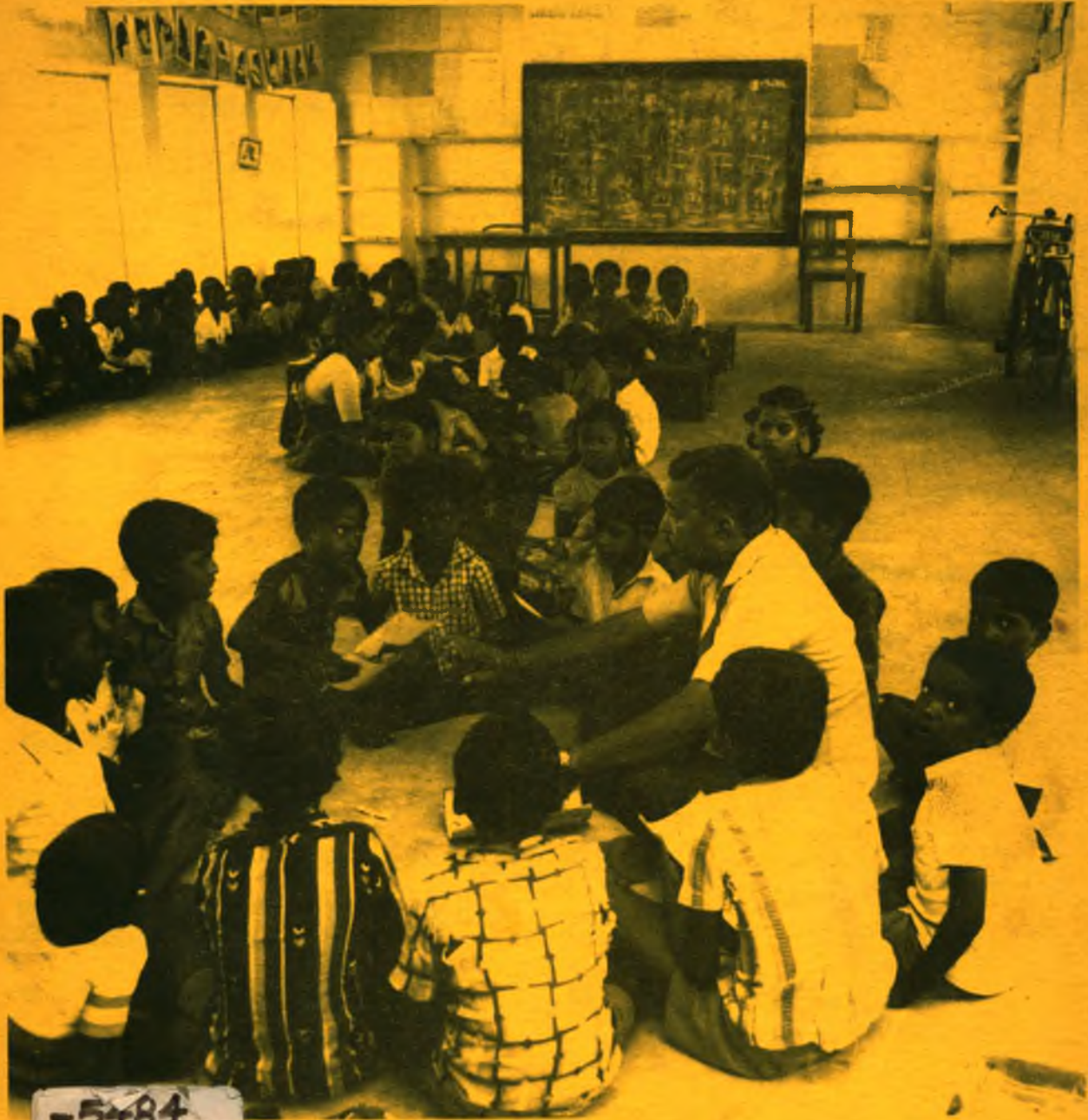


FOR REFERENCE ONLY

INDIA: PRIMARY SCHOOLS PROJECT, ANDHRA PRADESH



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TRIPARTITE REVIEW OF PILOT PROJECT

HYDERABAD

JANUARY/FEBRUARY 1987

**PRIMARY SCHOOLS PROJECT IN INDIA:**

**TRIPARTITE REVIEW OF PILOT PROJECT, ANDHRA PRADESH, 27 JANUARY - 6 FEBRUARY 1987:**

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#### **ACKNOWLEDGEMENT FROM THE BRITISH TEAM**

We would like to express our warm appreciation for the hospitality and generous assistance given to us by our hosts, the Government of Andhra Pradesh; to the Staff of the Project Office, Hyderabad for their dedication in responding to our needs, and to the teachers, parents and children of Andhra Pradesh for receiving us with such enthusiasm.



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## 1. SUMMARY REPORT

1.1 In 1983, the Indian and British Governments agreed to carry out a primary schools building project in Andhra Pradesh. The objective was to improve the quality of primary education by designing and building new classrooms in rural areas and combining this with a programme of in-service training in child-centred techniques for class teachers, head teachers, school inspectors and district education officers, which would significantly alter the traditional way of teaching at primary level. There was no attempt to change the curriculum. 11 districts out of a total of 23 in Andhra Pradesh were chosen to participate in the project.

1.2 British assistance has amounted to £1,000,000 in local costs assistance for construction work and in-state training; and over £300,000 in technical cooperation for training in the UK and short term consultancies. Normal practice requires the State Government to be responsible for 30 per cent of local costs expenditure.

1.3 Project headquarters were set up in Hyderabad and a project team assembled. This was made up of a project cell, covering all aspects of the Human Resource Development Programme (supported by the University of London Institute of Education) as well as project management and financial control; a design cell responsible for the design of various types of school buildings needed to accommodate differing soils, climate and cultures etc; and an evaluation cell to monitor project implementation throughout and to provide project data for performance analysis (supported by Professor Colin Lacey, University of Sussex).

1.4 The Pilot Project finishes on 30 April 1987. The main purpose of this review is to assess the success and impact of introducing purpose-built primary school buildings and child-centred learning methodology into Andhra Pradesh in order to reach conclusions on whether and how further financial resources might be allocated to primary education projects in India.

1.5 The review was undertaken by representatives from Union and State Governments and ODA. The team travelled widely in Andhra Pradesh to see project schools already housed in their new buildings; project schools using new teaching techniques in existing buildings and non-project schools using traditional

teaching methods. The team also had the honour of being received by the Chief Minister of Andhra Pradesh, Sri N T Rama Rao.

1.6 The Review Team were impressed by the enthusiasm, dedication and hard work shown by teachers adopting the new techniques. The project schools displayed fine collections of the children's work, in startling contrast to non-project schools where children play a passive and sometimes silent role in lessons. The Human Resource Development programme is well planned in a 3-tier structure of in-service training at state, cluster and block levels. This is combined with resource centres where teachers meet monthly to exchange ideas. Progress, as expected, is uneven; some schools have already achieved remarkable results, others are slower. After some initial difficulties, the building programme is now beginning to flourish and all new classrooms (200 in this phase) are expected to be in use by September 1987. Whether the combination of new teaching methods in purpose-built schools will have a lasting effect on school drop out rates and the retention of pupils, both of which are strongly affected by local socio-economic factors, will not emerge from some time. But, as a pilot project, the Andhra Pradesh Primary Education Project (APPEP) operating in poor, often isolated, rural communities, is a notable success.

1.7 The Review Team, required by its Terms of Reference to provide proposals for future activities, proposes a bridging period from 1 May 1987 during which the achievements of the pilot project can be consolidated and preparations for major 3-5 year state-wide project can be undertaken. The replication of the pilot project in another state should be considered by the Indian and British Governments.



## 2. TERMS OF REFERENCE FOR THE REVIEW

### 2.1 General:

To evaluate the success of Phase I of APPEP and on the basis of that evaluation determine whether further phases should be undertaken and, if so, discuss with GOI what form these phases should take.

### 2.2 Specific:

#### 1A. To assess the success and viability of the building programme:

- i) Has money for buildings been properly disbursed?
- ii) Has experience demonstrated some designs to be superior to others. In particular have they encouraged teachers in their task of providing child-centred learning?
- iii) Has a satisfactory procedure for design and construction been established on which a future programme might build and expand?
- iv) Compare the cost-effectiveness of project buildings with other GAP Primary School buildings.

#### 1B. To assess the success and viability of human resource development.

- i) Has training in UK served the purposes envisaged?
- ii) Has the 'cascade' principle of training through state level, cluster level and block level courses produced more effective teaching in the schools and has any effective contribution been made by ULIE trainers to in-India training?
- iii) Has provision of minimal resources (at Rs.500 per school per year) been demonstrated to make a difference?

iv) Have teachers' support materials provided through the project been of benefit?

1C. To assess priority needs of GAP and GOI in primary education and where U assistance could be most effective.

i) Balance between resources for buildings, for human resource development and inputs like equipment, software and curriculum development.

ii) Balance in the project between classes 1-5 and classes 6-8.

iii) Balance between extension of the project in existing clusters and new clusters in AP.

iv) Possible extension to other states.

### 3. EVALUATION OF THE PILOT PROJECT

#### 3.0 INTRODUCTION

3.01 In an Exchange of Notes dated 20 April 1983 the British Government agreed to make available to the Indian Government a total amount of £1,000,000 to finance the cost in India of Phase 1 of the Primary Schools Project. The allocation was made out of funds available under the United Kingdom/India Local Costs Grant 1981. A further sum of £300,000 was provided for Technical Cooperation. The objective of the Project was to help improve the quality of primary education in Andhra Pradesh. This was to be achieved by means of an integrated 3-year programme incorporating the design and construction of schools, in-service training of class teachers and inspectors and an evaluation of the impact of this help. Whether and how a further sum of £14 million should be allocated would be assessed on the basis of experience with Phase 1.

3.02 The project was organised geographically to cover four clusters:

- i) Cluster 1 in Telengana Region: comprising Ranga Reddy, Medak and Nalgonda Districts.
- ii) Cluster 2 in Telengana Region: comprising Khammam District.
- iii) Cluster 3, in Rayalaseema Region: comprising Chittoor, Cuddapah, Ananthapur and Kurnool Districts.
- iv) Cluster 4, in the Coastal Region: comprising Srikakulam, Vizianagaram and Visakhapatnam Districts.

A map showing the location of these clusters is provided at Appendix 1.

