A P.

ANDHRA PRADESH
PRIMARY EDUCATION PROJECT

REPORT OF
MAIN SURVEY 2

(CONDUCTED DURING NOVEMBER–DECEMBER, 1992)
ON
LEMENTATION OF THE PROJECT IN SCHOOLS

DIRECTORATE OF SCHOOL EDUCATION
ANDHRA PRADESH, HYDERABAD.

APPEP PEDAGOGICAL PRINCIPLES

* Providing teacher generated learning activities
* Promoting learning by doing, discovering and experimenting
* Developing individual, group and whole class work
* Providing for individual differences
* Using local environment
* Creating an interesting classroom by displaying children's work and organising it effectively.

ANDHRA PRADESH

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(APPEP)

HYDERABAD

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INDEX

PREFACE

The A.P. Primary Education Project costitutes one of the largest interventions attempted in the field of primary education in Andhra Pradesh, with the prine aim of improving the quality of primary education in the state.The project is being implemented with the financial assistance of Overseas Development Administration (ODA) of United Kingdom. The project involves, as in-puts for the realisation of its goals, a sizable building programme and an extensive training programme - the former aiming at a proper learning environment in schools and the later aiming to introduce activity-based teaching methods into classrooms which have been oriented hitherto,with whole class teaching and rote learning methods.

The Phase I of the project was implemented in 328 primary schools of 11 selected districts in the state from 1984 to 1987 on pilot basis. This was followed by a Bridging Programme from 1987 to 1989 to consolidate the gains of Phase-I before taking up wider introduction of the project in Phase II from 1989-90.

The Phase II of the project that commenced from 1989-90 aims to involve every teacher handling primary level class/classes in the state in a "cascade system" of in-service training programme in a phased manner - a total of approximately 1,65,000 teachers working in 55000 schools and provide materials to schools and Teachers' Centres to practise activity based teaching and learning, and construct 3393 classrooms in some needy schools and provide add-on-facilities to 1104 Teachers' Centres. Evaluation of the implementation of all these activities forms an integral part of the project both in Phase-I and Phase-II.

In this connection the Main Survey II, held in November-December 1992, is the second in the series of main surveys designed and developed to evaluate the implementation of the Andhra Pradesh Primary Education Project (APPEP). This was preceded by a Pilot Survey in April, 1991 and the Main Survey I in Nov.-Dec., 1991.

As a backdrop, the Pilot Survey, though very limited in its scope and size, and the Main Survey I, the first full-scale survey involving a mixed sample of 224 APPEP-trained schools and 276 APPEP-not trained schools have been able to provide some very significant findings about the usefulness of initial inservice training provided to teachers, participation and involvement of teachers in Teaches' Centre activities, organisation of group work and display of children's work in classrooms by the teachers, supervision and guidance of Educational supervisors , community awareness on school programmes etc., and the need for their improvement.

The implementation of Phase-II of the project was nearly halfway through by the time this Main Survey II was conducted.This obviously meant that the Main Survey II had a much wider variety of crucial issues to look at and report on.

As I go through this report on Main Survey II, I find that the survey accomplished its tasks successfully and touched not only the entire gamut of project activities in an impressive way but also dealt with different dimensions of implementation of these activities in an analytical manner like the effects of "dilution" of training on degree of implementation of APPEP principles and approaches in schools, comparisons between implementational levels among schools having more than one year of APPEP experience (longest trained) and schools having less than one year of such experience (recently trained) and the impact of "APPEPness" of schools on attendance, enrolment, dropout and achievement levels of pupils etc.

And now, having full satisfaction with this purposeful exercise, I feel it is my profound duty to thank all those but for whose support, guidance, cooperation and efforts, the survey itself in the first instance, and later this report thereon, would not have been in the present form.

Firstly, I sincerely thank Dr. J.Sreedhara Sarma, I.A.S., Secretary to Government, Education Department, Government of Andhra Pradesh, who evinces keen interest in anything that concerns APPEP, for his support to the cause of evaluation, particularly, the main surveys.

I thank Dr. A.J.Davison, Field Manager, APPEP and Dr.Ved Goel, Education Advisor, APPEP, British Council Division, New Delhi for the support and counselling that they rendered at all crucial stages of the survey as well as production of the report, enabling the exercises to conclude on a successful note.

I thank the team of UK consultants on evaluation comprising Professor Colin Lacey, Dr.Barry Cooper and Dr. Harry Torrance of the University of Sussex for their guidance and counselling in all matters pertaining to evaluation of APPEP in general, and, in particular, in designing and conducting the survey, computer-isation and advanced analysis of the survey data and in planning and finalising this report.

I very much appreciate the cooperation extended by the District Educational Officers, Principals of DIETs, District Monitoring Officers, Mandal Education Officers / Dy. Inspectors of Schools for the successful conduct of the survey.

I compliment the Lecturers of HRD/other branches of DIETs involved in the survey, who putforth all their efforts in collecting the data from schools, and the headteachers and teachers of the primary schools who participated in the survey and provided the data sought for the survey with all sincerity and purposefulness. I value their hard work, cooperation and service.

Finally, I congratulate the Project Director and the staff of APPEP, on successfully accomplishing the task of conducting the survey and producing this report.

The critical comments and the valuable suggestions of the users of this report are welcome.

Place : Hyderabad

Date : 20-12-1994

Sd/- J.C.RANGANAYAKULU
Director of School Education,
Andhra Pradesh, Hyderabad.

An Overview of Main Survey 2

With the conduct of Main Survey 2 (MS 2), the evaluation of the implementation of APPEP assumed a new dimension. While, in Main Survey 1 (MS 1), it was mostly a straightforward item-to-item comparison between two sets of sample schools - one, trained and the other, untrained in terms of APPEP inservice training to teachers, Main Survey 2 appreciably broadened the scope of the analysis that could be attempted. This was because the MS 2 data was based on not just two but three distinctly different sets of sample schools, two of them being the same as those that figured in MS 1. The third one was a fresh sample of untrained schools.

What is important here is that, by the time of MS 2, the trained sample of MS 1 became a sample with more than one year of APPEP involvement, and the untrained sample of MS 1 became a newly trained sample. They were therefore, for purposes of closer analysis, categorised and termed as the "Longest trained schools" and the "Recently trained schools" in MS 2. The data obtained from them facilitated, as was expected, a longitudinal assessment of the changes that took place in schools in respect of different implementation and outcome measures over a period of one year. The presence of the untrained sample in MS 2, enabled the kind of comparisons attempted in MS 1, to be repeated in MS 2 - the position in the untrained schools vis-a-vis the changes that were beginning to take shape in the recently trained schools and the changes that were becoming entrenched in the longest trained schools.

Furthermore, the formal (training) status of each of these three sets of sample schools was not always identical to the actual status. The so called trained schools had in them teachers with no APPEP training and some of the untrained schools possessed APPEP trained teachers. This was obviously due to the routine administrative and other types of transfers of teachers from school to school, and also some of the teachers missing the training sessions. The MS 2 analysis had to and did take into account these features also.

The evaluation model which was employed in MS 1 has been adopted in this survey as well for the purpose of directing the analysis and reporting.

The implementation of the project was evaluated in terms of three key aspects viz., Delivery of Inputs, Delivery of Outputs and Delivery of the Impact.

Delivery of Inputs :

More than 75 % of the teachers had been (APPEP) trained in the longest and the recently trained schools by the time of MS 2. About two thirds of these teachers

had been through the 3-day followup course specially designed to consolidate the skills acquired during their training period.

The teacher's handbook which is an important source of reference material after APPEP training was found to be available for use by about 80 % of the trained teachers. Timely supply of consumable materials to schools to aid teachers in practising activity-based teaching and learning in the classrooms was reported by nearly 85 % of the trained teachers.

The transfer of (APPEP) trained teachers out of the trained schools and their replacement by untrained teachers and/or some of the teachers tergetted to be trained missing the training courses was found to be causing a "dilution of training" effect in APPEP schools, and affecting adversely, in some measure, the implementation and outcome measures.

The frequency of visits by Mandal Education Officers to APPEP schools, and the support of these officers to trained teachers did not differ significantly from what they were to the untrained schools and untrained teachers. However, the extent of support the trained teachers got from the headteachers and colleagues was in substantial measure.

Delivery of Outputs :

The percentage of teachers participating in the Teachers' Centre activities was higher in the case of longest trained schools. A reflection of this was clearly visible in the classroom observation data which confirmed that the levels of APPEP implementation were by and large maintained in the longest trained schools, when compared with the position in the recently trained and the untrained schools. This is further borne out by the fact that nearly 40 % of the trained teachers in the longest trained schools were conducting group activities and organising displays of children's work in their classrooms.

A supportive evidence of the level of implementation in the longest trained schools was provided by the interviews held with pupils in which 64% of children reported that teachers in these schools were encouraging group learning.

Overall, the aforesaid aspects indicate that there is a possible accumulative effect of APPEP as schools gain experience over a period of time.

Among all these generally encouraging trends, there is one unwelcome aspect and that is the "dilution of training " effect which, as already pointed out, is caused by transfer of trained teachers out of trained schools and their replacement

by untrained teachers,, and possibly some of the teachers missing the training sessions. (This, however, should prove to be temporary, and should cease to exist once the APPEP inservice training is imparted to all teachers in all schools, without an exception, which indeed is the ultimate aim of the project). However, the current analysis indicates that the value of the APPEPness index which vas 1.0 when the longest trained schools had 100 % trained teachers, fell very steeply to minus 0.9 once they lost all of their trained teachers.

Delivery of Impact :

Pupils in APPEP schools (both longest trained and recently trained) stated during the interviews that the new activities interested them and motivated them to attend school more regularly than before. They felt they were now able to learn more because of the activities.

Pupil enjoyment of school is found to be higher in the APPEP trained schods. However it was adversely affected by "dilution of training", as the mean pupil enjoyment of school in the longest trained schools fell from 1.90 when they had 100 % trained teachers to 1.54 on a scale of 1 to 3 when they had no trained teachers.

Judging by the increased number of visits by parents to schools where their children study, and their notice of a substantial change in their children's school habits - they now observed their children collecting materials, drawing pictures, evincing keener interest in attending school etc., it can be conclusively said that parental awareness of the APPEP and its implementation has been growing.

As regards absenteeism of pupils, no particular pattern has emerged about the continuous absence of children in MS 2 data analysis which showed that it was slightly more in the longest trained schools - a reversal of the finding of MS 1.

The enrolment of pupils and the mean performance of pupils were positively affected in the longest trained schools when the degree of APPEP implementation was "high" and all the trained teachers were retained in the school. Dropout of children decreased in schools with 100% trained teachers who were implementing project principles above average levels.

Conclusion :

The level of APPEP implementation in schools is on the increase, when all the teachers are trained and retained in the same schools and the lengths of their APPEP involvement grow. The increased teacher participation in the Teaches' Centre activities, use of varied pedagogic activities in the classrooms of APPEP

schools, pupils' motivation to attend t school and their enjoyment of school with the new activities and the growing pararental awareness of these developments are some of the noteworthy evidences of tl the sustenance of APPEP in the classrooms.

Follow-up :

The findings emerging in this survey y point to the immediate need to draw the attention of the project management t to the following aspects for effective implementation of the project in the schoolols.

i) Provision of effective initial inservice t training to teachers by bringing about necessary changes in course content, , duration and organisation of the training programmes.

ii) Complete coverage of teachers in schchools for training by identifying the left over teachers since the commencement ofof phase II in 1989-90.

iii) Provision of 3-day follow-up courses s soon after the initial inservice training so that there may not be big time lag betweeen the two programmes.

iv) Retention of all trained teachers in schchools by avoiding unnecessary 'dislocations' to teachers to the extent possible.

v) Effective utilisation of Teachers' Centntre resources for improving the level of participation and involvernent of teachersrs and thereby their professional skills.

vi) Effective monitoring of coverages inin the training programmes and supply of materials to schools and Teachers' CCentres on time.

vii) Strong professional support and guidadance by Mandal Education Officers to teachers of primary classes.

viii) Continuous motivation and encouragement to teachers for bringing about required changes in classroom practices by alall the functionaries concerned in this regard.

ix) Creation of more awareness among tthe parents and enlisting their full cooperation and involvement in the school programmes through wider publicity measures like Radio broadcasts, telecasts, posters, s, news letters, magazines etc.

Section 1 : Backgroundd to the Survey

1.1 Introduction :

The evaluation of the Andhra Pradesh Primaiary Education Project entered a new phase with the conduct, in November-Decemmber, 1992,of the second main survey (Main Survey 2). In Main Survey 1 it becamme possible to report on the progress of the project by comparing the characteriststics of two matched samples : one drawn from the schools in which the APPEIEP project has been introduced and teachers working in them trained in APPEP p pedagogy, and the other drawn from schools in which the teachers had not been n trained. They were found to be very similar in all background characteristics. Thherefore it could be inferred that any differences found between them at the timeie of the survey with regard to pupil motivation, pupil enjoyment, classroom pracactices etc., were attributable to the implementation of APPEP scheme.

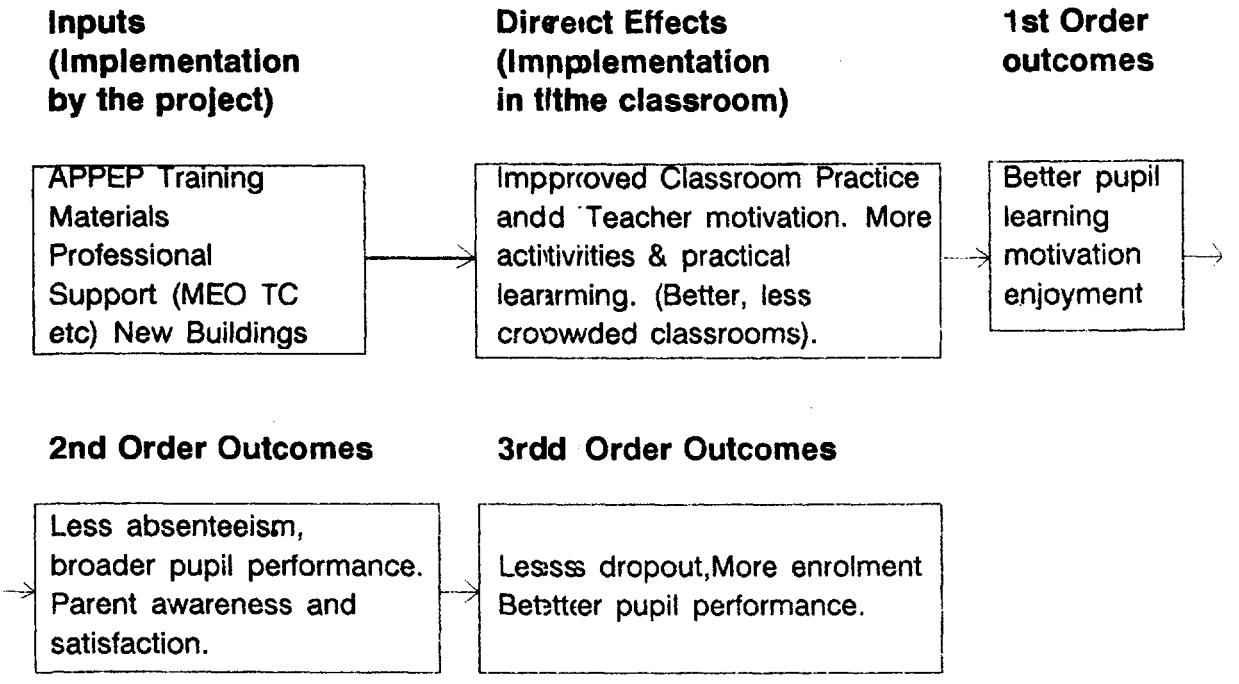
In Main Survey 2, the samples were compposed of schools in which teachers were trained more than 1 year ago, schoools in which teachers were trained less than 1 year ago and schools in which t teachers were not trained in APPEP approaches. The evaluation therefore repeatsts the comparison between a trained and an untrained sample but it now has a a new dimension. This enables the evaluation to report on changes that have occcured within APPEP schools over a period of a year. Main Survey 2 will therefoiore tell us about some of the things that happen as the schools mature within A APPEP; the sustaining efforts of the support structure, teachers' centre meetings s and the followup training balanced against the possibly diminishing effects of thhe initial training. It will be important to get as clear an idea as possible about hoiow the scheme progresses a year or more after training.The samples have been delesigned so that the schools surveyed in main survey 1 have been retained in the s study. This will allow some changes to be traced within the same schools (for t the full potential of the design see appendix-I).

The APPEP scheme is a complex package c of retraining and new resource allocation. There is a large programme of buildiding new classrooms in schools and add-on facilities to teachers' centres. There e is a programme of initial inservice training to teachers that varied in length froiom 10 days (at Mandal level) to 18 days (at DIET level). In addition, 3-day followw-up courses and six one-day teachers' centre meetings in a year are conducteted with the teachers after the initial inservice training to enable them to consolididate the skills acquired during their training and to continue their professional actitivities along the desired lines. There is a provision for new resources in the formm of teaching- learning materials to each of all the trained schools and consumanable and non-consumable materials

to each teachers' centre to carry out the programmes that enable the teachers to adopt activity-based instruction in classrooms. Further, there is also an element of on-going support from Mandal Education Officers who have also been through the initial inservice training programme and are expected to visit and encourage the development of APPEP methods in classrooms.

Thus the educational reform package of APPEP is centered on the school and in particular, the classroom. Teaching methods are expected to expand beyond traditional forms of content based rote learning and include a wide range of new practices, known as the six APPEP pedagogical principles. They include the use of groups and groupwork, the use of local materials and resources, the display of children's work, the allocation of learning tasks appropriate to individual pupils and the active involvement of the child in the learning process.

At the time of analysis of data of Main Survey 1, it became necessary to set out a heuristic evaluation model which summarised the expected progress of the APPEP scheme. The model was based on consultation and the results of past research and attempted to sequence effects and establish stages in the development of the complete process. The model is set out as follows.



The sequence suggests that the evaluation should measure the degree of implementation of the innovation before going on to attempt to understand the outcomes. It also suggests that some outcomes are likely to precede others. For example, it is likely that better pupil motivation will need to be experienced before there are improvements in pupil performance. Likewise, it is likely that

parent awareness and satisfaction will need t to precede any increase in enrolment or retention.

The modei provides a framework against which to measure the progress of the project. However, it is also a greatly simplified picture and hides many possibe unintended consequences and interactions. For example, if the project were to improve enrolment and retention, it is likely that the average level of academc performance would fall due to increased overcrowding and/or the inclusion of less able and/or more marginal pupils. These interaction effects are considered while interpreting the results of the survey..

1.2 Brief description of APPEP :

The promising results achieved in the pilot project (Phase 1) conducted between 1984 and 1987 in 328 schools, encouraged the government of Andhra Pradesh to proceed to introduce the APPEP to the entire State. After a short bridging period, Phase 2 of the project was launched in 1989-90. It was introduced in a phased manner to be operational for a period of 5 years from 1989-90 to 1993-94 (to be later extended till 1995-96) with the financial assistance of ODA of Gov. of U.K. The mode of implementation of the project has been in accordance with the programme of Operation Blackboard (OBB) of Govt. of India covering 20 % of Mandals per year in each district. Thus, all the Mandals in each district will be covered in a period of 5 years from the year of launching of the project.

The project was launched in the 23 districts of the State as indicated below :

Programme of Initial training for the entire State

Year of launching of the project	Districts
1989 - 90	Visakhapatnam, Krishna, , Nellore, Chittoor, Cuddapah, Hyderabad,, Ranga Reddy, Mahabubnagar and Nalgonda (to be completed in 1994)
1990 - 91	Srikakulam, East Godavaari, Prakasam, Anantapur, Kurnool, Karimnagar, Medak and Adilabad. (to be completed in 1995)
1991 - 92	Vijayanagaram, West Godavari, Guntur, Khammam, Warangal and Nizamabad (to be completed in 1996)

The implementation of the project at school level means providing an appropriate environment in the classrooms at primary level to enable teachers to adopt teaching-learning activities based on the six APPEP pedagogical principles of the project with the support of the project inputs that make the implementation process stronger and effective.

1.3 Project inputs to schools :

The project inputs to schools are :

- Initial Inservice Training of teachers of primary classes on the implementation of APPEP pedagogical principles and approaches in classrooms.

- Establishment of Teachers' Centres (TCs) for mutual academic support through 3 - day followup courses and six one day T.C. meetings each year. Each T.C. to serve about 20-30 teachers.

- Provision of consumable materials worth Rs. 500/- per year (escalated every year) to each of the schools that come under project implementation. Provision, to each Teachers' Centre (TC), of consumable and non-consumable materials worth Rs. 4000/- during the first year, and consurnable materials worth Rs. 2000/- per year (escalated every year) in the subsequent years. These provisions are for the preparation of pupil learning materials at school level and preparation of teacher activities at T.C. level respectively.

- Construction of additional classrooms to some needy primary schools and add-on-facilities to Teachers' Centres which include a meeting room, a store room, drinking water, toilets and electricity.

1.4 Targets and Achievements of the project :

The targets of the project aimed to be achieved by 1995-96 are :

- to provide APPEP initial inservice training to about 165 thousand teachers of primary classes working in about 52 thousand primary schools / sections in the State.

- to establish 6500 Teachers' Centres (TCs) and

- to construct 3393 classrooms in schools and add-on facilities to 1104 Teachers' Centres by 31/03/1993.

- to provide each year materials to all schools and T.Cs that are covered by the project as per the norms indicated earlier.

The achievements of the project till November, 1992 (the time of conduct of the survey) are :

- provision of initial inservice training to 53,657 teachers of primary classes.
- establishment of 2,396 Teachers' Centres.
- Construction of 2206 classrooms and add-on-facilities to 772 Teachers' Centres.
- Provision of materials to all schools and T.Cs. every year that are functioning in the project fold.

1.5 Design of the Survey :

The objectives of the survey, the sample chosen and methodology adopted for the conduct of the survey are briefly described in this section.

1.5.1 Objectives : The objectives of the survey are

- to identify changes in the classroom practices
- to find out the impact of the project on the quality of classroom instruction
- to assess the impact of project approaches on enrolment, retention and drop-out of children in schools.
- to identify the impact of the project approaches and principles on the pupil performance.
- to find out the extent of interaction of the community with the schools on the implementation of APPEP approaches and principles.

1.5.2 Sample :

The size of the sample selected for the survey was 636 schools. This sample includes all the 500 schools (224 APPEP schools and 276 Non-APPEP schools) of main survey 1; these were now included as APPEP trained schools. An additional 136 untrained schools (non-APPEP schools) were selected from the 23 districts

of the State. By the time of conduct of this survey(MS 2) in December 1992, the 276 untrained schools of main survey 1 were expected to become APPEP schools with the provision of training to teachers in those schools during 1991-92. The sample design is given in Appendix-I. The important features of the sample are described below.

Main Survey 1 (Nov - Dec 1991)	**Main Survey 2 (Nov - Dec 1992)**
A1 Untrained sample (276 schools)	A2 Trained for less than 1 year (276 schools) Recently trained
B1 Trained sample (224 schools)	B2 Trained for more than 1 year (224 schools) Longest trained
	C2 New untrained sample (136 schools)

(NB : Samples A1 and A2; B1 and B2 consist of the same set of schools)

Thus in addition to the comparisons between C2, A2, and B2 the sample enables us to make comparisons as indicated below.

Samples compared	**Period covered**
A1 and A2	From untrained to first year after training.
B1 and B2	From first year to second year after training
A1 and C2	Reliability check on sample selection.
B1 and A2	Trends in effectiveness of training programmes Implementation compared for 2 consecutive years.

The sample schools of main survey 2 have been categorised under 3 headings as untrained schools, recently trained schools (trained for less than 1 year) and longest trained schools (trained for more than 1 year) taking into account their formal training status for comparing the impact of project implementation. However, the data collected in the survey provided their actual training position

as opposed to their formal status.For example in some schools some teachers had missed the training session and in others some or all of the trained teachers had been transferred. It has therefore been necessary, in parts of the report, to develop a scale of the proportion of teachers in each school who were actually trained at the time off the survey in each of the three categories of schools mentioned earlier.The recently trained and longest trained schools are sometimes grouped and termed as APPEP schools and compared with the untrained schools termed as non-APPEP schools.

The sample schools were selected in each district by using the stratified random sampling technique to represent the characteristics of location ie., urban, semi-urban, rural and tribal areas, provision of APPEP classrooms and establishment of teachers' centres.

1.5.3 Survey Instruments ::

The eight schedules used in Main Survey 1 have been reduced to seven in Main Survey 2. The schedule 5 (for teachers of APPEP trained schools) and the schedule 6 (for teacherrs of APPEP not- trained schools) used in Main Survey 1 were combined and used as schedule 5 in Main Survey 2. However,schedule 5 used in main survey 2 consisted of two parts, part A and part B. Part A was to be filled in by both APPEP trained teachers and APPEP not- trained teachers and Part B, by APPEP trained teachers only, irrespective of the fact whether they were working in APPEP schools or non-APPEP schools. In the case of the other 6 schedules,some necessary revisions have been made based on the experience of Main Survey 1. The 7 survey schedules used in the survey and the function of each schedule are given in Appendix-II. All the schedules (except schedule 4) were in Telugu. Schedule 4 which was used by the DIET-based HRD Lecturer to fill in the classroom observation was in English. Printed schedules were used in the survey.

