based teaching learning but also had to manage the multigrade situation. The Assam case study reports: -

[eg 46]

The school building is a 'L' shaped one with a long hall, a small office room and a verandha along the hall. There is a large foreground which is used by the children as playground. The hall is used for teaching-learning process without having partitions to demarcate the different standards. There is a toilet attached to the hall, the tube-well is adjacent to the toilet.

In Madhya Pradesh, all the formal primary schools visited had 2-3 rooms with verandah and office. Some of these buildings have been newly constructed under DPEP. Space was fairly adequate. In EGS schools where the situation is quite different, two types of situations were observed - in many cases schools were run in homes of villagers. In these cases often the space was fairly cramped and was difficult to seat children in circles. To overcome this situation many EGS schools have moved outdoors. Panchayats have constructed chabootras (platforms) under trees. Teaching learning process is effectively followed outdoors round the year except in rains. Besides this, for a small percentage of EGS schools, buildings have been constructed under DPEP. These buildings are hexagonal in shape with a large single hall, adequate to seat 50 children.

BUILDING DESIGN

A common feature was observed in the building designs in schools in Tamil Nadu, Assam and Kerala. The building was found to be a large hall without the partitioning walls. Several classes were run within it with no sound or visual barrier,

which created disturbances in classroom transaction. Quoting from the Tamil Nadu report,

[eg 47]

There are nearly 110 children in the class as the attendance indicates. It is really not one class but two- sections A & B. Children of section A sit facing the eastern blackboard and the ones of section B face the western board. There is a virtual no-man's land in between where the children of the two sections are supposed to sit with their backs to each other. But they are never sure to which section they belong to and keep turning their faces depending upon which teacher offers greater entertainment."

In the schools observed in Kerala and in some schools in Tamil Nadu some temporary low partitions have been put up by the teachers with the TLM/school grant which helps in blocking visual distraction. The sound distraction however still remains very high, particularly when the pedagogy has a major component of loud chanting involved (Tamil Nadu).

In the schools observed in Assam and Kerala, where children are given tasks by the teacher in groups, the distraction was comparatively less. However, it needs to be noted that with minimal additional cost partition walls can be built. In one school visited in Tamil Nadu through DPEP funds an effort had been made to improve infrastructural facilities. The teachers of the school share:

The building of two rooms, a toilet and a water tank with the DPEP funds has made a significant difference. Earlier all the five classes had to be managed in one hall.

Buildings of Haryana schools visited were large and sometimes had 10 classrooms. In Maharashtra also the buildings were in good condition. The case study reports:

[eg 48]

The school building consists of two parts, one having one room and a verandah and the other having two rooms and a verandah. Thus there are three rooms for five classes. The building and classrooms are reasonably well painted. There is open space between and on the sides of the two buildings.

Experience of maintenance of the school buildings and premises was found to be uneven across the schools. Rather surprisingly, it was found that in the schools visited in Kerala the roofs leak during rains and some of the rooms are poorly lit and ventilated - there is the case of a teacher who did the wiring and hung an electric bulb at his own cost in his dark classroom and so on. According to the study,

> **[eg 49]**
>
> **Most schools in Kerala are housed in rented buildings. In many schools parents (PTAs) foot the bill for the repairs.**

The situation in the schools visited in Assam was found to be even more adverse. The floor of the schools is kaccha. In the damp climatic condition which prevail for the most part of the year, the floor also remains damp. In the schools observed, class I children sit on the floor on tarpaulin or mats. Class II and above have wooden benches. These are issues which have a direct bearing on quality of teaching learning. And neglect in these areas cannot be justified even on grounds of expenses because the financial implications involved are not so high.

An important issue is that of proper lighting, because lack of it not only creates a dull environment and obstructs teaching learning activity, but it has an adverse bearing on children's eye sight. For example in one primary school in Madhya Pradesh running in an old building, the windows in the classrooms had been walled up because of a couple of cases of robbery. Children were sitting in a pathetic condition even though the teaching learning atmosphere was fairly enthusiastic and participatory. A positive development is that by and large in Madhya Pradesh, in the newly constructed buildings this factor has been well taken care of with sufficient windows, down to the floor level, so that children sitting on the floor also have light. This has made the school atmosphere bright and lively.

FACILITIES - STORAGE SPACE, BLACKBOARDS, SITTING ARRANGEMENT

The next important issue is that of facilities such as storage space, blackboards, furniture/mats for sitting, etc. Storage space appears to be lacking in schools

observed across the states. The Kerala report states "...... Laxman keeps all books and journals stacked up on a bench, which are prone to damage specially during rains." (due to leaking roofs). In Haryana in most of the schools observed, TLM is kept on a table in a corner of the classroom. It is not clear whether some trunks have been made available for their safekeeping. It seems that even though large school buildings have been constructed, no almirahs have been built in. This was also true of Tamil Nadu schools where "teachers felt the need for secure storage facilities." In Assam there is a concept of learning corners - in one part of the room open bamboo shelves have been put up on which all the TLM is displayed. But again here is no lockable space in the school for its safekeeping. Further, the benches and desks have been transformed into working tables, to allow for flexible seating for group work as well as teachers' direct and easy interaction with all children in the classes.

In Madhya Pradesh both in the formal schools as well as EGS there is a provision to buy a trunk for the material. In outdoor EGS schools, the trunk is ceremoniously taken out and brought back everyday. But in a formal primary school it was also observed that the material prepared far exceeded the trunk and was untidily stacked up along a wall in a classroom, getting mishandled. In Andhra Pradesh in the schools observed there was adequate and secure storage space.

The point in making is that, for activity based pedagogy which involves the use of diverse TLM, provision for proper storage and safe keeping of the material is important. This is not an expensive proposition but goes a long way in making life convenient for a teacher, and encouraging him/her to enjoy rather than avoid the use of TLM. In financial terms, more wastage probably takes place due to spoiling and loss of TLM than the likely expense in ensuring the provision of an almirah or a trunk. It is a positive feature that in many new schools constructed under DPEP adequate built-in storage space is being provided.

It comes as a surprise, that in spite of the intensive efforts made for primary education, blackboards are still inadequate in number and in poor shape in many schools in different states. In the schools of Assam and Kerala blackboards were not found to be in good condition although they were available in sufficient numbers.

In many of the schools observed, the practice of having low blackboards around the classroom which the children can use, appears to have caught on, with very positive results. Each classroom has a big cement blackboard and also wall boards around all the walls for about 3 ft for children to work at. They are an essential part of the classroom in both Nali Kali (Karnataka) and Active Schools (Maharashtra). Each child is assigned a section of the blackboard to work on. They are also an essential part of the EGS building constructed by DPEP in Madhya Pradesh (Shahdol). Children were found joyfully making drawings and writing on these blackboards. This low black board allows children to work together and cheers up the classroom. In Andhra Pradesh and Haryana this is a feature found in many of the schools observed. However this concept of having low blackboards did not appear to have gained popularity in schools observed in Assam, Kerala and Tamil Nadu.

The seating arrangement of children is predominantly on the floor on taat pattis (jute mats). In Nali Kali and Active Schools children sit on the floor which is kept clean without mats. Active schools also have circles drawn in different parts of the classroom for different groups to sit on. In Haryana it is the same, and children use the floor to write and draw as well. In Shahdol district (Madhya Pradesh) taat pattis have been replaced by durries. The experience had been that the provision of durries instead of Taat pattis breaks the system of rows and columns encouraging the teacher to sit on the floor with the children. Some of the states have provision for benches in the higher classes, namely, Karnataka, Maharashtra, Tamil Nadu, Kerala and Assam. An example from Assam:

> *[eg 50]*
>
> *For class I, large jute mats are used for seating the children on floor. For the other classes, desks and benches are provided. In all the three classes, the desks/benches are low and are placed facing each other forming triangles. The entire hall is full of depictions on its walls and also fixed with various other materials like maps, charts with pictures etc. There are four blackboards. There is a learning corner where a whole lot of TLMs have been kept.*

THE EXTERNAL ENVIRONMENT OF THE SCHOOL

The external environment of the school has an important influence on the teaching

learning process inside the classroom. A school which has a spacious compound surrounded by a boundary wall, inside which trees are growing and a garden may have been developed, not to talk of a playground and swings, will be loved by children and valued by the community much more than merely a building standing by itself. This is sometimes, though not always, an expensive proposition unlike many of the facilities pointed out in the last section, because it involves land availability, construction of the boundary wall and so on.

There are old schools in many states such as Tamil Nadu, Karnataka, Kerala, Maharashtra, which already possess many of these facilities in a good or bad condition. In case of the new schools which have come up in more recent times, particularly those being constructed under DPEP, the compound and boundary wall are not necessarily part of the package. The expectation is that the boundary wall will be constructed with community support, initially in the form of a fence but ultimately as a pucca wall with a gate. These are essential before we talk of beautification of the compound by planting trees, constructing swings and so on. Even the toilet and drinking water facilities can be properly maintained only with proper fencing or boundary wall.