3.03 The School Building Programme set out to provide primary school classrooms of a superior design in a pucca (permanent) building. The design work was the responsibility of a Design Cell set up in the Project office, Hyderabad, which operated with the assistance of ODA's Architectural Adviser and a UK Consultant. To start with, 20 schools in Cluster 1 were constructed; this was known as the 'pilot scheme'. It was decided that construction of classrooms would be

restricted to 11 districts (out of a total of 23 in Andhra Pradesh). The main criterion used for choosing sites was that they should cover a wide range of different environmental, climatic, social and cultural conditions for which different building designs could be tried out. The Government of Andhra Pradesh construction agency, the Panchayat Raj Department (PRD), constructs the school buildings. It was envisaged that about 90 schools (up to 200 classrooms) would be provided.

3.04 The Human Resources Development Programme set out to enhance the quality of the work of teachers and teacher educators through training in the UK, in-country training programmes at state, cluster and block level, teachers' centre meetings and the production of handbooks for teachers and inspectors. Both the University of London Institute of Education (ULIE) participated in these activities. Schools are classified as pilot schools (those with a new building and a human resource development programme); project schools (those with a human resource development programme some of which may have a new building under construction); non-project schools (those which have not participated in the project). In all about 330 primary schools were expected to benefit from the teacher training programme.

3.05 In order for the review of the project to be successful it was essential that data needed for the assessment of all the elements of the project should be prepared for members of the tripartite team to study in advance of the review. Essential data is contained in the Project Report (1984-85) to (1986-87) which is reproduced in a separate Annex. The Project Report consists of two chapters: the first is a detailed description of the project since its inception covering human resource development, school buildings construction, project administration and finance. Chapter 2 covers the work of the Evaluation Cell which was set up to investigate and assess the impact of the project. The report is generally comprehensive although certain areas identified for investigation in the Aide-Memoire produced during the 1985 Monitoring Review of the Primary Schools Project (paragraphs 43-45 of that document) need further clarification and investigation notably:

- (a) The cost of buildings in relation to their location and availability of materials.

- (b) The cost and physical information on schools built to specifications other than those built by the project.
- (c) The collection and study of historical data on enrolment.
- (d) A study of the changes in enrolments during the day, noting differences between project and non-project schools and the impact of schools offering mid-day meals.
- (e) An investigation into the incidence of children repeating a class.

Where possible an attempt has been made to address some of these issues during this evaluation (see Appendix 4.II).

3.06 The first phase of this project ends on 30 April 1987. It has been monitored throughout by the Project Office in Hyderabad and ODA officials and Advisers. This Tripartite Review now attempts to analyse what has been achieved during Phase 1 and to relate this experience to proposals for future assistance.

### 3.1 SCHOOL BUILDINGS CONSTRUCTION PROGRAMME:

The building programme began with the construction of 20 schools (45 classrooms) in Cluster 1 using a preliminary design guide produced by ODA's Architectural Adviser. Following the establishment of the Design Cell a British Consultant, Gerard Brigden, visited the project in September 1986 to produce a Design Guide. This defined the physical and education parameters relevant to the design of primary school buildings in the State - as envisaged in the original project appraisal. 65 schools (155 classrooms) based on these guidelines are being constructed. This contributed to some delay in the construction programme which has been exacerbated by local strikes. However, building work is now proceeding at a satisfactory rate.

1A. We assessed the viability and success of the Building Programme by looking at the disbursement of funds for construction, the experiences of the Design Cell, and the cost effectiveness of buildings compared with other non-project primary school buildings.

- i) Authority to incur expenditure is given to the Panjayat Raj Department (PRD) on the basis of detailed estimates based on full quantities and standard rates. Against this, final costs and variations from the estimate can readily be checked against other buildings, given the limited range of type designs being used. Each one cross checks against earlier costs for the same building and there is little margin for variation from the norm which cannot be justified. Unit costs have averaged out lower than those currently being used by Government of Andhra Pradesh in planning non-project primary school buildings. On the basis of this information we believe that the funds for building have been properly disbursed.
- ii) With so few of the pilot project buildings in use it is not possible to define a "best-buy" from the current designs. Each has minor problems (for example storage facilities) which can be resolved without difficulty when the education and function aspects have been given further consideration. What is now available is a solid foundation of design experience on which a limited number of firm alternative designs for differing conditions can be readily developed.
- iii) The Design Cell has only been staffed and operational in its present form for about nine months. It is still below the necessary complement for it to be fully effective, and to take over some of the essential functions which, through necessity, have at present been delegated to the PRD. This inhibits the Cell's ability to design possibly more cost-effective and maintenance-free buildings than has up to the present. However the essential nucleus is now there for any extension of its responsibilities.
- iv) As all the present designs produce an improved educational and climatic environment in the building, and enable the teachers to bring into effect their enhanced training more effectively, at costs comparable to the "traditional" designs being built outside the project, they must be considered to be cost-effective. The responses from pupils, teachers and parents to the new designs as determined by the Evaluation Studies (these are provided in the Annex to this Report), have been positive.

3.1.2 The Project school buildings are generally accepted as an improvement on previous designs, even though so few are complete. The Director of School Education confirmed to the team that project designs, or subsequent improved designs, will be used for all the GAP funded primary school buildings and will be proposed for those funded from other sources. Later discussions in Delhi with Mr B S S Murthy, Adviser (Engineering), Department of Rural Development confirmed that there were no objections to GAP using the Project design for primary school buildings financed under the National Rural Employment Programme (NREP) and the Rural Landless Employment Guarantee Programme (RLEGP), both funded by GOI, provided costs were similar.

3.1.3 In order to visit as many school buildings as possible, both finished schools and those under construction, the team divided into two groups. The ODA Architectural Adviser joined the second group and examined buildings under construction in Kurnool and Chitnoor. His detailed notes are attached as Appendix 2 (I) and 2 (III). The first group, without a specialist adviser on buildings, used a simple checklist. The results of these investigation are set out in Appendix 2 (II).

### 3.2 HUMAN RESOURCE DEVELOPMENT:

3.2.1 Monitoring and evaluation of this aspect of the project has, from the beginning, been a major concern of the Evaluation Cell which was set up especially to ensure that every aspect of the programme should be carefully and comprehensively considered. This cell has had the assistance of Professor Colin Lacey, Professor of Education at Sussex University, in determining the format and scope of the investigation necessary to produce authoritative evidence on which decisions could properly be based.

3.2.2 The basic data on which their final report is based are given in a series of "Analysis Reports" titles of which are listed at Appendix 4 I - (The Analysis Reports themselves are available in the Annex attached to this Report) as a separate Annex). The Evaluation Cell Report forms Chapter II of the document entitled PROJECT REPORT (1984-85 to 1986-87). This is also reproduced in full in the Annex to this Report. It outlines the design of the Evaluation Cell's work, the methods used in determining the various samples taken, the processes of evaluating the various components of the "Cascade" system of training, the

details of questionnaires submitted to administrators, supervisors, head-teachers, class teachers, community representatives and children. It then reaches a number of clear conclusions and suggestions for further investigation and possible improvements.

3.2.3 The conclusions covering general developments are reproduced in full below:

"The Andhra Pradesh Primary School has achieved substantial success in almost all the human resources development aspects of the Project. In the areas of recruitment, attendance, and retention rates, the pilot schools show a distinct if moderate superiority over other project schools and non-project schools. It is in these pilot schools that the project is most developed. They possess the advantages of a new school building, retrained staff, a supply of teaching material and an improved teacher/pupil ratio. The other project schools have yet to demonstrate these indications of success over non-project schools.

In the area of implementation of project pedagogy in the classroom there has been substantial all-round project success. Every indicator of classroom activity, whether this is reported by the teachers themselves, the project staff acting as observers; local inspectors; the parent in interviews; the pupils in interviews or by teacher trainers engaged in small research projects, has demonstrated that the major pedagogic aims of activity and group-based learning are being practised. These styles of teaching, which make use of the local environment and involve the child in modelling and problem-solving are quite new. The traditional pedagogy continues in the non-project schools and there is little evidence of contamination. This points to the fact that the retraining programmes and in-service support, along with the material resources are all part of a package, essential for the success of the project".

3.2.4 In the face of the evidence presented by the Evaluation Cell (which exceeds by far in quantity, depth and thoroughness that which is usually available to any review team) we felt that our most useful contribution would be to visit a sample of schools, and within this sample to investigate particularly the effects as seen in the classroom of the six major aspects of pedagogical



improvement that have been the priority concern of all involved in the Human Resource Development component of the Project. These are:

- i) Active learning
- ii) Individual differences
- iii) Practical work
- iv) Utilisation of the environment
- v) Working in groups
- vi) Display

At the same time we decided to enquire into the supply of materials and the effect of these on the teaching environment, and to ask teachers directly about in-service teaching provision. A detailed account of our observations is attached at Appendix 3 II; a summary of our impressions is given in the following paragraphs.

3.2.5 The over-riding impression is that the availability of simple resource materials for the first time has revolutionised the concept of teaching, giving the teacher an awareness of many more "possibilities" than before, and giving the children the chance of doing rather more than listening, repeating, memorising and re-gurgitating either orally or on paper. The "domino" technique of question and answer had found a very ready response; clay modelling has been used to very good effect in many schools: and there is some evidence, but not yet as much as is possible or desirable, that the use of squared paper can help dramatically in the teaching of much of the mathematics syllabus.

3.2.6 Of the six changes in attitude and performance the most immediately apparent is that of display. The walls of project schools offer a marked difference in attractiveness and stimulation from the majority of non-project schools. The danger at the moment is that posters/aids may be made by the teacher more to impress the visitor than to contribute substantially to the children's learning and activity.

3.2.7 The concept of group work has also been widely accepted. In this case there is also a danger that it is used even in cases where it is not appropriate. There do remain occasions when full class teaching is the most effective form available. The skill of the teacher is in knowing when to apply each technique.

3.2.8 In many of the schools we visited it is clear that children have been encouraged to bring things of interest to the classroom and to contribute to the collection of counters of various sorts, eg pebbles, shells, used matchsticks, bottle tops. Some of these have been used with imagination and skill. Likewise it is clear that the environment round the school is gradually being considered as a resource, providing a suitable focus of study in itself, as well as being a source of materials for the study of other topics.

3.2.9 Practical work at the moment is confined in some cases to painting and model making, both from clay and other materials. In schools from Cluster III there was very little evidence of any serious attempts at measuring, recording and disseminating on the part of pupils, but the situation was markedly better in Clusters I and IV. Work cards have not been as enthusiastically espoused as posters!

3.2.10 The concept of "active learning" is that the child is mentally active in his/her own learning. The need therefore is to provide stimuli which encourage children's curiosity and active questioning. There is still too little opportunity for the child to try to express in his own words what he has done, what he has found out, what he has found interesting, what he does not understand. Questions by the teacher are still almost exclusively of the type that have one answer, and that answer is predetermined by the teacher. Though such questioning and answering are an important part of the total learning process, they should not form the total interaction between teacher and child.