1.5.4 Methodology adopted to conduct the survey :

The following steps were taken at the project headquarters for collecting data from the sample schools.

i) The District HRD Lecturers working in DIETs (four from each DIET) of the 23 districts were identified to collect data from schools and instructed on different aspects of the survey at the project headquarters in an orientation course-cum-workshop organised during the second week of November, 1992 for a period of two days. The printed schedules were handed over to them as per requirement during the workshop. Detailed guidelines for collecting and scrutinising the data were provided to them during the workshop.

ii) Specific dates for visits to 636 schools by 92 district HRD Lecturers in the 23 districts during the period from 16/11/92 to 31/12/92 were worked out and communicated to all the principals of DIETs to ensure timely conduct of the survey.

iii) School codes and teacher codes (on the basis of information collected in main survey 1) were developed and communicated for the use of HRD Lecturers to obtain longitudinal data from schools on pedagogic activities of teachers.

iv) Suitable instructions were issued to the District Educational Officers, principals of DIETs and District Monitoring Officers to take all necessary measures for the smooth conduct of the survey through continued monitoring and review of the survey work.

v) Monitoring visits were undertaken by members of the Evaluation Cell at the project headquarters during the period of collection of data.

1.5.5 Computerisation of data :

The computerisation of data collected for Main Survey 2 was carried out with the use of the computers installed at the project headquarters by engaging the services of four data entry operators from outside on payment basis, and also utilising the services of the data entry operator and the programmer working in the computer room. The data entry and data cleaning operations were carried out from March - June,93. The production of marginal totals and preliminary analysis of data were made at the project headquarters with the use of SPSS PC+ package provided by the British Council. The advanced analysis of data was developed under the guidance of the three U.K. consultants on Evaluation, Prof. Colin Lacey, Dr. Barry Cooper and Dr. Harry Torrance of the University of Sussex, whose academic expertise was made available during their visits to the project in designing and conducting the survey.

1.6 To sum up :

The evaluation of the project implementation takes on a new dimension with samples of schools having different lengths of APPEP training. The possibility of examining the longer term effects of APPEP is therefore beginning to materialise.In the analysis we will continue to use the model of the project developed in the Main Survey 1 report and reproduced on page 2.. In Main Survey 1 we were able to explore this model beyond levels of implementation and direct effects as far as first and second order outcomes.First order outcomes were traced in terms of pupil enjoyment and although there were some indications of second order outcomes these were still insubstantial.It was judged to be too soon for third order outcomes.In this report we will take this process further and look closely at third order outcomes.

Section 2 : Comparison of samples

2.1 Background Variables :

In order to confirm that the procedures adopted for choosing the 3 samples have yielded very similar groups of schools it has been necessary to test the comparability of the samples. The three samples chosen for Main Survey 2 have therefore been compared using the following background variables : i) management of schools ii) location of schools iii) ownership of school buildings iv) type of school buildings v) literacy levels of majority of parents and vi) economic status of majority of parents. The comparisons of samples in respect of variables like location of schools and literacy levels of parents are given in tables 1 and 2 below. The comparisons in respect of other variables are given in Appendix-III.

2.1.1 Location of Schools :

The sample schools are located in different areas of development in the State viz., urban, semi-urban, rural and tribal as shown in table - 1.

Table - 1
Location of Schools

Area	Sample Schools					
	Untrained		Recently Trained		Longest Trained	
	Number	%	Number	%	Number	%
Urban	18	13.5	44	16.0	37	16.5
Semi-urban	16	12.0	35	12.7	21	9.4
Rural	79	59.5	169	61.5	148	66.1
Tribal	20	15.0	27	9.8	18	8.0
	133	100.0	275	100.0	224	100.0

2.1.2 Literacy levels of majority of parents :

The sample schools are distributed by the literacy levels of majority of parents (father and mother separately) of children as shown in table - 2.

Table - 2
Schools by Literacy Levels of Majority of Parents

Literacy	Sample Schools					
	Untrained		Recently trained		Longest trained	
	Number	%	Number	%	Number	%
1. Father :						
Literate	44	33.1	94	34.2	71	31.7
Illiterate	89	66.9	181	65.8	153	68.3
Total :	133	100.0	275	100.0	224	100.0
2. Mother :						
Literate	21	15.8	40	14.5	36	16.1
Illiterate	112	84.2	235	85.5	188	83.9
Total :	133	100.0	275	100.0	224	100.0

2.2 Tests of significance for the differences in samples :

The difference in the values of the variables for the three types of schools has been tested for significance (at 0.05 level) and the results are as shown in Table-3.

Table - 3
Tests of significance for the difference in samples.

Sl.No.	Variable	Result
1.	Management of school	N.S.
2.	Location of School	N.S.
3.	Ownership of school building	N.S.
4.	Type of school building	N.S.
5.	Literacy level of majority of parents :	
	i) Males	N.S.
	ii) Females	N.S.
6.	Economic status of majority of parents	N.S.

NS. : Not Significant

2.3 Conclusion :

It is important to note that although the samples have been tested for six background variables none shows a statistically significant difference. This means that in most cases, where there are significant differences in outcome measures, these differences can be attributed to the effects of APPEP implementation. However, because of the richness of the data and the design of the evaluation it is usually the case that an important finding will be established through a detailed analysis involving the build up of evidence which is tested at various stages.

Section 3 : Implementation of the Project

3.1 Levels of Implementation :

The evaluation of an innovation needs to start with an assessment of the extert to which the planned change has been implemented.

This is because the hoped for outcomes will depend on the extent to which the innovation is actually implemented as well as the effectiveness of the innovation in bringing about the desired outcomes. The extent to which the APPEP scheme has been implemented is briefly discussed in this section. The next section will focus on the outcomes of the project implementation.

3.2 Evaluation of the Implementation :

The evaluation of the implementation of the project can be made at two levels viz. i) Implementation by the Delivery System and ii) Implementation by the teacher in the classrooms.

3.3 Implementation by the "Delivery System" :

Before proceeding to evaluate the implementation by the Delivery System, it is necessary to know the actual number of teachers working in sample schools, who responded to the survey and completed the questionnaires. These aspects are reported below :

The number of teachers working in sample schools and the number of teachers who responded to the survey were as given in table-4.

Table - 4
Response rates of teachers in Main Survey 2

Sl. No.	Item	Formal training status of schools			
		Untrained	Recently trained	Longest trained	Total
1.	No. of schools	133	275	224	632
2.	No. of teachers in position	605	1119	903	2627
3.	No. of teachers responded to the survey	572	1089	883	2544
4.	Response rate	94.54	97.32	97.78	96.84

The data in table - 4 indicate that the response rate of teachers for the survey was about 97.0 % which should be considered a very high response rate. The teachers who could not respond were those on long leave, deputation etc.

3.3.1 Provision of APPEP training to teachers :

The teachers in schools covered by the project are provided with initial inservice training (as indicated in 1.3) on project principles and approaches so that they can use the skills acquired during training in implementing these principles in classrooms.This training is followed by a 3-day follow up course which is designed to help them to consolidate their skills gained during the training. The number of teachers that were provided with APPEP initial inservice training in the sample schools was as given in table - 5.

Table - 5

Teachers Provided with APPEP Training in Sample Schools

Sl. No.	Item	Formal training status of schools			APPEP Schools (combined)
		Untrained	Recently trained	Longest trained	
1.	No. of teachers in position	605	1119	903	2022
2.	No. of teachers provided APPEP training	14	967	685	1652
3.	Percentage of teachers trained	2.31	86.42	75.86	81.70

The data in table - 5 reveal that APPEP initial inservice training was provided to about 82% of teachers in APPEP schools (86.42 % of teachers in recently trained schools and 75.86 % of teachers in longest trained schools). This indicates that the percentage of untrained teachers was about 14% in recently trained and 24 % in longest trained. The presence of these untrained teachers in APPEP schools might be due to gaps in the coverage of the training targets and/or the replacement of trained teachers by the untrained through "transfers". The explanation provided by "transfers" holds good for the presence of 2.31 % of trained teachers in non-APPEP schools. This distribution indicates that there is a "dilution of training" effect in the process of implementation of the project. It is to be noted that this dilution is likely to be highest in the longest trained sample where the period available for transfers is highest. This is further described in the following paragraph.

3.3.2 Dilution of training effect :

From the data collected in the survey, it is possible to infer that there was a mobility of trained teachers from APPEP schools to non-APPEP schools and untrained

teachers from non-APPEP schools to APPEP schools by way of transfers. In addition some of the untrained teachers in trained schools will have occued because they missed the training sessions.In table - 6 the sample schools are classified into 4 groups depending on the percentage of trained teachers in them.

Table - 6

Dilution of training effect

Percentage of teachers trained	Percentage of schools		
	(Formally) Untrained	(Formally) Recently trained	(Formally) Longest trained
100	-	73.0	54.0
> = 50 (not 100)	1.5	14.8	21.0
< 50 (not 0)	5.3	8.4	12.9
0	93.2	3.8	12.1

The table demonstrates a surprisingly large "dilution of training" effect. In the longest trained sample, only 54 % of schools have a 100 % trained staff and 12.1% of schools have no trained staff at all. This seems to indicate a progressve erosion of the trained staff in trained schools since the recently trained sample still demonstrates 73 % of schools with 100 % trained staff. while it is clear that some staff were missed (i.e., not trained) in the original programme of training, these figures indicate that some of the longest trained schools had lost some or all of their original APPEP trained staff by transfer, retirement, demise etc. and that the replacements were often not trained. The amount of teacher mobility has given rise to a high rate of dilution for some schools. The effects of this dilutbn will be examined at various points in the report.

3.3.3 Usefulness of the APPEP initial inservice training :

One of the measures of the effectiveness of the initial training was obtained by asking the APPEP trained teachers working in formally trained schools how "useful" they felt that the training had been. The percentages of teachers who expressed different opinions are as indicated in table - 7.

Table - 7

Usefulness of APPEP initial inservice training

Opinion on usefulness of training	Percentage of teachers who expressed opinions about training		
	Recently trained	Longest trained	APPEP Schools (Combined)
Very useful	29.09	24.62	27.22
of some use	69.83	74.18	71.66
of no use	1.08	1.20	1.12

The data of table - 7 demonstrate that APPEP initial inservice training was found to be 'very useful' by 27.22 % of teachers in APPEP schools (29.09 % of teachers in recently trained and 24.62 % of teachers in longest trained schools). This percentage was low when compared with the percentage on similar aspect in Main Survey 1 (39.94) and pilot survey (63.18). This indicates a steep decline in the opinion of teachers on the usefulness of the training over a period of one and a half years (Pilot survey : April, 91 and Main Survey 1 : Nov-Dec, 91). The reason for this might be either dilution in the conduct of training programmes or the disinterest that tends to grow, with the passage of time, among teachers (may be 'disillusionment' effect) or both. The disillusionment of teachers in longest trained schools might be due to their perception of the problems being confronted in the implementation of the project like traditional text books, insufficient number of teachers, large classes and inadequate skills gained in the short training programme. However the unwelcome results of the analysis shown above need not altogether cause alarm, if one keeps in mind the inherent weaknesses of the "Cascade system" of training which is well known to gradually lose its effectiveness, over a period. The evaluation has located this decline in effectiveness and by doing so indicates the need for remedial action. The finding specifically points to the need for updating and revising the initial training course. The project HRD Cell has already responded by completely remodelling the course, and the effectiveness of this revision will be reported on by Main Survey 4.

While responding to the above question, 13.6% of teachers of recently trained and 23.4% of teachers of longest trained schools indicated 'non-applicability' of the question as they were not trained. The presence of untrained teachers to the extent of about 18.0% (mean percentage) in APPEP schools (both recently trained and longest trained) is thus confirmed.

3.3.4 3-day follow-up courses :

The opinions of APPEP trained teachers of formally trained schools who had undergone initial training on the helpfulness of the 3-day follow-up courses that were conducted after initial inservice training with a view to consolidating their training skills were found to be as given in table - 8.

Table - 8

Helpfulness of the 3-day follow-up course

Opinion on usefulness of training	Percentage of teachers who expressed opinion		
	Recently trained	Longest trained	APPEP Schools (combined)
A lot	7.50	13.58	10.05
quite a lot	33.81	71.82	49.58
Not at all	16.75	7.44	12.89
Non-response	41.94	7.16	27.48
Total :	100	100	100

It is evident from the data in table - 8 that only 10.05 % of the trained teachers felt that the 3-day follow-up course they participated in after the initial training was helpful 'A lot'. 49.58 % of teachers viewed the course as helpful 'Quite a lot'. Thus about 60.0 % of trained teachers could perceive the helpfulness of the course. In Main Survey 1, about 21.0 % of the teachers felt the course as being helpful 'A lot' and about 66.0 % felt it as being helpful 'Quite a lot'. Thus, there was also a decline in these percentages when compared with the position during Main Survey I. The amount of non-response to this question indicates that about 27.0 % of teachers in APPEP schools (the break-up being 42.0 % in recently trained schools and 7.0 % in longest trained schools) had either missed attending or not been provided with the 3-day follow-up course. Summing up, it can be estimated that 18 % of the teachers in APPEP schools did not have initial in-service training, and that 27 % of the trained teachers did not do the 3-day follow-up course. Thus it is clear that, by the time of the survey, only about 55 % of the teachers in APPEP schools had been through the complete process of training, having been provided with both the initial inservice training and the follow-up. This is an important finding to be kept in view while judging the "degree" of implementation of the project principles and approaches in classrooms. It also indicates a need to locate and train these teachers who, for various reasons, have missed either the initial or 3 day training.

3.3.5 Handbook and classroom materials :

The teacher's handbook which is an important sourrce of reference material in the aftermath of the APPEP training was reported to be available with them by 80.0 % of the trained teachers (77.5 % of the recemtly trained and 83.36 % of the longest trained). Of them, 33.99 % reportedly used the handbook without any difficulty and 60.33 %, with some difficulty; whiile 5.68 % did not use the handbook. It should be noted that 20.0 % of the trained teachers were without the handbook.

About 84.62 % of the trained teachers reported receipt of the supply of materials to schools for APPEP implementation. Of them 79.33 % reported that the supply was on time and 65.81 % reported that the material was supplied in full. This indicates that the position of supply of materials to schools for effective classroom implementation has not been as planned.

3.3.6 Participation in Teachers' Centre (T.C.) meetings :

Teachers'Centres have been established in each Mandal at the rate of one for a group of 20-30 teachers. The Teachers' Centre is intended to serve as a forum for teachers to exchange their academic experiences, ideas and classroom practices for the effective implementation of APPEP principles in classrooms. In an academic year each T.C. is expected to organise six one-day meetings to teachers for this purpose. Each T.C. is strengthened with the supply of consumable and non-consumable materials as a support to teachers in their preparation of activity-based instruction in classrooms. In addition, one T.C. in each mandal is provided with add-on facilities like a meeting room, a storage room etc. Thus, the principal objective of the Teachers' Centres is to carry out academic activities related to the effective implementation of the project principles and approaches in classrooms. But the teachers of those schools which have not yet been covered by the project (i.e., untrained sample), and as such have no "Teachers' Centres" organised for them, attend the one- day meetings, held once in a month, of what are known as Teachers' Association (T.A.) Centres to discuss academic as well as administrative matters. Though the deliberations at a Teachers'Association centre meeting are not very much related to the APPEP pedagogy, the teachers there do involve themselves in presentation and observation of demonstration lessons, in their own traditional way. But what mainly distinguishes the TA centre meeting from a TC meeting is that considerable time of a TA meeting is devoted for discussions on matters that the teachers think have a bearing on their service conditions - e.g. the various types of circulars, orders, memoranda etc. issued by the government from time to time. The participation of teachers in the different activities of the Teachers' Centres / Teachers' Association meetings was reportedly as shown in table - 9.

Table - 9

Participation of teachers in T.C. Meetings

	Activity	Percentage of teachers participated		
		Longest trained	Recently trained	Untrained
1.	Presenting demonsttration lessons.	56.9 (S)	31.1 (L)	34.8
2.	Attending demonstration lessons given by otther teachers.	92.6 (S)	63.2 (L)	64.0
3.	Exchanging ideas	94.1 (H)	64.2 (L)	66.3
4.	Display of children's work	75.0 (H)	37.6 (H)	17.0
5.	Field trips with other schools.	19.7 (L)	11.8 (L)	11.5
6.	Preparation of teaching / learning aids.	85.3 (H)	52.4 (H)	29.3
7.	Preparation of institutional plans	49.8 (H)	24.9 (L)	20.6
8.	Preparing unit or period plans	78.6 (H)	44.9 (H)	29.9

Note : H indicates that there has been an increase in participation in this group of schools since last year i.e., conduct of Main Survey 1.

S indicates the same level.

L indicates a decrease. (Most of these changes are small, not greater than 5 %.)

The data in table-9 inform us that the major activities of Teachers' Centres are exchange of ideas, attending the demonstration lessons given by other teachers, preparing teaching/learning aids, preparing unit/period plans, display of children's work etc,. It should be noted that the percentage of teachers participating in the TC activities is higher in the longest trained schools when compared with the percentage of teachers from recently trained schools. This is almost certainly due to the timing of the survey in relation to the time available for holding T.C.activities. It is likely that a majority of recently trained schools have not yet had the opportunity of participating in more than a few T.C. meetings. This is borne out by the close similarity in the pattern of response between the recently trained and untrained schools.The traditional activities in T.A.meetings, as already mentioned, are holding demonstration lessons and teacher discussion. The first 3 items in Table 13,represent these activities and show a close match between the "recently" and "untrained" samples. The first APPEP linked (new) activities

that are introduced seem to be "displays of children's work", "preparation of teaching-learning aids" and "preparation of unit plans". In these 3 categories of activity the recently trained teachers are reporting new experiences supplied by the T.Cs. They therefore show much greater levels of participation.

By the time T.C. meetings are established after a year within the project, the longest trained schools show higher levels of participation in every one of the eight T.C. activities listed in the survey. It is important to note that within the longest trained schools teachers have generally maintained or improved their rates of participation since the previous year. It will be important for the recently trained sample to show large increases in participation by 1993.

3.3.7 M.E.Os visits to schools :

As reported by teachers, the Mandal Education Officers (MEOs) who have a very crucial role to play in the effective supervision of the project implementation at classroom level visited the sample schools during the year that preceded the survey as indicated in table-10. In the normal course, they are expected to pay three visits to a school in a school year.

Table - 10

MEOs' visits to schools

No. of visits	Percentage of schools that were visited		
	Longest trained	Recently trained	Untrained
None	7.5	7.2	9.3
Once	11.2	12.3	9.8
Twice	23.2	31.0	23.1
Thrice or more	57.1	48.7	56.6

The data in table-10 indicate that MEOs visits to the schools of trained as welll as untrained samples were quantitatively not very different. This is indicative off the fact that the trained schools received no special attention from them. A\ similar pattern was noticed in Main Survey 1 also. The data demonstrate thatt the MEOs managed to visit only 48.0 % - 57.0 % of the schools either trainedl or untrained as per the norms. Further, the MEOs could not visit 'even once" about 7.0 to 9.0 percent of the schools either trained or untrained. The position,, therefore, warrants the immediate need to strengthen the supervision at the schooll level possibly by reducing the multi-farious duties of these educational officers att mandal level so that they can discharge their roles completely and competently. Their levels of support are similar to those reported last year.

3.3.8 Support of Headteachers for APPEP implementation :

The trained teachers of APPEP schools who were expected to respond to this question (these exclude headteachers/teachers of single teacher schools and untrained teachers) have reported the extent of support they are receiving from the headteacher in their endeavour to implement the APPEP principles. An analysis of the data is presented in table-11.

Table -11

Headteacher support for APPEP implementation

Nature of support from Headteacher	Percentage of teachers reporting in schools		
	Recently trained	longest trained	APPEP schools (combined)
Very good	14.50	14.20	14.40
Adequate	66.30	72.80	69.00
Poor	9.50	7.70	8.80
None	9.70	5.30	7.80

As seen from the data in table-11, 80.80 % (14.50 + 66.30) of teachers in recently trained schools and 87.0 % (14.20 + 72.8) of teachers in longest trained schools reportedly received enough support from their headteachers for implementation of APPEP. On the whole, 83.40 % (14.40 + 69.0) of trained teachers in APPEP schools received enough support from headteachers.

3.3.9 Support of colleagues in the implementation of APPEP

Just as headteacher's support, support from colleagues too plays a prominent role in motivating a teacher to take interest in actively implementing the APPEP scheme. An analysis of the kind of support teachers received from their colleagues is presented in table-12.

Table-12

Support of Collegues in the implementation of APPEP

Kind of Support from Colleagues	Percentage of teachers reporting in schools		
	Recently trained	longest trained	APPEP Schools (combined)
A lot	12.00	7.60	10.20
Adequate	73.70	83.80	77.90
None	14.30	8.60	11.90

The data in Table-12 indicate that 85.70 % (12.00 + 73.70) of teachers in recently trained schools and 91.40 % (7.60 + 83.80) of teachers in longest trained schools had sufficient support from their colleagues in the implementation of APPEP. Thus, 88.10 % (10.20 + 77.90) of the trained teachers in APPEP schools received enough support from their colleagues in the implementation of APPEP.

3.3.10 A review of implementation by the Delivery System :

As seen from the data furnished by teachers earlier it could be noticed that about 80 % of the target population (teachers in APPEP schools) were provided initial inservice training on APPEP and about 55 % of the teachers had undergone both initial inservice training and 3-day follow-up course despite several administrative holdups. However, only 27.22 % of the trained teachers in APPEP schools viewed the initial inservice training as being 'very useful'. The 3-day follow-up course was still less regarded as only 10.05 % of them felt it as 'A lot' helpful. Thus, there is every need to revitalise the two types of courses to serve the target population to full extent. The Teachers' Centres have sufficiently motivated the longest trained teachers to take part in activities that promote activity based learning in classrooms. The frequency of visits by MEOs to APPEP schools had in no way differed from non-APPEP schools and not improved since the previous year.

3.4 Implementation of APPEP within the classroom :

We will now examine the extent to which APPEP principles are implemented in the classrooms. The evaluation has done this using two methods.The first involves asking the teachers directly whether they have carried out certain key aspects of the project within the classroom; the second involves direct observation of a limited number of lessons(2) being taught in each school. The first method reported in this section is dependant on the teacher being able to accurately report their levels of implementation. However, we know that in circumstances where a teacher feels under some compulsion to innovate they are likely to exaggerate their levels of implementation. For this reason we have developed the technique of using the levels of reported implementation by untrained teachers as a correction factor or exaggeration factor (see report of main survey 1). It was never thought that traditional methods of teaching would be completly replaced by APPEP practices. But, it was expected that there would be significant changes in the quality of pedagogy, pupils learning activities and classroom environment as a whole. Further, it is hoped that a high degree of APPEP implementation will enhance the enrolment and performance levels of pupils in the long run (as third order outcomes). The opinions of teachers on some APPEP practices and the activities they carried out to implement the practices were as follows.

3.4.1 Time for traditional methods of teaching :

The trained teachers working in APPEP schools indicated the percentage of time that they felt should be devoted to traditional methods of teaching as given in table -13.

Table -13

Percentage of time to be devoted to traditional methods of teaching

Percengage of time	Percentage of teachers indicated		
	Recently trained	Longest trained	APPEP Schools (combined)
0	2.04	1.79	1.94
25	36.48	30.04	33.79
50	43.45	51.88	46.97
75	16.09	14.35	15.36
100	1.94	1.94	1.94

The data in table-13 point out that most of the APPEP trained teachers (98.0 %) say that they would prefer to devote at least 25 % of their instructional time to traditional methods of teaching.

3.4.2 Need for changing traditional methods of examination :

About 79.0 % of the trained teachers (the break-up being 82.52 % of the recently trained and 74.45 % of the longest trained) felt the need for changing the traditioral methods of examination for effective implementation of the APPEP approaches in classrooms.

3.4.3 Organisation of groupwork :

Two implementation measures viz., organisation of group work and display of children's work have been selected to assess the degree of implementation of APPEP principles in classrooms. The data collected on group work relate to the activities conducted during the week prior to the date on which data were collected by District HRD Lecturers of DIETs. The data furnished by teachers on organisation of group work are as shown in table -14. The figures in the table give the percentage of teachers who indicated about group work.

Table - 14

Organisation of groupwork in schools

Category of schools	Subject	Total % of teachers reported to have organised group work	Number of times group activities organised			
			1	2	3	more than 3
Untrained	Language	17.8	3.2	6.1	2.6	5.9
	Maths	16.9	2.4	4.3	3.5	6.7
	E.S. I	15.9	6.3	2.9	1.7	5.0
	E.S. II	15.5	4.9	4.0	1.4	5.2
Recently trained	Language	47.6	14.3	17.2	5.1	11.0
	Maths	46.5	14.5	10.1	7.4	14.5
	E.S. I	43.1	15.8	11.1	5.9	10.3
	E.S. II	43.4	15.3	10.0	6.5	11.6
Longest trained	Language	55.0	17.1	18.2	6.2	13.5
	Maths	54.7	14.5	16.7	8.7	14.8
	E.S. I	51.5	17.2	15.3	7.5	11.5
	E.S. II	54.4	16.3	17.1	7.4	13.6

The data in table-14 reveal that approximately 15 % of teachers in untrained schools, 45 % of teachers in recently trained schools and 55 % of teachers in longest trained schools have organised group work. The amount of organistion of group work in untrained schools can be considered as an exaggeration factor, as there is no obligation for the teachers of those schools to conduct group work whether they are untrained or APPEP trained. As such if the percentage in the case of untrained schools is cosidered as the amount of exaggeration, the estimates of implementation of group work will be as follows after deducting the exaggeration factor.

- 30 % of teachers are conducting group work in recently trained schools

- 40 % of teachers are conducting group work in longest trained schools.

It is interesting to note that while the percentage of teachers in the longest trained sample reporting that they have organised group work ,has fallen since the previous year from more than 60 % to just over 50%, the proportion in untrained samples has also fallen by about 10 %. This result seems to validate the procedure adopted here of deducting the exaggeration factor. The fact that the exaggeration factor has decreased seems to indicate that as the innovation has spread and become more generally understood, there is less anxiety and less

pressure to exaggerate. The result is that the levels of implementation of group work in the longest trained sample have remained fairly stable. However, leves of implementation in the recently trained sample are somewhat down compared with the recently trained sample last year. It will be important to notice if any other indicators point to a lowering in the levels of implementation in the recenty trained cohort.