In Karnataka the two schools observed in detail were fairly well endowed, and had compounds with fencing or wall, playground, trees and plants maintained by the children and teachers, a bore well for drinking water. Toilet facilities were meant only for teachers, children had to go out. The schools in both the villages were the pride of the community, which had contributed substantially to campus development. The teachers also had the freedom to take children out into the compound for a game or a recitation to break the monotony. It encourages the possibility of many other types of collective activity such as expressed in the following excerpt: "...after the common prayer, news reading and thought for the day, the students gave a physical display with the band. Six stretching exercises and four sitting exercises were done."

In the schools observed in Assam, Tamil Nadu, Kerala and Karnataka drinking water facilities were available in most schools in the form of tube wells, bore wells etc. In schools observed in Madhya Pradesh and Andhra Pradesh small tanks have

been purchased and kept to store drinking water. Toilet facilities were still very uneven.

Small, sporadic innovations like a stationary shop in a school in Assam which supplies pencils, erasers, copies etc on payment helps children purchase these things as and when necessary. Often in remote areas such items are not available in any local shops. It is a common sight in schools particularly in remote rural areas for children to be found sitting idle in class for simple reasons such as loss of a single pencil or small piece of chalk. Such facilities can help children replenish their stock of stationary.

The case studies also revealed examples of beautiful compounds having been developed as a result of the head master's and community's motivation. In one school observed in Assam (district Dhubri) a rich garden has been developed outside the school with fruit trees, flowers and medicinal herbs. The decorative garden is surrounded by a low bamboo fencing. The Tamil Nadu study states "Although it does not form a part of the conventional classroom, gardens and playgrounds play an important role in the learning of children and in building a non-classroom interaction between students and teachers." In one of the schools observed in Tamil Nadu a garden was carefully tended and maintained by the students and the teachers. The teachers of this school complained that there was no boundary wall to protect the garden. Another school had a playground with slides, see saws and bars. This was also the only school which provided game equipment to students to play during recess. Another example is of a primary school in Madhya Pradesh (district Shahdol). This school also has a spacious lush green compound with trees shrubs and grass. In addition it has many swings and see-saws in the compound which seems to delight the children. This has also been a joint effort of the Head Master (HM) and the community. The HM of this school now wants to double the number of swings.

In other schools of Shahdol district in Madhya Pradesh, an attempt has been made in a big way to encourage the community to put up swings outside the school. There is a variety in the swings that has been put up - they include slides, see-saws, the regular swing and a locally popular *rahachua*. The swings have come up outside

EGS schools also even though they do not have enclosed compounds. This has become a major attraction for children and has probably helped in the regularity of children in coming to school as well. The swings have helped create a joyful atmosphere in the schools and encouraged collective, playful interaction amongst children. Additionally, since children hang on around the swings till late after school, the spot has become a meeting point for the community members as well.

From the complex picture presented in the preceding chapters, certain issues appear to be emerging. To begin with, from the school observations and perceptions of teachers, it is clear that a supportive, egalitarian and encouraging teacher-child relationship is taking root. As teachers have grappled with teaching learning issues in training programmes and other situations, they have increasingly moved closer to the child and offered her space for expression. Importantly, they have also, with more or less success, tried to create situations and activities that allow children to experiment, consult, observe and create in order to learn. Teachers in some schools were more at home in this learning context than others. While in some schools teachers could create a fluid environment to foster various kinds of learning, moving easily from one topic to another, others were more halting, alternating between a traditional style they were comfortable with, and a new one that they were learning. It needs to be noted that within the framework of their understanding about the learning process and the child, teachers had innovated with teaching learning materials, lesson planning, classroom organisation and other ways of making the teaching learning process effective.

This emerging picture of the classroom is a result of many strategies followed, practices instituted as well as institutions set up and strengthened, specially at the grassroot level, in DPEP. The changing picture of the classroom has been supported by the states' efforts at textbook renewal, teacher training, setting up of resource centres and several other strategies. While it is difficult to link a particular strategy with a specific classroom "outcome", it does seem worthwhile to take note of the kind of processes that states have fostered in this time period. We try now to identify some major enabling conditions, as fostered by grassroot institutions close to the schools as well as state and district initiatives. From these, several issues emerge for the future.

TEXTBOOKS

The scope of this case study did not include an exhaustive review of textbooks or

teacher training, and observations regarding these are limited to such issues as have emerged during classroom observation and discussions with teachers. But it needs to be pointed out that in the last six years all the states have attempted to revise and renew their textbooks. The process of textbook development itself has changed to include teachers and non-government agencies as well as field trials. Many states have attempted to make their textbooks competency based and activity oriented. Most states have based their textbooks on the minimum levels of learning (MLLs), particularly Maharashtra, Karnataka and Tamil Nadu. In Haryana and Madhya Pradesh, the states have adapted MLLs as per their own needs before making these a basis of textbook reform, while Kerala has moved the farthest away from MLLs. The new textbooks tend to use simpler as well as local language, often use one integrated text for learning in separate subjects, focus on equity issues and evoke relevant contexts. These have also been supplemented extensively with teachers' guides (for further details see "*Status and Processes of Textbook Renewal in DPEP" and "Textbooks with a Difference**").

This study has attempted to document the use of teaching learning materials other than textbooks. We find that diverse materials liven up the classroom considerably, and provide a wide variety of learning opportunities. However, at times the teaching learning materials themselves appeared to be circumscribed by the textbook. In particular use of story books, and books for general reading as part of "mainstream" classroom transaction was limited. It may, therefore, be worthwhile to ask:

> * Is it possible to improve textbooks further to stimulate creativity and build in a certain amount of flexibility and open endedness?
> * Can teachers be given more autonomy to move outside the textbook?
> * Can use of diverse materials, particularly library books, be facilitated as part of the curriculum?

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*Status of textbook renewal in DPEP: a document providing an overview of textbook development in DPEP states, available at the Technical Support Group of DPEP, Delhi.

**'Textbooks with a difference': a study of two DPEP experiments (MP and Kerala), undertaken by the Department of Preschool and Elementary Education, NCERT, Delhi.

These case studies revealed two major issues about teacher training. Firstly, the scale of teacher training in DPEP has been far greater than before. Individual teachers, who in 10 or 15 years before DPEP had been trained once or twice, reported undergoing yearly rounds of training. Secondly, teachers systematically reported that they had found these trainings useful. For instance, from the Tamil Nadu report:

[eg 51]

It was not possible for me to review the impact of the teacher training inputs. It seems to have played a very significant role in the shift towards child friendly teaching practices. An initial round of training seems to have taken place in 1997. This was followed every year with booster trainings for specific classes or aspects like multigrade teaching or activity based teaching. Teachers seemed to have found the training on multigrade teaching with its emphasis on preparation of TLM as the most useful among all the trainings received. This seems to have opened a world of opportunities to creative teachers.

Through the case studies, teachers reported the benefits of training in the following ways.

These trainings have enabled me to look at children differently from what I had learnt in the teacher's training certificate course of two years. Now my understanding of the children has improved. Children now love to be in my company. I am trying my level best to implement what I have gained from various trainings. I have benefited a lot especially from the Nall-Kall training"...
                    Ms. Bhanumati, Teacher, The Mode Higher Primary School, Ragibomunana Hally, Karnataka
"I received several trainings which focussed on issues like aims of education, activity-based teaching, importance of curricular statements over textbooks etc. They were quite useful to my teaching. They made me realise that, (a) it is more effective to teach through activities involving use of reading materials other than textbooks, (b) children do show keen interest in reading books other than textbooks, and (c) evaluation is possible through activities"...
                    Ms. Ratna Kumari, Teacher, Mukkuthala Primary School, Kerala.
"Experience in teaching contributes to its qualitative improvement; but these trainings helped me in getting acquainted with the new books and new teaching methods. The DPEP workshops have encouraged us to re-examine the children's learning processes. They are now given individual attention. They are not forced to learn by the rote method"...
                    Ms. Parvinder Kaur, Teacher, Govt. Girls' Primary School, Kemri, Haryana.
"I underwent the DPEP training in 1996. I became sensitive and critical towards the classroom issues only after going through these training inputs. For tackling multigrade situations also, I received training from DPEP and also regular support from the ARG (academic resource group). The training on TLM was of great help to me as TLMs make the job of the teacher easier, minimising the load, specially in multi-grade situations".
                    Mr. Sukumar Sikdar, Teacher, 1195 Dighaltari Ratan LPS, Assam

The usefulness of teacher training is indicated not only from the teachers' perceptions but also from actual classroom observations. The case studies showed that many teachers have moved on to create active and vibrant classrooms. However, the case studies also showed that their skill in creating situations for learning depends upon the depth of their understanding of the learning process. Thus while teachers appeared to internalise the more emotive aspects such as being friendly and egalitarian with children, their capacity to organise activities systematically varied considerably. Teachers' understanding and assumptions about the learning process appear to be key to constructive improvements in the classroom. Therefore:

> **Q** In future teacher training programmes is it possible to deliberate in greater depth on the learning process and ways of creating learning situations in the classroom with teachers?