3.2.11 Provision for individual differences is the least developed of the six skills encouraged by this project. Even at the stage of comment on work done by children, and careful consideration of mistakes as a possible source of misunderstanding, there is much room for improvement. Thoughts about modifying presentation according to student ability, in most cases, is still a long way off.

3.2.12 By way of contrast, one team also visited a non-project school. While having facilities which were similar to the project schools without new buildings there was a striking difference in student activity. Students were sitting in rows, segregated by sex, either reading from a text book, listening to a teacher or reciting. Apart from the odd photograph, bare walls surrounded the class

there were no displays of any kind. Student activity was limited by the lack of materials. It was reported that this was a good school, with pucca buildings providing either a classroom or verandah and a teacher for each class. From this base line one can see how much the project has already achieved.

3.2.13 Similarly a short visit to a Teacher Training Institute highlighted how few of the project ideas have percolated to pre-service training. Only in the pilot schools did we see all aspects of the human resource development programme working well. Without sufficient teaching space, display area and storage facilities, opportunities for students learning appeared restricted.

3.2.14 In the light of its experience the team has no hesitation in confirming the conclusion drawn by the official Evaluation Cell Report and in particular the statements quoted in paragraph 3.2.3 above.

3.1.15 We turn now to each of the specific Terms Of Reference relating to human resource development:

(i) UK Training

During the first two years of the project (1984-86) thirty Teacher Educators and Inspectors were trained in Britain. However on their return, as inter-regional transfers are very difficult, the Department of Education could not post eleven of them to Project districts. The Project however has made excellent arrangements to use the other nineteen in follow-up activities and in Teacher Centre meetings. Moreover, in 1986, the Project Director restricted candidates to the eleven Project districts alone and made his selection following a seminar-cum interview. Those selected were released from their regular work and put in charge of two Project Schools for a month. After this familiarisation exercise they went to University of London Institute of Education (ULIE) for a three months course. On return they were assigned on-the-job training for three months, again attached to Project schools. During our visits to Andhra Pradesh project schools we met a number of returned study fellows and were able to get first hand information regarding the training they had in ULIE and in India. The team found that this component of the Project has been largely satisfactory, particularly in the revised format described above which is considered very effective.

(ii) The Cascade Approach:

The UK specialists were directly involved in courses conducted at the state and cluster levels. There is considerable evidence to show that these courses were well organised and effective. But the findings of the evaluation show that the teachers of project schools were not so satisfied with the block level courses. This deficiency was largely rectified in 1986 by the following support activities:

- a) At least one UK trained person was involved in each course conducted at block level.
- b) Thirty four enterprising teachers were directly trained by UK specialists at a workshop conducted in Hyderabad. These teachers play a leadership role in teacher centres and block level courses.
- c) The returned study fellows are asked to make more frequent visits to project schools and to Teachers' Centre meetings.

(iii) Consumable materials for project schools:

Rs.500/- worth of materials such as paper, cardboard, crayons etc has been supplied to project schools. The team was satisfied that schools were making good use of this provision. Though this contribution is very small it has brought about a dramatic and favourable change in class room practices.

(iv) Teachers Support material:

The Project Office has distributed the recently produced Teacher's Handbook to all the project schools. This material is well used and it was found to be an effective tool for introducing activity based learning. Teachers send regular feedback regarding this material to the Project Cell. Apart from the Teacher's Handbook, other support materials such as newsletters and guidance notes are sent to project schools on a regular basis. They are also of great value to practising teachers.

### 3.3 PROJECT ADMINISTRATION

3.3.1 Initially a project coordinator was appointed by the Andhra Pradesh Government to operate from the State Council of Educational Research and Training (SCERT). In 1984 three cells were created to implement, monitor and evaluate the project; the Project Coordinator's Cell, Design Cell and Evaluation Cell. The post of Project Co-ordinator was redesignated as Director in January 1985 and the Project Office was firmly established in accommodation separate from SCERT in the same month.

#### Project Directors' Cell:

3.3.2 The Andhra Pradesh Government has recently designated the Project Director as a separate Head of Department under the Education Department. The Cell has a total complement of 16, equally divided between operational and ancillary staff. Four lecturers for the HRD programme are attached to the Project Director's Cell. The post of Administrative Officer, which was agreed at a meeting between the Principal Secretary and the Monitoring Review team of November 1985, was filled in March 1986 and has had a positive effect on office management and financial administration. However, any extension of the project would require some strengthening of staffing levels to provide an optimum level of effective management.

#### Design Cell:

3.3.3 The Design Cell, after a shaky start has now settled down with five out of a total of six approved posts filled. A new Assistant Architect was appointed in June 1986. The Junior Scientist post remains unfilled. The Monitoring Review of November 1985 made it clear that Project management should be able to undertake regular monitoring of building contracts, in order to identify and correct problems as they arise and before the buildings are reported as complete. Proposals for the creation of three Assistant Engineers were not submitted to the Andhra Pradesh Government for approval until October 1986. This has proved late for the effective monitoring of construction work, which these appointments should now make possible.

Evaluation Cell:

3.3.4 During 1986 the post of Junior Assistant (with some knowledge of typing) has been filled. This, together with the purchase of a jeep for the cell and extra storage space for evaluation studies has greatly increased the overall efficiency. There is still a lot of work to be done, and future demands on the Evaluator for any extension to the project, and for monitoring other developments in primary education in Andhra Pradesh for the Department of Education, will be heavy. The early appointment of a Statistician would facilitate matters.

State Level Steering Committee:

3.3.5 The Aide Memoire which followed the November 1985 Review suggested that the State Level Steering Committee should be reconstituted under the Chairmanship of the Chief Minister of Andhra Pradesh rather than the Principal Secretary, Education Department. The objective was to ensure the effective implementation of the Project. The Government of Andhra Pradesh rejected this recommendation but compromised by reconstituting the Committee under the chairmanship of the Minister for Education. This is a welcome move and clearly demonstrates the Government's commitment to the Project. The Committee is convened at least three times a year. In addition to the high-level committee there are District Steering Committees chaired by the appropriate District Collector with two members, the District Educational Officer and an Executive Engineer from the Panchayat Raj. These committees sort out problems at a local level.

#### 3.4 FINANCIAL RESOURCES AND MANAGEMENT

3.4.1 In support of the Andhra Pradesh Primary Schools Project the ODA committed £1 million for local expenditure and £300,000 for training in the UK and consultancies. Local expenditure is claimed by the Government of Andhra Pradesh from the Government of India less 30 per cent which is the State Government's own contribution to the Project. The Government of India claims full local cost expenditure from the UK. The State must provide in its budget for the entire costs of the project.

3.4.2 The breakdown of amounts sanctioned and spent on the project in 1984/85, 1985/86 and 1986/87 (up to 31 January 1987) is recorded at Appendix 5. The

gives a total amount sanctioned of Rs.17,467,451 and an amount spent of Rs.14,096,402, which represents £895,767 and £722,892 respectively at £1=Rs. 19.50. Data for 1986/87 is still incomplete, as much of the human resource development expenditure has yet to be provided. Taking this into account, the total amount of expenditure by 30 April 1987 is likely to be at least £750,000. To date about £600,000 of claims for reimbursement have been received by the ODA. The Project Office is confident that the total amount sanctioned will be the equivalent of £1 million although local cost claims may not be received by ODA for payment until F/Y 87/88.

3.4.3 Much of the delay in expenditure relates to the time-consuming financial procedure where a proposal for the sanction of expenditure takes about 2-3 months to be processed and obtained. The pressure on the Project Office has been eased by the appointment of an Administrative Officer with experience of government financial procedures, as recommended by the ODA monitoring team of November 1985. However, there is still room for improvement in the disposal of funds. The present ODA team considers that a small bank account, opened for the Project for day to day expenditure, would be a most useful facility; this is the practice in some other projects. Management of the account would seem appropriate for the Project Director, which is a post equivalent to a Head of Department in the Ministry of Education.

3.4.4 Under the technical cooperation element of the Project ODA has disbursed funds as follows:

	84/85	85/86	86/87	87/88	Totals
Consultants		2,410	6,764		9,174
Experts		6,815	5,942	17,250	32,264
ODA Advisers ) and Aid Administration )		6,821	13,452		18,016
Training in UK		-	132,000	140,000	272,000
<b>Totals</b>		<b>16,046</b>	<b>158,158</b>	<b>157,250</b>	<b>331,454</b>

The 1985 Monitoring Review of the project recommended that the HRD programme should continue until April 1987. Provision above the £300,000 ceiling for TC was made available.

3.4.5 In accordance with the Phase I agreement, an audited statement for the project will be prepared and an auditor will visit Panchayat Raj in May/June to collect statements. These statements will take some time to process, but should be available for scrutiny by GOI and ODA by the Autumn of 1987.

#### 4. PRIORITY NEEDS IN PRIMARY EDUCATION

##### ANDHRA PRADESH

4.1 At a meeting held on Monday 2 February 1987 in the Office of the Directorate of School Education the following papers were considered: a document outlining allocations for elementary education during the VIIth Five Year Plan (1985-1990), plans for the universalisation of Elementary Education, notes on the construction of primary school buildings; the Five Year Plan programme for SCER plans for a Teacher's Academy in Andhra Pradesh and brief statements about Non-Formal Education, Pre-Primary Teachers Training and Teacher Training Courses for preparing teachers for primary schools generally. These are the priority areas for Andhra Pradesh.

4.2 The total allocation to the School Education Department of the VIIth Five Year Plan is Rs.13,500 lakhs, out of which allocations for Elementary Education and Non-Formal Education are Rs.5,137.26 lakhs respectively. The aim is 100% enrolment in Primary Schools by 1990.

4.3 Figures showed that actual expenditure incurred during the financial years 1985-86 and 1986-87 was considerably below paper allocation. The reason for this lie in relatively late confirmation of plans and fulfilment of financial regulations, but since the money is "non-recoverable" the loss is substantial. Attempts are now being made to streamline procedures so that once provision is made for a particular project building, permission for spending may proceed automatically.

4.4 In considering the construction of Primary School buildings it was noted that the chief sources of funding lay outside the control of the Directorate, but that in the year 1987-88 it was proposed to build 1000 schools at the rate of Rs.66,000 per classroom using GAP allocations. The Director of School Education gave an assurance that if the Review Report indicated that the new



~~APPEP~~ designs could be erected at the same, or a lower rate than the designs would be used for these 1000 schools at least.

4.5 The plans for the establishment of a Teachers' Academy are still at a fairly early stage. The thought behind this idea is that there should be a single institute responsible for education through all its stages, overseeing curriculum development, managing teacher training, responsible for research, and providing an overall resource to the teaching profession.