3.4.4 Introduction of group work from pupil perspective :

During interviews with pupils in the process of collecting data for the survey, they were asked the question "Has your school introduced group work ?" The responses of the pupils were as given in table - 15.

Table - 15
Introduction of group work from pupil perspective

Introduction of group-work	Percentage of Pupils responded in schools		
	Untrained	Recently trained	Longest trained
Yes	12.8	54.2	63.6
No	86.7	45.4	33.7

This data validate the earlier findings. It should be noted that although ths question returns higher percentages of implementation, this is probably a feature of the form of the question. It does not restrict the reporting of groupwork to the previous week.

The data in table - 15 show that the teachers in trained samples have introduced groupwork to a substantial extent. It is worth noting that the teachers trained earlier (i.e., teachers trained more than a year ago) maintain a higher rate (64 %) of conducting groupwork than those trained recently (54 %). This phenomenon is observed to be occuring even though the longest trained schools have a higher "dilution". This could indicate a possible accumulative effect of APPEP as schools gain experience in implementation of the project or, as mentioned before, a possible lowering of levels of implementation in the recently trained cohort.

3.4.5 Display of children's work in classrooms

The data furnished by teachers on display of children's work are as shown n table-16.

Table - 16

Display of children's work in class rooms

Category of schools	Subject	Total % of teachers reported to have displayed childrens work	No.of times children's work displayed		
			1-5	6-10	morethan 10
Untrained	Language	12.6	11.7	0.9	-
	Maths	16.6	15.4	1.2	-
	E.S. I	14.7	14.2	0.5	-
	E.S. II	15.0	14.5	0.5	-
Recently trained	Language	39.9	38.3	1.5	0.1
	Maths	41.3	38.9	2.1	0.3
	E.S. I	37.0	34.9	1.9	0.2
	E.S. II	38.6	36.5	1.9	0.2
Longest trained	Language	55.0	53.6	1.2	0.2
	Maths	55.9	54.0	1.5	0.4
	E.S. I	51.8	50.8	0.6	0.4
	E.S. II	54.2	52.9	1.1	0.2

The deduction of exaggeration factor to data in table-16 in the way similar to data in table-14 will enable us to conclude that

- 25 % of teachers of recently trained schools are displaying children's work

- 40 % of teachers of longest trained schools are displaying children's work

This result confirms the trends noticed in the analysis of the implementation of group work. It would appear that levels of implementation in the recently trained sample of schools are slightly lower than the recently trained sample a year ago.

3.5 Classroom Observation :

During the visits to schools, the District HRD Lecturers made classroom observation of lessons to fill in schedule IV (given in Annexure) of the survey to measure traditional and APPEP activities carried out in the teaching-learning process. In each school precautions were taken to prevent the teachers preparing lessons especially for the observer. The exact date of the visit was withheld, only the week of the visit was given in advance. The observer asked for a class to observe and when this was completed asked to observe a second class. It is this second observation that is recorded and analysed here. The classroom observation took into account three dimensions of teacher behaviour viz., teacher talk, nature of

teacher talk and pedagogic activities and three dimensions of pupil behaviour viz., organisation of pupils for learning, pupil talk and pupil learning activity. Under each dimension, different activities are listed out and codes assigned to them to facilitate the recording. In a period of 40 minutes duration, 20 observations are recorded on each dimension. Similar data were collected during Main Survey 1 also. As such, the analysis given in this section includes some comparisons with data of Main Survey 1 on the classroom observation.

3.5.1 Indices of classroom observation :

For the purpose of analysis, combined observation indices and indices in respect of each dimension of teacher and pupil behaviour are worked out keeping in view the formal APPEP training status of the sample schools. The sample schools are labelled as A1, B1, A2, B2 and C2 for discussions (see para 1.5.2) as indicated below :

A1 : untrained schools in main survey 1

B1 : trained schools in main survey 1

A2 : trained schools in main survey 2
(less than one year of training i.e., recently trained)

B2 : trained schools in main survey 2
(more than one year of training i.e., longest trained)

C2 : untrained schools in main survey 2

It is to be noted that A1 and A2 are the same set of schools, B1 and B2 are the same set of schools and C2 is the new untrained set of schools for Main Survey 2. Therefore the difference in results of classroom observation between A2 and A1 and between B2 and B1 are expected to be the effects of APPEP implementation. Also, it should be noted that if differences occur between sample A2 and sample B2, it will indicate the effects of the year after training. In other words if sample B2 shows higher levels of implementation than A2, it could indicate that the project is being consolidated and that the 3 day training and teacher centre meetings have beneficial effects. The results of the two sets of schools A1 and C2 are expected to be the same as both are untrained school samples in two subsequent years (1991 and 1992). A comparison of mean values of these indices on each of these dimensions in respect of different sets of schools is made in the following paras.

3.5.2 Comparison of A1 with C2 :

This comparison is between two untrained samples selected and observed in subsequent years. The indices in respect of these schools are given in table - 17.

In the three tables that follow, the indices on the three dimensions of teacher behaviour viz. (i) Teacher talk, (ii) Type of teacher talk and (iii) Teacher's pedagogic activity are abbreviated as TI 1 (meaning Teacher Index 1), TI 2 and TI 3 respectively.

Those concerning the pupil behaviour viz. (i) Organisation of pupils for learning, (ii) Nature of pupil talk and (iii) Pupil learning activity as PI 1 (meaning Pupil Index 1), PI 2 and PI 3 respectively.

A high score on these indicies indicates teacher or pupil behaviour in tune with APPEP principles (see Appendix -)

Table - 17

Observation indices In schools of untrained sample for MS 1 and untrained sample for MS 2

	Mean index of Sample School		
Dimension	A1 (Untrained for MS 1)	C2 (Untrained for MS 2)	Difference (Col 3-Col 2)
(1)	(2)	(3)	(4)
TI 1	0.12	0.11	- 0.01
TI 2	0.20	0.21	+ 0.01
TI 3	0.39	0.42	+ 0.03
PI 1	0.05	0.03	- 0.02
PI 2	0.06	0.06	0.00
PI 3	0.14	0.16	+ 0.02
* COI	1.00	1.00	0.00

* Combined observation index

The data in table-17 in respect of the sample schools of A1 and C2 groups have close similarity and indicate that the indices on class room activities are maintained at the same level in both untrained samples. This is a good reliability check.

3.5.3 Comparison of A1 with A2 :

This comparison represents the change from the untrained to the recently trained. The mean values of the indices and the differences therein, in respect of these schools are shown in table - 18.

Table - 18

Observation indices in schools of untrained for M.S. 1 and recently trained for M.S. 2

Dimension	Mean index of Sample School		Difference (Col 3-Col 2)
	A1 (Untrained for MS 1)	A2 (Recently trained for MS 2)	
(1)	(2)	(3)	(4)
TI 1	0.12	0.24	+ 0.12
TI 2	0.20	0.27	+ 0.07
TI 3	0.39	0.50	+ 0.11
PI 1	0.05	0.28	+ 0.23
PI 2	0.06	0.25	+ 0.19
PI 3	0.14	0.34	+ 0.20
COI	1.00	1.85	0.85

The above differences indicate that substantial changes have taken place in the classroom pedagogy in the same group of schools after the APPEP traininig has taken place. This is a reassuring finding.

These differences indicate that the APPEP related pupil behaviours like organisation of pupils for learning in groups, pupils talking in pairs and/or in groups and pupil learning activities like working with materials, drawing, recording own information etc., are observed much more frequently in the recently trained schools (of M.S. 2) than in the untrained schools. These differences are almost double the differences in the teacher behaviour.

3.5.4 Comparison of B1 with B2 :

This comparison represents the change that took place between recently trained (< 1 year ago) and longest trained (> 1 year ago) in the same sample (group) of schools. The differences in the index values for the two groups of schools are as follows.

Table - 19

Observation indices in schools of trained sample for M.S. 1 and longest trained for M.S. 2

Dimension	Mean index of sample school		Difference (Col3-Col2)
	B1 (trained sample for M.S. 1)	B2 (longest trained sample for M.S.2)	
TI 1	0.24	0.24	0
TI 2	0.35	0.29	- 0.06
TI 3	0.47	0.48	+ 0.01
PI 1	0.35	0.33	- 0.02
PI 2	0.28	0.26	- 0.02
PI 3	0.39	0.36	- 0.03
COI	2.08	1.97	- 0.11

The differences in the mean index values noticeable in table-19 are very narrow butt overall they demonstrate a slight downward drift.The practice of APPEP principless has therefore been maintained with some very marginal loss. This result confirmss the result from teacher reported levels of implementation. The teachers have by and large maintained their levels of implementation between the first and second year after the training. This is an important finding. The result of the 3 day training and TC meetings has been to maintain levels of implementation.

35.5 Comparison of B1 with A2 :

This comparison will give a rough indication of the effects of training in 19911 compared with the effects of training in 1992. The indices worked out on thee effects of training during the two years in respect of each dimension are as givem in table - 20.

Table - 20

Indices on the effects of training

Dimension	Mean index of Sample School		Difference (Col 3-Col 2)
	B1 (trained sample for M.S. 1)	A2 (recently trained for M.S. 2)	
TI 1	0.24	0.24	0
TI 2	0.35	0.27	- 0.08
TI 3	0.47	0.50	+ 0.03
PI 1	0.35	0.28	- 0.07
PI 2	0.28	0.25	- 0.03
PI 3	0.39	0.34	- 0.05
COI	2.08	1.85	- 0.23

The differences in the mean values of the indices found in table- 20 are small but represent a slightly stronger downward trend than in the previous case. As such, we may infer that training in 1992 still produced a marked effect on classroom practies but the effect is growing slightly weaker. This table confirms the trend indicated in the teacher reported levels of implementation and teacher reported levels of satisfaction with training that the training in 1992 was not as effective as the training in 1991. However,the decrease in effectiveness is small and would not be expected to produce a large decline in pupil or parent response. I is nevertheless a timely warning and should be acted upon by the project team.

3.6 Index on APPEPness in schools :

In order to estimate the overall amount of implementation of APPEP principles and approaches in schools, an index has been created by combining the values of indices on variables like participation and involvement of teachers in Teachers' Centre activities, organisation of group activities and display of children's work by teachers in classrooms and indices of classroom observation. This combined index is called the APPEPness index. It measures a wide range of pupil and teacher activities relevant to APPEP. It should be remembered that the APPEPness index is a school level measure like mean, standard deviation etc.. It contans standardised elements and cannot therefore be compared across samples (.e. between he surveys held in different years).

It will be important to determine if the value of APPEPness Index is affected by "dilution of training". This analysis is set out in table-21.

Table-21

Training of teachers and APPEPness

Percentage of trained teachers	Value of APPEPness Index in schools		
	Untrained	Recently trained	Longest trained
100 %		0.23	1.00
> = 50 % (not 100 %)	- 0.56	- 0.10	0.77
< 50 % (not 0 %)	- 1.12	- 0.37	0.16
0 %	- 1.38	- 0.41	- 0.90

The data in table - 21 have profound implications for the progress of APPEP. APPEPness was found to be very high (1.0), where schools have been trained for more than 1 year and have retained 100 % of trained teachers. But, the score of APPEPness was considerably lower at -0.90 when these schools had either not been trained or lost all the trained teachers. A similar decline could be

seen in the recently trained schools. This effect could be caused by two factors - trained teachers being transferred out of the school and teachers missing the training sessions. This indicates that the effects of APPEP training can be lost through 'transfers' of teachers from APPEP schools to non-APPEP schools. The above data also indicate that, given 100 % trained staff, implementation of APPEP is relatively at a higher level in the longest trained schools than in the recently trained schools.

Section 4 : Outcomes of project implementation :

4.1 Order of outcomes :

A sequence of outcomes has been predicted in the heuristic model presented in section 1 of the report. This section adheres to the order of outcomes set out in the model.

4.2 First Order Outcomes :

The first order outcomes predicted in the model are better pupil learning, motivation and enjoyment. During the collection of data for the survey, 1257 pupils of classes 4 and 5 were interviewed to find out what they felt about the changes in their schools that had probably been caused by APPEP. The genderwise composition of the group of pupils interviewed is as given in table-22.

Table - 22
Number of Pupils interviewed

Pupils interviewed		Sample Schools		
		Untrained	Recently trained	Longest trained
Boys	Number	151	302	244
	%	57.0	55.3	54.6
Girls	Number	114	244	202
	%	43.0	44.7	45.2
Total	Number	265	546	446
	%	100.0	100.0	100.0

The opinions of pupils expressed during the interviews are analysed and the analyses are given below :

4.2.1 Pupil learning motivation :

To find out the level of motivation of pupils to attend schools consequent upon introduction of new activities, pupils were asked "Do new activities (classroom) enable you to learn more ?". This could be answered by pupils interviewed only if they had experienced one or more new methods besides the traditional ones. From out of those who were interviewed, 31 pupils of untrained schools (11.70 % of the interviewed in that group), 322 pupils of recently trained schools (58.97 % of the interviewed in that group) and 279 pupils of longest traired schools (62.40 % of the interviewed in that group) responded properly to the question. A meaningful response to the question by pupils of untrained schools indicates that about 12.0 % of the pupils in the "untrained" sample are implidtly

claiming that they have experienced APPEP methods at some time. An analysis of the responses given by the pupils in APPEP schools is given in table - 23.

Table - 23

Pupil Learning Motivation

	Percentage of pupils		
	Recently trained	Longest trained	APPEP Schools (combined)
More than traditional methods	85.09	87.45	86.19
Same as traditional methods	12.42	11.47	11.98
Less than traditional methods	2.49	1.08	1.83

It is to be noted from the data in table-23 that 86.19 % of pupils of APPEP schools (87.45 % of longest trained and 85.09 % of recently trained samples) who experienced new methods of instruction feel that new methods enable them to learn more.

4.2.2 Pupils' interest to attend school :

Similarly, when the pupils were asked "Do those new activities make you want to come to school ?", 11.70 % of the pupils of untrained schools, 60.0 % of the pupils of recently trained schools and 62.78 % of the pupils of longest trained schools responded to the question in a proper manner which again is indicative of the possibility that they had experienced the APPEP methods of instruction in schools. An anlysis of the responses of pupils in APPEP schools is shown in table - 24.

Table - 24

Pupil interest to attend school

Pupils'interest to attend school	Percentage of pupils		
	Recently trained	Longest trained	APPEP Schools (combined)
More than in the past	85.67	89.64	87.50
As much as in the past	13.41	9.64	11.68
Less than in the past	0.92	0.72	0.82

The data in table-24 testify that 87.50 % of pupils of APPEP schools who experienced new methods of instruction (89.64 % of longest trained and 85.67 % of recently trained) are motivated by the new activities to attend school more than in the past. This is a fairly encouraging trend. Once again, the pupil response indicates that the new methods are popular with the pupils.

4.2.3 Pupil enjoyment of school :

In support of the above opinions, the pupils were asked " How much do you enjoy school ?". It should be remembered that this question was asked as much of the pupils of untrained schools as of those in the trained ones.The responses were as given in table -25.

Table-25

Pupil enjoyment of school

	Percentage of pupils expressed		
Extent of Pupil Enjoyment	Untrained	Recently trained	Longest trained
Not at all and Not much	27.1	18.4	17.8
Quite a lot and A lot	72.9	81.6	82.2

The data in table-25 show that pupil enjoyment is nearly 9 % greater in both types ot APPEP trained schools when compared with "untrained" sample.

In Main Survey 1 also, 93.0 % of pupils of APPEP schools reported that they enjoyed school quite a lot with the new activities. Thus, pupils continued to respond positively to the organisation of APPEP activities in schools.

Thus the data in tables 22 - 24 provide an independent source of information on teacher implementation in addition to new outcome measures of the first order.

The positive responses mentioned earlier from the "untrained" sample might be due to the fact that the pupils experienced some APPEP methods consequent on transfer of "trained" teachers to untrained schools. However, since only about 7.0 % untrained schools have some trained teachers (see table - 6),this cannot explain all of this effect. The balance is likely to be caused by a small exaggeration effect.

60-70 % of APPEP implementation (as revealed through the responses of pupils in tables 23 - 25) in the two types of APPEP trained samples confirm the finding of main survey 1 that about 30 % of APPEP trained teachers do not implement APPEP principles at all.

The data from longest trained sample reveal that more pupils of these schools believe that the new methods enable them to learn more, more of their pupils want to come to school more than in the past and more of their pupils enjoy school slightly more. These desired outcomes indicate that if APPEP implementation is sustained in schools, it could have an accumulative effect.

4.2.4 Training of teachers and pupil enjoyment :

The pupil enjoyment of school due to the implementation of APPEP methods is directly associated with not only the training of teachers in APPEP approaches but also the presence of trained teachers. The data in table-26 show how such dislocation and missed training has an effect on the mean pupil enjoyment.

Table-26

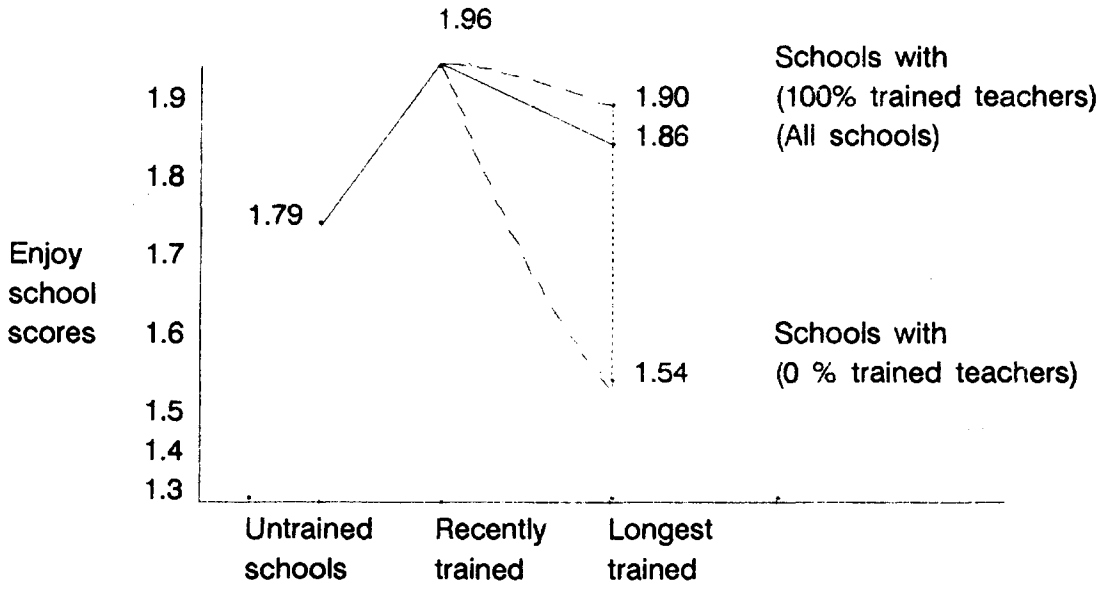
Training of teachers and pupil enjoyment

Percentage of teachers trained in schools	Mean pupil enjoyment with teachers trained			
	Untrained	Recently trained	Longest trained	APPEP Schools (combined)
100%	-	1.98	1.90	1.95
>=50% (Not 100%)	1.75	2.05	1.90	1.97
<50% (Not 0%)	1.93	1.67	1.88	1.81
0%	1.78	1.75	1.54	1.74
Total	1.79	1.96	1.86	1.88

The data in table - 26 show that in the recently trained schools with 100% trained teachers, the mean pupil enjoyment score is 1.98, and it declines to 1.75 when there are no trained teachers. In the longest trained schools with 100% trained teachers, the mean pupil enjoyment score is 1.90 and it has steeply fallen to 1.54 when there are no trained teachers. The mean pupil enjoyment measure has a theoretical maximum of 3 and a minimum of 1. These results indicate a possible reaction to the dislocation of trained teachers from the APPEP schools and consequent loss of pupil enjoyment that takes them down to a level of enjoyment beneath the level they started with. This could be called a "Disillusionment effect."

The following graph further demonstrates the way in which pupill enjoyment of school is associated with the training and the year after training.

Enjoy Scores before and after training



As seen from the graph, one year after training the pupil enjoyment score dips slightly to 1.86, but in those schools where the trained teachers have in some cases left and been replaced by untrained teachers, the pupil enjoyment score dips to a new low of 1.54.

Since, the pupil enjoyment scores are derived based on interviews with pupils, they represent very rigorous measures of the effects of a classroom based innovation.

So, the immediate task of the project should be tracing the untrained teachers in 'trained' schools and ensuring that they are repidly trained. Any delay in this regard could jeopardise the future development of APPEP.

4.3 Second Order Outcomes :

Parent awareness and satisfaction, less absenteeism and broader pupil performance are set out as the second order outcomes in the evaluation model (see para 1.1). The analysis of data on these aspects is presented in the following paras.

4.3.1 Number of Parents interviewed :

Parents were interviewed during collection of data for the survey to find out the nature of their involvement in the school activities. While selecting parents for the interview, care was taken to see that women and persons belonging to SC,ST and BC were given proper representation. A total of 1261 parents were interviewed

by selecting 2 parents from each school. The genderwise composition of this group is as shown in table -27.

Table -27

Genderwise composition of the interviewed parents

Parents interviewed		Sample Schools		
		Untrained	Recently trained	Longest trained
Female	Number	77	199	184
	%	28.9	36.4	41.1
Male	Number	188	346	263
	%	70.7	63.3	58.7
Total	Number	265	545	447
	%	100.0	100.0	100.0

The data in table - 27 indicate that, despite attempts to get equal numbers of mothers and fathers, about 60-70 % of those interviewed were men and about 30-40% were women. It should be noted that the untrained sample is the most biased towards fathers. This could give rise to some skewing of the results. This should be held in mind.

4.3.2 Educational Status of the interviewed parents :

Of the parents who were interviewed, 33 % were illiterate and 67 % were literate (State figures are 55.91 % illiterate and 44.09 % literate as per the 1991 census). 51.7 % of the parents were below matric and 15.3 %, matric and above.

4.3.3 Visits to schools by parents :

About 80.0 % of the parents who were interviewed informed us that they had visited the schools at least once during the academic year. The frequency of visits made by parents to schools was as given in table - 28.

Table - 28

Frequency of Visits to schools by parents.

Frequency of Vsits	Percentage of Parents Visited to Schools		
	Untrained	Recently Trained	Longest Trained
None	23.3	18.6	15.8
Once	9.8	5.3	6.5
Twice	17.7	17.7	15.8
Thrice	19.5	17.7	18.1
Many times	29.7	40.6	43.8

The data in table - 28 show that 76.7 % of parents in untrained schools, 81.3 % of parents in recently trained schools and 84.2 % of parents in longest trained schools visited the schools at least once during the year. It is important to note here that the percentage of parents who visited schools many times was 10% more in both types of APPEP trained schools when compared with untrained sample schools. The reason for this may be that some parents are frequently asked by their children to visit the school and see the new kinds of activities they are involved in during the teaching-learning process. Besides, parents might have observed their children at home collecting materials from the local environment,measuring objects,estimating their measurements etc, and, as a result, taken interest in visiting the schools to see for themselves what their children are doing with those materials and how they are progressing.

4.4 Observations made by parents during their visits to schools :

The parents were questioned during interviews, "Did you notice any change in the methods of teaching in school ?" The percentage of parents who responded positively is given in table - 29.

Table - 29
Parents noticing new methods of teaching

	Sample schools		
	Untrained	Recently trained	Longest trained
% of parents who responded positively	9.4	42.6	50.4

The data in table-29 show that the awareness of parents on the change in pedagogy is growing as he period of APPEP implementation is increasing.

4.5 Observation of parents about children's behaviour :

The same pattern as is seen above, is repeated in parents' observation of the behaviours of their children like evincing more interest in attending school regularly, counting different objects at home, collecting different objects (empty match boxes, bottletops etc) available in home or environment, bringing home materials prepared by them in the school etc. as seen from data given in table -30.

Table - 30

Parents noticing changes in behaviours of children

	Behaviour	Percentage of parents informed		
		Untrained	Recently trained	Longest trained
1.	Evincing more interest in attending school regularly	35.0	70.9	72.5
2.	Counting different objects at home	15.8	50.1	59.4
3.	Collecting different objects from home and environment	9.4	49.7	54.0
4.	Bringing things home from school	4.9	30.5	33.3

The above information indicates a substantial change in the behaviour of children in APPEP schools as noticed by their parents, even allowing some amount of exaggeration.

4.6 Parents keeping children off school :

Despite these encouraging features there is one discouraging aspect so far as parental involvement is concerned i.e. parents keeping the children away from school to make them look after the younger ones at home or assist them in their occupation. The percentage of parents who responded on this aspect is given in table-31.

Table-31

Incidence of parents keeping children away from school

Frequency	Untrained	Recently trained	Longest trained
Often	5.6	9.0	4.0
Sometimes	30.5	38.2	34.6
Never	62.8	52.3	60.9

As seen from the above data, about 36 - 47 % of pupils are kept away from schools by parents for various reasons. This will have an adverse effect on the outcomes of project implementation. It should also be noted that in the case of the recently trained sample of schools, parents are the most likely to keep their children away from school and the longest trained sample show no improvement over the untrained sample. This is an important finding. It indicates that although parents know that APPEP causes their children to be more interested and involved in school, this is not at this stage a significant factor when it comes to deciding

whether or not to keep their child away from school. It is likely that the main factors that impinge on this decision are of a social and/or ecomonic nature and lie outside the classroom. However, it is possible that a longer exposure to APPEP classroom activity or a more outgoing and socially oriented policy by the Project could change this outcome.