EVALUATION SYSTEM

These case studies found extremely limited instances of systematic work and renewal in the area of student evaluation. While varied systems of student evaluation as per a new pedagogy have evolved in Nali Kali in Karnataka and also in Madhya Pradesh as well as in Kerala, the old examination system tends to persist.

At the workshop at which these case studies were discussed, it was unanimously agreed that a change in this system was absolutely essential if the new processes were to be sustained. In fact, many participants of the seminar were of the view that evaluation as per the earlier system tended to undo what had been achieved through teacher training and exposure.

Detailed discussions about the Nali Kali experience made it clear that there is need to develop a student evaluation system which helps the teacher understand a student's particular interest as well as level of learning. Such an evaluation can be used by teachers to make their teaching need based and to help students to proceed at their own pace. It was also argued during the seminar that such a system would be radically different from the traditional examination system, where the pace of learning is uniform for all students who are then assessed at the end of the year. Moreover, in earlier years some students were detained at the end of these

examinations, though lately states have ceased to detain students. However, this does not mean that students are in fact able to learn at their own pace, spending time as per need on different curricular areas and then moving on. It means rather that the earlier uniform pace is continued with the modification that students are promoted automatically. In this policy the stigma of failing is removed, but the student may move on to later stages without having grasped the fundamentals. A major pre-requisite for individualised attention to students and maximising learning therefore, is a change in the evaluation system in a manner that allows a teacher to perceive a student's level on the one hand, and the student time and space to learn at his/her pace, on the other

The question that arises is :

Q Is it not essential to evolve a system of student evaluation, in keeping with the new pedagogy, which is an aid to teaching and learning rather than just an assessment?

RESOURCE CENTRES

A key development in DPEP has been the establishment of grassroot academic resource centres at the block, cluster, or Mandal. In these resource centres, usually one or more "resource teacher" - often a excellent primary school teacher - provides academic support to a cluster (12-15 schools) through school visits, meetings of teachers to discuss academic issues and other activities. This resource person also functions as a trainer during teacher training programmes. Discussions with teachers indicated the critical importance of sub district resource centres for pedagogic improvement, and also that these have played a special role in DPEP. An extract from the Tamil Nadu report about a visit to Kalravanthapadi school in Thandarampathu block reads:

[eg 52]

It was strange to hear from these teachers whose commitment to their profession so impressed me, that the regular follow-up system was very crucial in improving the teaching learning processes. However, they insisted that frequent visits by outsiders kept them on their toes and forced them to adopt the new methods. The BRC

personnel shared the view of the teachers that the visits contributed significantly to building teacher discipline and adoption of the new methods. They told me that teacher absenteeism was a major problem in the early years of the DPEP and it had been virtually eliminated.

The Tamil Nadu report concludes that:

Equally important has been the role of monthly meeting of the teachers at the cluster level. It has created a forum for peer interaction, which is essential for building any sense of professionalism. What was most impressive about the meetings was the initiative it gave to the teachers. Teachers of different schools were allocated the responsibility of preparing a model lesson in different subjects. These they had to demonstrate in the cluster meeting by actually teaching children gathered for the purpose. This method has the merit of encouraging teacher initiative and ensuring a better receptivity.

Even in terms of actual understanding in various content areas, discussion among teachers is helpful. Demonstration lessons, review of cards and discussion on difficult topics are common features in Nali Kali CRC meetings. Apart from this in Assam and Andhra Pradesh teaching learning materials are prepared at cluster centres and at Teacher Centres. The BRC and CRCs are the supporting pillars of the entire supervision and monitoring mechanism of DPEP Assam. Similarly, the Mandal resource centres and Teacher Centres in Andhra Pradesh have been the focal point of pedagogical reform, as have been the block resource centres in Kerala. Moreover, in all states, resource centres have become major hubs for teacher training, particularly at the block level. This has led to frequent need based context specific teacher trainings (for a more detailed description of resource centres see "*Glimpses from the Grassroots".

However, it needs to be noted that the processes to be fostered in sub district resource centres need significant attention, or these may not be productive. The Tamil Nadu case study shows that:

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* Glimpses from the Grassroots: a synthesis based on case studies of successful practices at local resource centre in Assam, Bihar, Kerela, Karnataka and Madhya Pradesh. The document is available at the technical Support Group of DPEP in Delhi.

[eg 53]

Some teachers also complained about the rigid format of the cluster meetings. Apparently agenda for the monthly meetings has been set for the entire state and this agenda is more than a year old. Teachers find the meetings repetitive and boring. The meeting I attended did not have on agenda any issue arising from follow-up visits to the schools or problems raised by the teachers. It is possible to give more space to these issues by making the cluster incharge prepare the agenda for the meeting.

Similarly, the Karnataka case study revealed that the main role perceived for the block resource centres was training (pedagogic as well as non pedagogic), though teachers as well as the resource persons expressed a need for more interaction on issues, on the spot help, and so on. The point is that the effectiveness of resource centres is influenced by the kinds of processes it supports, and these in turn need to respond to the needs of the teachers. There is a case therefore, for constantly scrutinising the processes of cluster meetings, school visits and training to make them more responsive to teachers' needs.

To this end, the capacity building of resource persons at these sub-centres also assumes importance, and states have taken different steps to build capacities of resource persons. The highlights of the Kerala attempt are :

* School placement programme for trainers (15 days)
* Participation of trainers in state level workshops.

In Assam, resource persons were trained and also encouraged to visit institutions such as Eklavya in Madhya Pradesh, APPEP and Centre for Learning Resources in Pune. Similar training programmes and capacity building exercises for resource persons have been conducted in all states. Further, the centres have been enriched with books, materials and the like. However, the capacity building of resource persons is not a task that can be performed mechanically. For instance, the Haryana case study shows that books available in a cluster centre had not really been read by teachers. On the other hand, the same case study showed that teachers look forward to resource support from CRCs and BRCs, specially as a new pedagogy is introduced.

To enhance the capacity to bring about improvements in the teaching learning situation, the following questions may be asked:

> **Q** * Are appropriate processes based on teachers' feedback being followed in the resource centers?
> * Has the capacity of the personnel at the resource centers been fostered adequately?
> * Can the capacity of resource persons be built by one time training or is it a long term process?

THE COMMUNITY

These case studies have brought out a plethora of ways in which the community can and has contributed to the quality of classroom transaction either by directly participating in it or by supporting it indirectly. In Karnataka community based activities, which focus on children's learning are organised.

For instance:

[eg 54]

In the metric mela the children, teachers, VEC members and the community participate in the host village to negotiate metric business practically through formal measurements. The village wears a festive look. Metric mela is conducted for a day. In the mela 25-30 guest children from different schools, VEC members, teachers and parents participate. There are 25-30 stalls in the mela, 2 to 3 children look after each stall. The members of VEC and the youth are involved in the activities along with the children while preparing the stalls.

There are two types of stalls, commercial and metric. In the commercial shops, children sell milk, flowers, banana, coffee, tea, sweets, vegetables, fruits and eatables of different kinds. In another stall children measure the height, weight and circumference of individuals. In each stall transactions are meticulously maintained. Parents wander around the stalls, enjoying themselves and observing how their children manage the stalls.

In Kerala too, we find that the parents/community is beginning to play a much more central role in classroom transaction. The case study reports that wherever possible parents extend support to the school by taking classes, organising field trips, attending CRC meetings and so on. In one school a parent had been taking classes for the last two weeks since the teacher had been transferred. PTAs are regularly organised to discuss the progress of children. Teachers increasingly rely on and seek community support in Kerala, where the case study reports that:

[eg 55]

The teacher records the progress of each child at least once in a week. He also keeps a mother's diary through which he interacts with the mother. A PTA meeting is held every month with parents to share the activities of the last month, progress of their children and plans for the next month.

In addition to sharing the progress of children, every year the parents, trainers and teachers develop a school level plan which eventually forms a part of the block and district plan. The school plan broadly lists out the main academic and non-academic activities of the year. The case study reports:

[eg 56]

in Vadakkumury school, one of the aims in the year's plan talks about the importance of reading in creating children's interest in studies. It further refers to the importance of school libraries, inculcating a habit of reading newspapers daily and so on.

The plan then articulates the major problems encountered in achieving this aim. These are:

*   * non availability of newspapers/children's magazines etc.*

*   * inadequate books in the school library*

*   * absence of PTA support.*

The plan further goes on to identify tasks for the PTA and Gram Panchayats: The PTA will prepare the list of books and magazines for children and also forward it to Gram Panchayat. The Gram Panchayat will decide the budget and also tap sponsors for purchase of books. This will be done between 2000 June - 31st March, 2001.