4.6 Non-Formal Education has taken on a more central role in the New Education Policy (NEP) of 1986 (see also paragraph 4.9). Plans are to provide education for those not enrolled in the formal system and/or drop-outs. Courses are planned in two phases, each lasting two years - Phase I in 4 six-monthly stages covering the essential ingredients of the syllabus of Classes 1 - 5 and Phase II in 2 one-year stages covering the requirements of Classes 6 to 7. The programme is run at a number of centres with 25 children at each centre. Tutors are paid Rs.105/- per month for Phase I courses, Rs.125/- per month for Phase II courses on the assumption of 2 hours/day for 320 days in the year. A preliminary training programme for tutors lasting two weeks is provided. Administration is in the hands of a supervisor for each block, who in turn report to the District Educational Officer. There are in addition 23 Co-ordinators, one in each of the Teacher Training Institutes.

4.7 Pre-Primary Education: A proposal has been submitted for funding the training of Pre-Primary Teachers at the 3 comprehensive Colleges of Education at Nellore, Rajahmundry and Hyderabad, but to date this has not been agreed. On request, a copy of the syllabus for such training was provided to the ODA team. Work is largely done under the auspices of UNICEF in the Integrated Child Development Scheme (ICDS) programme.

4.8 Pre-service teacher training is now available at 25 Teacher Training Institutes - one in each of the 23 Districts and two specifically for Scheduled Tribes. Emoluments in each are restricted to Rs.150, and staffing is typically a Principal, plus five. There are plans that Teacher Training Institutes (TTIs) should become increasingly involved with in-service work, and as such must become familiar with the approaches advocated by the Andhra Pradesh Primary Education Project (APPEP). It was proposed that a survey of facilities,

syllabuses, and general functioning of the colleges should be carried out by two specialists from UK later in the year and for this purpose a full set of syllabuses and examination papers would be provided to ODA.

## **INDIA**

4.9 A policy statement, issued in 1986, and generally referred to as NEP 1986, (National Education Policy) places a top priority on primary education and aims at providing the opportunity for all children of the appropriate age to attend in classes 1-8 by 1990. In order to achieve this there is to be a considerable emphasis in both formal and non-formal education.

4.10 Central support to the formal education system is intended to be provided by a massive injection of funds under a scheme referred to as "Operation Blackboard". This has as an ambitious target: the minimum provision of a two-roomed, two teacher school within a radius of 1 - 1.5km for each "habitation" (satellite unit to a village). Details have not yet been announced but each State has now submitted estimates of costs to the Central Government.

Mr Veera Raghavan, Special Secretary charged with the implementation of the New Education Policy, in discussions with ODA's Education Adviser, spoke of his interest in the Andhra Pradesh Project in terms of lessons that might be learned and applied, with respect to building design, cost effectiveness, and Human Resource Development. It is apparent, therefore, that APPEP may have far-reaching consequences well beyond the boundaries of Andhra Pradesh.

## **5. THE FUTURE OF UK ASSISTANCE**

### **5.1 RECOMMENDATIONS FOR ANDHRA PRADESH**

5.1.1 From the discussions described in 4 above, it is clear that there are several possible scenarios for future UK assistance in primary education, all of which have attractive elements. There is no shortage of prospective projects. Nevertheless, we believe that from evidence we have collected during this evaluation, an extension of Phase I into a larger scale Phase II project is strongly indicated. This points to:

- (i) extending both the building programme and the human resources programme into 23 districts;

(ii) strengthening the Teacher Training Institutes especially in the area of pre-service training;

(iii) the gradual absorption, both in terms of organisation and financial responsibility, of the Project Office and Human Resource Development programme by the Andhra Pradesh Department of Education, to ensure that the benefits of this project will continue to be available to Andhra Pradesh.

5.1.2 Because a major new project will take some time to set up, we believe it is necessary to provide a means of maintaining and consolidating the achievements of the Phase I project in the construction programme, in human resources development and in continuing support for the Project Office to administer these. The most effective way of achieving this is described below.

#### BRIDGING PROGRAMME MAY 1987/MARCH 1988

5.1.3 We have discussed with the Project Office proposals for a Bridging Programme to cover the period 1 May 1987 - 31 March 1988. The main elements and estimated costs for these are:-

#### Local Costs

1.	Continuation of the Project Cell at a cost of	Rs. 29,75,300
2.	In-country Training	Rs. 15,41,100
3.	Buildings	
3.1	Modifications, repairs, cost over run on Phase I	Rs. 12,00,000
3.2	20 new schools in existing 11 districts each with 3 rooms	Rs. 45,60,000
		<hr/>
	Total	Rs. 102,76,400
	Estimated Sterling Cost @ Rs.19.5 = £1	£527,000

#### Off-shore costs (TC)

		£
1.	20 training awards	140,000
2.	15 Man weeks of consultancies	20,000
3.	Short visits to UK	27,000
4.	Books for the Design Cell	300
5.	Management Costs (British Council)	7,000
		<hr/>
	Total(TC)	194,300
	+	
	Contingency	15,000
		<hr/>
		£209,300

BRIDGING PROGRAMME TOTAL

£736,300

5.1.4 We recommend that early consideration of the detailed proposals for the Bridging Programme should be undertaken by ODA to enable the Project to evolve beyond Phase 1 without a break, prior to the appraisal of a major Phase 2 project.

#### PHASE 2 1988 (3/5 YEARS)

5.1.5 It was not intended that this review would appraise a major new project. Nevertheless, our Terms of Reference ask for an assessment to be made of Phase 1 and, from this, for a guide to be produced to what the form and balance of a future project might be.

5.1.6 The review has established the success of the objectives which were set for Phase 1. Phase 2 is seen as a programme of extension and dissemination. The ability of the Andhra Pradesh Government to utilise and disperse physical and financial resources will be a limiting feature.

5.1.7 The Human Resource Development Programme is seen as the highest priority component in Phase 2. This includes substantial inputs into in-service teacher training, based on the review of teacher training facilities (see paragraph 4.8) which has been incorporated into the Bridging Programme.

5.1.8 With the acceptance of the Project designs as the 'norm' for future primary school building from funds from both Andhra Pradesh and Central Governments, the need for a balance between UK resources for buildings and Human Resource Development, falls away. Under these circumstances, the building programme in Phase 2 can form the balance between the requirements for Human Resource Development and the total financial resources available. We estimate that the annual amount needed for Human Resource Development will be of the order of £900,000 - £1,000,000. Within this amount a sum of £50,000 should be made available for local purchase of equipment, software and curriculum development materials.

5.1.9 We believe that Phase 2 should continue to be restricted to Classes 1-V. We have considered upper primary schools, non-formal education and pre-primary education but have established that the Andhra Pradesh Government do not wish to include these subjects in any extension.

5.1.10 Consideration of both GOI and GAP policy on universalisation of elementary education leads to the conclusion that Phase 2 should be extended geographically from the existing 11 districts to all 23 districts in Andhra Pradesh. This will immediately produce difficulties in communication during Phase 2 and it is probable that the usual three year project cycle will be inappropriate: 5 years is a more realistic time span.

5.1.11 We recommend that ODA mounts an appraisal mission within six months of this report to consider the detailed inputs for Phase 2 on the lines of paragraphs 5.1.5 - 5.1.10 above for submission to the Projects Evaluation Committee in ODA.

## 5.2 RECOMMENDATIONS FOR PROJECT REPLICATION IN INDIA

5.2.1 The original agreement for the Andhra Pradesh Project foresaw the possibility of future phases of the Primary Schools Project being extended to other States. We consider that in order to establish the viability, principles and approach of the Andhra Pradesh project elsewhere, a minimum UK investment of £3 million will be needed.

5.2.2 Moreover, we envisage a pre-appraisal stage as being necessary in order to establish:

- (i) that the State concerned has understood and accepted the problems inherent in the Andhra Pradesh situation;
- (ii) that the State is prepared to establish a Project Cell within their own administrative structure;
- (iii) that the State would be prepared to release project staff for preliminary training in project planning techniques;

and

- (iv) that ODA advisers should conduct a familiarisation visit as early as possible.

## 6. CONCLUSIONS AND RECOMMENDATIONS

6.1.0 Phase 1 of this project has made a substantial impact on the development of primary education in 11 districts in Andhra Pradesh.

6.2 Commitment to the concepts of the project both in terms of building design and activity learning have been demonstrated at all levels from the Government of Andhra Pradesh through to the end-users, the Primary School teachers, children and parents.

6.3 Implementation of the construction programme, after some preliminary difficulties, is now firmly established. It has had a positive effect on primary school design throughout Andhra Pradesh.

6.4 Implementation of the Human Resource Development Programme has outstripped the parallel building programme. Teachers using the new methodology in existing schools (which are sometimes pucca, sometimes kutcha (including thatch) have shown commendable skill in overcoming their unsatisfactory surroundings.

6.5 Project management and financial control has shown a steady improvement during Phase 1. The Project Office is staffed by an enthusiastic and committed group of administrators, specialists and ancillary workers. It will need further strengthening in future activities to maintain its influence and impact. In the future the Project Office should gradually be absorbed into the structure of the Andhra Pradesh Department of Education.

6.6 Future activities for UK assistance should cover:

- (i) A Bridging Programme (May 1987 - March 1988) to maintain present activities beyond the end of Phase 1 (April 1987) at a cost of £750,000.
- (ii) Phase 2 of the Andhra Pradesh project to take effect from April 1988 at a cost of at least £6 million over a 5 year period. A project appraisal mission should take place in September 1987.
- (iii) Preliminary investigations by GOI and ODA into the possibility of replicating the project elsewhere in India.