4.7 Absenteeism of pupils :

The data on number of children in classes 1 to 5 who had been continuously absent from school during the months of March, 1992 and October, 1992 were collected from all the sample schools. To measure the impact of implementation of APPEP principles on the continuous absence of children in schools (which is a second order outcome) the data have been pooled in respect of 123 untrained schools (with 0 % APPEP trained teachers), 200 recently trained schools (with 100 % APPEP trained teachers) and 121 longest trained schools (with 100 % APPEP trained teachers). The position of continuous absence of children in these three types of schools is given in table - 32 (percentage to the total number of children on rolls) by working out the percentage of children who were continuously absent from schoo in March,1992 and October, 1992, adopting the formula given below.

Percentage of continuous absence in March,'92/ Oct., '92 = (No. of children who were continuously absent in classes 1 to 5 in March/October,'92 divided by enrolment of children in classes 1 to 5 in March, '92/October,'92) times 100.

Table - 32
Position of continuous absence of children in classes 1 to 5 in March, 92 / Oct,92 (in percentage)

Class	Month	Untrained (with 100% un-tralnedteachers)		Recently trained (with 100% trained teachers)		Longest trained (with 100% trained teachers)	
		B	G	B	G	B	G
1.	March'92	13.48	16.36	18.02	19.92	18.73	17.45
	Oct'92	10.93	11.57	16.11	17.01	15.01	14.43
2.	March'92	16.85	19.55	22.13	21.49	21.52	20.74
	Oct'92	15.57	14.85	18.33	18.48	20.74	17.67
3.	March'92	12.79	13.53	18.91	18.08	16.38	17.07
	Oct'92	10.99	11.44	14.11	14.30	16.18	16.64
4.	March'92	11.87	12.14	15.10	16.27	13.98	14.33
	Oct'92	10.57	10.77	11.65	12.48	12.26	14.31
5.	March'92	7.32	8.90	9.93	11.33	11.59	10.57
	Oct'92	6.57	8.72	7.83	7.40	10.67	10.80
Total:	March'92	12.62	14.71	14.66	18.14	17.09	16.65
	Oct'92	11.03	11.71	14.11	14.74	15.39	15.05

The data in table-32 indicate that the percentage of children continuously absent is more in APPEP schools (both in recently trained and longest trained) than in 'untrained' schools during March'92 and October'92 when pure samples are taken into account. The incidence is slightly more in 'longest trained' schools. This finding is a reversal of the outcome measure obtained in the main survey 1. The continuous absence is found to be more among girls than boys in all the three types of schools. However, the continuous absence of children has declined from March'92 to October'92 in general in all the schools eventhough the differences are not statistically significant. Thus, the data on continuous absence of children in Main Surveys 1 and 2 show no pattern to draw any conclusions on the beneficial impact of APPEP. Further longitudinal data (MS 3 and MS 4) may enable us to draw conclusions in this regard.

4.8 Continuous absence of pupils :

The result of the analysis of the statistics for continuously absent pupils in March and October 1992 is both disappointing and surprising. In main survey 1 the 'continuously absent' statistics indicated that they might be the first of the behavioural indicators to show an improvement as a result of the APPEP innovation. This possibility appeared to be even more probable when both pupils and parents indicated that they noticed and approved of the new classroom activities. However, the direct question to parents relating to their willingness to keep their child away from school shows that this aspect of parent behaviour is not easily affected by improvements in classroom teaching. In other words the economic and family constraints that usually determine whether a child is kept away from school (harvest, child minding etc.) are not easily affected by pedagogic developments in the classroom. This result has a number of possible implications. It might mean that the "continuously absent" indicator is wrongly assigned to the second order effects and it should now be moved into the third order level. It might mean that the cotinuously absent for 1 month statistic is not sufficiently sensitive to the changes that we are examining. For this reason we have initiated a validity test of the indicator by tabulating the percntages continuously absent in the month of the main harvest and compared them with percentage absent in months without a main harvest (see Appendix - IV). The result does throw cosiderable doubt on the validity of the continuous absence figures. Five of the ten comparisons show a statistically significant difference in the wrong direction i.e.continuous absence is lowest in the month of the main harvest than in the rest of the year. It is possible that the continuously absent figure is inflated by the unwillingness of some headteachers to remove transfers and dropouts from the register or to mark pupils absent during the harvest.

As a result of this exercise a new absenteeism procedure will be designed for main survey 4 and a new analytical approach will be designed for Main Survey 3.

4.9 Third Order Outcomes :

The model presented in section 1 describes more enrolment, less drop-out and better pupil performance as the third order outcomes of project implementation. Any improvements in these aspects are supposed to be preceded by improvements in the first and second order outcomes viz., better pupil learning, motivatioin and enjoyrnent, less absenteeism, broader pupil performance and parent awareness and satisfaction. Apart from this logical consequence, an increase in the 'enrolment' and decrease in the 'drop-out' of pupils are considered as the important goals for any innovation in primary education. In the case of APPEP, the major aspects of the innovation relate to broadening the classroom skills of teachers for activity-based instruction, improving the resource base (materials, classrooms etc.) and strengthening the support system by training MEOs and providing resourced teacher centres. Through the data of main survey 1 and this survey, it is shown that the innovation has had an impact on the pedagogy and classroom management resulting in more pupil enjoyment of school. These effects are also acknowledged by parents who seem to have recognised the improved motivation of their children towards the school activities.

However, one has to keep in mind that while the first order and second order outcomes may be necessary prior conditions for any improvements in enrolment and drop-out, they are not necessarily sufficient conditions, as many other factors like economic condition of the family, settingup private English medium schools in the locality etc., could intervene.

4.9.1 Enrolment change measure in Sample Schools :

An analysis of the data collected on enrolment in the survey on three different reference points viz., September'91 (as on 30.09.91), March'92 (as on 31.03.92) and September'92 (as on 30.09.92) is presented in this section. The aggregated enrolment figures are as given table - 33.

Table - 33

Enrolment of pupils in sample schools

Enrolment of Pupils in		Sample schools			Total	Grand Total
		Untrained	Recently trained	Longest trained		
September'91	Boys :	14590	29001	22232	65823	
	Girls :	11390	23663	17290	52343	118166
March'92	Boys :	14162	27877	21684	63723	
	Girls :	11068	22502	16845	50415	114138
September'92	Boys :	14590	27997	22243	64830	
	Girls :	11203	23135	17487	51825	116655

4.9.2 Change in enrolment between Sept'91 and Sept'92 :

Based on the above data, the change in total enrolment in classes 1 to 5 between September'91 and September'92 is given in table-34.

Table - 34

Change in enrolment in classes 1 to 5 between Sept'91 and Sept'92

Total Enrolment in			Sample Schools		
			Untrained	Recently trained	Longest trained
September'92	Boys	:	14590	27997	22243
	Girls	:	11203	23135	17487
September'91	Boys	:	14590	29001	22232
	Girls	:	11390	23663	17290
Difference	Boys	:	0	- 1004	+ 11
	Girls	:	- 187	- 528	+ 197
% increase	Boys	:	0.00	- 3.46	+ 0.05
or decrease	Girls	:	- 1.64	- 2.23	+ 1.14

The data in table - 34 reveal that all samples except the longest trained APPEP schools either show a drop or are stable in overall enrolment. However, the result does not support the hypothesis that formal involvement in the APPEP scheme by itself increases enrolment. Rather the pattern is one in which there is a steeper decline in enrolment in the recently trained sample than in the untrained sample. This could be interpreted as a disruption effect caused by the relatively long period of closure of schools during training. If these samples are taken to represent a change over time, the steepest decline in enrolment occurs in the training year and, in the year that follows, there is a recovery. It is important to notice whether this pattern repeats itself in other indicators like drop-out, pupil performance etc,.

4.9.3 Enrolment change measure in "Restricted" sample schools :

It is often criticised that enrolment statistics are subject to errors, inaccuracies and exaggerations. Also, it is clear from the analyses elsewhere of the implementation of APPEP and the measurement of first and second order outcomes that the beneficial effects of APPEP training are most marked in those schools which have a fully trained staff. In effect this latter type of analysis distinguishes between those schools that are formally involved in the scheme but may have lost some or all of their trained teachers (or whose teachers missed training sessions) and those schools which have had all their teachers trained. It can be argued that the latter category represents the ideal state of affairs which the project will approach as the training programmes are completed and teachers who missed training sessions are trained. Therefore, the sample has been restricted using

the following measure in computing the change in enrolment between Sept '9[illegible] and Sept '92.

"Only those schools whose formal training status corresponds to their actua training status have been included i.e., formally trained schools with 100 % o[illegible] teachers trained or formally untrained schools with 0 % of teachers trained."

The resulting sample will, in what follows, be called the "Restricted sample". This correction cleans out schools that do not fit exactly the formal training status considered for the purpose. The enrolment change figures are obtained from the formula :

$$\frac{\text{Enrolment Sept 1992 - Enrolment Sept 1991}}{\text{Enrolment Sept 1991}} \times 100$$

and are presented in table - 35.

Table - 35
Changes in Enrolment between Sept '91 and Sept '92 in (Restricted Sample) schools

Boys in Class	Untrained (0 % teachers trained)	Recently trained (100 % teachers trained)	Longest trained (100 % teachers trained)	Differences in Enrolment change measures among samples		
				R-U (C.3-C.2)	L-U (C.4-C.2)	L-R (C.4-C.3)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	- 0.29	- 7.28	- 4.07	-	-	+
2	5.83	1.37	3.66	-	-	+
3	- 1.38	- 3.04	- 4.03	-	-	-
4	- 4.96	- 4.66	- 2.71	+	+	+
5	5.10	- 3.32	- 3.03	-	-	+
1-5 Boys	0.83	- 3.67	- 2.11	-	-	+
Girls in Class						
1	5.77	- 1.22	- 2.97	-	-	-
2	- 3.83	- 0.06	7.26	+	+	+
3	5.63	- 4.57	- 2.69	-	-	+
4	- 5.28	- 3.93	- 2.54	+	+	+
5	-10.56	1.08	- 4.03	+	+	-
1-5 Girls	- 0.83	- 1.70	- 0.86	-	-	+

N.B : Positive numbers in columns 2-4 indicate an increase iin enrolment.

Key : Positive signs in columns 5 - 7 indicate that the APPEP sschools increase enrolment better than Non-APPEP schools or longest trained beetter than recently trained schools.

The data in table - 35 reflect the earlier pattern of declirne in enrolment during the training year and recovery in the subsequent year. Therefore, the final conclusion based oh the enrolment data is that a formal involvement in the APPEP scheme alone does not currently improve the enrolment of pupils.

4.9.4. APPEPness and Enrolment change measure between Sept '91 and Sept '92

However, an interesting relationship is revealed between score on implementation level of APPEP (APPEPness) in schools and the patterms of enrolment in the case of longest trained schools (with 100% trained teachers). The division of APPEPness into high and low has been undertaken by using the mean APPEPness score (0.54) for trained schools with 100% trained teachers as a cutoff point. Based on this criterion, the Restricted sample schools are grouped as follows.

Table - 36

Number of schools having high and low APPEPness

Degree of APPEPness	Sample Schools		
	Untrained Number	Recently trained Number	Longest trained Number
Low	119	121	52
High	4	79	69
Total :	123	200	121

The enrolment change measure in the Restricted sample schools (with high and low APPEPness scores) between Sept,'91 and Sept,,'92 are as given in table - 37. This measure is worked out by school, class and gender.

Table - 37
APPEPnesss and Enrolment change measure beetween Sept'91 and Sept'92

Class	Gender	Untrained (0 % trained)	Recently Trained (100%trained)		Longest Trained (100%trained)	
		low	low	High	low	High
1	Boys	- 0.14	- 8.13	- 5.95	- 6.94	- 2.14
	Girls	6.55	0.13	- 3.44	- 7.77	- 0.18
2	Boys	5.28	1.53	1.15	- 4.05	8.15
	Girls	- 2.22	3.64	- 4.92	- 3.87	13.09
3	Boys	- 2.14	- 3.98	- 1.59	- 10.25	- 0.09
	Girls	5.52	- 6.18	- 2.31	- 13.27	3.46
4	Boys	- 4.92	0.98	- 11.90	- 14.83	5.37
	Girls	- 5.13	- 0.13	- 8.60	- 19.50	7.85
5	Boys	4.05	- 8.89	4.61	- 9.46	0.85
	Girls	- 9.99	- 3.17	7.46	- 8.90	- 1.39
Total	Boys	0.45	- 4.10	- 3.04	- 8.61	2.02
	Girls	- 0.13	- 0.78	- 3.02	-10.14	4.40

Key : Negative numbers indicaate a decrease in enrolment. Positive numbers indicate an increase in enrolmentt.

The data in table - 37 reveal that the enrolment change measure has shown positive results in the ccase of longest trained schools (with 100 % trained) in which the APPEP score iss "High". In 8 out of 10 cases the enrolment has increased or decreased less when compared with both the untrained and recently trained schools. Thus APPEPneess score shows a positive association with enrolment of pupils. These results show that when APPEP teaching methods are put into practice and are given eenough time to penetrate the local community (in the case of longest trained sschools) they do affect the enrolment positively. That the high APPEPness / longeest trained category out-performs all the other categories of schools in the samplee bears ample testimony to this.

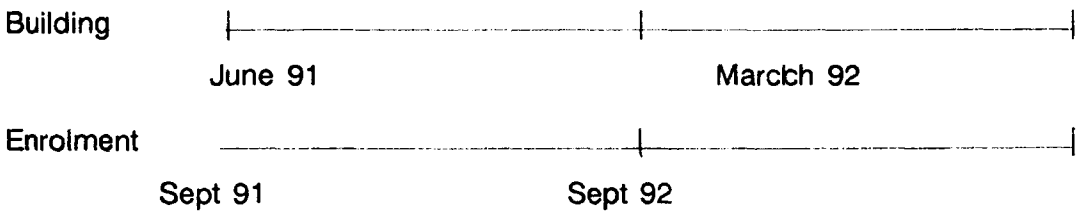
4.9.5 Provision of new classsrooms and effect on enrolment change :

The provision of additionaal classrooms to some schools was one of the features of the APPEP that did not fitit easily into the model of project inputs and effects. This difficulty arose because tthe building programme was planned and implemented independently of the trainining programme and in addition APPEP was not the only source of new schcool buildings in Andhra Pradesh during this period. In order to assess the effeccts of new school buildings this report included school buildings from any sourrce (APPEP, Operation Black Board (OBB), Zilla Praja Parishad (ZPP)/Mandal FPraja Parishad (MPP), Voluntary Organization and local

people- donations/shramdan). In addition, it is not clclear at what stage after the completion of the building the school role is likely to bbe affected. For this reason three computations were completeed - one is presenteed below.

Headteachers were asked to record in Schedule 11 of the survey how many new classrooms had been added to their schools dduring 3 time periods; prior to 1990-91 , during 1990-91 and during 1991- 92. TThe two early time periods were discarded for the purpose of this analysis becauuse they did not fit with the points in time for which enrolment data had been ccollected. The building data for 1991-92 was used with the enrolment data from ! September 1991- 92 in the following analysis.

Time Lines for buildings and enrolment data.



In the following analysis it is assumed that new buildinggs provided between June'91 and March'92 are more likely to improve the Sept'992 enrolment figure than the Sept'91 enrolment figures, that is if new buildings ddo cause an improvement in enrolment. However, this line of reasoning assumes ɛa close relationship between providing a new building and its effects on the localal community. There may be many factors intervening. For example the buildingg work may have disrupted schooling, the building may remain unopened and ı uncommissioned and finally a new school building may not be a salient factor irin influencing parents of non attending school aged children.

Changes in enrolment occuring in schools with annd without new classrooms provided between June,91 and March,92, and enrolmment measured for the period between September'91 and 92 are presented as perccentage change in table - 38.

Table - 38

Provision of Buildings and effect on enrolment change

Class	Gender	Enrolment change with/without provision of Buildings					
		Untrained		Recently Trained		Longest Trained	
		No	Yes	No	Yes	No	Yes
1	Boys	- 2.65	- 2.08	- 8.43	- 5.35	1.15	1.14
	Girls	- 0.54	11.64	- 1.95	- 1.43	2.65	- 2.31
2	Boys	0.49	12.14	1.20	6.55	2.49	0.51
	Girls	- 6.17	2.56	- 0.19	- 1.65	7.65	4.50
3	Boys	2.29	- 2.61	- 2.10	- 2.22	0.03	- 6.55
	Girls	8.21	- 5.44	- 5.67	- 2.31	4.04	- 3.14
4	Boys	- 5.30	- 3.52	- 5.89	- 3.38	- 3.58	3.99
	Girls	- 1.35	- 6.90	- 4.67	0.98	- 2.96	- 11.34
5	Boys	6.97	- 3.28	- 1.55	- 5.11	1.03	- 7.28
	Girls	- 10.92	-- 11.62	- 1.33	3.33	- 4.29	1.57

Note : Negative numbers signifyy a decrease in enrolment.

Key : "No" indicates that buiidding is not provided. "Yes" indicates that building is provided. This table is tthe result of comparing the yes - no pairs. If the "Yes" percentage is highest,onne point is scored in "Yes" row. If the "No" percentage is highest, one point is sccored in "No" row. The result for Class I boys in longest trained schools, being sso close, has been omitted.

Number of comparisons in which buildings have had a beneficial effect :

	Recently Trainned	Longest Trained	Total
Yes	7	2	9
No	3	7	10

The two other methods of analysing this data produced similar results. There is clearly no overall benneficial effect on enrolment change at this stage in the development of APPEP. It could be argued that the existence of a new school building will have a longg term effect, equivalent to a level 4 outcome. If this is the case we will have to wait for M.S. 3 data to be analysed when the September 1993 enrolment figures ccan be included.

4.10 Dropout measure in sample schools :

The analysis of dropout during the school year is usually calculated between the months of September and March. The crude aggregated data is used to calculate the percentage dropout in classes 1 to 5 in the following table, using the formula :

$$100 \times \frac{\text{(Enrolment in March, '92) - (Enrolment in Sept., '91)}}{\text{(Enrolment in Sept., '91)}}$$

Table - 39

Dropout measured between Sept., '91 and March, '92 in classes 1 to 5

Sample School			Sept'91	March'92	Difference	% Dropouts
Untrained	Boys	:	14590	14162	428	2.93
	Girls	:	11390	11068	322	2.83
Recently	Boys	:	29001	27877	1124	3.88
trained	Girls	:	23663	22502	1161	4.91
Longest	Boys	:	22232	21684	548	2.46
trained	Girls	:	17290	16845	445	2.57

The analysis of the crude aggregated enrolment data shows very little difference in dropout between the untrained and the trained samples. Moving down the percentage of dropout column there is a small increase in dropout between the untrained and the recently trained samples and a small decrease between the recently trained and the longest trained sample. It is tempting to point to the similarity between this pattern and the pattern exhibited in the enrolment analysis. However, although it is possible to argue for a disruption effect perhaps due to training and a recovery in the post training period, the evidence for this remains slim. The most important conclusion must be that formal involvement in the APPEP scheme alone does not reduce dropout.

4.10.1 Dropout measure in "Restricted" Samples :

The arguments relating to the unreliability of enrolment data also apply to the use of the data on dropout. However, it should be noted that in using the data to construct comparative change measures some of these inaccuracies will be corrected, i.e., if exaggeration occurs at both times, the subtraction will reduce its effect. Nevertheless the data was extensively analysed and the analysis presented below uses the same corrections that were applied to the analysis of enrolment

data i.e., the "restrected sample" has been used. The formula used in calculating the dropout corresponds closely to the one used in official state statisticas :

$$\frac{\text{Enrol March'92 - Enrol Sept'91}}{\text{Enrol Sept' 91}} \times 100$$

Table - 40

Dropout measured between September 91 and March 92.

	Dropout measures in Restricted Sample schools			Differences in Dropout measure among samples		
Boys in Class	Untrained (0 % trained teachers)	Recently trained (100 % trained teachers)	Longest trained (100 % trained teachers)	R-U (C.3-C.2)	L-U (C.4-C.2)	L-R (C.4-C.3)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	- 3.10	- 3.97	- 2.05	-	+	+
2	- 4.01	- 2.93	1.92	+	+	+
3	- 2.81	- 3.96	- 0.22	-	+	+
4	- 2.09	- 5.18	- 1.14	-	+	+
5	- 0.99	- 1.45	- 1.58	-	-	-
1-5 Boys	- 2.68	- 3.55	- 0.69	-	+	+
Girls in Class						
1	1.24	- 3.60	2.36	-	+	+
2	- 4.05	- 4.05	2.38	*ND	+	+
3	- 5.35	- 4.54	- 0.38	+	+	+
4	- 0.97	- 6.43	0.36	-	+	+
5	- 5.81	- 4.24	- 2.80	+	+	+
1-5 Girls	- 2.59	- 4.42	- 0.82	-	+	+

* ND : No difference

N.B. : Positive numbers in columns 2 - 3 indicate no dropout.

Key : Positive signs in columns 5 - 7 indicate an outcome favourable to APPEP i.e. less drop out or in some cases an increase in roll.

Comparison	R - U	L - U	L - R
Positives	3	9	9
Negatives	6	1	1

Six negatives out of 10 in column 5 indicate that the recently trained schools recorded more dropout than the untrained. But 9 positives out of 10 in column 6 and an equal number of positives in column 7 suggest that the long trained schools recorded less dropout (or in some cases more enrolment) than the untrained. Therefore, the pattern can, once again, be interpreted as a disruption effect followed by a recovery in the case of dropout also. A similar trend is noticed in the case of enrolment. (See table - 34 and the interpretation that follows it).Thus it can be concluded that the data on dropout do indicate a positive impact of APPEP in schools where 100 % of teachers have been trained.

4.10.2 Dropout change measure in 'Restricted' samples with 'high' and 'low' APPEPness :

The dropout change measures in 'Restricted' samples with 'high' and 'low' APPEPness between Sept,'91 and March,92 (i.e. in the same academic year) in classes 1 to 5 are worked out and given in table-41.

Table - 41

APPEPness and Dropout change 'Restricted' samples with 'high' and 'low' APPEPness

Class	Gender	Untrained (0 % trained)		Recently Trd. (100 % trained)		Longest Trd. (100 % trained)	
		low	High	Low	High	Low	High
1	Boys	3.39	- 6.14	3.45	4.77	7.02	- 1.29
	Girls	- 1.23	- 1.57	1.79	6.55	2.25	- 5.04
2	Boys	4.15	0.92	2.76	3.17	2.22	- 4.34
	Girls	2.78	18.99	3.49	4.79	2.09	- 4.73
3	Boys	3.47	-18.05	3.88	4.08	6.04	- 3.47
	Girls	5.69	- 1.09	3.06	6.61	6.12	- 2.97
4	Boys	2.30	- 3.57	3.75	1.00	6.15	- 2.21
	Girls	1.71	-16.42	2.60	11.14	3.44	- 2.69
5	Boys	0.75	6.89	2.67	- 0.29	7.88	- 2.22
	Girls	6.14	0.00	4.46	3.89	11.24	- 1.77

The data in table - 41 reveal that dropout rates are negative in all the five classes and in respect of both genders (boys and girls) in the longest trained schools (with 100 % trained) in which APPEP implementation is "high". This indicated that there is an increase in the number of pupils enrolled in classes 1 to 5 from Sept'91 to March'92 in these schools. This finding supports the hypothesis that

'high' degree of APPEP implementation affects the dropout of pupils. This is a desirable outcome.

This finding is very similar to the finding for enrolment. It gains strength from this similarity. It is an encouraging development because it indicates that when APPEP is properly implemented it can have third order outcomes. However, the indication is still relatively slight and must await the analysis of Main Survey 3 before strong claims can be made.

4.11 Pupil Achievement :

The Evaluation Model given in section 1 of this report (para 1.1) indicates better pupil performance as a third order outcome. Since APPEP has introduced a wider range of teaching techniques into some primary school classrooms in the state it is reasonable to anticipate some changes in pupil learning. Measuring changes in learning is always difficult and some learning changes are especially difficult to measure in a large scale survey. In order to measure the pupil achievement, data on annual examination scores (routine test scores) of pupils in classes 3 and 5 (during 1991-92) were collected from all sample schools. These were based on the traditional paper and pencil tests that were not standardised and set out and marked by the classroom teachers. These routine test scores give us information about the sample schools in relation to the traditional goals of education but have some limitations and methodological weaknesses. Further, these routine test scores are not designed to measure the broader pupil learning experiences in relation to groupwork, development of local knowledge and the acquisition of skills with a wider range of materials etc. So, besides collecting data on routine test scores in the survey, attempts were also made to devise new tests that measure broader learning outcomes. These tests were administrated in 52 sample schools (Assessment Run, March'93) and supplement the picture obtained from the analysis of the routine test scores.

4.11.1 Analysis of routine test scores :

The mean scores of pupils in class 3 and class 5 of sample schools were given in tables 42 and 43 respectively subject wise, genderwise and percentage of teachers trained.