As in case of Karnataka and Kerala in other states too we find the community participating in classroom processes. For example, the Andhra Pradesi case study reports instances of story telling sessions by mothers for the children.

In Assam, the community is involved in the process of developmen of TLMs, largely by contributing no-cost (some times low-cost) materials that an be used directly as TLM or as raw material for preparation of TLMs. Conribution of various materials like agricultural implements, fishing implements (often made in miniature form), birds' nest, various kinds of seeds, old scriptures and so on are made to the learning corner. In many places mothers' groups were constituted to support school activities. The case study reports:

> **[eg 57]**
>
> **Mothers in the community formed Matru Pragati Sanghas and contributed to the growth of the school through development of gardens, TLMs, takinf proper care of children and cooperating in the classroom processes.**

Thus in most states we find that the community is beginning to pla a crucial role in the classroom.

Other than strengthening classroom activities, the community supports the school in number of ways. In MP we find that it is the community which rises a demand for an EGS school. They make a list of school going children, selet the location for the school, extend support toward construction or provide accommodation. The school timings are also suited to the needs of the community. It eems that the school is almost created by the community. This sense of ownersip eventually results in support of the community in all the school activities. The case study reports:

> **[eg 58]**
>
> **Throughout the day someone or the other from the community wa present in the school. Today it may have been more because of our presence, buthe guruji said that it is a daily feature. The adolescents, who had studied a few clases would even start helping children. Women also came and sat. They appeared i general to be satisfied with the school and the gurujis.**

In the Karnataka case study too, we find a sense of ownership for the school developing in the community. The case study reports:

[eg 59]

They (the community) are very proud of their school. They praised the present band of teachers, who according to them have brought about a transformation. Children love the school and want to be there. Earlier parents rarely visited the school, but now on 15th August, 26th January and other days when functions are held in the school more than 500 people (half of the population of the village) attend. Though many parents are illiterate, they are proud of their children who are so active and making good progress. Mothers seemed happiest, and showered praise on the teachers

Other than participation in school activities, regular meetings are held to sort out problems.

[eg 60]

Though there is poverty, of late, due to VEC training there is awareness among the people about sending their children to school. The VEC is very active and highly co-operative. They meet regularly every month and sort out problems of the school and discuss children's attendance. Last year, the school was adjudged the second best in the district and was awarded Rs.25000/- cash prize. The entire amount was spent on getting 9 guntas of land just behind the school which was developed as a play-ground. The Panchayat has assured a financial assistance of Rs.1000/- for getting a barbied wire fencing with stone posts.

In Assam too, a high degree of community involvement is noticed. Building roads, fencing of schcols, having public discussion on primary education, are some of the activities undertaken by the community.

[eg 61]

Enrolment Week in VECs is another crucial event that was carried out (1998-99) in Assam. Various kinds of activities like general meetings with the villagers, house-to-house visits to motivate the indifferent guardians, sports competitions for children,

felicitation of students or guardians who showed remarkabie improvement in regular attendance were taken up during these weeks.

Community involvement is thus a partnership between parents, teachers and children in which all try to contribute to the school. However, generating and using community support is an issue of the teacher's initiative as much as that of the community. Training teachers to tap this resource, to interact with the community, is therefore important. States have also successfully used reward and recognition systems to motivate the teachers as well as the community. To take an example from Karnataka:

[eg 62]

LPS, Doddankana Hally school in Muddur Taluk Karnataka received the best VEC award during 1997-1998. In this village the school was running In a private building as no building could be constructed, because of the non-availability of land. After getting best VEC award, the community was Inspired and mobilised some more funds In addition to the cash award and purchased two acres of land for the school and decided to construct two class rooms. The construction work is in progress.

The Karnataka case study goes on to comment :

Giving awards inspires and creates a sort of healthy competition among VECs and helps the community to take the responsibility of school development.
Rewards to VECs and schools have multiple impact. Not only do they allow them to use the money made available in the reward, but seem to spur them on to make greater contributions.

From the above examples, the questions that arise are:

* Can the community play a role in classroom pedagogy?
* What should be the nature of interaction between the school and community as far as classroom transaction is concerned?
* Do adequate mechanisms for tapping and fostering community support exist?
* Are teachers aware of these?

The scope of this case study did not include an investigation into the overall educational context of the state or the general level of awareness and efforts made before DPEP. Neither did it include a detailed understanding of the socioeconomic context of the state, or for that matter, of the villages in which the schools were situated. However, some of the case studies have thrown light on the efforts that were initiated before DPEP and have contributed a great deal in building a base for the change process.

The importance of these efforts was illustrated partly in the Kerala case study, which indicated that the DPEP attempts at renewal and reform of pedagogic practices were preceded by a concern for school quality since the 1980s in the state, particularly by the Kerala Shastra Sahitya Parishad (KSSP). In the 1980's, KSSP, through its intensive interaction with the community and schools, had begun to address the limitations of the teaching learning process in the classrooms. The activities initiated by the organisation included:

* Enrichment classes for children to make subjects and the mode of teaching interesting
* Creating awareness in the community
* Science clubs introduced in every school for upper primary and Science camps where children would come and stay together and conduct experiments/activities

These activities of the KSSP, along with a literate and articulate community form the background of DPEP efforts in Kerala. Notably, the likely influence of these earlier gains can be estimated by the fact that a number of KSSP teachers became trainers and state resource groups members for pedagogic reform in DPEP, and played an active role in all the DPEP activities.

In the seminar held to share these case studies, it emerged that the generally high levels of literacy in Kerala are manifested in the form of a plethora of magazines, books and newspapers that are available, and these include stories, poems and

articles for children. While Tamil Nadu, Karnataka and Andhra Pradesh also had a rich background of a similar nature, this was not the case at all in Assam. Resource persons at the workshop commented that in many languages, adequate reference material was simply not available. This may partly explain why in Assam production of "teaching learning material" was such a central issue.

Though this report does not focus on these general and historical developments in education in the states, and is therefore unable to document what may or may not have happened in each state, this continuity of educational concerns needs to be recognised, as enabling factors of the more recent years are identified. Further, the enabling factors cannot be viewed as a judgement on what a state did or did not do, but need to be viewed in terms of what needs to and can be done.

STATE STRATEGIES

As states evolved different strategies for bringing about significant changes in classroom transaction, some strategies emerged as clear winners. A major factor that appears to have contributed to a state's success in fostering positive pedagogic practices is the way in which early or first few attempts were treated, i.e., whether or not these were reviewed critically and reflectively, and whether changes in strategies were made on the basis of the emerging understanding.

An example is Kerala, where initially, in 1995, the concept of books and training based on MLLs was introduced in 20 schools of each BRC of 3 DPEP districts (i.e. about 500 schools). MLL based textbooks were prepared by SCERT, and SPO was entrusted with the task of teacher training. However, this training was not perceived as a success. To quote from the case study,... "It left the classroom untouched and the teachers complaining about the problems in keeping/maintaining records". It was at this time that a process of reflection started, to which there were two major aspects. Firstly, an empowered state resource group (SRG) which could undertake this reflection was formed. Secondly, the process of reflection relied intensively on feedback from schools. We shall return to both these aspects later.

Similar processes were attempted in Madhya Pradesh. Till the end of 1997, the whole

pedagogic reform process in Madhya Pradesh was guided by a Technical Resource Support Group (TRSG) which consisted of representatives from government, academic institutions from all over the country, and non government organisations. In general, in DPEP, this reflective process has been fostered in all states, through workshops, discussions and various feedback mechanisms. However, states have differed in how well they have organised this reflection, and how much it has actually guided state policy. Two elements through which a sense of this organisation can be gained is through the nature of state resource group, and the system for obtaining feedback. A third contributor is the nature and extent of NGO involvement, used by some states. There is also evidence that strengthening the district level and decentralisation contribute to this process. Finally, the general administrative environment can support pedagogic reform, or obstruct it.

Nature of SRGs

Though SRGs have been established in all states in DPEP, the nature of these groups, their style of functioning, and recognition within the state has varied considerably. As has been noted, in Kerala, the SRG was empowered, and active. In Madhya Pradesh, such an SRG was attempted, but could not continue. In other states, SRGs tended to form and work for highly specific goals, such as teacher training and textbook formulation at a particular point in time, but did not develop continuous and systematic processes. This lack of continuity interfered in the development of a vision, sustained attempts at pedagogic reform and tackling of problems as and when they arose. How well these resource groups were formed, how regularly they met, the recognition given to their recommendations were major contributors to how effectively they were able to reflect and lead. With this background, the questions are:

> * Is there a state resource group or other mechanism of a continuous nature to deliberate on pedagogic issues? Have the capacities of this group been developed?