Review Team  
Hyderabad  
February 1987

# ANDHRA PRADESH

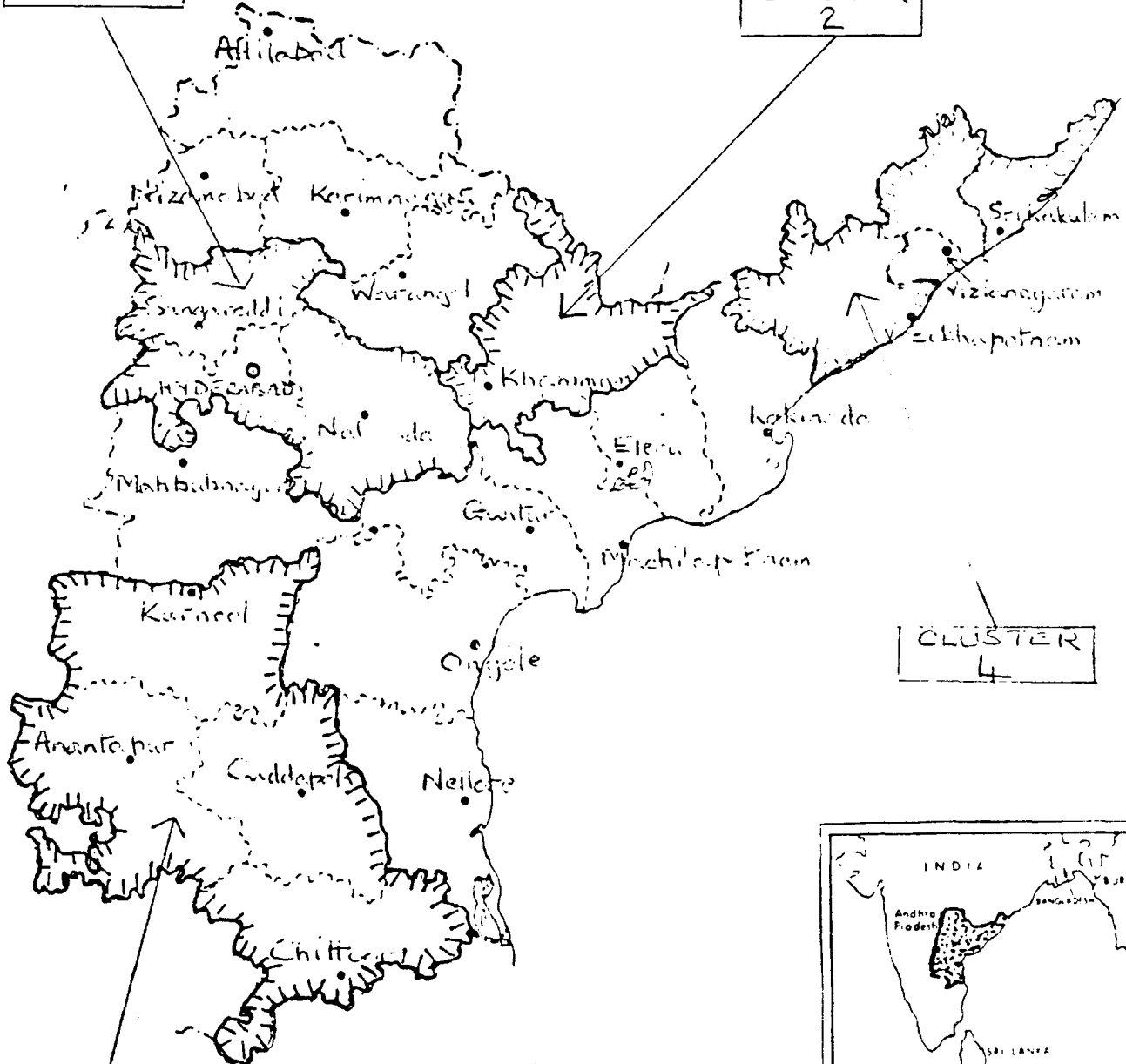
(With District boundaries)

CLUSTER 1

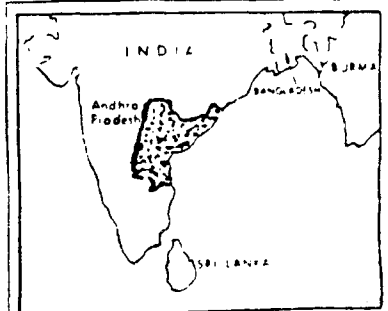
CLUSTER 2

CLUSTER 4

CLUSTER 3



○ State Capital  
● District H.Q.s



SCALE 1 CM = 50 KM.  
0 50 100 200  
KILOMETRES

**GENERAL COMMENTS ON THE BUILDINGS COMPONENT BY ODA ARCHITECTURAL ADVISER**

It is unfortunate that the strike of nearly 2 months in 1986 delayed completion of the remaining buildings, so that we were not able to base comments on an inspection of the various alternative designs actually in use. However, it is obvious that they will all provide a satisfactory teaching environment, even if we cannot yet determine which design, or what combination of design factors, will in the end produce the optimum answer.

2. For these reasons, I recommend that any interim programme, pending the appraisal of a new major project, be considered as a consolidation phase, for reviewing the present designs after examining the completed buildings, for expansion and training of Project Design Cell staff; and for reviewing the pre-contract procedures.

3. The main point which arises from the review of progress and problems to date is the necessity for the Design Cell to take a tight grip on both the design and tenders stages of the work. Most of the problems which have occurred on site appear to be due to either the lack of detailed information supplied to the PR Department or to having left design decisions (such as the structural design) to them, by default.

4. I believe that if cost effective buildings are to be achieved, (and there is potential for further progress in this direction) all the design and information processes should be carried out within the project office.

5. Where building designs are to be used many times over, it is cost-effective to invest time and manpower in ensuring that every aspect of the design is considered; that every part of the building is fully detailed, and that a process of feedback is instituted. This should not only include the general architectural drawing, but the structural design, measurement of quantities and estimating, which are interrelated at every level.

6. Up to the present time these latter activities have been left to the PR Department, and it has not been possible to formalise any feedback on, for example, the cost implications of alternative structures design. Also the tender procedures of the PR Department as far as we can understand them, seem to have a levelling out effect, so that all the different designs appear to cost the same (Rs.6 lakhs per class room).

7. It is agreed that the PRD have the organisation and staff to carry out the post contract phase of the works including the day-to-day supervision and it would be counter-productive to attempt to duplicate this. This, however, should not rule out the possibility of the Project office trying out alternative procedures from time to time, as part of an on-going research and experimentation programme.

The review of the current designs should, inter alia, include the following:

- a. Element by element comparison of each design with the recommendations of the design guide.



- b. Detailed review of the storage requirements of schools, including storage of materials, models, garden tools, sports equipment, maintenance tools and materials, foodstrip for mid-day meals, teachers personal effects, etc as required, and whether the original concept of these for community use has any validity.
- c. Different materials, hanging methods, etc of window shutters; materials and size of doors etc.
- d. High level ventilation facilities.
- e. Pin-up and hanging facilities for display.
- f. Minimum floor level in relation to ground level to reduce cost and minimise steps.
- g. The concept of the "Teaching Station" needs to be reviewed, to ensure that teachers clearly understand how it is supposed to work.
- h. Structural designs to be reviewed within the project to minimise costs.

9. In addition to these, there is now a need to start work on the building handbook described in Chapter D(a) page 20 of the Design Guide.

10. At several schools the area of land provided has been barely adequate to accommodate the new building. I recommend that in future the potential size of the school be determined from school age population data, and that the area of land required be defined as a minimum; to be made available before work starts, and that this be defined on site by concrete pillars as soon as the contractor moves in.

11. The situation as described at Madiledu (Appendix 2.III paragraph B.2) raises an aspect of the project which has not been considered before, ie the condition and continued use of existing buildings on the same site as the new building, which will still be used by the school. Where these have a reasonable life expectancy of, say a further 10 years and improvement can be effected at reasonable expense, as in the example described, I suggest that the cost of this should be included in the project. In any case, bearing in mind the limited maintenance funds available to the Ministry of Education, I recommend that essential maintenance repairs and redecoration, if required, be carried out to (i) extend the life of these buildings, and (ii) to enable all the community to take pride in the whole school, rather than in the new building only, at the possible expense of the older area.

12. Up to the present time Teachers' Centres have operated without any of the special accommodation envisaged in the Pilot Project and this leads the team to suggest that these additional rooms are not really essential to the success of the concept. What might be more appropriate and more cost-effective would be to ensure that each school so designated has at least one double teaching space which would give more working space to those attending the course, and sufficient of the multi-purpose benches pioneered by the project, to seat them; (ie one per two adults). This would have the added advantage of familiarising the teachers with these benches and to exchange ideas on how they can be used.

**SCHOOL VISITS: OBSERVATIONS ON SCHOOL BUILDINGS VISITED BY GROUP 1**

## 1. Cluster 1: (Maheswaram, Sabbararam)

Maheswaram was one of 20 schools built in 1985 in the "pilot" to phase I. Learning space and storage space was considered more than adequate and was being used well. The two elements not liked were wire meshes as windows and an asbestos roof both of which could not prevent the elements from invading. The lavatory was being used by teachers only. There were local superstitions about orientation and changes had been made.

## 2. Cluster 4: (Agraharam, Kanamam, akshiminagar, Beyapalem)

At all sites the main building had priority, with the well (if applicable) and the lavatory to follow later. Construction had reached roof level: only flooring and the roof had to be laid. Quality seemed all right. At one site local material (stone) was being used. All the buildings were orientated East/West. Unlike Cluster I, local villagers did not object to this orientation because of any superstition. Sites selected had enough space around; on most sites schools were being run in Panchayat Samiti buildings and several duplicate National Rural Employment Programme (NREP) school buildings (although smaller in size) were coming up.

3. From research among pupils, teachers and parents in these clusters, it was clear that electricity and lavatory facilities had marginal benefits. None of the project school lavatories were used by pupils. (See also Appendix 2.IV).

4. The new improved building designs were found satisfactory by all, and were regarded as superior to non-project schools.

## SCHOOL VISITS: OBSERVATIONS ON SCHOOL BUILDINGS VISITED BY GROUP 2

## A) KURNOOL

1) Krishnanagar; Mark II, 3 rooms generally completed. This school had been started before the siting could be checked by the Project staff, and consequently the building had been set out parallel to adjacent buildings, rather than to the specified orientations. Consequently there is a problem of sun penetration, though not too serious. Several other changes at the whim of the engineers had been incorporated, such as a roof parapet, although none will affect the function of the building. After work had been started, a decision had been made to divide the internal space into three rooms. The instruction had been verbal, with no explanatory details, and the opportunity to incorporate the maximum storage cupboard space had been missed. No work has taken place yet on the water supply or latrine block, although we were assured that they had not been forgotten.

## Design points for review:

1. Considerable cost of high floor level, and unnecessary by provision of steps.
2. Review function of stores (originally proposed for community rather than school use) and relative requirements/volume of this and teachers room.
3. Resolve detail of function between top and bottom shutters (U-U) and their potential for further shading protection, etc.

2) Hussainapuram: Mark II, up to lintel level. This school is an experiment in the local traditional technique of using Cuddapah stone slabs as a roofing materials, although the PR Department maintain that they will be more expensive than reinforced concrete. The walling will also be in natural stone, unplastered, to obviate the need for periodic repainting. Workmanship is satisfactory; no action so far on toilets or water supply.

## B) CHITTOOR:

1. Kapugimnau: Mark III, 2 rooms up to lintel level. Workmanship good so far. No further comment.
2. Madiledu: Mark II, 3 rooms (2 + 1) up to lintel level. Workmanship good. Part of the allocated site is subject to flooding, and will need to be filled. No latrines have yet been built, but there is a well on the edge of the site. The existing building will be retained as part of the school, in its present form it provides interior accommodation with inadequate lighting, etc. However, there is potential for making a great improvement to this, by opening up the internal spaces, providing additional windows etc. This with some essential repair and maintenance work, will produce a satisfactory building, to relate well to the new accommodation. It would also produce essential storage space missing from the new building. I recommend that this work be included in this contract, (and in others where a similar situation exists) Design points: if this plan is to be re-used, the storage facilities etc need to be reviewed with those of other designs.