Table - 42

Mean scores of pupils of class 3

Subject	Percentage of teachers trained	Mean Scores of Pupils in Schools					
		Untrained		Recently trained		Longest trained	
		B	G	B	G	B	G
Telugu	100	-	-	42.89	43.64	45.26	43.19
	>= 50 (not 100 %)	38.29	47.83	43.96	47.80	43.81	42.80
	< 50 (not 0 %)	41.72	40.72	41.46	47.32	39.81	40.98
	0	43.97	43.77	39.36	38.91	42.65	44.42
Maths	100	-	-	42.99	43.38	45.65	43.62
	>= 50 (not 100 %)	39.57	54.33	44.61	47.11	42.27	41.68
	< 50 (not 0 %)	43.98	43.80	37.28	42.77	38.63	41.55
	0	43.40	43.80	40.09	44.77	41.87	44.28
E.S. I	100	-	-	41.92	42.22	44.19	43.14
	>= 50 (not 100 %)	42.00	49.94	42.77	45.17	41.92	39.48
	< 50 (not 0 %)	39.05	39.43	36.86	41.28	39.69	39.87
	0	42.54	41.33	39.02	39.73	38.58	42.89
E.S. II	100	-	-	41.66	42.97	44.57	42.58
	>= 50 (not 100 %)	45.14	52.17	42.62	44.00	40.96	40.62
	< 50 (not 0 %)	38.56	38.35	38.40	42.14	39.15	38.84
	0	42.68	42.35	39.60	42.75	39.39	42.78

Table - 43
Mean scores of pupils of class 5

Subject	Percentage of teachers trained	Mean Scores of Pupils in Schools					
		Untrained		Recently trained		Longest trained	
		B	G	B	G	B	G
Telugu	100	-	-	47.82	49.27	48.99	49.71
	>= 50 (not 100 %)	54.14	57.56	48.02	49.75	45.82	46.83
	< 50 (not 0 %)	38.36	41.65	46.65	55.60	46.29	49.69
	0	47.12	49.61	48.46	44.97	47.73	45.53
Maths	100	-	-	46.00	45.90	48.20	46.61
	>= 50 (not 100 %)	50.57	51.88	45.84	44.67	44.40	44.31
	< 50 (not 0 %)	36.83	34.65	42.55	53.01	44.27	45.85
	0	46.81	47.67	51.11	39.94	43.01	42.79
E.S. I	100	-	-	46.53	47.61	48.42	48.76
	>= 50 (not 100 %)	52.14	53.31	45.10	47.06	44.07	43.35
	< 50 (not 0 %)	38.10	37.93	48.11	50.89	44.43	47.47
	0	47.61	49.42	50.54	47.50	47.05	46.03
E.S. II	100	-	-	47.86	48.78	49.03	49.01
	>= 50 (not 100 %)	53.14	54.69	48.99	48.13	46.46	46.45
	< 50 (not 0 %)	44.03	42.95	47.00	52.61	45.09	47.76
	0	49.78	50.38	52.91	48.58	44.77	44.71

The data in tables 42 and 43 indicate that the mean performances of pupils in classes 3 and 5 in the three types of sample schools do not vary importantly. However in 12 out of 16 cases, comparing boys 100 % trained (recent and longest) with untrained, and similarly in 12 out of 16 girls cases, the schools retaining 100 % trained + longest trained with untrained, in 7 out of 8 boys cases, the 100 % trained fared best; but this was only the case with 3 out of 8 girls cases. Overall there is some slight evidence of a beneficial effect where most of the teachers are trained and are in post over a period of at least one year. There are also 'blips' and 'dips' in the figures which suggests a possible disruption effect of training, and possibly a 'disappointment' effect when trained teachers leave. It should also be noted that where some particularly high scores are attained in untrained schools (e.g. Telugu, class 5, boys and girls, >= 50 % trained) the cell sizes are very small (7 and 16 respectively) and there may be a 'selection' effect (e.g. parental background/literacy). It must also be stressed that these are ordinary examination results testing recall of knowledge, rather than any of the broader learning outcomes in which APPEP is interested.In this case it would be safest simply to conclude that APPEP is not having a negative effect on scores, so long as trained teachers are in post.

4.11.2 Assessment Run March'93 :

Annual Examination scores of pupils of classes 3 and 5 were collected as part of MS2 data to assess the pupil performances. But as already indicated these scores were based on the teacher- made paper-pencil tests which were not standardised.

Since, activity-based instruction is being adopted by teachers in classrooms consequent on implementation of APPEP principles and approaches, it was felt necessary to develop some assessment instruments to evaluate the pupil performances, despite the fact that teachers were not provided with training on assessment procedures suited to the method of instruction. Some assessment trials were conducted in a few schools during the years 1991 and 1992 to find out the assessment practices in vogue and to know the opinions of teachers and pupils on new assessment procedures to be adopted. Based on the results and experiences of these trials, assessment instruments were developed which were intended to be more suited to the activity-based teaching and learning and administered in 52 sample schools during March'93. This sample consists of 29 APPEP schools (including 6 pilot schools of phase I of the project) and 23 non-APPEP schools. The sample contains one "good" (as measured by APPEP-ness indicator) APPEP school and one Non-APPEP school from each of the 23 districts. The instruments have been developed in the four school subjects for pupils of class 5. The four subject tests had a part 'A'/ part 'B' design with part 'A' (Max. 15 marks) designed to test recall and part 'B' (Max. 30 marks)

designed to test understanding and interpretation. It is presumed that the pupils from the "good" APPEP schools would do as well on part "A" and better on the more demanding part "B" than pupils from non-APPEP schools. By the time of computerisation and analysis, data were not received from 6 schools in 3 districts for various reasons. As such data of 40 sample schools + 6 pilot schools were taken into account for analysis.

Unfortunately, due to the progress of the cascade training, many of the teachers in the untrained sample had been trained by the time the tests were administered in March 1993.The categorisation of sample schools has therefore been reconstructed based on the evidence about actual position of the training of teachers in schools collected in the survey. Thus the samples could be cross tabulated on the variables like length of time in APPEP, percentage of teachers trained in schools and indicators of APPEP implementation.

The categorisation could eventually generate a sample of 12 schools which had been trained longer than one year; and retained 50 % or more of staff trained; and had high APPEPness indicators; 23 schools which had been trained less than one year and retained 50 % or more of staff trained; and had low-medium APPEPness indicators; and 4 schools which had been trained less than one year or had not been trained; had no or less than 50 % staff trained; and had low APPEPness indicators.

In addition 3 pilot schools which still retained trained teachers and had high APPEPness indicators were included in the final sample (the 6 pilot schools actually divided into 3 with 100 % trained staff and 3 with 0 % trained staff).

This categorisation of schools is not as satisfactory as that intended in the original design. Nevertheless it enables some comparisons to be made that throw some light on the effectiveness of the APPEP training with respect to learning gains in pupils.

The mean scores of pupils in Assessment Run conducted in March'93 are as given in table - 44.

Table - 44
Mean scores of pupils in Assessment Run

Subject	% of teachers trained	Mean score of pupils in Part A in schools of Category *			Mean score of pupils in Part B in schools of Category *		
		0	1	2	0	1	2
Telugu	0 - 50	5.44	-	-	9.74	-	-
	50 - 100	5.43	4.95	7.19	15.58	12.94	18.33
Maths	0 - 50	7.80	-	-	11.27	-	-
	50 - 100	9.23	9.70	13.59	16.73	16.57	23.35
E.S. I	0 - 50	10.47	-	-	3.75	-	-
	50 - 100	10.31	10.59	10.39	13.11	13.06	14.81
E.S. II	0 - 50	4.41	-	-	6.18	-	-
	50 - 100	5.40	5.34	8.09	11.81	10.73	12.82

* Category of schools
0 : Not trained or <1 year trained and low-medium implementation indicators.
1 : > 1 year trained and medium - high implementation indicators.
2 : Pilot schools with high APPEP implementation indicators.

The data in table - 44 indicate that mean scores of pupils in the pilot schools (still with 100 % trained teachers) are highest in every case except in part 'A' of ES I when mean scores were very similar across all schools. Mean scores for pupils in schools which had been in the project more than a year were sometimes higher, sometimes lower, than those which had been in the project less than a year, but again in most cases, scores from pupils in both of these groups of schools were higher than those from schools which were not trained or had less than 50 % trained teachers and low implementation indicators. Pupils from schools in the project retaining more than 50 % trained teachers always had higher means on part "B" (designed to test a broader range of learning outcomes) than pupils in schools with no or less than 50 % teachers trained.

These results while mildly encouraging must be treated with extreme caution. The number of schools and pupils in this first assessment run is small and the cell sizes of the two most contrasting categories of schools is extremely small. Also there is no consistent pattern of achievement across groups of schools with different levels of training and implementation. However a clear contrast between schools longest in the project retaining 100 % trained teachers, schools more recently in the project retaining a majority of trained teachers (50 - 100 %) and schools with less than 50 % or no trained teachers is identifiable.

4.11.3 Experiences of the Assessment Run :

While it was necessary to reconstruct the categorisation of the sample schools based on the evidence about their actual training, the part "A" Part "B" design in the test did not work as intended. Factor analysis of scores on items did not reveal significant differences between parts "A" and "B" and the overwhelming majority of items were correlated with each other. What the tests infact seemed to be identifying was a general propensity to do well at school with some marginally higher within subject correlations on parts A and B. Nevertheless the tests provide us with the first directly comparable evidence of achievement across a range of school with different levels of APPEP training with implementation and notwithstanding the negative results from the factor analysis the mean scores of pupils from "good" APPEP schools were consistently higher on part "B". The tests were developed further for Main Survey 3.

4.12 Conclusion :

The results of the third order outcomes reported in this section demonstrate a pattern. Crude comparisons between the formal samples demonstrate no overall effects with respect to enrolment, dropout or learning gains. However, when actual implementation of the APPEP scheme is taken into account a new pattern starts to emerge. Schools with 100 % trained teachers which have been trained for more than a year provide a more encouraging picture. The enrolment of schools which declines in the year of training recovers in the year after training, and when APPEPness is taken into account, the high APPEPness schools do show an increase in enrolment over all other samples.

The same pattern is demonstrated by the dropout data. The longest trained schools with 100 % trained teachers demonstrate improvements in dropout that more than compensates for the deterioration that occured in the training year.

The data on achievement gains is more complicated but the overall structure of the result is maintained. The unstandardised routine test schools show no overall improvement in the trained schools but when length of time trained and percentage of teachers trained is taken into account a more encouraging picture begins to emerge. However, the routine tests are not standardised and measure only traditional rote learning. APPEP is designed to broaden the learning experiences of pupils. Tests that were designed to take into account this broader outcome of learning have been trialled and despite weaknesses in the structure and administration of the tests and relatively small samples, they show a familiar pattern; highest test scores occur in schools with high APPEPness and a high proportion of trained teachers.

Section 5: Survey Findings and Overall Conclusion

On the basis of the main survey 2 data analysis, the findings about the implementation of the project in terms of delivery of inputs, outputs and impact are found to be as follows.

5.1 Survey Findings :

Delivery of inputs :

i) The provision of APPEP initial inservice training is in substantial measure as 86.42 % of teachers in recently trained and 75.86 % of teachers in longest trained schools had undergone the training by the time of the survey. But there is a "dilution of training" effect in these schools with the presence of untrained teachers (about 14.0 % in recently trained schools and about 24.0 % in longest trained schools) probably due to the replacement of trained teachers through "transfers" and/or gaps in the coverage of teachers for training (Para 3.3.1).

ii) The "dilution of training" effect was found to be in significant proportions in the trained sample, as only 54.0 % of the longest trained schools and 73.0 % of the recently trained schools had in them 100 % trained teachers working at the time of the survey. 12.1 % of longest trained and 3.8 % of recently trained schools did not have a single APPEP-trained teacher (Para 3.3.2).

iii) 3-day follow-up course conducted after the initial in-service training to consolidate the skills gained during the training period was provided to about 58.0 % of teachers (who had undergone the initial in-service training) in recently trained schools and 93.0 % of teachers (who had undergone initial in-service training in longest trained schools. This indicates that there is a considerable gap between the two components (viz. the initial training and the three day follow-up) of the package of training to teachers which is supposed to be carried out in quick succession (Para 3.3.4).

iv) About 80.0 % of the trained teachers have reported the availability of teacher's handbook to them which is an important source of reference material after APPEP training. Of them, only about 34.0 % of teachers were able to use the handbook without any difficulty. About 85.0 % of the trained teachers reported the supply of materials to schools for APPEP implementation. However, the position of supply is found to be not as planned (Para 3.3.5).

v) The Mandal Education Officers (MEOs) have not been paying any special attenton to the APPEP schools, as their visits to trained and untrained schools did not

differ quantitatively. Their levels of support to APPEP schools are similar to those repoted at the time of main survey 1 (Nov-Dec.91). (Para 3.3.7)

vi) The support of headteachers for APPEP implementation is found to be adequate by 80.0 % of trained teachers in recently trained schools and 87.0 % of trained teachers in longest trained schools. This indicates that the headteacher support for APPEP implementation needs to grow further for stronger and more effective implementation of APPEP in schools (Para 3.3.8).

Delivery of outputs :

i) The APPEP initial inservice training provided to teachers of primary classes is found to be 'very useful' by 27.22 % of trained teachers (29.09 % of recently trained and 24.62 % of longest trained schools). It is found to be of 'some use' by 69.79 % of the teachers (69.83 % of recently trained and 74.18 % of longest trained schools). The percentage of teachers who viewed the training as being 'very useful' has fallen considerably when compared with such percentage in main survey 1 (39.94 %), though the percentages on the second shade of opinion (viz. 'of some use') have improved notably (56.87 % in main survey 1). (Para 3.3.3)

ii) 3-day follow-up course after the initial inservice training is found to be helpful 'A lot' by a meagre 10.05 % of teachers (7.50 % of recently trained and 13.58 % of longest trained schools). It is found to be helpful 'Quite a lot' by 49.58 % of teachers (33.81 % of recently trained and 71.82 % of longest trained). In main survey 1, the percentages on these two shades of opinion were 21.0 and 66.0 respectively. As such there has been a steep decline in the number of teachers acknowledging the helpfulness of the 3-day follow- up course. (Para 3.3.4)

iii) The percentage of teachers participating in Teachers' Centre (TC) activities like preparation of teaching-learning aids, preparing unit/period plans etc. is higher in the longest trained schools (which was the trained sample in main survey 1) when compared with the percentage of teachers of recently trained schools involved in similar participation. It is likely that a majority of recently trained schools had not had the opportunity of participating in more than a few T.C. meetings until the time of the survey (Para 3.3.6).

iv) It is estimated that 30 % of teachers in recently trained schools and 40 % of teachers in longest trained schools are conducting groupwork in schools. The levels of implementation of group work in the longest trained sample have remained fairly stable since main survey 1 (Para 3.4.3).

v) From the pupil perspective also, 64.0 % of pupils in longest trained and 54.0 % of pupils in recently trained indicate conduct of groupwork, which indicates a possible accumulative effect of APPEP as schools gain experience (Para 3.4.4).

vi) It is estimated that children's work is displayed in classrooms by 40.0 % of teachers in longest trained schools,and by 25.0 % of teachers in recently trained schools. The level of implementation of this aspect is maintained along with group work (Para 3.4.5).

vii) The classroom observation data reveal that the levels of implementation of APPEP are by and large maintained in longest trained schools when compared with the levels of implementation in those schools, one year ago (Para 3.5.4).

viii) There is a slightly stronger downward trend in the levels of impiementatior of APPEP when compared with the implementation in the recently trained samples of two successive years i.e., 1991 and 1992 (Para 3.5.5).

ix) The value of APPEPness index was found to be getting affected by "dilution of training". In the case of longest trained schools, the index value was 1.0 when they had 100 % trained teachers and it fell very steeply to - 0.90 when they ost all of their trained teachers. (Para 3.6)

Delivery of Impact :

i) Majority of pupils in both longest trained and recently trained schools feel that the new methods enable them to learn more and the new activities motivate them to attend school regularly (Paras 4.2.1 & 4.2.2).

ii) Pupil enjoyment of school due to the introduction of new activities was found to be higher in both samples of APPEP trained schools (Para 4.2.3).

iii) Mean pupil enjoyment of school recorded a steep fall from 1.90 when there were 100.0 % trained teachers to 1.54 when there were no trained teachers in the longest trained schools. This is a reaction to the dislocation of trained teachers from the APPEP schools (Para 4.2.4).

iv) The APPEP activities introduced in schools possibly attracted parents to visit schools more frequentlly as it was found that more than 75.0 % of the interviewed parents visited schools more than once during the year (Para 4.3.3).

v) The awareness of parents on the change in the pedagogy is growing as the period of APPEP implementation is increasing in schools (Para 4.4).

vi) Parents notice a substantial change in the behaviours of their children as the latter evince more intrest in attending school regularly and in doing things ike counting different objects at home, collecting different objects available in home and/or environment etc. (Para 4.5).

vii) Though parents know that APPEP causes their children to be more interested and involved in school, some extraneous factors, mostly social and/or economic in nature, are forcing them to keep their children away from school. This is contributing to the absenteeism of pupils in schools (Para 4.6).

viii) The continuous absence of pupils was found to be slightly more in longest trained schools. This is a reversal of the finding of the main survey 1. The data of main survey 1 and main survey 2 do not show any particular pattern on the continuous absence of children (Para 4.7).

ix) The APPEPness score shows a positive association with enrolment of pupils in schools where the length of APPEP experience is more than one year, all of their teachers are trained and the degree of APPEP implementation is high (Para 4.9.3).

x) When APPEP training methods are put into practice at a 'high' degree and 100 % trained teachers are retained and given enough time, the change in enrolment is affected positively (Para 4.9.4).

xi) Schools with more than one year of APPEP involvement, high degree of APPEP implementation and 100 % trained teachers have lower dropout rates especially in classes 2 and 3 when compared to schools with less than one year of APPEP implementation (Para 4.10 and 4.10.1).

xii) The mean performances of pupils do not vary significantly in the three types of sample schools. The analysis of routine test scores indicate that APPEP is not having a negative effect on scores, so long as trained teachers are retained (Para 4.11.1).

xiii) The Assessment Run March'93 results indicate that the mean scores of pupils are higher when schools have longer experience of APPEP implementation, the degree of implementation is "high" and all the 100 % trained teachers are retained. But as the size of such schools in the sample for the Assessment Run was found to be very small, the results could not be generalised (Para 4.11.2).

5.2 Overall Conclusion :

The evaluation of APPEP using a large scale survey has in this report proceeded to its second year (MS2). It has therefore been able to trace the effects of the innovation in a much more meaningful way. Educational changes take time to become established and to have effects. They require a constant and prolonged effort at every level, management and administration, training, classroom practice

and pupil and parent involvement, if they are to become established and succeed in achieving their goals. The evaluation has mirrored this long term strategy in the model it has set out to measure the effectiveness of training, the implementation of support for teachers, the implementation within the classroom and the three orders of outcomes.

In Main Survey 1 the evaluation was able to show that good levels of implementation had been achieved; especially when the scale of the project is taken into account. At that time it was also possible to document first order effects in the form of pupil enjoyment and second order effects like parental awareness of the innovation. These were satisfactory outcomes, measured so soon after implementation.

In Main Survey 2, the longest trained sample had been trained for more than a year and the untrained sample in Main Survey 1 had become a newly trained sample. There was a new sample of untrained schools. It has therefore been possible to confirm the levels of implementation documented by Main Survey 1 and, in addition, to provide a picture of the outcomes of the year after training.

It is now possible to conclude that the levels of implementation remain at a 'good' level. There has been some slippage in teacher satisfaction with the initial training and some of the support elements like TC meetings and M.E.O. visits have been slow to develop. Urgent steps need to be taken to ensure that this slippage does not continue and it is to be hoped that the revised initial training will provide an improved base on which to build. However, it is clear that continued support after training to extend and develop classroom repertoire of teachers is also essential. At the time of the survey, levels of implementation in the classroom were being maintained.

The measured effects of implementation have also been maintained. Pupils enjoyed APPEP and felt that they had learned more. Parents had noticed the new activities and recognised the new levels of motivation in their children. Unfortunately, this realisation did not apparently feed through to ensuring that long term pupil absenteeism (1 month) was cut down in APPEP schools. There are some doubts about the appropriateness of this measure but there are also some developments, for instance economic hardship of the poorer sections of the community and the expansion of private education for the more economically secure, that could point to underlying reasons for this lack of outcome.

The main new developments revealed by Main Survey 2 have been the third level outcomes. Careful analysis of the data which takes into account the proportion of trained teachers in the schools, the degree to which APPEP has been implemented

(APPEPness) and the length of time for which teachers have been trained, shows that where these aspects are high, third order effects are noticeable. in short, where training and support has been effective, where classroom implementation was high and where teachers have been trained for long enough, there are measurable improvements in enrolment, dropout and learning. This is a very important finding and conclusion. It means that the project is capable of achieving its ultimate goals. It does not mean that they have already been achieved.

Main Survey 3 will reveal whether this progress has been maintained or whether this promising development has reached its peak.

A P P E N D I X - I

Design of Main Survey II Sample

Cohort	No.. of schools selected in				Totals	Remarks
	Group I AB + TC	Group II AB - TC	Group III TC - AB	Group IV Neither		
1990/91	27	26	66	85	204 + 20 pilot schools of phase I = 224	The schools are located in 17 dists. in which APPEP is in progress.(schools trained more than a year ago)
1991/92	22	29	109	116	276	The schools are located in all 23 dists. in which APPEP is in progress. (schools trained less than a year ago)
1992/93	26	26	42	42	136	The schools are located in all 23 dists. (schools untrained)
Total	75	81	217	243	616 + 20 pilot schools = 636	

Group I : Schools having both APPEP Buildings and Teachers' Centre

Group II : Schools having APPEP Buildings only

Group III : Schools having Teachers' Centre only

Group IV : Schools having neither APPEP Buildings nor Teachers' Centre

APPENDIX - II

ANDHRA PRADESH PRIMARY EDUCATION PROJECT

HYDERABAD

MAIN SURVEY - 1992

SCHEDULE - I

(Questions 1 to 32)

Instructions :

1. The Schedule I containing questions 1 to 32 should be filled in by the Head Teacher of the APPEP (trained) school/APPEP (not trained) school only.

2. To the question, which is followed by given answers and which requires only one answer, please indicate your response by writing the figure (0 or 1 or 2 or 3...) of your choice in the box provided at the right hand side.

E.g.: Q 3-i) Management of your school:

1) Government
2) Mandal Praja Parishad
3) Municipality
4) Private aided
5) Private unaided

Answer 3-i) | 2 |

3. To the question, which is followed by given answers and which requires one or more answers, indicate your responses by first putting tick ✓ marks in the brackets against your choices, and then writing the figure '1' in each of the boxes that correspond to the ticked brackets. You may please write figure '0' in the remaining boxes (that correspond to the unticked brackets).

E.g.: Q.10) Is the school building used for other purposes ?

A) Non formal Education Centre	(✓)	10-A.	1
B) Adult Education Centre	( )	B.	0
C) Panchayat meetings	( )	C.	0
D) Religious purposes	( )	D.	0
E) Teacher centre	(✓)	E.	1
F) Other community purposes (marriages etc.)	(✓)	F.	1
G) None	( )	G.	0

4. In furnishing information to question 4, the following criteria should be kept in view while describing the area in which the school is situated.

   A) All cities/towns having municipalities are urban areas

   B) All Mandal Headquarters and major Panchayats are semi-urban areas

   C) All notified tribal areas are to be treated as tribal areas.

   D) The rest are rural areas.

5. To questions which will have numbers as answers, please record your response by writing the digits of the number legibly in the boxes provided.

E.g.Q14) Please estimate how many of the children have to travel more than one kilometer to reach the school (If your answer is, say, 5 write it as shown here)

Answer 14 | 0 | 0 | 5 |

	STATE	DISTRICT	MANDAL	SCHOOL
SCHOOL CODE	0	1		

APPEP (TRAINED) SCHOOL

APPEP (NOT TRAINED) SCHOOL

*[If yours is an APPEP trained school, write 1, otherwise write 0 in the code box]

SCHEDULE 1
MAIN SURVEY QUESTIONNAIRE
FOR APPEP AND NON-APPEP SCHOOLS

(To be filled in by Head Teacher only)

Please answer all the questions as carefully and honestly as you can. Do not leave any code box blank. Be prepared to praise or criticise yourself or others, whichever you feel is appropriate. The answers to this questionnaire will be regarded as confidential and will only be used to prepare statistical reports.

GENERAL INFORMATION

1. Name of the school
2. Address: (A) Village/town/city
   (B) Mandal
   (C) District

Note: Questions 3 to 9 in this section are followed by more than one alternative. Write the figure (0 or 1 or 2 or 3....) indicating your choice in the boxes provided at the right hand side.

3-i. Management of school

1) Government
2) Mandal (MPP)
3) Municipal
4) Private aided
5) Private Unaided

3.i.

3-ii. Is the school an Ashram school?

0) No
1) Yes

3.ii.

4. How would you describe the area in which the school is situated?

1) Urban
2) Semi-Urban
3) Rural
4) Tribal

4.

5. Ownership of school building (Please keep in view the major portion of the building)

1) Own
2) Rented
3) Rent free

5.

6. Type of school building (Please keep in view the majority of the rooms)

1) No building (open-air)
2) Thatched sheds
3) Semi-pucca
4) Pucca

6.

7. How would you describe the economic status of the majority of the parents who send their children to your school?

1) Very poor
2) Poor
3) Of average wealth
4) Well-off
5) Very well-off

7.

8. Please describe the literacy levels of the majority of the parents of your pupils.

(i) Males

0) Illiterate
1) Literate

8-i.

(ii) Females

0) Illiterate
1) Literate

8-ii.

9-i. What would you estimate is the average income of parents who send their children to your school?

0) Less than Rs. 6,000 per year
1) Between Rs. 6,000 and Rs. 12,000 per year — 9-i. [ ]
2) More than Rs. 12,000 Rs. per year.

9-ii. What number of your pupils (of classes I to V only) reside :

1) With their parents ? — 1) [ ]
2) With relatives/known people ? — 2) [ ]
3) In hostel (s) ? — 3) [ ]

(Please provide the numbers in the boxes. If you are not aware of the exact figures, please give the best possible estimates.)

Note: Questions 10 - 12 are followed by several alternatives. Please tick as many as necessary. Write figure '1' in the boxes that correspond to the ticked brackets and figure '0' in the boxes that correspond to the unticked brackets.