Generating a dialogue

The second major component of the reflection process in Kerala consisted of

feedback from schools and classrooms. Some methods adopted by the state to collect feedback from the field included:

* internal academic missions launched to assess possible improvement in training etc.
* visits of teams of teachers, BRCCs, district and state functionaries to schools to interact with teachers, community, children, trainers etc., and submission of detailed reports to the SPO.
* feedback during training was collected and report submitted to SPO
* feedback to SPO was collected at CRCs. For instance, soon after the introduction of new books, feedback was collected from the teachers in the CRC meeting on each chapter of the book. The feedback was compiled and forwarded to SPO.
* regular meetings of the SRG

The nature of the feedback process fostered has not been even in all states. For instance, the Haryana case study indicates that most of the activities undertaken have been led by the state and initiative from the district and block level is limited. The feed back system developed in Karnataka too appears to be limited, and consists largely of state level meetings. An attempt was made in Assam to take teachers along in the pedagogic renewal exercise. The Assam case study reports :

[eg 63]

Before going in for large scale teacher training activities, brainstorming sessions were organised at the state level with educational functionaries. It was strongly emphasized that before going for mass teacher training, the teacher must be consulted and prepared to adopt the new teacher-learning practices envisaged by DPEP. Subsequently, a three day "acceptance programme" with teachers representing various levels, teacher educators, educational administrators and opinion leaders of communities was organised, followed by a one day programme for primary school teachers at the district level. Teachers were appraised of the fundamentals of DPEP and goals of the teacher training programmes.

However, the lack of a constant resource group which could deal with the feedback on a continuous basis did not allow this feedback to feed into improvement processes.

Thus Pedagogic improvement appears to depend a great deal on processes of different organisations and teachers. A major contributor of success appears to be the "depth" of this interaction, as well as its systematised nature. Whether or not a state is able to make this a part of its way of moving forward, i.e., part of the system of decision making is critical. Equally important appears to be the nature of the discourse that takes place in this process. One of the findings in these case studies has been that while issues related to children's motivation and a more egalitarian and friendly relationship between the teacher and child have been understood fairly well, the cognitive issues of how children learn are more difficult to grasp. These may need to be discussed intensively before they become part of actual classroom transaction.

Notably, the organisation of a meaningful dialogue needs systemic and institutional support. For instance, in Kerala, a mechanism for establishing a continuos dialogue between the field and state was the presence of BRC trainers in the regular meetings of SRG. This ensured that debate and discussions on fundamental issues were initiated at even the cluster level. So if the SRG was struggling with the language approach, then similar questions were being raised at the cluster level.

[eg 64]

In the training teachers were convinced but later when they actually started teaching through stories and meaningful contexts instead of alphabets they got stuck and they would call me - "Hari come here ... come here to my class and first show me how we are going to do it". Then we and the teachers tried together to find solutions.

Hari Shankar an ex-trainer from Kerala

Another trainer recollects an experience of cluster meeting:

[eg 65]

There was a major argument about the use of local language and then we raised questions like "What is standard language" "How many of us use standard language? and so on?" ... the arguments went on and on.

The fact that the issues that were debated at the state level were also debated at the district and sub district level meant that the capacity at all levels to tackle basic pedagogic issues increased, which in turn allowed the reform process to take root widely as well as deeply. The pertinent questions for states to consider then are:

Q * Is there a mechanism for continuous feedback from schools and grassroot institutions?
* Do forums for sustained discussion on basic pedagogic issues exist at all levels?

Non government organisations

A related issue is that of collaboration with non government organisations : Both Madhya Pradesh and Karnataka benefited from NGO participation and made use of expertise outside government. This process appears to have had two very positive results. Firstly, it allowed the school system in these states to access knowledge and skills outside government. Secondly, intensive interactions with non government resource organisations also built capacities of state and district resource persons. Both these states were partly fortunate, as they had access to organisations within the state. But they also actively sought such collaboration, even from outside the state. Notably, neither "handed over" its schools to an NGO. Rather, an active dialogue was put in place. Similarly, Andhra Pradesh appears to have benefited from intensive capacity building and exposure in the Andhra Pradesh Primary Education Project.

In Assam and Haryana too, exposure of various kinds were attempted, but the element of sustained dialogue and interaction appears to be missing. Kerala, Maharashtra and Tamil Nadu attempted their pedagogic improvement processes internally, tapping only limited resources from outside. This is not to say that these states did not participate in seminars, share experiences and learn - they did. But the major focus was to develop their own resources.

As experience shows, both strategies can work, depending on the resources and capacity within the state. Where these are low, interaction with NGOs as well as

other states may be fruitful. The question for moving forward is:

* Has the state tapped the resource support available from NGOs?

The general environment

In the process of pedagogic reform, all states have reconsidered issues, and sometimes changed earlier decisions. This is quite understandable, and necessary for a continuously improving programme. However, how these changes impact the school depends on the extent to which these are based on feedback and the extent of teachers' involvement in the change. When these changes are rapid, not a logical corollary of the feedback, and teachers are not taken into confidence, they can be a demotivating force.

Here is an extract from the Karnataka case study about a CRC meeting :

> *[eg 66]*
>
> *Then, there was a discussion on the Nali-Kali method being adopted in I & II grades. This approach was agreed by all as the best approach tried out so far but teachers thought that unless it was extended to III and IV grades, there would be confusion among the children. Though it was intended earlier that it would be extended to grade III in the current year and training was given to teachers, Nali Kali was stopped and for three months the teachers were under confusion. Then children were supplied with third grade textbooks and the teachers had to teach according to MLL methodology. There were rumors that Nali-Kali approach would be introduced again in the forthcoming year.*

On the other hand, a positive environment can also be generated as is apparent from the following excerpt from the Tamil Nadu report :

> *[eg 67]*
>
> *We also discussed factors contributing to teacher motivation. They felt that much depended on the district and block level team's own commitment, "when teachers see us working so hard all through the day and night they also imbibe the spirit". Another factor that emerged was that political interference in the programme at the local level was minimal and this helped to build a professional discipline and*

commitment. There was no pressure on the teachers to divert the school grant of Rs. 2000 or the TLM grant of 500/ to non-school purposes. Also there was no political interference in personnel selection or in giving protection to erring teachers. They attributed this to the strict stand taken by some of the early state level officials of the DPEP.

The same holds true for sudden shifts of personnel. For instance, here is an interview with a teacher in Mallavi block Karnataka:

[eg 68]
There are a few officers who evince interest in academic activities. Malavalli had one such BEO, Mr. Belli Shetty and Mandya DIET had one such principal Mr.Satyanarayan Reddy. They had initiated many progressive measures, teachers had high regard for them. But unfortunately they were transferred. Such officers should be allowed to stay for a minimum period of 5 years.

An important case in point in this context is the varied strategy that Madhya Pradesh appears to have followed with its EGS and alternative schools on the one hand, and formal schools on the other. The former appear to have been backed with a constancy in personnel as well as approach, and allowed to evolve systematically. The latter however have been subjected to sudden shift in personnel and reversal of policies, leading to a certain cynicism and apathy. Thus how well a state chooses to protect its own initiatives is a major ingredient of success.

An important area for building a positive environment is the general orientation/awareness about DPEP activities for the SIs, BEOs and other district officials who may not be directly associated with the programme but are linked to educational activities of district or block. In many states SI/BEOs have been oriented and their support does affect the classroom transaction. Joint visit by BEO and BRC teams, joint planning for training has gone a long way in building a supportive environment. The questions then are:

Q
* Does the administrative environment protect the gains made?
* Have the officials associated with educational activities been oriented towards the new pedagogy introduced in the classrooms?

DECENTRALISATION AT THE DISTRICT LEVEL

While state level initiatives were critical, the strengthening of DIETs and formation district resource groups (DRGs) also played a substantial role in ushering in qualitative improvements. In two cases in this case study there was evidence of very strong district level initiative.

District Latur in Maharashtra attempted the Active School Project which may eventually be expanded throughout the state. The significant point about the Active Schools Program is that it is an initiative indegenuous to district Latur. The team at the DPO Latur was fully involved in evolving this program, although one or two persons linked with pedagogical aspects were the main force behind it. This was possible because the team has remained stable since the beginning of DPEP in this district, with no transfers or changes.

Initially, the team members visited a number of ongoing initiatives in the country, like Rishi Valley, Nali Kali, etc. and also consulted a lot of literature before formulating their own concept, which they thought was the most suitable to their school conditions. The program was then introduced in a suburban area of Latur town and took a whole year of experimentation and struggle on part of the DPO as well as the school authorities and teachers before some concrete shape emerged. Only in the second year did the processes start stabilising, with teachers and children getting used to the new routines. Positive results then became visible. Later, the program was expanded. Also worth mentioning is the space as well as the support DPO Latur received from the SPO in carrying out this experiment - and today the SPO owns it as its own program and is trying to establish it in other districts as well.