3. Kancherapalem: Mark III, 3 rooms up to lintel level. The quality of workmanship is good. I believe that there is a need for ventilation at the highest point of the underside of the roof; this was discussed and modification agreed.

The area of land made available for the new building is barely adequate in spite of the fact that ample land is available on the two sides not boarded by roads. As a consequence of this, the building is less than ideally located, close to the road and nearby housing. In looking at the present school enrollment it is immediately clear that this new building is inadequate to accommodate the 200 (approx) children in standards I-V, quite apart from the fact that the school also has standards VI and VII. To help ameliorate this situation (but not resolve it entirely satisfactorily) it was suggested and agreed that the screen wall, etc opposite the entrance, would be demolished, and the "teacher station" omitted, to provide additional clear floor space for extra groups of children and extra black boards provided. The overall situation needs to be reviewed including the question of whether the existing rented building will need to be retained for standards VI and VII, and possibly IV and/or V also. No latrines have been started but there is a well nearby.

Design Points for review:

1. The concept of the "teaching station" should be treated with caution until it has been discussed with and understood by both trainers and teachers, and one or two stations tried out in practice.
2. Storage facilities in this design are particularly restricted and need to be reviewed in time with other designs.

4. Thondambhattu: Mark I Rev. up to lintel level. Workmanship good, this a modification of the original design incorporating a pitched RC Roof, the cross beams designed by the PR Engineers is massive, due to the use of flat bottom chord, rather than a cranked beam. The Engineers on site agreed to review this design, to effect major savings on concrete and steel.

Again the bare minimum of land has been provided, and there is little or no play space, although we were assured by the Chairman of the Panchayat Samiti that they would acquire some of the adjacent agricultural land wherever it was needed. This is one of the cases where I consider that some additional land is required now and future needs established and earmarked for future acquisition. Design Points: The structural design of this, and all other, buildings should be done within the Project Design Cell, rather than left to the PR department, who neither have any direct incentive to save cost, nor probably the time to research alternative structural solutions.

5. Peddapalaveedu: Mark III, 2 rooms up to lintel level. Good quality work and no problems; the site appears to be of adequate size to accommodate any future extension required.

6. Karakollu: Mark III 2 rooms. Workmanship good, the site is restricted and the building is very close to gravel roads on two sides and dust may be a problem. Play space, gardens etc will probably need to be on land on the opposite side of the main road into the village; on land which we were told is unsuitable for building.

## USEFUL DATA ON THE CONSTRUCTION SYSTEM

1. PRD: The GAP construction agency which constructs buildings in rural areas for GAP and GOI.
2. Schedule of rates: PRD has prepared a schedule for each district giving bench mark costs of materials, transport, labour and construction on the basis of which it would appraise for work executed directly by it (eg, buildings under NREP, RLEGP, VIII Finance Commission).
3. Incentive in remote areas: For each district it has specified locations on grounds of inaccessibility and remittances where it grants a contractor an additional 30 per cent of contract value as "agency commission".
4. Tendering: Because of the scale of its operation PRD do not invite tenders for routine construction but have GAP authorisation to nominate contractors as per its schedule of rates. But for APPEP, GAP have advised them to go for open tender.
5. Supervision: In each district PRD has its structure of engineering staff; in each mandal an engineer, a junior engineer and a works inspector supervise on-going construction.
6. Materials: PRD provides steel and cement to all the contractors constructing; all other materials have to be arranged by the contractors.

## BUILDING COSTS:

The building costs on which the original appraisal was based, in August 1982, were Rs 70 per square foot.

Final cost figures are available only for the initial 20 schools (MK.I). These give a mean unit rate of Rs.111 per square foot, varying between Rs.94 and Rs.125.

This is equivalent to an average cost of:-

Single classroom unit	RS.65,040 (actual 62,000 to 55,000)
2 classroom unit	Rs.1,11,000 (actual 1,23,000 to 1,07,000)
3 classroom unit	Rs.1,55,000 (actual 1,75,000 to 1,65,000)
4 classroom unit	Rs.2,05,000 (actual 2,30,000 to 1,05,000)
5 classroom unit	Rs.2,57,000 (actual 2,53,000)

Unfortunately, under the present PRD system, the Project Office does not receive any cost projections between the initial estimate and the final account. Although tenders have been accepted for the second group of schools, only the initial estimates are available, at RS.60,000 per room ie.

Single classroom	RS.60,000
2 classroom	Rs.1,20,000
3 classroom	Rs.1,80,000

There is no discernable pattern to the variations in the cost of similar units ie location, structural method or materials, on which future project estimates can be based. The only variation identifiable is reflection of the fact that

gross floor area of the units is not in a straight ratio, of 'x', '2 x', '3 x' etc, but  $x+y$ ,  $2 x+y$  etc, where 'x' is the cost of one 20'x 20' teaching space and 'y' is the cost of the two stores which are common to all designs.

Since the majority of schools are of 2 or 3 rooms (3 + 3 out of 7) in a typical district, there is no point in fine-tuning estimates beyond the Rs.120,000 and Rs.180,000 figures that are currently being used, until the Project Office has its own estimating capacity.

All that can be said is that the unit costs achieved so far relate very favourably to the target costs set in mid 1982, and, (for a far more suitable building) are lower than those being used by GAP Ministry of Education in their non-project building estimates, at Rs.66,000 per net classroom (ie with a verandah, but without the Teachers room or store).

### **LATRINES**

The average cost of latrines in project schools comes to RS.12,000 for a simple water flushing toilet, based on the limited number of schools which have a latrine. This cost compares favourably with non-project schools in general, although very few primary schools in Andhra Pradesh have a latrine, on which a comparison can be made. The lack of a suitable water supply has delayed construction of latrines in many villages, and the Government of Andhra Pradesh tends to regard the provision of latrines as a fairly low priority, and have generally not included them in their own primary school designs. Whether or not Phase II of this project should continue to include the provision of latrines should be given some thought. The Evaluation cells report (see the Annex to the report) reveals that in the pilot project (sample A) schools, the latrines have problems over the supply of water and are little used by the children. It will inevitably take time for the children to learn to use a latrine, but the lack of water and general maintenance problems of the latrines may pose a more lasting constraint to their effective usage. The Government of India has made the provision of latrines in primary schools compulsory under their various rural employment schemes, so it is desirable that any ODA funded project should follow suit. However, a poorly maintained latrine may be more of a health risk than no latrine at all, and going by present classroom and latrine costs, the exclusion of latrines would enable 20% more classrooms to be built in a future project.

**HUMAN RESOURCE DEVELOPMENT: COSTS**

The total cost of the HRD component in Phase I comes to around Rs.10 million (£520,000 at £1 = Rs. 19.5). This consists of about £350,000 TC expenditure and RS. 3.3 million local cost expenditure. The majority of the TC expenditure has gone on the training of the project team and teacher trainers in the UK, but also includes the costs of UK consultants who have visited India. The local cost element consists of the state, cluster, and block level training courses, teacher's centre meetings, and the provision of teaching materials to project schools.

The total number of people trained under Phase I is illustrated in the table below:

	1984/85	1985/86	1986/87
UK Training	16	19	20
State level		43	34
Cluster level		95	105
Block level		710	795

At the cluster and block level, many teachers, teacher trainers and educational officers went on more than one course, and so the figures above exaggerate the total numbers of people trained. In addition, the state level course in 1986/87 was a special course to train "strong teachers", and was not the same as the 1985/86 state level course, which was for DEOs and staff at Teachers Training Institutes. The total number of teachers trained at the various levels is 869, which is the total number of teachers in the 328 primary schools served by the project (out of 330 schools envisaged at the start of the project).

A rough indication of the cost per teacher trained can be devised by dividing the total HRD cost by the number of teachers trained. This amounts to a cost of Rs.11,500 per teacher. However, the teacher trainers who attended the UK and state level courses have the potential to train many more teachers than those covered in the project without requiring further training themselves. The cost per teacher trained is thus greatly exaggerated.

The local cost, in India, component of the training cost is about Rs.3,800 per teacher trained, and this is probably a more realistic estimate of the cost per teacher that would be encountered in Phase II.

Whilst these costs are greatly in excess of existing teacher training costs in Andhra Pradesh, the cascade system has enabled the high cost (ie the UK training) element to be kept to a minimum. In future, this element can be further reduced, as the project staff are now virtually all fully trained, and the main future requirement will be to train more teacher trainers, of whom the majority will be able to be trained in India, using UK experts where necessary. In general, the use of UK experts on fairly short term TC assignments is considerably more cost-effective than sending Indian staff to be trained in the UK, and does not necessarily result in a reduction in the quality of the training. A concentration on in-India training, using UK experts where necessary, should thus take up a much greater proportion of the total HRD costs in Phase II than they have done in Phase I, and this will help to reduce the cost per teacher trained.

**SCHOOL VISITS: OBSERVATIONS ON HUMAN RESOURCE DEVELOPMENT**

1. The aim of visiting pilot and project schools was to confirm the validity of the evaluation studies on both the Buildings Programme and Human Resource Development. A check list was developed to enable both teams to collect comparable information.

**AP PRIMARY SCHOOLS PROJECT REVIEW TEAM CHECK LIST**

## 1. HUMAN RESOURCE DEVELOPMENT

(a) Are the teachers involved in the six changes in teaching techniques set out by the project as objectives? Namely:

## ACTIVE LEARNING:

Give examples of specific activities either seen or described.

## OBSERVATIONS:

Students were almost always seen in groups working with various materials. Within a year group students were working on different activities. These ranged from drawing fruits and vegetables, writing out letters with pens, coloured salt or with tamarind seeds to playing mathematical games of 'Bingo' and 'Flick It Over', 'Shove-ha'penny', and Dominoes. The use of materials provided was most evident in these activities as students drew, wrote and calculated.

## PRACTICAL WORK:

What materials, natural or ready made, are being handled by (a) teacher (b) children?

## OBSERVATIONS:

Many of the displays contained ample evidence of children's practical work especially in model making using a wide variety of local materials. Students showed familiarity when asked to demonstrate the use of the simple weighing scales. Examples of student made visual aids on fractions were on display in several schools. These were obviously student made by the variation in style within a school and a few genuine 'errors'. Good uses of grid paper in the teaching of mathematics were evident. Several schools were using teacher made games to encourage language and number learning.