10. Is the school building used for other purposes?

A) Nonformal Education Centre	( )	10-A)	[ ]
B) Adult Education Centre	( )	B)	[ ]
C) Panchayat Meetings	( )	C)	[ ]
D) Religious Purposes	( )	D)	[ ]
E) Teacher Centre	( )	E)	[ ]
F) Other Community Purposes (marriages etc.)	( )	F)	[ ]
G) None	( )	G)	[ ]

11. What are the two main working occupations of the parents of your pupils? (Tick only two. The figure '1' should be found only in two boxes. Please put '0's in each of the remaining boxes).

A) Farmer	( )	11-A)	[ ]
B) Agricultural Labourer	( )	B)	[ ]
C) Other Labourer	( )	C)	[ ]
D) Businessman	( )	D)	[ ]
E) Barber	( )	E)	[ ]
F) Washerman	( )	F)	[ ]
G) Fisherman	( )	G)	[ ]
H) Potter	( )	H)	[ ]
I) Cobbler	( )	I)	[ ]

J) Carpenter	( )	J)	
K) Weaver	( )	K)	
L) Employee (Govt or Private)	( )	L)	
M) Goldsmith	( )	M)	
N) Beedi Workers	( )	N)	
O) Blacksmith	( )	O)	
P) Tailor	( )	P)	
Q) Rikshaw-puller	( )	Q)	

12. What language(s) is/are used as the official medium (s) of instruction in your school?

A) Telugu	( )	12-A)	
B) Urdu	( )	B)	
C) Hindi	( )	C)	
D) Tamil	( )	D)	
E) Kannada	( )	E)	
F) English	( )	F)	
G) Oriya	( )	G)	
H) Marathi	( )	H)	

Note: Questions 13-14 will have numbers as answers. Please write the digits of the number legibly in the boxes at the right hand side. (see instruction 5 at the beginning)

13. Please enter for each language below the approximate number of children at your school who speak that language at home (i.e. who have it as thier mother-tongue if the number is nil, please put '0's in the boxes).

A) Telugu	13-A)	
B) Urdu	B)	
C) Hindi	C)	
D) Tamil	D)	
E) Kannada	E)	
F) Oriya	F)	
G) Marathi	G)	
H) Tribal language	H)	

14. Please estimate how many of the children have to travel more than one kilometer to reach the school.

14. [ ]

BUILDING AND PHYSICAL FACILITIES

Note: Questions 15-20 in this section are followed by more than one alternative. Write the figure (0 or 1 or 2 or 3...) indicating your choice in the boxes provided at the righthand side.

15. Please describe the area of your school garden

0) None
1) Poor
2) Adequate
3) Very good

15. ☐

16. Please describe your school playground

0) None
1) Poor
2) Adequate
3) Very good

16. ☐

17. Please describe the average quality of the natural light, for children's study, in the classrooms of your school.

0) None
1) Poor
2) Adequate
3) Very good

17. ☐

18. Please describe the toilets in your school.

(i) For teachers :

0) None
1) Poor
2) Adequate
3) Very good

18-i) ☐

(ii) For the pupils :

0) None
1) Poor
2) Adequate
3) Very good

18-ii) ☐

19. Please describe the source of drinking water in your school.

0) None
1) Borewell/Open well
2) Tap

19. ☐

G) Video cassettes	G)	
H) Audio Cassette Player or Recorder	H)	
I) Video Cassette Player or Recorder	I)	
J) Television	J)	
K) Radio	K)	
L) Science kit	L)	
M) Maths kit	M)	
N) Mini tool kit	N)	
O) Educational Models	O)	
P) Musical Instruments	P)	

24. Please record the number of books in the school under the following headings (If the number is nil, please put '0's in the boxes)

A) Reference Books/Dictionaries	24-A)	
B) APPEP Teachers' Handbooks	B)	
C) Class Textbooks	C)	
D) Supplementary Reading Books for Pupils	D)	

25. Please record the number of each of the following in your school : (If the number is nil, please put'0's in the boxes)

A) Chairs (of all types)	25-A)	
B) Tables	B)	
C) Almirahs (Metal/Wooden, Big/Small)	C)	
D) Benches/Seating planks	D)	
E) Record Boxes (Metal/Wooden)	E)	
F) Stools	F)	
G) Clocks (Big ones like wall clocks)	G)	
H) Alarm clocks	H)	
I) School Bells	I)	
J) Gardening tools (Shovel, Crow-bar etc.)	J)	
K) Carpenter's tool	K)	

Note: Write the figure indicating your choice in the box provided

26. Have you any sports material in your school

0) No
1) Yes 26. ☐

DETAILS OF CONSTRUCTION OF ADDITIONAL CLASSROOMS

27. Please fill in the table below to show how many classrrooms have been added to your school prior to 1990-91, during 1990-91, and 19911-92 under different sources (If the number is nil, put '0's)

	No. of Classrooms Built				
	By APPEP	**By OBB**	**By ZPP/ MPP**	**By volumtary organisation**	**By local people (Donations /Shramdan)**
Prior to 1990-91					
During 1990-91					
During 1991-92					

28. Do you know of any plans to build additional classrooms for your school in 1992-93 and afterwards? Again, please fill in the table : (If the number is nil, please put '0's)

	No. of Classrooms likely to be Built				
	By APPEP	**By OBB**	**By ZPP/ MPP**	**By voliuntary organiisation**	**By local people (Donations /Shramdan)**
During 1992-93 or afterwards					

TEACHING STAFF

NOTE : Please fill the table under 29-A to 30 carefully

29-A Please fill the table bbelow. APPEP (not trained) Schools may leave it blank, if there is no informatiodon to provide. Head teachers of UP schools and others bigger schools shouidd take into account teachers handling primary classes only.

Sl. No.	Name of the Teacher	Whether attended APPEP (Courses (Pl.put, t, if you have attttended)			Please where courses where held (Enter only if you have attended)			Dates of courses (Enter only if you have attended)		
		DIET /Mandal Level Course	3-day follow-up Course	One-day T.C. Meeting	DIET /Mandal Level Course	3-day follow-up Course	One-day T.C. Meeting	DIET /Mandal Level Course	3-day follow-up Course	One-day T.C. Meeting
1.										
2.										
3.										
4.										
5.										
6.										
7.										
8.										

* In column 3, write '0' if if the teacher has not been trained in APPEP, write 1, if the teacher has been trainened in APPEP at Mandal level and write 2, if the teacher has been trained at DIBIET level.

29-B Please fill the table belolow : (An APPEP trained school Head Teacher should list the names of the teachchers in the same order as appearing in the table under 29-A)

Note: i) If male, please write '1'1' If female, please write '0' in Col.3

ii) To enter subject under r Col.9, write '1' for Language, '2' for Maths, '3' for E.S.I. and '4' for E.S.II

iii) Please follow the codes s given below for Academic and Professional qualifications of teachers, as indicateded below. (Columns 5 and 6)

Academic Qualification	Code	Professional Qualification	Code
Below Merit	1	Higher Grade / HEGBT	1
Metric / SSC	2	S.G.B.T / TTC	2
Intermediate	3	Telugu Pandits // Hindi Pandits/	
Vidwan/Visarad	4	Urdu Munishi	3
Graduate (B.A., B.Sc., Bcom.)	5	B.Ed	4
Post-Graduate (M.A., M.Sc., M.Com.)	6	M.Ed	5

iv) While filling Col.8, write 1 if the teacher is teaching class 1, write 2 if he is teaching class 2, write 1,2 if he is teaching classes 11 and 2 and so on.

v) To fill col. 9, use the codes given below :

Subject	Code
Lamguage	1
Matths	2
ES 1	3
ES: 2	4

* IMPORTANT : The serial number of the teacher in tthe above table (viz., Table under question 29-B) should be entered as teacher'ss code number on schedules IV, V and VI.

Sl. No.	Name of the Teacher (including Head)	Male or Female code 1 or 0	OC, BC, SC or ST (Pl. indicate)	Qualifications Acad/ Code No.	Qualifications Prof.. Code No.	Total Service in years	Classes handled (codes)	Subjects taught (codes)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								

30. How many teachers reside in the village / town where the school exists ?

30. [ ]

31) What is the period of the main harvests in the area around your school ?
(Please write the serrial numbers of the months in the boxes.)

31) Month - 1 : ☐

Month - 2 : ☐

32) Do you think the Natitional Literacy Campaign has helped motivate the parents in your school area to ssend their children to school in greater numbers ?

0) No

1) Yes 32. ☐

Signature of the Headteacher :

Name in Capitals :

Date :

* Code :

APPEP (Trained) School	
APPEP (Not Trained) School	

[* If yours is an APPEP (Trained) School, write '1', otherwise write '0', in the code box.]

SCHEDULE II

(PARTS - A, B & C)

INSTRUCTIONS

Part - A (Pupil Enrolment and Absenteeism)

1. This part should be filledd in by Head teacher of the school.

2. Clear instructions for filliring up the Part-A of this schedule are in the schedule itself.

Paart - B (Absenteeism Proforma)

1. This part should be filled ɨ in by the HRD Lecturer of DIET himself personally and not left to the Headteachher.

2. Count the number of chihildren marked present in the register in each class and record on the proforma.

3. Count the number of chihildren actually present in each class and record on the proforma.

4. If there are discrepancies:s between children marked present In the register and those actually present, seielect one class where there is a large discrepancy, and ask the teacher quietly ɛ and politely about some of the absentees - why he marked attendance for chihildren not present. Record some of the remarks on the proforma.

Part - (C (Drop-out in Class I Proforma)

1. This part should be filled ɨ in by the HRD Lecturer of DIET with the cooperation of Head teacher.

2. For Class I, record the narames of all pupils who are currently absent from school and have been absent for ɔr 1 month or more.

3. Ask teacher for reasons for the absence of each pupil above. If you are convinced that a particular pupil is very much likely to return to school or is likely to join some other school (because of reasons like the family shifting to another locality/village), treat all such pupils as non-dropouts and the others as dropouts. Record reasons for absence of each one of them (e.g. left village for livelihood, poverty-to assist parents in labour etc.) and put'_/'mark against the names of each of them under the column "drop-out". Also put the total number of drop-outs at the bottom.

Note : Make sure that the teacher realises that you are not reporting his or her name to the authorities. The information will be confidential. We need the information to make an accurate record of the effects of applying APPEP methods in the classroom.

ANDHRA PRADESH PRIMARY EDUCATION PROJECT

SCHEDULE II

	STATE	DISTRICT	MANDAL	SCHOOL
SCHOOL CODE *	0	1		

* APPEP (TRAINED) SCHOOL

APPEP (NOT TRAINED) SCHOOL

* If yours, in an APPEP trained school write '1',otherwise write '0', in the code box.

PART A

(To be filled in by the Head Teacher only)

Name of the school :

Village/Town/City :

Mandal :

District :

1. Total no. of children in each class as on 30/09/1991. (Write '0', if the number is nil).

	S.C.		S.T.		B.C.		O.C.	
	Boys	**Girls**	**Boys**	**Girls**	**Boys**	**Girls**	**Boys**	**Girls**
Class I								
Class II								
Class III								
Class IV								
Class V								

2. Please record in the following table the number of children who were on the school roll as per the attendance register on 31/03/1992.

	S.C.		S.T.		B.C.		O.C	
	Boys	**Girls**	**Boys**	**Girls**	**Boys**	**Girls**	**Boys**	**Girls**
Class I								
Class II								
Class III								
Class IV								
Class V								

3. Please record In the following table the number of children who were continuously absent in the month of March, 1992.

	S.C.		S.T.		B.C.		O.C.	
	Boys	**Girls**	**Boys**	**Girls**	**Boys**	**Girls**	**Boys**	**Girls**
Class I								
Class II								
Class III								
Class IV								
Class V								

4. Total number of children in each class as on 30/09/1992.

	S.C.		S.T.		B.C.		O.C.	
	Boys	**Girls**	**Boys**	**Girls**	**Boys**	**Girls**	**Boys**	**Girls**
Class I								
Class II								
Class III								
Class IV								
Class V								

5. Please record in the following table the number of children who were continuously absent in the month of October, 1992.

	S.C.		S.T.		B.C.		O.C.	
	Boys	**Girls**	**Boys**	**Girls**	**Boys**	**Girls**	**Boys**	**Girls**
Class I								
Class II								
Class III								
Class IV								
Class V								

Signature of head teacher :

Name in capitals :

Date :

SCHEDULE II

PART B

ABSENTEEISM PROFORMA

(To be filled in by HRD lecturer of DIET)

STATE DISTRICT MANDAL SCHOOL

SCHOOL CODE * 0 1

* APPEP (TRAINED) SCHOOL

APPEP (NOT TRAINED) SCHOOL

* If yours, in an APPEP trained school write '1',otherwise write '0', in the code box.

Name of the school :

Village/Town/City :

Mandal :

District :

Date of Visit to school by HRD lecturer : Day Month Year

1. Absenteeism of pupils - Classwise - on the day of visit :

Class	**Pupils marked present in the attendance register**		**Pupils in classroom counted**		**Difference (2)-(3)**	
(1)	**(2)**		**(3)**		**(4)**	
	Boys	**Girls**	**Boys**	**Girls**	**Boys**	**Girls**
Class I						
Class II						
Class III						
Class IV						
Class V						

2. Reasons for discrepancies for class ..... :

(Please choose and write the class having the largest discrepancy)

a)

b)

c)

d)

3. Record number marked "present" in the register for the same day in the previous week. If the school remained closed on that day, please go to the previous week.

* If the number is nil, put '0', in the box.

Class	Boys	Girls
Class I		
Class II		
Class III		
Class IV		
Class V		

* If the number is nil, put '0', in the box.

Signature of the HRD Lecturer of DIET :

Name in capitals :

Date :

SCHEDULE II

PART C

DROPOUT IN CLASS I - PROFORMA

(To be filled in by HRD lecturer of DIET)

	STATE	DISTRICT	MANDAL	SCHOOL
SCHOOL CODE *	0	1		

* APPEP (TRAINED) SCHOOL

APPEP (NOT TRAINED) SCHOOL

* If yours, in an APPEP trained school write '1',otherwise write '0', in the code box.

Name of the school :

Village/Town/City :

Mandal :

District :

List the names of the pupils of Class I who had been absent for 1 month in the month prior to your visit (From register or information from teacher). Obtain the reasons for absence from the classteacher. Try to find if the pupil has resumed attending or is very much likely to resume attending school, or if the pupil has, in fact, stopped attending school. (See instruction 3 under Part C again)

Instructions :

1. In column 3, write '1'for boy, and '0' for girl.
2. In coulmn 4, write 1 for SC; 2 for ST; 3 for BC and 4 for OC.
3. In column 5, use the codes given below to record reasons for absence.

	Reason	Code
1.	Illhealth	1
2.	To assist parents indoors/outdoors	2
3.	To labour to earn wage due to poverty	3
4.	Left village for livelihood	4
5.	Left village due to transfer of parents (Father/Mother employees)	5
6.	Shifted locality	6
7.	To attend important events (marriage/pilgrimage)	7
8.	Joined some other school	8

Note : A pupil need not neecessarily be a dropout, if he/she has been absent from school due to reasonns 1, 5, 6, 7, and / or 8 .

3. In column 6, write '1' ' if the pupil is a dropout; and '0 'if the pupil is not a dropout.

S.No.	Name of pupil of class I	Booy/Girl (BB / G)	ST BC OC SC	Reason(s) for absence (Please use codes)	Whether dropout or not (If dropout put'1' else put '0')
(1)	(2)	(:(3)	(4)	(5)	(6)
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
		Total:			

NOTE : If the number goes beeyond 15 please record on a separate sheet of paper (In the same format) and 1 attach it to this. Please use following codes to indicate reasons for absence :

Signature of HRD Lectuurer of DIET :

Name in capitals :

Date :

SCHOOL CODE	STATE	DISTRICT	MANDAL	SCHOOL
	0	1		

SCHEDULE III

(PARTS - A & B) Test Scores of pupils

INSTRUCTIONS

Part A-(Test scores of pupils for the Academic year 1991-92 proforma)

1. The marks secured by a sample of the pupils in the 1991-92 annual examination of class III and class V (For the subjets Telugu, Mathematics, Environmental studies I and II) should be recorded in the proforma. A 20% sample is required, balanced for boys and girls. Thus the marks of the 1st, 5th, 10th, 15th 20th etc. boys on the class rolls and the marks of the 1st, 5th 10th, 15th, 20th etc. girls on the class rolls.

2. If any pupil whose class roll no is 1, 5, 10 or 15 etc is absent for the whole annual exam, the marks of the pupil with the next roll number should be taken for this purpose. (i.e. 2, 6, 11 etc.)

3. If classes 5 and 3 are divided into "sections" please ensure that the sample of scores covers all "sections", selected and balanced as per instructions 1 and 2.

4. If the no. of boys or girls in Class III/Class V is less than 20, the scores of boys or girls with Roll Nos. 1,3,5,7,9 etc. should be furnished upto a maximum of five boys and five girls.

5. If the no. of boys or girls on rolls in Class III and Class V is less than 5, please record the annual exam scores of all the boys and/or girls.

Part B (Test scores of pupils for the Academic year 1990-91 proforma)

Only those schools which are participating for the first in Main Survey (i.e., Main Survey 2) should fill in this part. The schools which participated in Main Survey 1 in 1991 can leave this part blank.

1. The marks secured by the pupils in the annual examination for the academic year 1990-91 for class III and class V should be recorded on proforma as indicated in part A.

SCHEDULE III

PART A

(TO BE FILLED IN BY THE HEADTEACHER ONLY)

Name of the school :

Village / Town :

Mandal :

District :

Class III

TEST SCORES OF PUPILS FOR THE ACADEMIC YEAR 1991 - 92 PROFORMA

Sl. No.	Class Roll No.	Name of the Pupil	Write '1' for boy, and '0' for girl	SC ST BC OC	Marks secured by the pupils in annual exam			
					Telugu	Maths	E S I	E S II
		Class III						
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								
15.								
16.								
17.								
18.								
19.								
20.								

Class V

TEST SCORES OF PUPILS FOR THE ACADEMIC YEAR 1991 - 92 PROFORMA

Sl. No.	Class Roll No.	Name of the Pupil	Write '1' for boy, and '0' for girl	SC ST BC OC	Marks secured by the pupils in annual exam			
					Telugu	Maths	E S I	E S II
		Class V						
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								
15.								
16.								
17.								
18.								
19.								
20.								

SCHEDULE III

PART B

(TO BE FILLED IN BY THE HEADTEACHER ONLY)

Class III

TEST SCORES OF PUPILS FOR THE ACADEMIC YEAR 1990 - 91 PROFORMA

Sl. No.	Class Roll No.	Name of the Pupil	Write '1' for boy, and '0' for girl	SC ST BC OC	Marks secured by the pupils in annual exam			
					Telugu	Maths	E S I	E S II
		Class III						
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								
15.								
16.								
17.								
18.								
19.								
20.								

Class V

TEST SCORES OF PUPILS FOR THE ACADEMIC YEAR 1990 - 91 PROFORMA

Sl. No.	Class Roll No.	Name of the Pupil	Write '1' for boy, and '0' for girl	SC ST BC OC	Marks secured by the pupils in annual exam			
					Telugu	Maths	E S I	E S II
		Class V						
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								
15.								
16.								
17.								
18.								
19.								
20.								

Signature of the Head Teacher :

Date :

ANDHRA PRADESH PRIMARY EDUCATION PROJECT

SCHEDULE IV

STATE DISTRICT MANDAL SCHOOL

0 1

* CODE

APPEP(trained)School

APPEP(not-trained)School

* If your school is an APPEP (trained) school write '1', otherwise write '0' in the code box.

INSTRUCTIONS AND EXPLANATION OF CODES FOR CLASSROOM OBSERVATION

The codes are intended to make possible the recording of classroom activity for every two minutes. They are designed to measure traditional and APPEP activities but there will be times when the codes do not cover an activity. If this happens please explain in a covering note on the back of the proforma how you have recorded the activity. It will be coded later.

Procedure :

1. Note the time of your starting the observations at the top of the time column and record first observation 2 minutes later against 2. The number in the column will then tell you how many minutes you need to add on to the starting time for each observation.

2. At first it will take you quite a long time to record each set of six codes. Take note of the classroom activity (teacher and pupil) at the appropriate time and search the columns for the nearest descriptive code. Do not worry if the classroom activity changes while you are searching and recording. You can pick up the change when you make the next observation. As you become more experienced and the classroom settles down the coding becomes easier and quicker.

3. When you have established the coding routine begin to write the short description of the lesson in the space below the columns. Please note the seating arrangement In the class as part of the description eg. rows, circles, groups etc.

4. During your visit to the school you will observe two lessons. Please record only one using the proforma. If the lesson lasts more than 40 minuts stop recording when the proforma is full. If it is shorter, please draw a line across the proforma.

The Codes :

The codes are designed so that the first three cover teacher activity and the second three describe pupil learning activity.

Teacher Talk :

This is the most straight forward code. It simply measures the amount of teacher talk and to whom the talk is directed. Note that (**tiw**) and (**tgw**) cover situations when the teacher is talking to an individual or group but intends the whole class to hear.

Teacher Talk - the nature of the talk :

The dimension measures some dimensions of the nature of the talk. Reprimanding and praising are fairly obvious extremes on this scale. Telling is a very common teacher activity and here it includes explanation. The most difficult codes are the three grades of questionning; checking recall '(**tqr**) simply questions about something the pupils have been told before (this lesson or past lessons); encouraging individual response (**tqe**) indicates a question that poses a deeper problem and the teacher encourages the pupils to think more deeply before replying; generating a discussion (**tqd**) indicates a question that the teacher puts to the class and then enables the class or groups in the class to discuss it among themselves. This indicates a high level teaching activity in line with APPEP principles. So it is important to recognise this activity whenever and wherever it occurs.

Teacher Activity ; Pedagogic and non-pedagogic activity :

Very occasionally teachers withdraw from teaching but remain in the classroom. They may receive a visitor and talk to them, or they may day dream. This would be coded 0. All the rest of the codes relate to pedagogic activity and are fairly straight forward descriptions of teacher behaviour. For example 'Doing own work' refers to activities like reading a text book to revise part of the lesson or looking for materials in a cupboard i.e. work related to teaching.

1. Pupil Behaviour :

The first code relates to the way pupils are organised at the time when the observations are made, for example, 'working in groups', as individuals', or 'as a class'. 'Working as a class', refers to times when the teacher is talking to the whole class. i.e. the teacher expects the whole class to be listening or looking. This can sometimes be confusing because the teacher might be talking to an individual but doing it in a way that is intended to attract the attention of the whole class. Working as a class (**pc**) can therefore be defined as times when

the teacher expects the whole class to be paying attention to what he or she is saying or what a pupil is saying as a result of being asked a question by the teacher. Note that the pupils may be organised into groups but if the teacher is talking to the whole class and they are all expected to pay attention to the teacher, they are no longer working in groups (**pgc**) is the correct code). Also, the pupils may be sitting in groups but the teacher may have set them individual work tasks, say copying from a card into their own books. (**pgi** is the correct code). Finally the teacher might be writing on the Blackboard and expecting all the class to be paying attention to him or her but also for them to be copying the writing into their book. (the correct code is **pc**). Note that (**pg**) refers to being organised as groups and working in a group i.e. it involves some cooperation and some communication between group members.

2. Pupil Talk :

This dimension measures whether pupils are talking and if so, the type of talk that they are engaged in. Most of these codes are straight forward, for example (**ps**) - pupils silent or (**ptg**) talking in groups. However, it is important to realise that talking in groups" refers to talk about the learning task. If pupils are merely chattering about other things the correct code is (**pch**) and this applies whether they are in groups or in pairs or organised as a whole class. The most important code in the dimension for measuring the application of APPEP principles is (**pqt**). Child centered education encourages children to ask questions. However, if the child merely asks a question about the organisation of the lesson (needs a pen, or paper or does not know what to do) or needs to go to the toilet; this kind of question does not fulfil that purpose. You should record (**pgto**) (organisation) for that kind of question. (**pqt**) should stand for questions about the content of the lesson, e.g. the child does not understand a point that has been made or the child asks if, an example that they know about, is similar to the point the teacher is making. (**pqt**) should indicate that the child is seeking understanding.

3. Pupil Learning Activity :

This code is a very varied one and should tell us about the variety of learning activities in APPEP and non-APPEP classes. Some of these codes describe the whole activity, for example (**pcp**) tells us the pupils are copying from books or charts etc. Other codes in this dimension qualify an activity that has already been described in column 5. For example (**prc**) tells us that the children are repeating in chorus and thus qualifies (**pat**) in column 5. i.e. the questions or instructions are not being put to individual pupils. Please note that (**pri**) is a code that contains a measure of APPEP principles in this dimension. (**Pri**) should refer to pupils recording their own information i.e. not copying from the blackboard or a book. Also (**psp**) relates to pupils solving problems and this can be used to include maths problems as well as problems in other subjects. This is the dimension where you will be tempted to add descriptions of your own. Please remember to note the full meaning on the back of the proforma.

KEY FOR TEACHER BEHAVIOUR

FOR APPEP(TRAINED) AND APPEP(NOT TRAINED) SCHOOLS

(To be filled in by HRD lecturer of DIET who visits the school)

1. The first dimension is whether the teacher is talking, and to whom, or whether the teacher is silent. The suggested codes are as follows:

Teacher talking to	(i)	Whole class	tw
	(ii)	Individual	ti
	(iii)	Individual but for benefit of whole class	tiw
	(iv)	Group	tg
	(v)	Groups but for benefit of whole class	tgw
Teacher silent			ts

2. The second dimension concerns the detailed nature of teacher talk and, in particular, questioning behaviour. Codes are as follows:

No talking		O
Reprimanding		tr
Telling		tt
Questioning:	Checking recall of knowledge	tqr
	Encouraging individual pupil response	tqe
	Generating Discussion	tqd
Praising		tp

3. The third dimension - teacher activity - again concerns the nature of teacher activity, but in more detail. The suggested codes which cover pedagogic and non-pedagogic activity are as follows:

No pedagogic activity	O
Observing	to
Doing own work (related to lesson)	tow
Writing on blackboard	tbb
Demonstrating or displaying work	td
Reading from book	tbk
Helping individual (or small group)	thi
Giving instruction	tgi
Giving material	tgm
Conducting games	tcg
Marking(or correcting pupils work)	tm

Key for pupil behaviour :

Again, there are a number of dimensions.