In Madhya Pradesh a fair amount of integration and collaboration has been brought about between the DPOs and the DIETs. The entire faculty of the DPO is located within the DIET. The persons in-change of the various programs of DPEP such as teacher training, EGS, alternative schooling, curriculum review, etc. are DIET faculty. In district Shahdol this arrangement seems to be working particularly well. This may perhaps be because the District Project Coordinator (DPC) himself is

lecturer from the same DIET, on deputation to DPEP. He maintains an excellent rapport with his colleagues from the past, and they all work as a cohesive team. Also, the DPO is housed in the DIET building itself. The close monitoring of DPEP programs by the Collector and other district authorities has also made a great difference to the program. It has ensured proper implementation of activities at all levels. In Shahdol, the field visit component is also very strong. Most of the DIET faculty members visit the field regularly for monitoring purpose. The DPC mentioned that he has personally visited over 500 primary and EGS schools over the last 4-5 years, ensuring coverage of the remotest ones.

In both the above initiatives at the district level, it is important to remark that they have emerged in the context of good state level organisation as well as state support for decentralised initiatives.

The case studies of other states also reveal that whenever DPO and DIET join hands and are allowed initiative, results are more productive. In Assam, district level resource groups comprising of DIET/BTC faculty, BRC coordinators, BEOs and SIs were constituted to plan and monitor pedagogical interventions. In Kerala we note that DIET faculty was not only deputed to BRCs but also to DPO. The case study reports:

> *About 6 DIET faculty members were deputed to DPO as programme officers. Presently the Principal of the DIET is the additional district project coordinator. During my visit I was informed that DPO will be soon shifting into the DIET building.*

The important question in this context is:

Q Are district initiatives encouraged? Is there autonomy to initiate programmes at the district level?

In this synthesis report, we have tried to present a picture of the classroom processes in phase I districts as well as the earlier APPEP districts. In this picture, certain issues have appeared important, which the synthesis report has tried to highlight. The goal of this exercise has been to share learnings from across the country. We have tried to document what teachers, teacher educators and resource persons have attempted, where they have succeeded, and the issues that have emerged. It is understood that there cannot be a single opinion on these, and this report offers but one point of view. It is hoped however, that it will take the dialogue forward.

ANNEXURES

Name of the State/District/Block	Name of the School	Number of Teachers	Range of PTR	Training attended by the teachers interviewed
Assam Dhubri district Agamoni block	*Main schools observed* 404 Dighaltari Junior Basic School Dighaltari Ratan Primary School *Other schools visited* Brahmamyee Primary School Sonakhuli Primary School Sutakhawarchar Primary School	3 1 4 2 2	1:83 to 1:127	Most of the teachers have undergone training on: • TLM • MLL • New textbooks • MGT and • Resource materials
Andhra Pradesh Chittor district Pitchathur block	*Main schools observed* Neeruvoy School Karur School 4 other schools were visited	2 3	1:28 to 1:34	All DPEP training at BRC, DPO and state level.
Haryana Hissar district Hissar I block	*Main Schools Observed* Govt. Primary School, Satroad – main (Khan) Govt. Girls' Primary School, Kemri *Other Schools Visited* Govt. Primary School, Davada Govt. Primary School, Meer Khan Govt. Primary School, Satroad – 1 Govt. Primary School, Sartroad – 2	12 9 5 5 5 5	1:35 to 1:44	Most teachers had attended training on: • Textbooks (6 days) • Motivational aspects (10 days) • Content areas • Refresher on textbooks (3 days) • Activity based teaching (7 days).

Name of the State/District/Block	Name of the School	Number of Teachers	Range of PTR	Training attended by the teachers interviewed
Karnataka Mandya district Malavalli block	*Main Schools Observed* Govt. Higher Primary School Kodagahalli Girls' Lower Primary School, Hasahalli The Mode Higher Primary School, Ragibomunana Hally *Other Schools Visited* Govt. Lower Primary School, Huchhanadoddy Govt. LPS.PG Honnally Higher Primary School, Kodena Koppalu	6 3 10 2 2 4	1:14 to 1:38	Most teachers had attended training on: • MLL (3 days) • DPEP (10 days) • Activity based administrative training for HMs (6 days) • SOPT (6 days) • TLM (3 days) • Nali Kali training (12 days) • Film based training (3 days) Additional training had been given to some of the teachers: • Science kit (6 days) • Multigrade teaching (2 days) • Physical education • Dramatics VEC.
Kerala Malapuram Dist. Edapal block	*Main Schools Observed* Govt. Lower Primary – Vadakkumurry Mukkuthala Primary School *Other Schools Visited* Mapla Lower Primary School	9 7 5	1:28 to 1:58 1:58 was observed only in one school, where 2 classes had been combined in absence of headmasters.	Every year teachers are exposed to a minimum of 5-6 days training "Kinginnikkoottam". Uptill now most teachers have attended trainingd on: • MLL • New books/curriculum (5 days) • Language and integrated approach (3 days) • Evaluation (6 days) • In addition to the above some of the teachers had also attended SOPT training.

Name of the State/District/Block	Name of the School	Number of Teachers	Range of PTR	Training attended by the teachers interviewed
Madhya Pradesh Shahdol district Pushpragarh block Jaithari block Goparu block	*Centres Visited* EGS Indiranagar EGS: Mach-ha Tola EGS: Shilpan Tola EGS: Doomar Tola EGS: Larkhan Tola EGS: Son Tola EGS: Devari No. 3 *Primary Schools Visited* Primary School: Paankhet Primary School: Channaudi Primary School: Bholgarh Primary School: Chormara	2+1 (honarary) 2 2 2 1 1 2 2 2 3 2	1:22 to 1:52	Seekhna Sikhana Package (focus was on child centred activity based teaching learning) EGS Package (focussing on level based teaching by removing the grade system)
Maharashtra Latur district Ahmedpur block Osmanabad district Bhoom block	*Main Schools Observed* Primary School, Unni Primary School, Hokarna (class I – VII) Primary School, Bhatkheda (class I – VII) *Other Schools Visited* Primary School, Samarkundi (class I – VII)	3 10 9 7	1:12 to 1:38	All teachers had attended training on: • MLL • Joyful learning • Content areas • SMART-PT In addition to the above, some teachers had attended training on maths, science, English and physical education.

Name of the State/District/Block	Name of the School	Number of Teachers	Range of PTR	Training undergone as reported by the teachers
Tamil Nadu Tiruvannamalai dist. Thandarampattu block	*Main Schools Observed* Kilravanthavadi Thandarampattu Melthiruvedattanur *Other Schools Visited* Radhapuram Nalalpaliam Elattur	3 14 2 - 3 3	1:23 to 1:62	Teachers have undergone training on activity based teaching and different content areas.

KEY QUESTIONS TO BE ADDRESSED THROUGH THE STUDY

A.   *State level*

1.   What have been the major programmes/activities initiated by the state in the area of pedagogy in the last 5 years? What has been the pedagogical vision and the focus?

2.   Which agency has initiated and implemented these programmes? What has been the involvement of NGOs, teachers, DIET faculty and other persons if any?

3.   What are the major initiatives taken by the state regarding the following:

    (i) Textbooks
    (ii) Teaching learning material
    (iii) Teacher training
    (iv) Student evaluation
    (v) BRCs and CRCs
    (vi) DIETs

4.   Comparison of earlier inputs with the new ones, particularly old and new textbooks, and old and new teacher training modules.

5. As a result of the above initiatives, what does the state expect to see in the

    (i) Classrooms
    (ii) BRC, CRC
    (iii) DIET
    (iv) What is the nature and frequency of SRGs/teacher training in-charge's, interaction with the field?

6.   What are the limitations perceived by the state with respect to implementation of various programmes in the field?

7.   How does the state take feed back from the field (DIET, BRCs, schools)? Is there an organised system of meetings? How much time is spent on pedagogy issues in these meetings? (Please see the minutes of the meeting)

8. How has the pedagogy programme been evolving, how are new inputs or initiatives planned?

9. What would SCERT/SPO like to do in the future?

B. District level

1. What have been the inputs from the state (SCERT, SPO)?

2. How does the district plan for its pedagogic interventions?

3. How much autonomy is there to develop academic programmes? Is there a differential profile of the district?

4. What have been the major programmes initiated by the district in the last five years (as directed by the state as well as independent initiatives to address the local needs of the districts)?

5. What are their expectations from the state level?

6. How do they interact with the field and at what frequency (BRC, CRC and schools)? Are there financial provisions for field interactions?

7. What are their expectations from the field (BRC, CRC, Schools)?

8. According to them what difference have the various programme interventions made in the classrooms?

9. What are the limitations perceived by the district with respect to implementation of various programmes in the field?

10. How has the working of the DIET & DPO changed over the last 5 years?

11. What would they like to do in the future?

12. If a DRG exists what is its role in pedagogical planning?

13. How do they interact with the field continuously and how do they respond to the academic problems and questions that emerge from the field?