MAKING PROVISIONS FOR INDIVIDUAL DIFFERENCES. Does teacher help with individual problems?

## OBSERVATIONS:

This was one of the most difficult aspects to evaluate. Teachers, Headmasters and Deputy Inspectors of Schools all said that the groupings were heterogenous to enable the slower students to learn from the faster ones. Considering the honesty with which they answered all the other questions, it is reasonable to conclude that this is a normal practice. Extra lessons (probably of the more traditional type) were often arranged for the slower learners, but we were unable



to find out if the teaching methodology was different or just a repetition of what was given to the whole class.

USING THE ENVIRONMENT. Is material brought to classroom or does class go out?

OBSERVATIONS:

Many examples of material from the local environment were on display either as charts (ie seeds, leaves and feathers) or used in model making. Local items such as fruits, vegetables, a cow skull, and simple mathematical apparatus like bottle tops, shells, seeds, sticks were also on display or used in group learning. Several teachers/headmasters said they took children out of the class for some topics and arranged short field trips. Vegetable gardens had been started in a few schools.

DISPLAY How used? How often changed?

OBSERVATIONS:

When entering a project school the most striking impression is one of large amounts of material on display. In several school areas outside the classroom had been used including outside walls and 'washing lines'. While many of the teacher-prepared aids were similar from school to school, a good number of teachers had prepared their own versions and developed new ideas. Many were enthusiastic about the teaching aids both they and their students had developed and they were eager to demonstrate them. Questioning of the students indicated that the displays of their work were between 3-30 days old. Many were able to explain the topic and what they had written or drawn. One student was not persuaded to place ticks in each column of a weather chart, thereby showing his understanding of the use of the chart.

Students were well able to describe the purpose and method of construction of various models they had made.

(b) How has money provided for materials been used? Are materials available and replaceable? Are they actually being used? Have they been replaced if use up?

OBSERVATIONS:

A standard package of materials has been provided by the Project through Deputy Inspectors of Schools. In all cases adequate material had been provided and was replaced when necessary and an adequate stock of materials was maintained in each school.

(c) INSET aspect: Block level course: What form did it take? Ask for teacher description. How actively were teachers involved? Has there been any follow up since block level course ie, frequently of visits by DIS or project team?

OBSERVATIONS:

Only one or two recently transferred teachers had not attended Block level training courses. When teachers were asked to describe the format of the course they most frequently mentioned the sessions given to the production of teaching aids. Model lessons were both described and demonstrated, after which the teachers had to prepare lesson plans and give demonstration lessons. Lectures,

discussions and explanations were generally given in the morning with practical sessions arranged in the afternoon.

Similar activities were carried out at the monthly teachers' centre meetings, together with discussions about examples of pupil's work exhibited.

Considerable support has been provided by Deputy Inspectors of Schools, and occasionally District Education Officers, returned UK trained study fellows, TTI lecturers and Project Staff. Mandal Development Officers, elected local officials and parents have also taken great interest in developments.

**LIST OF ANALYSIS REPORTS**

(The detailed reports are contained in a separate annex)

Report No:

1. Sample 'A' on 20 pilot primary schools (Cluster I)
2. Sample 'B' on 20 non-pilot project primary schools of Cluster I
3. Sample 'B1.2' on 20 project primary schools without buildings
4. Sample 'B2' on 24 project primary schools in Cluster II, III, & IV
5. Sample C on 20 non-project primary schools in Cluster I
6. Baseline data of schools in sample A
7. Evaluation of training courses for the year 1985-86
8. An enquiry into the academic achievement of project primary schools in Andhra Pradesh
9. Report on the State Level Preparatory Course
10. Report on the Materials Writing Workshop - Bheemunipatnam
11. A note on Research Work relating to the project
12. Evaluation of in-country in-service training programmes for the year 1986-87

**ENROLMENT AND DROP-OUT RATES**

1. One of the principle aims of the Andhra Pradesh Primary Education Project is to bring about the universalisation of primary education in Andhra Pradesh, which is in keeping with the National Policy on Education, (NEP) 1986. Universalisation of primary education centres on achieving 100% school enrolment of primary school age children, but it is also equally important that attendance and drop-out rates are improved to ensure that all children are receiving an adequate level of education.
2. Much of the analysis of Phase I of the project depends on the work of the Evaluation Cell, backed up by findings of the Tripartite Review team during their school visits. The Evaluation Cell's analysis contained in the Annex to this Report centres on a cross-sectional examination of pilot schools containing new buildings and teacher retraining (sample A), project schools with only teacher retraining (sample B), and non-project schools (sample C) in Cluster I. In addition, random samples of project schools in the other clusters were also undertaken to ensure a more broad-based analysis (samples B1.2 and B2). Schools in samples A, B and C were specifically chosen to ensure that non-educational influences on enrolment and drop-out rates would not differ significantly between the schools. However, it is inevitable that such things as parent income levels, agricultural methods, caste differences and other socio-economic factors will all have an influence on primary school enrolment, none of which will be easily separable from the influences of the project. As such, the results will have to be treated with some caution, and viewed as indications of likely trends rather than actual relationships.

**ENROLMENT:**

3. The Evaluation Cell's Report (Chapter 2 of the Project Report available in the Annex to this Report) does not state the numbers of school age children (6-11 years) for primary school classes (I-V) in each village, so it is not possible to determine what the enrolment rate is in project and non-project schools from their samples. However, the review teams were able to get population and enrolment data from some of the project schools visited, and these generally revealed enrolment rates of over 90%, with some exceptions. This can be compared with the June 1986 estimate of the enrolment rate in Andhra Pradesh of 81%. Given the handful of schools on which the enrolment rate for project schools is based, it is not possible to state definitely that the project has improved enrolment.
4. A more accurate estimate of the influence of the project on enrolment is a time series analysis of project schools over the years of the project. The Evaluation Cell's Report contains overall enrolment levels for project schools in 1985/86 and 1986/87, indicating a very small rise (0.68%) in 1986/87 enrolment which is less than the population growth rate. This is in contrast to the Review team's findings, to whom project teachers stated that enrolment had increased by around 10-25% since the introduction of the new teaching methods. With such ambiguities it is impossible to draw conclusions, and further work clearly needs to be done on time series analysis of project schools.

#### ATTENDANCE:

5. Attendance rates are probably a more effective indicator of the universalisation of primary education, than enrolment rates, since the latter may be artificially increased by the inclusion of children outside the primary age group. Fortunately, the data on attendance rates in the Evaluation Cells Report is much more comprehensive than that on enrolment rates. Samples A, B and C all had fairly similar average attendance rates of 85.4%, 82.7% and 82.5% respectively, although sample A attendance rates varied much less between villages than sample B or C rates. Income levels in all the sample areas were similar, with a medium income level of Rs.3,500-4,000 per household, although it is significant that the pupil: teacher ratio in sample A was lower at 36:1, than in sample B at 45:1 and sample C at 42:1, which may partially explain the higher attendance rate. Nevertheless, it appears that the new school buildings in sample A have brought about a modest improvement in attendance. As sample B and C rates are similar, it cannot be clearly stated that the new teaching methods of their own have brought about an increase in attendance. The wider samples (B1. and B2) had differing results. Sample B1.2 was similar to B with 82.6% attendance, but B2 only had 73.9% attendance rate. This low attendance could be explained by the coverage of tribal and remote areas where other socio-economic factors had significant influences on attendance. The Review Team's results were generally similar to sample B2 attendance rates, with attendance generally varying between 65-85%.

6. A closer analysis of attendance rates reveals that they were similar between all social class groups in the Cluster I samples, but attendance rates were generally lower for scheduled tribes in the wider samples. The Government policy of free uniforms and books for scheduled castes, scheduled tribes, and backward classes appears to have had results on attendance from among these groups. Attendance rates among girls was generally slightly lower than for boys but the difference in enrolment is greater, particularly in Cluster I where cultural factors have limited female enrolment to half that of males.

#### DROP-OUT AND RETENTION:

7. The Evaluation Cell attempted to measure drop-out rates, but data was generally limited to those who drop-out from a class during the academic year. Data on those who fail to enrol for the next class (retention) was generally not available, but can be roughly deduced from the number of children in each class at any one time. Not all the schools produced drop-out information which limited the accuracy of the data, but it does reveal a fairly significant reduction in drop-out rates amongst sample A schools, where drop-outs were 10.4% of those enrolled. The corresponding figures for the other samples were B:17.0%, C:17.8% and B.2:20.2%. A time series analysis of 12 sample A schools from 1981/82 to 1985/86 reveals that drop-outs increased over 1982/82 - 1983/84 by around 54%, but fell by 73% over 1983/84 - 1985/86. The building programme in these villages only got underway in 1983/84, which implies that the building of a new school had a significant impact on drop-out rates, even when allowing for other factors.

8. The Evaluation Cell's Report contains no data on retention; the Review Team's observations of enrolments at each class level is all that is available. Some allowance will have to be made for population increases and the retention of some children in one class for more than a year, when comparing class levels on a cross-sectional basis, but the results will indicate trends. The main result is that about half the children fail to proceed beyond class II, with a significant amount dropping out after Class I. Those that proceed to Class III will generally stay till Class V. A similar pattern is revealed for attendance rates.

where absenteeism is generally higher in Class I and II than in Classes III - V. It is still too early to judge whether the project has had any impact on retention rates, and the Evaluation Cell will need to undertake a much more thorough analysis of this area.

#### CONCLUSIONS:

9. The Evaluation Cell has made a good attempt to evaluate Phase I under difficult conditions, and some interesting information has been compiled. In the future, more time-series analysis of schools before and after the introduction of new building and teaching methods will give a better indication of the success of the project on enrolment and drop-out rates. The present data reveals that there has been some improvement in attendance and drop-out levels in the pilot schools of sample A. This indicates that the building component of the project is important. The evidence to support the human resource development component is not so conclusive, but it is still rather early to accurately evaluate this component. It is also important to bear in mind that whilst primary education may be improved in project villages, other factors such as income levels and household labour requirements will not have changed, and will continue to exert powerful influences on primary school attendance.

**APPENDIX 5**

Statement showing the particulars of amounts sanctioned and expenditure incurred thereon from the date of inception of the project.