1. The first concerns the way in which the pupils are organised for learning. The suggested codes are as follows :

Organised and Working as a class	pc
Organised and Working as class but working individually	pci
Organised and Working in a group	pg
Organised in groups but working individually	pgi
Organised and Working in pairs	pp
Organised in groups but working as class	pgc
Organised and Working indivudally	pi

2. The second dimension records whether the pupils are talking and, if so, the type of talk the pupils are engaged in. Codes are as follows:

Silent		ps
Talking	Answering teacher	pat
	Questioning teacher(Content)	pqt
	Questioning about organisation	pqto
	Talking in pairs	ptp
	Talking in groups	ptg
	Talking to whole class	ptc
	pupils chatter	pch

3. The third dimension concerns pupil learning activity. Codes are as follows:

Copying	From blackboard or chart	
	From book	pcp
	From dictation	
Working with materials		pwm
Recording own information		pri
Drawing pictures		pdp
Playing		pp
Singing or reciting		psr
Dancing		pd
Listening		pi
Pupil reading (out)		pro
Pupil solving problems		psp
Repeating in chorus		prc
Calling out to teachers or pupils		pco

SCHEDULE IV

FOR APPEP (TRAINED) SCHOOL AND APPEP (NOT TRAINED) SCHOOL

CLASSROOM OBSERVATION SCHEDULE

School Code	State		District		Mandal		School		
	0	1							

NAME OF THE SCHOOL : _____

VILLAGE/TOWN/CITY : _____

MANDAL : _____

DISTRICT : _____

CLASS : DATE :

TIME STARTED : * SUBJECT :

TIME	TEACHER DIMENSION			PUPIL DIMENSION		
EVERY 2 MIN	TEACHER TALK TO	TYPE OF TALK	PEDAGOGIC ACTIVITY	CLASS GROUP INDIVIDUAL	PUPIL TALK	PUPIL ACTIVITY
2						
4						
6						
8						
10						
12						
14						
16						
18						
20						

* Against SUBJECT, write '1' for Language;
'2' for Maths
'3' for E.S.1 and
'4' for E.S.2

TIME	TEACHER DIMENSION			PUPIL DIMENSION		
EVERY 2 MIN	TEACHER TALK TO	TYPE OF TALK	PEDAGOGIC ACTIVITY	CLASS GROUP INDIVIDUAL	PUPIL TALK	PUPIL ACTIVITY
22						
24						
26						
28						
30						
32						
34						
36						
38						
40						

NAME OF THE TEACHER
WHOSE LESSON IS OBSERVED : [ ]

Teacher's Code No : [ ]

(Pleace refer to the teacher's entry in col.1 of the table under Qn.29 of Schedule 1 also

*** Note to DIET (HRD) Lecturer :**

Please remember that, in respect of the Schools which participated in Main Survey III (in 1993) the list of Teachers' Code numbers is provided to you by the project Headquarters. That code number should tally with the code number in the Table under question 29 in Schedule I; with the code number here in the box above and also with the Teacher's Code number on Schedule 5. In respect of the schools which are participating in the survey for the first time this year, the serial number against individual teacher's name as found in table under Question 29 of schedule I, itself is the Code Number. If any new teacher has come into the old survey schools, please allot to him the number next to the last number on the list provided to you, as the code number. If a teacher, who is already coded

on the list given to you, is found transferred or retired, please do not allot that code number to any other teacher.

Please answer the following questions by writing the number of your choice in the box provided.

1. Classroom Observation. Does the classroom have a display of pupils' work ?

   1) Yes 0) No 1. [ ]

2. If Yes, is the display well organised and attractive ? (If 'No', put a dash in the box)

   1) Well organised

   2) Of an acceptable standard 2. [ ]

   3) Poorly organised

Signature of HRD Lecturer of DIET :
Name in capitals :
Date :

SCHEDULE V

[To be filled in by Headteachers and teachers handling primary classes (Each one)]

PART - A

(For APPEP trained as well as APPEP not trained teachers)

Name of the teacher :

Teacher's Code No :

* In respect of schools which participated in Main Survey - I (in 1991), the Teacher's Code numbers are supplied by the project headquarters to the DIET Lecturer. The DIET Lecturer should himself / herself write down the Code Number in the box, before he/she hands over the schedules to the individual teachers. Howevei, in respect of schools which did not participate in Main Survey - II but are participaing in Main Survey - II for the first time, the DIET Lecturer should pick the Teacher's Serial Number which is also the Teacher's Code Number as entered in the table under Question 29 of Schedule - I, and copy it into the Teacher's Code box before he/she hands over the schedule to the individual teacher.

Whether Teachers'Centre Secretary

Whether Teachers'Centre Asst.Secretary

Note : If yes, please write '1' otherwise write '0' in the box.

Type the Teacher :

* You may belong to any one of the 4 types listed below. Please indicate by :

  i) Write **1 1** , if you are working in an APPEP school and are Trainec in APPEP.

  ii) Write **1 0** , if you are working in an APPEP school and are not Trained In APPEP.

  iii) Write **0 1** , if you are working in a Non APPEP school and are Trainec in APPEP.

  iv) Write **0 0** , if you are working in a Non APPEP school and are not Trained in APPEP.

Name of the school :

Village/Town/City :

Mandal :

District :

Educational Support and Supervision

Academic Guidance

1. How frequently has the MEO visited your school iin the previous 12 months?

   0) None
   1) Once
   2) Twice 1.
   3) Three or more times

2. How many demonstration lessons has the MEO given at your school in the last year?

   0) None
   1) One
   2) Two 2.
   3) Three or more

3. When did the MEO last inspect your school?

   Date : **DAY** **MONTH** **YEAR**

4. How would you describe the guidance given by the MEO during his or her visit?

   0) None
   1) Poor
   2) Adequate 4.
   3) Very good

5. Please describe any follow-up action suggested by the MEO.

6. Please describe any fofollow-up action that you have carried out after the MEO's visits.

Teachers' Centre

7. Use of Teachers' Centntre (T.C.) Meetings :

i) Have you presenteced any demonstration lessons at the T.C. ?
   0) No
   1) Yes 7-i)

ii) Have you attended d demonstration lessons given by other teachers or head-teachers at the T.CC. ?
   0) Yes
   1) No 7-ii)

iii) Have you exchangeged ideas with other teachers or headteachers at the T.C. ?
   0) No
   1) Yes 7-iii)

iv) Have you displayecd your pupils' work at the T.C. ?
   0) No
   1) Yes 7-iv)

* v) How many Teacher r Centre meetings have you attended so far ? (i.e., indicate the number in the t box provided.)
*7 - v)

vi) Have you been traiained in APPEP methods ? (Please write the number of your choice in the t box provided)
   0) Not yet trainened
   1) Trained at a 1 10-day Mandal Course 7-vi)
   2) Trained at anin 18-day DIET Course

* vii) If you are trained in n APPEP, how many days back ? (Please write the numoer of your choice in ththe box provided)
   1) Within the lasast three months
   2) During the lasast four months to one year *7 - vii)
   3) More than a 1 year

8 - i) Have you carried out field trips jointly with other schools at the TC ?

0) No
1) Yes 8-i)

8 - ii) Have you made any teaching/learning aids at the T.C. ?

0) Never
1) Once 8-ii)
2) More than once

8 - iii) Have you been involved in preparing institutional plans at the T.C. ?

0) No
1) Yes 8-iii)

8 - iv) Have you prepared unit or period plans at the T.C. ?

0) Never
1) Once 8-iv)
2) More than once

Teaching - Learning Processes

9. Please give some examples of locally available materials that you have collected at some time, during the last one year and used in the classroom during the last month ?

10-i) Have you organised any group activities in the last week?

0) No
1) Yes 10-i)

ii) If your answer to the above question is "yes", how many times, subject-wise? (Please put '0' if the number is nil. Please leave it blank if your answer to the above question is "No").

Subject		**Number of times**
a)	Language	10-ii a)
b)	Mathematics	b)
c)	ES I	c)
d)	ES II	d)

11. How many times have you been able to organise the display of children's work in the previous week?

Subject		Number of times
i)	Language	11 i)
ii)	Mathematics	ii)
iii)	ES I	iii)
iv)	ES II	iv)

12. Have you been able to organise any educational games in the past one month (in relation to any of the subjects that you teach) ?

Subject	Name of the educational games
i) Language	.....
ii) Mathematics	.....
iii) E S I	.....
iv) E S II	.....

13. Have you been able to organise any local visits/ field trips (four your pupils) in the past one month (in relation to any of the subjects that you teach) ?

Subject	Description of the visit
i) Language	.....
ii) Mathematics	.....
iii) E S I	.....
iv) E S II	.....

14. Have you been observing the way that children work together in groups in order to make improvements in your teaching?

0) No
1) Yes 14)

15. Have you been able to draw up lesson plans during the past week ? Please indicate for each subject.

i)	Language	A) Yes	B) No	15-i)
ii)	Mathematics	A) Yes	B) No	15-ii)
iii)	E S I	A) Yes	B) No	15-ii
iv)	E S II	A) Yes	B) No	15-iv)

16. All new methods of teaching have to overcome difficulties. Please choose upto five from the list and write figure '1' in the boxes that correspond to the five choices; and letter '0' in the remaining boxes. ('1' should be found only in five boxes and '0' in each of the remaining boxes).

i)	School in remote and/or tribal area	16-i)
ii)	Few teaching resources available in school	16-ii)
iii)	Lack of suitable timetable	16-iii)
iv)	You do not speak mother tongue of pupils	16-iv)
v)	Large number of pupils in your class	16-v)
vi)	Need to cover prescribed curriculum	16-vi)
vii)	Need to prepare pupils for examinations	16-vii)
viii)	Physical characteristics and size of classroom	16-viii)
ix)	Multiple class teaching	16-ix)
x)	Classroom work disrupted by elections, census etc.	16-x)
xi)	Lack of community support for any new method of teaching	16-xi)
xii)	Lack of suitable training for teachers	16-xii)
xiii)	Length of instruction period being too short.	16-xiii)

ASSESSMENT

17. What methods of assessment do you use with your pupils ? (Please tick in the brackets against your choices and then write figure '1'in the corresponding boxes. Please donot forget to write '0's in each of the remaining boxes.)

a)	Unit tests	( )	17 a)
b)	Examinations (Eg. Quarterly, Half yearly)	( )	b)
c)	Assignments (by classwork)	( )	c)
d)	Assignments (by homework)	( )	d)
e)	Oral testing	( )	e)

21-i) Do you assess pupil progress in the wider learning outcomes listed below ? (Please indicate by writing '1' or '0' in the box against each).

a)	Understanding better	0) No 1) Yes	18-i a)
b)	Developing practical skills	0) No 1) Yes	b)
c)	Observing accurately	0) No 1) Yes	c)
d)	Solving problems	0) No 1) Yes	d)
e)	Taking initiative	0) No 1) Yes	e)
f)	Working in groups	0) No 1) Yes	f)
g)	Organising displays	0) No 1) Yes	g)

21-ii) Do you record pupil progress in the wider learning outcomes listed below. (Please indicate by writing '1' or '0' in the box against each).

a)	Understanding better	0) No 1) Yes	21-ii a)
b)	Developing practical skills	0) No 1) Yes	b)
c)	Observing accurately	0) No 1) Yes	c)
d)	Solving problems	0) No 1) Yes	d)
e)	Taking initiative	0) No 1) Yes	e)
f)	Working in groups	0) No 1) Yes	f)
g)	Organising displays	0) No 1) Yes	g)

32. How far is the Teachers' Centre from your school ?

0) T.C. existing in the school
1) 1 km or less
2) 2 km
3) 3 km 32)
4) 4 km
5) 5 km or more

* 33. Do you ever visit the homes of children who live in catchment area of the school?

0) Never
1) Sometimes 33)
2) Rarely

34. If '0' is not your answer for the above question, please indicate the reason or reasons for the visit : three reasons are given below, choose from them and write '1' in the boxes against your choices. Please write '0's if boxes remain.

i. To pursuade parents to send their children to school. 34-i)

ii. To encourage the parents to send their children regularly and punctually ii)

iii. To discuss the work of individual pupils with their parents. iii)

* 35. Do you even invite the parents of children into your classroom / school?

0) Never
1) Sometimes 35)
2) Frequently

PART - B

(For APPEP Trained Teachers Only.
APPEP Not Trained Teachers need not fill in this part)

18. Do your assessment methods help or hinder the implementation of APPEP teaching methods ?

    0) Hinder
    1) Make no differemce 10)
    2) Help

19-i) Do you think the traditiional methods of assessment need to be changed in order to assist the introductkon of APPEP principles ?

    0) No 19-i)
    1) Yes

19-ii) Please state reasons for your answer.

20-i) Have you introduced any new methods of assessment since you began workng with APPEP ideas andl methods ?

    0) No 20-i)
    1) Yes

20-ii) If "Yes" what new methods have you introduced ?

20-iii) If "No" why have you not introduced any ?

22-i) Did you receive any training in assessment during the APPEP Training Course?

    0) No 22-i)
    1) Yes

22-ii) If "Yes" please state what this involve

22-iii) If "No" please state whether you would like such training?

0) No (22-iii)
1) Yes

APPEP Training and Implementation :

23) Now you have returned to your classroom to put APPEP principles into practice. How useful would you say the initial APPEP in-service training course was to you?

0) Of no use
1) Of some use (23)
2) Very useful

24) If you have been on a three-day APPEP follow-up course, please indicate whether it has helped you in implementing the six principles?

0) Not at all
1) Quite a lot (24)
2) A lot

25) Which ideas, (in accordance with APPEP principles) subject- wise have you been able to put into practice in your classroom?

I) Maths :

ii) Language :

iii) E S I :

iv) E S II :

26) How much support have you had from your colleagues in introducing the APPEP principles?

0) None
1) Adequate (26)
2) A lot

27. How would you dleescribe the support you have had from the Headteacher in applying APPEP prrinnciples in your teaching? (This question is for teachers only. Headteacher need nnot answer this but may please put a dash in the box.)

0) None
1) Poor
2) Adequate 27)
3) Very good

28. How many demomststration lessons relating to APPEP principles has the MEO given at your schoolol in the last year ?

0) None
1) One 28)
2) Two
3) Three or morre

29. How would you desscrribe the guidance given on implementing the APPEP principles by the MEO duringg t his or her visits ?

0) None
1) Poor
2) Adequate 29)
3) Very good

30. What proportion of yoour time do you believe should be retained for more traditional approaches under thhe APPEP scheme?

0) 0%
1) 25%
2) 50% 30)
3) 75%
4) 100%

31. Have you been ablee to draw lesson plans which involve the APPEP principles during the past weekk? Please indicate for each subject.

	Subject			
i)	Language	1) Yes	0) No	31-i)
ii)	Mathematiicss	1) Yes	0) No	ii)
Iii)	E.S.I	1) Yes	0) No	iil)
Iv)	E.S.II	1) Yes	0) No	iv)

36. Is the course participant's handbook available with you (Provided during APPEP training course at DIET/Mandal level)?

0) No
1) Yes 36)

37. If yes, are you able to use it for effective implementation of APPEP principles?

0) No 37)
1) Yes, with some difficulty
2) Yes, without difficulty

38-i) Is the material provided for APPEP activities available to you in the school?

0) No
1) Yes 38)

38-ii) If yes, is the material :

1) Provided no time ? 38-ii)
2) Sometimes late ?
3) Often late ?

38-iii) Is the material :

1) Supplied in full ? 38-iii)
2) Supplied only partially ?

39. If yes, are you able to use the material properly and effectively for the activities?

0) No 39)
1) Yes, with some problems
2) Yes, without problems

Signature of the Teacher :

Name in capitals :

Date :

SCHOOL CODE	STATE	DISTRICT	MANDAL	SCHOOL
	0	1		

APPEP(Trained) School

APPEP(Not Trained) School

* If yours is an APPEP (Trained) school, write'1', otherwise wiret '0' in the code box.

SCHEDULE - VI

(Interview schedule for the Parent)

School (at which interview is held) :

Village/Town/City :

Mandal :

District :

Date of Interview : DAY MONTH YEAR

NNote : Please furnish information on the following items as per the instructions give :

1. Name of the Interviewee : (Father/Mother/Guardian of the pupil of the school)

2. Whether male or female : (If male, write '1' and if female write '0' in the box provided) 2.

3. Age (please enter the number of completed years) 3.

4. Educational level (of the interviewee) (please write the letter of the right choice in the box provided)

   0) Illiterate
   1) Fifth Class or below
   2) Below Matric
   3) Matric pass
   4) Inter (passed or failed) 4.
   5) Graduate
   6) Post Graduate

5. Profession of the Interviewee : (Please write the letter of the right choice in the box provided)
   1) Farmer
   2) Agricultural Labourer
   3) Other Labourer
   4) Businessman
   5) Barber
   6) Fisherman
   7) Washerman
   8) Potter
   9) Cobbler
   10) Carpenter
   11) Weaver
   12) Employee (Govt. or private)
   13) Goldsmith
   14) Beedi worker
   15) Blacksmith
   16) Tailor
   17) Mason
   18) Street vendor
   19) Rickshaw puller

5.

6. Community he/she belongs to (Please write the letter of the appropriate choice in the box)
   1) S.C.
   2) S.T.
   3) B.C.
   4) O.C.

6.

Note : Please record the answers of the Interviewee to the questions given below :

7. Have you visited the school during this academic year? (Please write the letter of his choice in the box)
   0) No
   1) Yes

7.

8. (If the answer to question 7 is 'Yes') How many times?
   1) Once
   2) Twice
   3) Thrice
   4) Four times

8.

9. During your visit(s) to the sschool, did you notice any change in the teaching method(s) adopted at the scchool?
   0) No
   1) Yes 9.

10. (If the answer to question 9 is 'Yes') What new things did you notice? (in brief)

   i)

   ii)

   iii)

   iv)

11. Have you noticed any chamngge in your child's reading habits at home?
   0) No
   1) Yes 11.

12. Have you ever noticed your child counting different objects at home?
   0) No
   1) Yes 12.

13. Have you ever noticed your cchild collecting things like empty match boxes, match sticks, seeds, bottle tops, rmaarbles etc., that may be available in the house or its surroundings?
   0) No
   1) Yes 13.

14. Have you noticed your childd talking about writing and reading materials used in the classroom (such as sksketch pens, colour pencils, colour paper, pictures, charts, diagrams etc.)?
   0) No
   1) Yes 14.

15. Dose your child bring home things made by him/her at school ?
   0) No
   1) Yes 15.

16. What do you think could/should be done to gain more parental support to new method(s) of teaching in the school?

i)

ii)

17. What do you think could/should be done to encourage more and more children to go to school?

i)

ii)

* 18. Have you visited the school to see the work produced by your child displayed ?
0) No
1) Yes 18.

* 19. Are there occasions when it becomes necessary for you to stop your child from attending school to make him help you in your occupation/look after the younger children ?
0) Never
1) Sometimes 19.
2) Frequently

Name of the Interviewer :

Designation :

Signature (With date)
of the Interviewer :

SCHOOL CODE	STATE	DISTRICT	MANDAL	SCHOOL
	0	1		

APPEP(Trained) School

APPEP(Not Trained) School

* If yours is an APPEP (Trained) school, write'1', otherwise wiret '0' in the code box.

SCHEDULE - VII

(Interview schedule for the pupil)

School (at which interview is held) :

Village/Town/City :

Mandal :

District :

Date of Interview : **Day** **Month** **Year**

1. Name of the Pupil interviewed :

2. Whether boy or girl (if boy, please write 'B' and if girl please write 'G' in the box provided) 2.

3. Class the pupil is in (please write 4 or 5 as necessary in the box provided) 3.

4. Community the pupil belongs to (please write the letter of the correct choice in the box provided)
   1) S.C.
   2) S.T.
   3) B.C. 4.
   4) O.C.

Note : Please record the answers of the pupil (interviewee) to the questions given below by writing the number of the right choice in the box provided.

5-i) Whether new methods have been introduced in your school to enable you to work in groups ?

0) No

1) Yes 5-i)

Note : If the pupils' answer is 'No' for the above question, there is no need to question the pupil on questions 5-ii, 6, 7 and 8. Question '9' can be asked immediately.

5-ii) In which subjects have you worked in groups during the last week? (if yes write '1', if no write '0' in the box against each of the following).

i)	Language	1) Yes	0) No	5-i)
ii)	Mathematics	1) Yes	0) No	ii)
iii)	E.S.I	1) Yes	0) No	iii)
iv)	E.S.II	1) Yes	0) No	iv)

6. Can you describe some of the group activities you participated in, during the last week?

i) Language (Telugu, Urdu etc,.) :

ii) Mathematics :

iii) E.S.I :

iv) E.S.II :

7. What materials did you use in those group activities?

i) Language (Telugu, Urdu etc,.):

ii) Mathematics :

iii) E.S.I :

iv) E.S.II :

8. What items were you able to produce in the group activities?

i) Language (Telugu, Urdu etc,.) :

ii) Mathematics :

iii) E.S.I :

iv) E.S.II :

9. What roles did you happen to take in any classroom activities ?

(Please tick in brackets against as many as necessary and then write '1' in the corresponding boxes. Please write '0' in the remaining boxes.

a)	Group leader	( )	a)
b)	Reporter	( )	b)
c)	Displayed material	( )	c)
d)	Collected material	( )	d)
e)	Participated in the preparation of material	( )	e)

10-i) Did your teacher ask you to collect any materials either from home or local environment and bring them to the school ?

0) No

1) Yes 10-i)

NNote : If the pupils' answer is 'No' for the above question, there is no need to question the pupil on questions 10-ii.

10-ii) Mention any four items that you collected from the local environment.

i)

ii)

iii)

iv)

11. Have you participated in any field trips/visits during this academic year?

0) No

1) Yes 11.

Note : If the pupil's answer is 'No' for this question, there is no need to ask questions 12, 13 and 14.

12. If yes, name the places (not more than four) where you have been taken to :

i)

ii)

iii)

iv)

13. Have you produced any report on the field trip and presented it to the class?

0) No

1) Yes 13.

14. Do you find the field trips useful ?

0) No

1) Yes 14.

15. Did you participate in any educational games during the last week ?

0) No

1) Yes 15.

Note : If the pupil's answer is 'No' for this question, there is no need to ask questions 16.

16. If yes, name some of them (subjectwise)

i) Language (Telugu, Urdu etc,.)

ii) Mathematics

iii) E.S.I

iv) E.S.II

17. How many times did your parents (father or mother) or any elder relatied to you visit your school during this academic year ?

0) Not visited at all
1) Once
2) Twice 17.
3) Thrice
4) Many times

18. Do you like participating in new learning activities, and to do that, attending school regularly ?

0) Not at all
1) Not much 18.
2) A lot
3) Quite a lot

Important Note :

If the pupil's answer is 'yes' to any one of the questions 5-i), 10-i), 11 and 15, the following questions also may be asked.

19. You have seen some new activities of teaching in the school (Group activities, materials collected, displays, field trips or educational games). Are you able to learn through these activites.

1) More than the traditional methods of teaching
2) As much as the old methods of teaching 19.
3) Less than the traditional methods of teaching

20. Due to these new activities of teaching, are you interested to attend the school ?

1) More than in the past ?
2) As much as in the past ? 20.
3) Less than in the past ?

Name of the DIET Lecturer :
(Interviewer)

Designation :

Signature of the Interviewer :

Date :

A P P E N D I X - III

Management of Schools :

The sample schools are under different managements as given in table - 1.

Table - 1

Management of Schools

Managementt	Untrained Number	%	Recently Trained No.	%	Longest Trained No.	%
Government	15	11.3	23	8.4	18	8.0
M P P	105	78.9	223	81.1	183	81.7
Municipal	8	6.0	19	6.9	16	7.2
Private Aided	5	3.8	8	2.9	6	2.7
Private unaidled	0	0.0	2	0.7	1	0.4
	133	100.0	275	100.0	224	100.0

Note : MPP - Mandal Praja Parishad.

Ownership of school buildings :

The position of ownership of buildings in the sample schools is as given in table - 2.

Table - 2

Ownership of School Buildings

Nature of Ownership	Untrained Number	%	Recently Trained No.	%	Longest Trained No.	%
Own	12	84.2	240	87.3	197	87.9
Rented	6	4.5	18	6.5	14	19.6
Rent free	15	11.3	15	5.5	13	5.8
Not indicated	-	-	2	0.7	-	-
	133	100.0	275	100.0	224	100.0

Type of school buildings :

The school buildings of the sample schools are of diffferent types as indicated in table - 3.

Table - 3

Type of School Buildings

Type of school Buildings	Untrained Number	%	Recently Trained No.	%	Longest Trained No.	%
Pucca	106	79.7	216	78.55	169	75.4
Semi-pucca	17	12.8	42	15.33	44	19.6
Thatched sheds	6	4.5	6	2.2	3	1.3
Open air	3	2.3	11	4.0	7	3.1
(Not indicated)	1	0.7	-	-	1	0.6
	133	100.0	275	100.0	224	100.0

Economic Status of Majority of Parents :

The economic status of majority of parents whose children are studying in sample schools is as given in table - 4.