14. What is the role of DIETs in inservice teacher training programmes?

C. Block Level

1. What have been the inputs from the DPO/ DIET?

2. What have been the major programmes initiated by the block in the last five years (as directed by the DIET/DPO as well as independent initiatives to address the local needs of the block)?

3. What are their expectations from the district level?

4. How do they interact with the field and at what frequency? What is the frequency of visit to CRCs and schools?

5. What are their expectations from the schools as well as CRCs?

6. According to them what differences have the various programme interventions made in the classrooms

7. What is the nature of support extended by the BRC to CRC (nature of interaction in monthly meetings, workshops organised)?

8. What type of issues are raised by the CRCs in the BRCs meetings?

9. What would they like to do in the future?

D. Cluster Level

1. What have been the inputs from the block and district level (DPO, DIETs)?

2. What have been the activities initiated by the cluster in the last few years (as directed by the block as well as independently to address the local needs of the cluster)?

3. What are their expectations from the block level?

4. How do they interact with the field and at what frequency? What is the frequency of visits per school in a month?

5. What are their expectations from the schools as well as CRC?

6. According to them what difference have the various programme interventions made in the classrooms?

7. What is the nature of interaction among teachers in the cluster level monthly meeting?

8. What would they like to do in the future?

9. What according to the CRC coordinator should be the thrust of the programme?

E. Teacher

1. Profile of the teacher:-
Name, age (male/female) experience, reasons for joining as a teacher, distance he/she travels to reach school, is he/she local or an outsider?

2.   workshops and training programme has the teacher been exposed to in the past?

3.   What differences have various interventions made to him? Does s/he teach differently from the way s/he was taught?

4.   What changes according to the teacher have taken place in the teaching learning process?

      - What difference has the new textbooks made in the classroom?

      - What aspects of the training are they able to apply in the classroom, what are they not able to apply, and for what reasons?

      - How has the TLM grant helped the teacher? How has the teacher utilised the TLM grant and what use do they make in the classroom?

5.   What is the nature of support extended to them by CRCs and BRCs (frequency of visit, activities undertaken by the coordinator during his/her visit to the school)

6.   What are the teachersí expectations from resource centres?

7.   What happens in the monthly meeting?

8.   What are the problems encountered by the teacher in the normal day to day functioning?

9.   What would they like to do in the future?

10.   What is the nature of interaction between the teacher and child? Do teachers take help of children in teaching? Do they keep track of individual children acknowledging their ability, so on?

11.   What is the nature of interaction of the teacher with peers?

F. School

1.   What happens in the school from morning till evening (How does the day begin and end)?

2.   How has the school changed over the last five years?

3.   What are the nature of linkages with the community? Specially what is the nature of interaction between teachers and parent?

4.   In the last one year what have been the major school level activities?

5.   What would they like to do in the future?

G. Classroom

1. What is the atmosphere of the classroom like?
2. What is the nature of teacher-child interaction?
3. How is the classroom organised?
4. Are teaching learning materials and other reading material used in the classroom?
5. What is the attitude of the teachers towards the class as a whole?
6. Does the teacher treat all categories of children equally?
7. Is the teacher aware of the learning levels of different children?
8. Does the teacher understand the skills of the child and base his future planning on it?
9. What is the nature of content transaction?
10. What would they like to do in the future?

Detailed points of reference for the researcher

1. _Children and Teachers_
   - classwise strength of children (boys/girls; caste)
   - Are there any underaged children in class I? Are there pre-primary facilities in the area?
   - What percentage of the children have home support in their learning?
   - Number of teachers posted (posts sanctioned / vacant).
   - Age, length of experience, qualifications, training , motivation for joining this service, etc
   - Whether local or outsider, distance of residence from home
   - Whether the teacher can speak the local dialect or not
   - Which teachers are assigned which classes (qualification/experience wise). (Generally the lesser qualified and experienced teachers are given classes I & II to teach)
   - If it is a multigrade situation, how are the classes clubbed together? What is the rationale behind this?
   - How large is the class (or classes, if multigrade) which one teacher has to handle?

- What techniques/strategies does the teacher employ in the multigrade situation?
- If the class size is very large then what strategies does the teacher employ?

2. *Classroom Organisation & Teaching Learning Process*
Sitting arrangement
in rows?
in a large circle?
in a mixed, disorganised sort of crowd?
- Does the teacher alternate between whole class teaching and working in small groups, or it is whole class all the time?
- Does the teacher do most of the talking or does she elicit participation from children as well?
- Does she take help of some of the children while teaching
- Does she teach all the time, or also gives tasks to children to do on their own or in groups (i.e. encourage independent learning)?
- Does she treat the class as a homogeneous mass or does she segregate children into 3-4 groups and address them according to their pace of learning? (Slow learners/ average / fast)
- Is any sort of remedial teaching practiced for slow learners?
- How does the teacher use the textbook?
- How much and what sort of use is made of TLM by the teacher (assuming there is TLM in class)?
- Does the teacher innovate/devise new activities and materials/teaching aids or does
she practice only that which has been taught to her in training?
- Does the teacher simply move from lesson to lesson, focussing only on ìteachingî or does she also assess what the children are learning?
- Does the teacher add information and ideas and examples from her side as well or
does she stick only to the letter of the textbook?
- Does she assess children by ìright or wrong answersî or marks obtained in exams or does she have some other parameters for assessment/evaluation?
- Does the teacher keep track of the children individually or groupwise?

3.   _Learning Levels of Children_
      - To be assessed classwise. This can be done in two ways :
      - By looking at the achievement levels of children in the school records
      - By testing them according to the skills and concepts they ought to be mastering
      in a particular grade.

4.   _Teacher's Attitude towards Children_
      - Does the teacher ìtalk downî to the children or does she regard them as thinking
      individuals and treats them with respect?
      - Are children confident, open and interactive or are they dull and silent?
      - Does she make any distinction between
      - boys and girls?
      - backward caste/tribal children and others
      - How does she treat those who are slow learners? As ìdullî or as children who should be given additional attention?
      - How does she treat the ìextra brightî children?
      - What is her attitude towards the families of the children (illiterate, unaware, no good? or does she respect their dignity?)
      - If she is an urban or semi urban person then what is her overall attitude towards the rural children?

5.   _School Management Issues_
      - Do children come to school on time or do they keep coming in one by one till long after the school has begun? What happens at break time?
      - What is the average attendance classwise?
      - Does the school have a time table? Is it seriously adhered to?
      - If a teacher is absent, what happens to her class(es)?
      - Do the teachers come on time?
      - Observation of an entire day from opening of the school closing.
      - What is the nature of interaction among teachers?
      - Do the teachers even review their progress with the HM during the year.
      - Major school level activities in the last one year.

6.   _Linkages with the parents & community_
- Is the PTA functional? How frequently does it meet? What issues are discussed?
- How frequently do parents come to school to enquire about their child?
- Does the teacher know the parents individually?
- Does the teacher spend time with children outside the school, and try to link childrenís experiences outside school with classroom activities?

7.   _Physical Environment of_
School Out doors
        - campus and boundary wall,
        - toilets, drinking water
        - trees, plants
        - play area
        - cleanliness and maintenance
Indoors
        - how many rooms are there in the school?
        - which are the other spaces used as seating areas?
        - is there sufficient and proper space for children to sit?
        - is there sufficient space for children to sit in groups and teacher to move about?
        - is their enough light and ventilation in the class?
        - other physical features of the class - floor, walls, windows, etc.
        - cleanliness
        - are some of the rooms used for any other purposes - like for office or as a store?

8.   _Seating of the different classes_
        - which classes are made to sit in the rooms and which on the verandah or out in the open?
        - What is the rationale behind this? (Generally classes I & II will be outside)

9. _Physical facilities and material_
        - Are there sufficient taat pattis for children
        - Is there a blackboard (in proper condition) for every class?

- Do all children have text books?
- Do they all have slates, copies, chalk, pencils ,etc?
- What type of TLM is available in the school? How is it being used?
- Are there library books in the school? How are they being used?
- Is there any other support material like teacher's guide, etc?
- Is there sufficient storage space for all this material?