S.No.	Govt.Order No. & Date	Amount sanctioned	Expenditure
1	2	3	4
		1984-85	1985-86
		Rs.	Rs.
<b>Project Coordinator's Cell:</b>			
	1.G.O.Rt.No.1419 Edn.dt.5.11.84	))	1,64,516.00
	2.G.O.Rt.No.1320 Edn.dt.15.10.84	))	
		))	
<b>Evaluation Cell:</b>		)) 4,51,400	
	1.G.O.Rt.No.1422 Edn.dt.9.11.84	))	4,902.00
		))	
<b>Design Cell:</b>		))	
	1.G.O.Rt.No.1423 Edn.dt.9.11.84	))	
<b>CONSTRUCTION:</b>			
	1.G.O.Rt.No.1497 Edn.dt.7.11.84	10,00,000	10,00,000.00
	2.G.O.Rt.No.192 Edn.dt.22.1.85	10,00,000	10,00,000.00
<b>HUMAN RESOURCES DEVELOPMENT:</b>			
		Rs.	Rs.
		25,51,400	21,67,454.00
<b>1985-86</b>			
<b>Project Director's Cell:</b>			
	1.G.O.Rt.No.755 Edn.dt.3.5.86	))	4,81,914.00
		))	
<b>Evaluation Cell:</b>		)) 8,64,400	
	1.G.O.Rt.No.755 Edn.dt.3.5.86	))	36,972.85
		))	
<b>Design Cell:</b>		))	
	1.G.O.Rt.No.755, Edn.dt.3.5.86	))	30,729.00
<b>HUMAN RESOURCES DEVELOPMENT:</b>			
	1.G.O.Rt.No.839 Edn.dt.20.5.85		
	(State & Cluster level courses)	1,80,038	1,05,989.65
	2.G.O.Rt.No.1857 Edn.dt.1.10.85		

(Consumable materials to 20 Pilot schools)	36,000	36,000.00
3.G.O.Rt.No.116 Edn.dt.24.1.86 (Conduct of teacher Centres meetings)	1,32,000	1,32,000.00
4.G.O.Rt.No.1253 Edn.dt.30.7.85 (Block level courses and Block level followup courses and Equipment to teacher centres)	7,03,780	7,03,780.00
5.G.O.Rt.No.269 Edn.dt.18.2.86		
i) Writing workshop at Bhimunipatnam	61,000	) (
ii) Production of Teachers' Handbook	75,000	) (
6.G.O.Rt.No.2222 Edn.dt.16.12.85	1,54,473	1,54,473.00
<b>CONSTRUCTION:</b>		
1.G.O.Rt.No.1373 Edn.dt.20.8.85	10,45,527	10,45,527.00
2.G.O.Rt.No.487 Edn.dt.24.3.86	50,00,000	50,00,000.00
	92,52,218	92,52,218.00
TOTAL 85 - 86		73,18,286.00

1986 - 87

(from 1.4.86 to 31.01.1987)

Project Director's Cell:	) (	
G.O.Rt.No.879 Edn.dt.10.06.86	) (	4,11,217.80
Evaluation Cell:	) (	8,03,833
G.O.Rt.No.879 Edn.10.6.86	) (	55,029.30
Design Cell:	) (	
G.O.Rt.No.879 Edn.dt.10.6.86	) (	72,415.60
<b>HUMAN RESOURCES DEVELOPMENT:</b>		
G.O.Rt.No.946 Edn.dt.20.6.86		
i) Block Level Courses to the Primary School teachers who did not attend the block level courses during August, September, 1985 (6 courses)	71,000	71,000.00
ii) Preparatory courses to primary School teachers/Headmasters of project schools (one course)	20,000	20,000.00
iii) Cluster level courses (3 courses)	46,400	
iv) Block Level courses (34 courses)	2,88,403	
v) Research Fellowships to B.Ed. students at each Rs.2000/-	4,000	
vi) Providing materials to 34 teacher Centres of project dists.@Rs.5000/-	1,70,000	
vii) Providing consumable materials to 90 project schools where school buildings are constructed @Rs.2500/-	2,25,000	



Viii) Trying out the project document and writing workshop during January/April 1987	40,000
ix) Production of 20,000 copies of project folders and news letters	20,197
x) Follow-up courses in Nov-February '87 (two) at block level	2,58,920
xi) Six Teacher Centres mettering during 86-87 in 34 Teachers Centres	96,450
xii) Printing of materials of the project	1,27,630
TOTAL H R D	13,70,000

NOTE: The particulars in respect of items (i) to (xii) except (ii) the amount were released to the D.E.Os. concerned for conducting the above courses during 1986-87. As seen above the courses will be conducted upto the closure of the financial year i.e. 31.03.1987. As such expr. particulars are not furnished.

CONSTRUCTION:

1.G.O.Rt.No.1450 Edn.dt.15.9.86 (unforeseen expenditure)	28,20,000 30,000	28,50,000.00 -----
2.G.O.Rt.No.1188 Edn.dt.24.7.86 (Jeep to design cell)	1,40,000	-----
3.G.O.Rt.No.1359 Edn.dt.23.8.86 (supply of furniture to project schools)	6,00,000	6,00,000.00

NOTE: With regard to the balance amount of Rs.9,00,000 Government have been addressed requesting to sanction an amount of Rs.8,70,000 to meet the expenditure on construction and the balance amount of Rs.30,000 will be incurred for unforeseen expenditure of this project. Orders of Government are awaited.

ADMINISTRATIVE OFFICER  
for Project Director

**PRIMARY SCHOOLS PROJECT WITH UK ASSISTANCE**

**PROGRAMME OF THE TRIPARTITE REVIEW TEAM IN ANDHRA PRADESH:**

27.01.87 (TUESDAY) 10.00 AM. Meeting with Honorable Education Minister, Education Secretary, Principal Secretary Finance and Planning; Secretary to Government, Planning; Secretary to Government, PR Department, and other officials in the Committee Hall of Old Finance Building, Secretariat.

12.30 PM to 2.00 PM: Press call and Lunch at Dilkusha Guest House, Hyderabad.

2.30 PM to 5.00 PM: Meeting in the Office of Project Directors Primary Schools Project.

28.01.87 to 30.01.87: The review team toured 4 Projects Districts in two groups as attached at (ii) and (iii).

31.01.87 (SATURDAY): Team reconvened and reviewed findings.

8.00 PM: Dinner at Dilkusha Guest House, Hyderabad hosted by Board of Intermediate Education.

01.02.87 (SUNDAY): Report Writing.

02.02.87 (MONDAY): 10.00 AM call on Sri N T Rama Rao, Chief Minister, Government of Andhra Pradesh.

2.30 PM: Talks at Office of Project Director.

03.02.87 (TUESDAY): Final round of discussions with the Project staff in O/o Project Direct.

04.02.87 (WEDNESDAY): 10.30 AM: Discussions with Education Secretary in his chambers.

1.00 PM: Lunch hosted by the Telugu Akademi at Dilkusha Guest House, Hyderabad.

PM British team to Delhi.

05.02.87 AM Briefing meeting at British Council Division.

Meeting with Department of Rural Development, Ministry of Agriculture.

PM Further discussions at British Council Division.

06.02.87 AM Round up meeting with Government of India, Ministry of Human Resources Development, Department of Education.

07.02.87 AM Return to London.

**TOUR PROGRAMME OF THE REVIEW MISSION**

## GROUP I

Mrs Pat Scutt, Desk Officer in India, ODA

Mr David Theobald, First Secretary (Education and Science) British Council  
Division, New Delhi.

Mr Deep Sagar, Senior Development Officer, British High Commission, New Delhi.

Government of Andhra Pradesh representative:

Sri N K Visweswara Rao, IAD

Dy Secretary Education

Mr G Manohar Rao, Project Director, PSP

28.01.87	08.00 AM	Dep	:	Hyderabad by road
	09.30 AM	Arr	:	Nandiwanaparthi
				Inspection of School building under construction
	10.30 AM	Dep	:	Nandiwanaparthi by road
	11.15 AM	Dep	:	Begarikancha - visit to Project School
	12.15 PM	Dep	:	Begarikancha
	01.00 PM	Arr	:	Maheswaram
				LUNCH
	02.00 PM		:	Visit to Primary School (Girls)
				Maheswaram and meeting the BDO and others
	04.00 PM	Dep	:	Maheswaram
	04.30			Unscheduled visit to non-project school
	05.30 PM	Arr	:	Hyderabad
29.01.87	10.30 AM	Dep	:	Hyderabad by Flight IC 561
	11.30 AM	Arr	:	Vizag - Stay at Hotel Park
	01.00 PM	Dep	:	Vizag by road
	01.00 PM	to	:	Visit to two project schools of
	04.30 PM		:	Sabbavaram block including the PS Sabbavaram where the buildings are under progress
	06.00 PM			return to Vizag
30.01.87	08.00 AM	Dep	:	Vizag by road
	09.00 AM	to	:	Visit to two project schools in
	12 Noon		:	Pendurthi Block including PS Laxminagar where building construction is under progress

01.00 PM : Lunch at Bheemunipatnam  
02.00 PM : Unscheduled visits to Teacher Training Institute  
and Residential School for bright girls from poor  
rural villages  
02.30 PM Dep : Bheemunipatnam  
03.30 PM to : Visit to project schools at Kanamān  
04.30 PM : Boyapalem where school building construction is  
in progress  
06.00 PM : Returns to Vizag

31.01.87 12.00 Noon Dep : Vizag by Flight IC 560 to Hyderabad

GROUP II

Mr J B Shelley, Architectural Adviser, ODA

Mr P G Scopes, Educational Adviser, ODA

Mr A Hall, Economic Service, ODA

Mr G M John, Programme Officer, British Council Division, Madras

Government of India Representative

Chief Engineer (Panchayat Raj) Representative

Sri. M V Venkata Reddy, Director of School Education

28.01.87:

08.00 AM: Dep Hyderabad by Thungabhadra Express

01.20 PM: Arrival Kurnool (Lunch at P W D Guest House)

2.00 PM: to 4.30 PM: Visit to project schools at Krishnanagar and  
Hussainapuram, where the school building construction  
is in progress

05.00 PM: Return to Kurnool

10.00 PM: Dep Kurnool by Venkatadri Express

29.01.87:

10.00 AM: Arrival Tirupathi. Stay at University Guest House and Lunch

01.00 PM: Departure Tirupathi by road

02.00 PM to 04.30 PM: Visit to the project schools at Kapugunneru and  
Maddiledu of Srikalahasthi block, where the school  
buildings is in progress

06.00 PM: Return to Tirupathi by road

30.01.87:

07.00 AM: Departure Tirupathi by road

09.30 AM to 12.15 PM: Visit to Kancherapalem and Thondamabhattu where  
the school building construction is in progress

01.30 PM: Departure Satyaveedu by road

02.15 PM to 04.30 PM: Visit to the project schools at Peddapalaveedu,  
Karakollu where the school building construction  
in progress

06.00 PM: Return to Tirupathi and Rest

31.01.87: Morning Flight Departure Tirupathi by Air

Sub. National Systems ~~Unit~~  
National Institute of Educational  
Planning and Administration  
17-B, Sri Aurobindo Marg, New Delhi-110016  
DOC. No. ....  
Date .....