Table - 4

Economic status of majority of parents

Economic Status	Untrained Number	%	Recently Trained No.	%	Longest Trained No.	%
Very well-off	-	-	-	-	-	-
Well - off	-	-	-	-	1	00.4
Of average wealth	43	32.3	89	32.4	78	34.8
Poor	66	49.6	139	50.5	108	48.2
Very poor	24	18.1	47	17.1	36	16.2
Not indicated					1	0.4
Total :	133	100.0	275	100.0	224	100.0

APPENDIX - IV

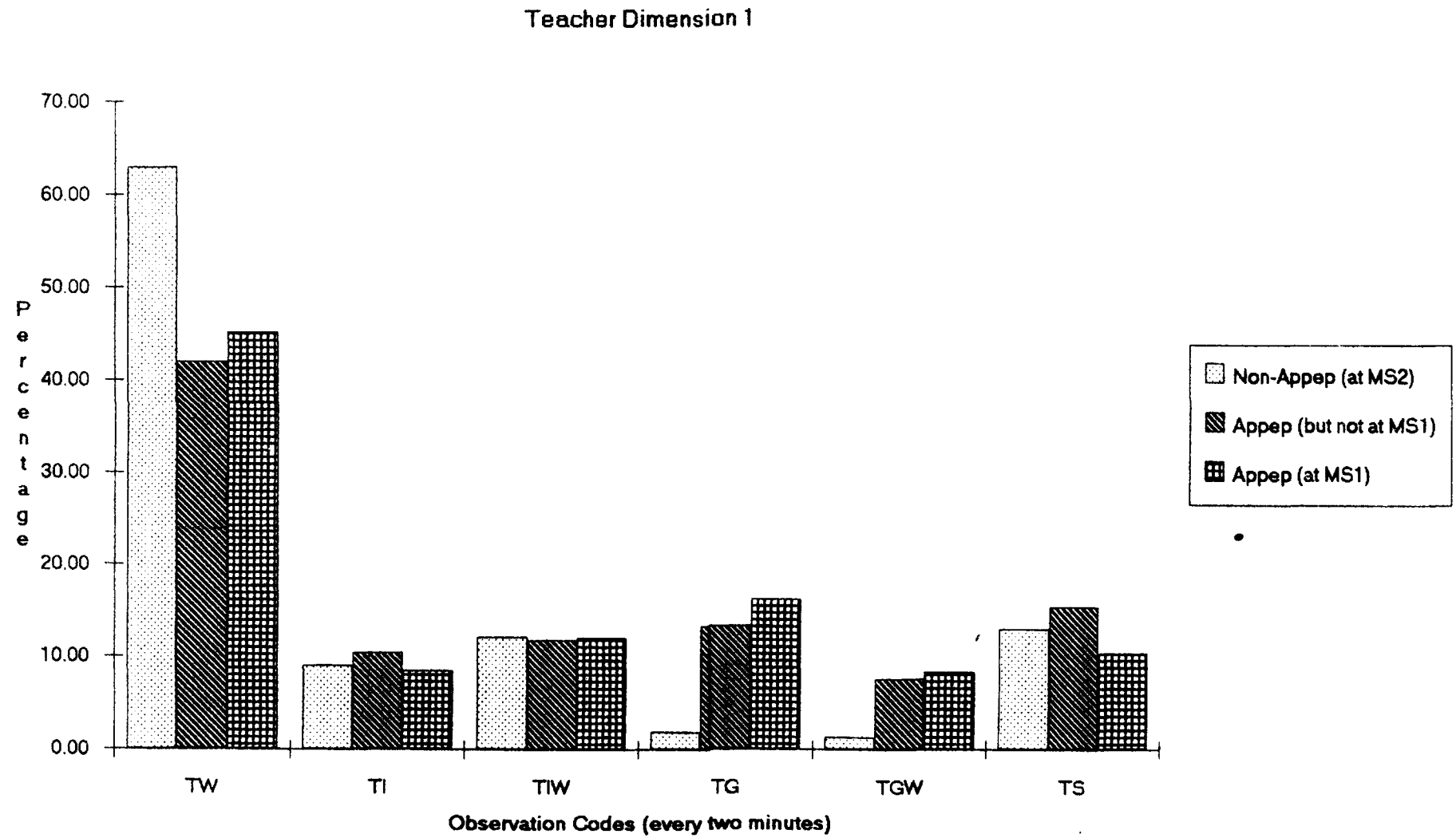
An initial exploratory analysis has been made on the results of T-test for continuous absence in March'92 and October'92 in terms of the two groups of schools which respectively do not have and do have main harvesting months in their areas at these times. The results are as given in the following Table.

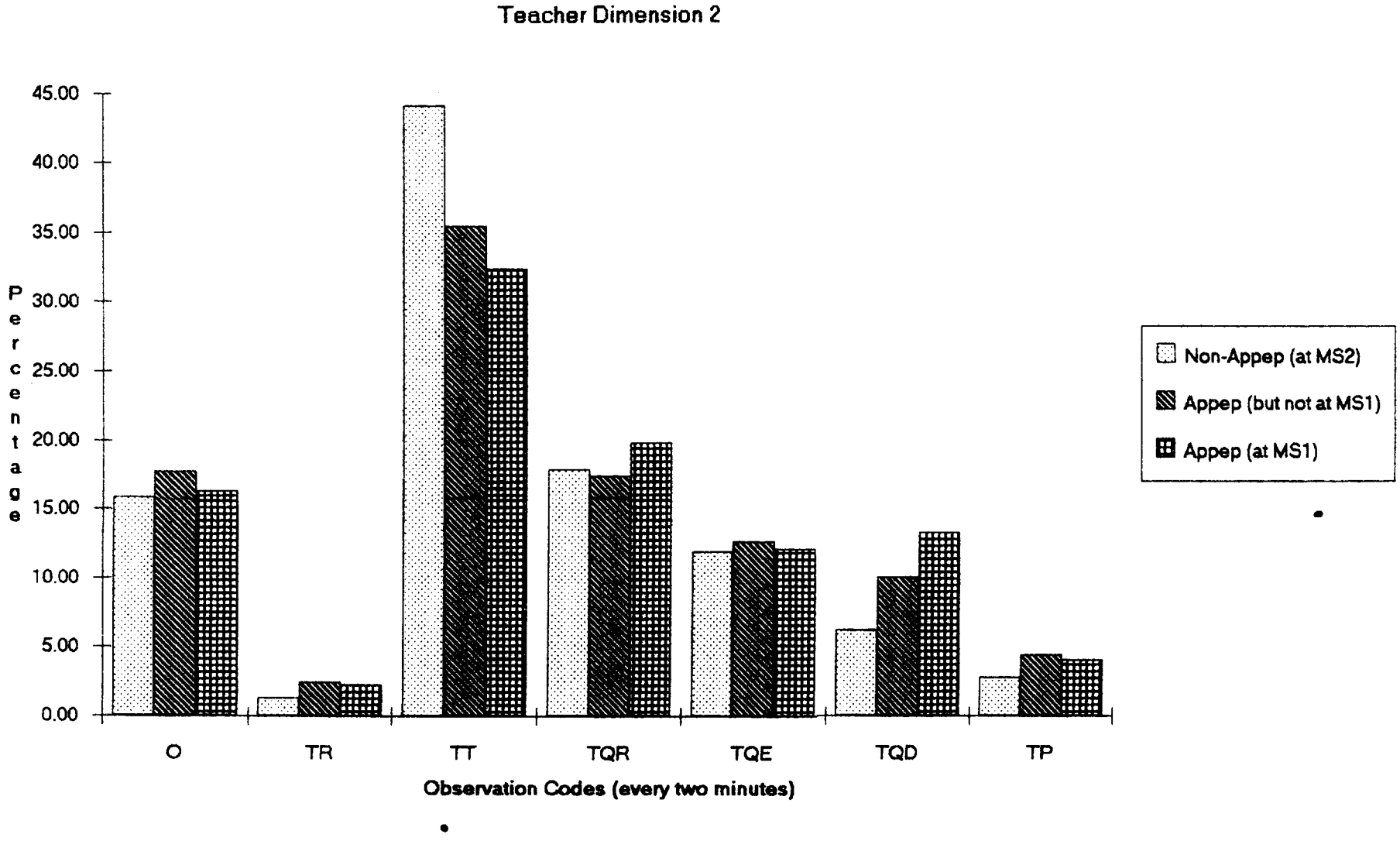
Continuous absence of children in March'92.

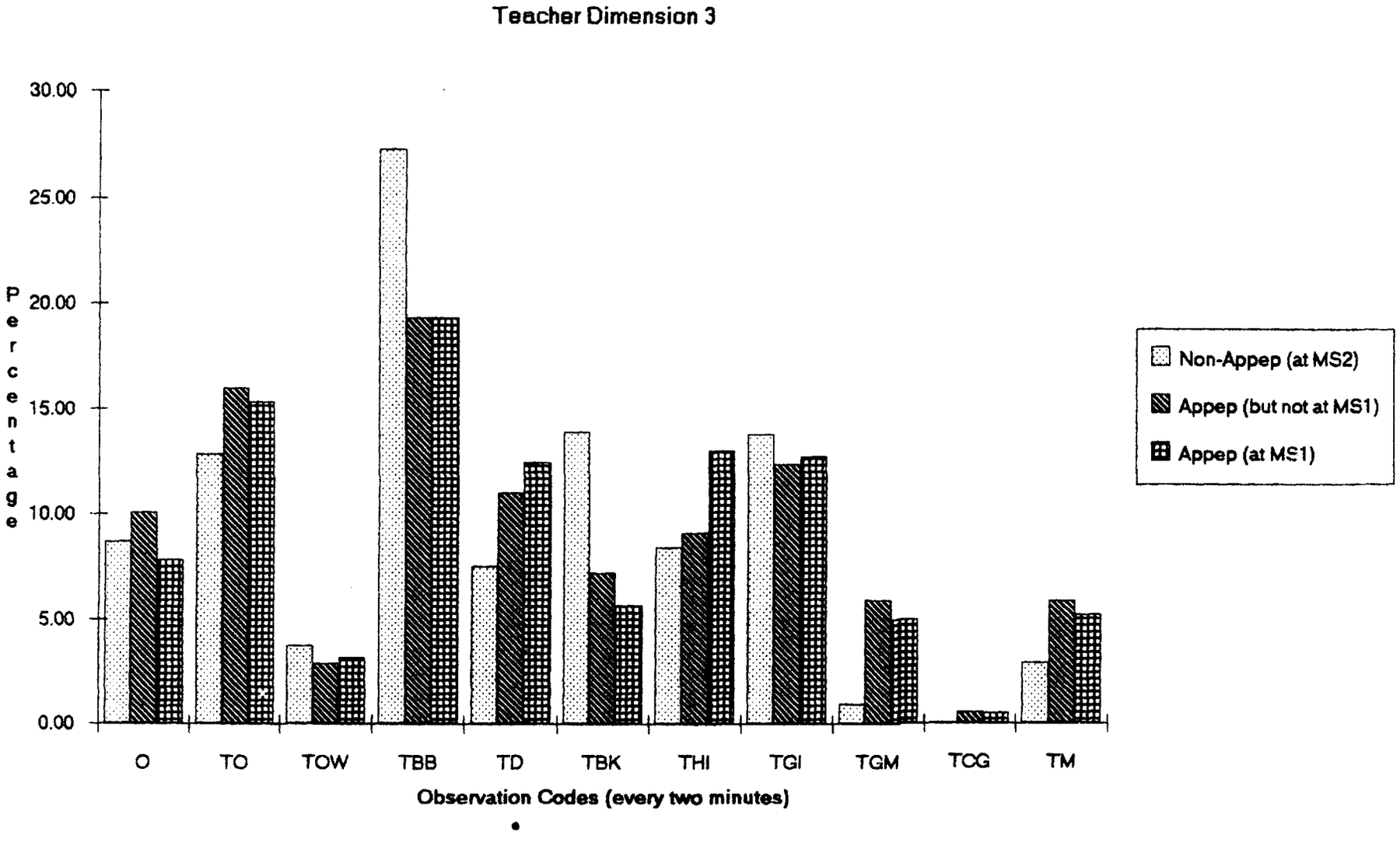
Classe	Boy/ Girl	% continuously absent (no harvest)	% continuously absent (a main harvest month)	Difference in % (colm. 3- colm. 2)	Statistical significance of the difference
(1)	(2)	(3)	(4)	(5)	(6)
Class 1	Boys	16.78	21.68	+ 4.90	N.S.
	Girls	19.52	20.47	+ 0.95	N.S.
Class 2	Boys	16.78	18.35	+ 1.57	N.S.
	Girls	17.40	17.27	- 0.13	N.S.
Class 3	Boys	15.70	13.84	- 1.86	N.S.
	Girls	15.62	18.23	+ 2.61	N.S.
Class 4	Boys	12.09	12.68	+ 0.59	N.S.
	Girls	12.98	17.53	+ 4.55	N.S.
Class 5	Boys	9.85	13.88	+ 4.03	N.S.
	Girls	12.80	15.80	+ 3.00	N.S.

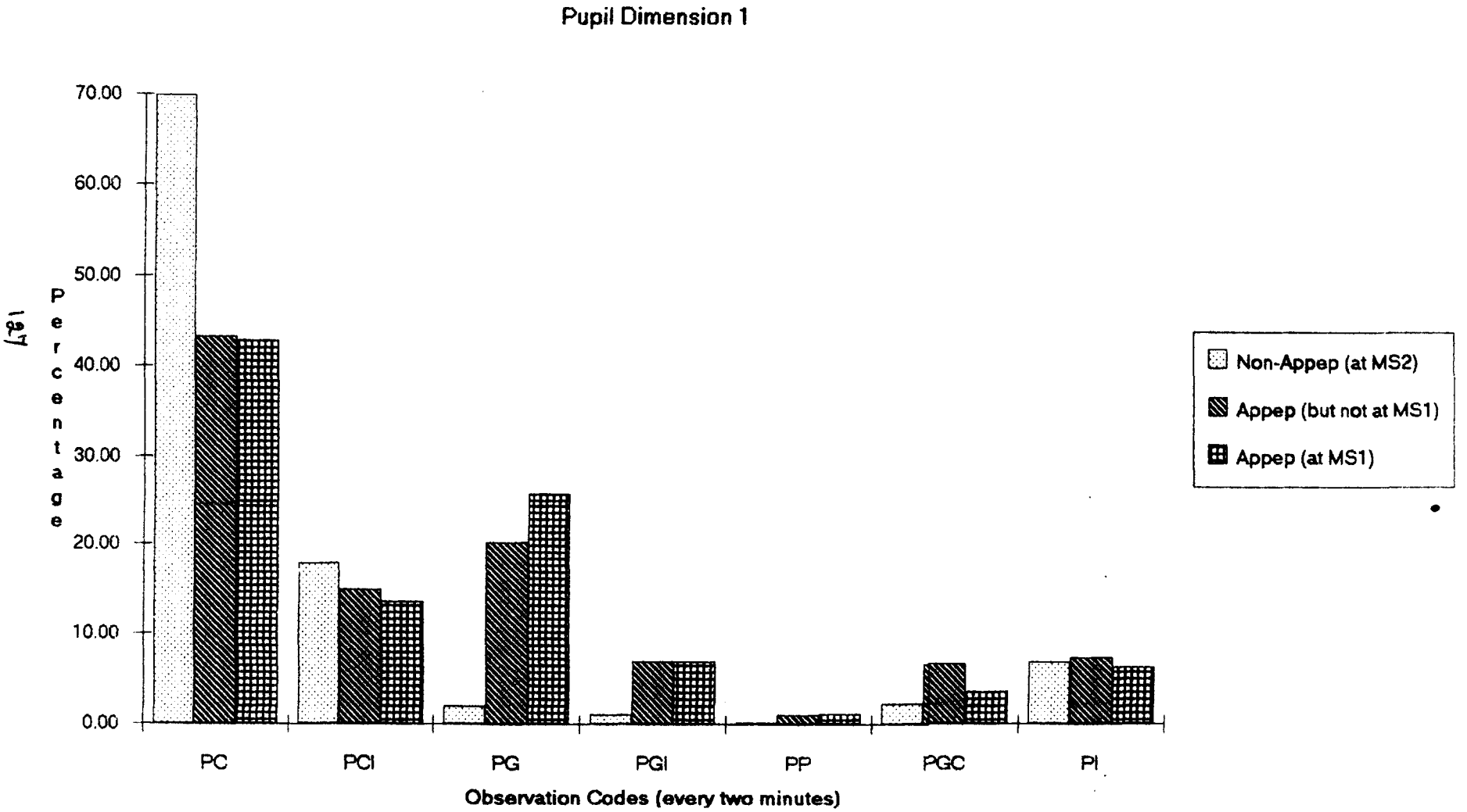
Note : N.S. - Not significant.

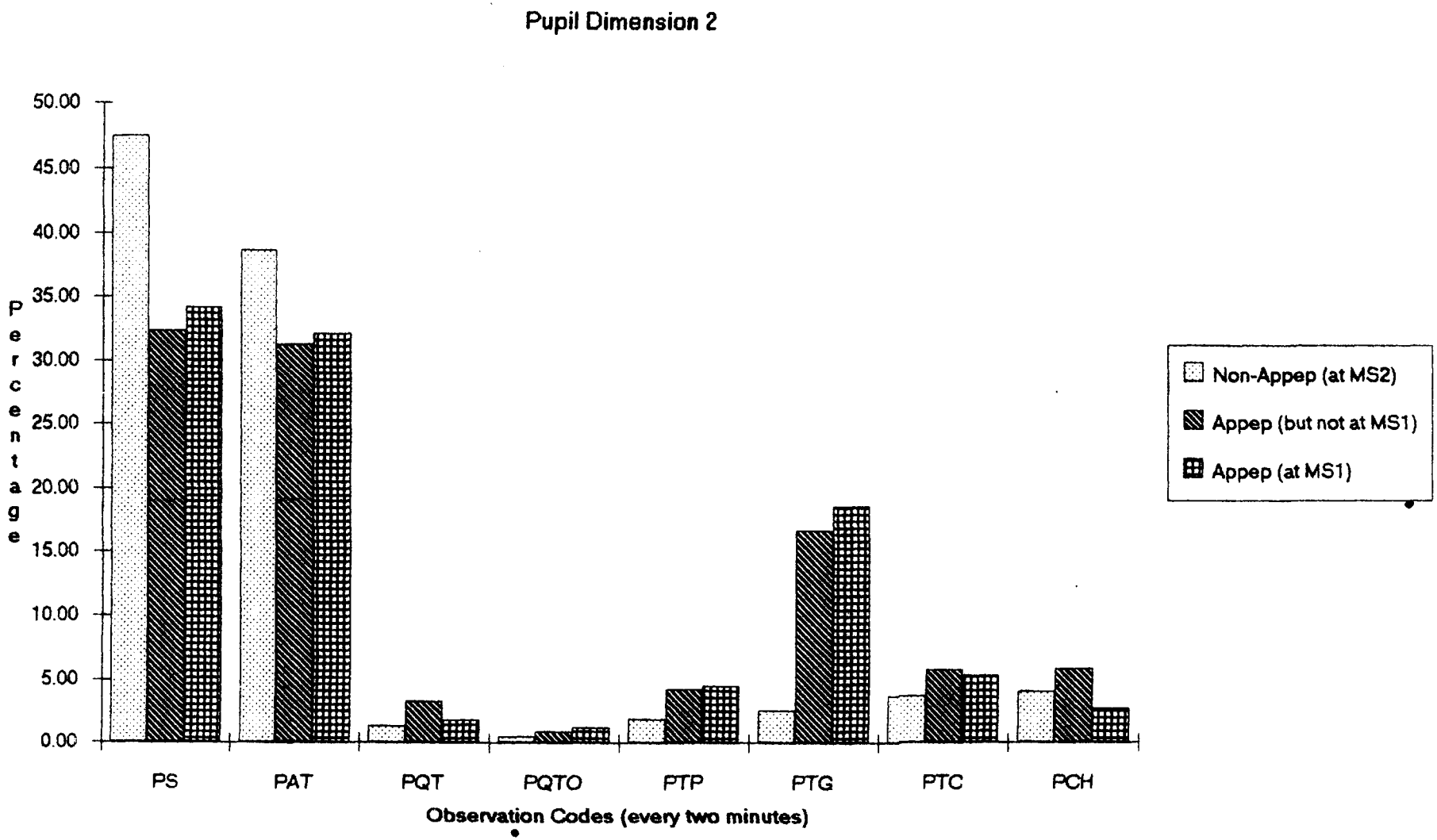
The data in the above table indicate that continuous absence of children in classes 1 to 5 is higher in schools during a main harvest month in 8 out of 10 cases than during no harwest month however the difference in perctntages are not statistically signlficantt.

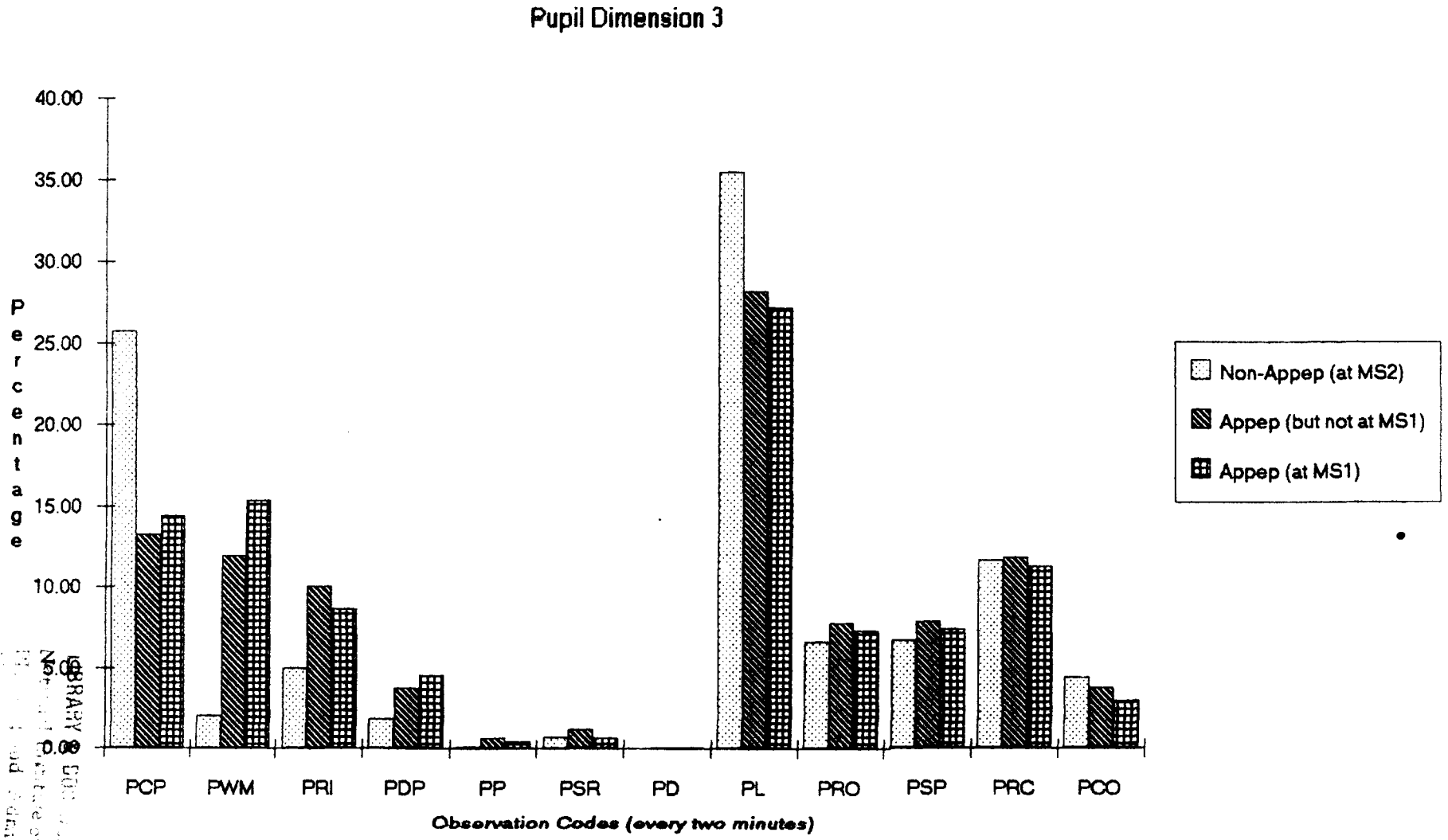

Teacher Dimension 1
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
Percentage
TW
TI
TIW
TG
TGW
TS
Observation Codes (every two minutes)
Non-Appep (at MS2)
Appep (but not at MS1)
Appep (at MS1)


Teacher Dimension 2
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
Percentage
O
TR
TT
TQR
TQE
TQD
TP
Observation Codes (every two minutes)
Non-Appep (at MS2)
Appep (but not at MS1)
Appep (at MS1)


Teacher Dimension 3
30.00
25.00
20.00
15.00
10.00
5.00
0.00
Percentage
O
TO
TOW
TBB
TD
TBK
THI
TGI
TGM
TCG
TM
Observation Codes (every two minutes)
Non-Appep (at MS2)
Appep (but not at MS1)
Appep (at MS1)


Pupil Dimension 1
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
Percentage
PC
PCI
PG
PGI
PP
PGC
PI
Observation Codes (every two minutes)
Non-Appep (at MS2)
Appep (but not at MS1)
Appep (at MS1)


Pupil Dimension 2
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
Percentage
PS
PAT
PQT
PQTO
PTP
PTG
PTC
PCH
Observation Codes (every two minutes)
Non-Appep (at MS2)
Appep (but not at MS1)
Appep (at MS1)


Pupil Dimension 3
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
Percentage
PCP
PWM
PRI
PDP
PP
PSR
PD
PL
PRO
PSP
PRC
PCO
Observation Codes (every two minutes)
Non-Appep (at MS2)
Appep (but not at MS1)
Appep (at MS1)

A TEACHERS' CENTRE MEETING - TEACHERS CRITICALLY OBSERVING THE MODEL DEMONSTRATION LESSON

A TEACHERS' CENTRE BUILDING