In addition to your observations, please also:
  - **Record at least one day of complete school functioning (from before the start of school to after the end)**
  - **If possible, record the transaction of a topic over a 3-4 day period with one class (for e.g. how does the teacher initiate a topic or a curricular unit in class? What does she do from beginning to end? etc).**

NALI KALI PROGRAM, KARNATAKA

Originally based on the Rishi Valley Model, this is a highly structured and activity based approach for teaching Language, Maths and EVS. This approach was developed in HD Kote, Karnataka, in 1995. It is now being practiced in one block each in all phase I districts of Karnataka DPEP. The main features of the Nali-Kali approach are as follows:
? Learning is based on activities undertaken by children.
? Text books are replaced by cards and other teaching learning materials.
? It addresses the multi level situation in classrooms, and the differing paces of learning amongst children
? A group-based approach instead of whole-class teaching is followed
? A changed system of pupil evaluation, doing away with marks and focussing on continuous assessment
? A changed role of the teacher from an instructor to a facilitator

Levels

In this approach, children move from level to level, in the following framework:
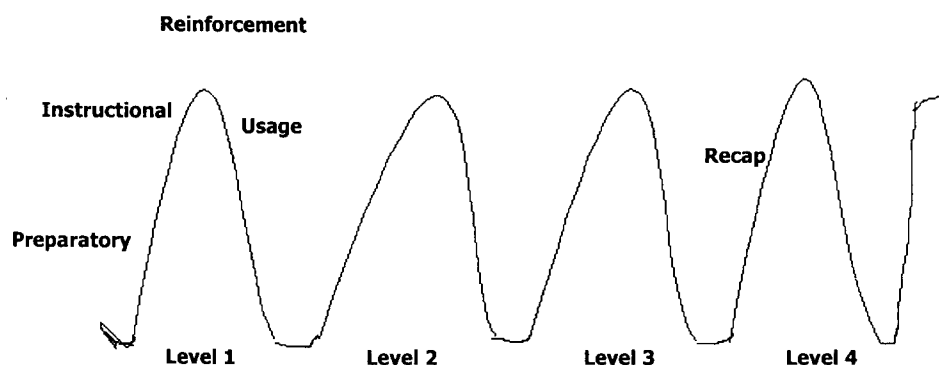
For language, Maths and EVS, the organisation is as follows:
LANGUAGE: The teaching of language is divided into 10 levels.

Each level has a set of activities associated with it which can be classified into the following categories:

- Preparatory
- Instructional
- Reinforcement
- Usage
- Evaluation

At each level a set of letters is dealt with. At the next level, the same type of activities are done with the next set of letters. The activities include stories, songs, picture-word matching, word games, drawing of letters, use of stencils, and so on. At the end of every third level there are activities to recapitulate the previous three levels. The activities are sequenced and can be done only in the specified order. There are a total of 151 activities for language distributed over the 10 levels.

MATHEMATICS: In mathematics the process is the same as for Language. The number of levels is seven. At the first level children work with numbers 1 to 5, at the second level with 6 to 9, and so on.

Activities are again classified in the five categories mentioned above. At every level there are activities designed for learning counting, ascending and descending order, addition, subtraction and more-less-equal. The total number of activities is 100.

EVS: EVS is not divided into levels. Nor does the teaching-learning of EVS take place in groups. This subject is done with the class as a whole. There are a total of 99 activities for EVS.
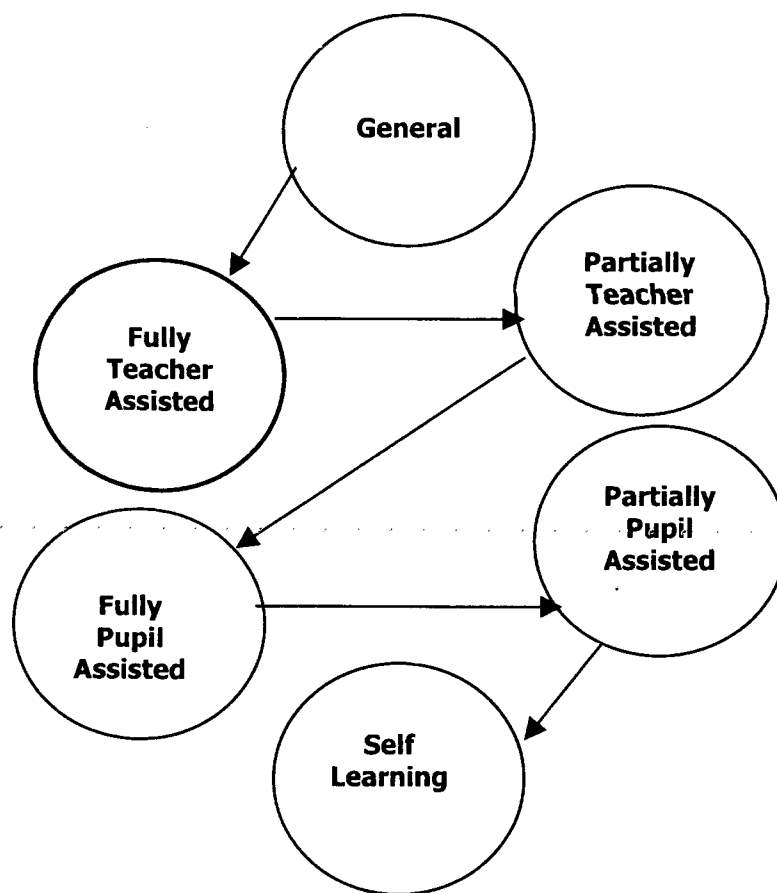
Grouping

At any stage of the subject, the children of a class may be found in any of the six groups shown above. They also move from group to group as shown by the arrows. A child stays in a group for as long as it takes for her to master the activities in that group and then moves on to the next. Children are grouped on the basis of their level of learning, not age, ability, gender, caste etc. In the first group i.e. the ëgeneralí group children do some preliminary, warm-up activities. From here those who move to the ëfully teacher assistedí group begin learning some new skills and

concepts with the help of the teacher. Those who master these skills and concepts go to the ëpartially teacher assisted groupí and do activities which are relatively more independent. In the third and fourth groups older pupils help the newcomers. By the time the children reach this last group they are assumed to have reached the stage of learning on their own. Pupils may be in different groups with respect to different subjects.

Grouping

This manner of grouping is supposed to take care of the multilevel situation that exists in every classroom, and differing paces of learning amongst children. Notably, children are grouped according to levels of learning across classes.

Apart from this there the other significant features of the Nali Kali approach are:

Progress Chart: Every classroom has a specially designed progress chart put up

which enlists all activities in sequence and provides space for each child to mark progress. The children mark their progress on their own .

Weather Map: In each classroom a weather map is also displayed on the wall in which on a daily basis children record information about the sky conditions (sunny/ cloudy/ partially cloudy/ etc), wind direction, temperature, etc.

Health Check up: Weekly health check ups are to be done for all the children, including their personal hygiene.

ëLearning Ladderí Teacherís Register: Each RP & teacher has a reference register which contains details of all the activities along with the sequence right from day one in the class. It also explains in detail how to work with the material that is to be used for each activity. As mentioned, the sequence of activities and the material to be used is predetermined and cannot be changed. The evaluation process is also included in the register. The register guides the teacher day by day and activity by activity as to how to work with children in the class. This sequence of learning is also referred to as the ëlearning ladderí.

ABBREVIATIONS

ADEI	:	Assistant District Education Inspector
AEO	:	Assistant Education Officer
AP	:	Andhra Pradesh
APPEP	:	Andhra Pradesh Primary Education Programme
A.M.	:	Anti Meridiem
BAC	:	Block Academic Coordinator
BEO	:	Block Education Officer
BLRG	:	Block Level Resource Group
BRC	:	Block Resource Centre
BRG	:	Block Resource Group
BTC	:	Basic Training Centre
CRC	:	Cluster Resource Centre
CRG	:	Cluster Resource Group
CRP	:	Cluster Resource Person
CS	:	Curricular Statements
DIET	:	District Institute of Education & Training
DLRG	:	District Level Resource Group
DPC	:	District Project Coordinator
DPEP	:	District Primary Education Programme
DPO	:	District Project Officer
DRG	:	District Resource Group
DSERT	:	Directorate of State Educational Research & Training
Ed.CIL	:	Educational Consultants India Ltd.
EGS	:	Education Guarantee Scheme
EVS	:	Environmental Science

GLPS.	:	Girl's Lower Primary School
HQs	:	Headquarters
IED	:	Integrated Education of the Disabled
KSSP	:	Kerala Shastra Sahitya Parishad
LPS	:	Lower Primary School
MGT	:	Multigrade Teaching
MHRD	:	Ministry of Human Resource Development
MLL·	:	Minimum Levels of Learning
MP	:	Madhya Pradesh
MRP	:	Master Resource Person
NGO	:	Non Government Organisation
P.M.	:	Post Meridiem
PS	:	Primary School
PTA	:	Parent Teacher Association
PT	:	Pupil Teacher Ratio
RP	:	Resource Person
SCERT	:	State Council for Educational Research & Training
SIs	:	Sub Inspector of Schools
SMART-PT	:	Statewide Massive & Rigorous Training for Primary Teachers
SOPT	:	Special Orientation for Primary Teachers
SPO	:	State Project Office
SRG	:	State Resource Group
TC	:	Teacher Centre
TLM	:	Teaching Learning Material
TSG	:	Technical Support Group
TRSG	:	Technical Resource Support Group
VEC	:	Village Education Committee
w/s	:	Workshop

DPEP

जिला प्राथमिक शिक्षा कार्यक्रम
DISTRICT PRIMARY EDUCATION PROGRAMME

सत्यमेव जयते

Department of Elementary Education and Literacy
Ministry of Human Resource Development
Government of India