

EDUCATIONAL STATUS OF DENOTIFIED TRIBES IN ANDHRA PRADESH: ATTAINMENTS AND CHALLENGES

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Education of children of the Denotified Communities (here after DNTs) is a very important concern of our government. Although schools were provided in their colonies, attendance was made compulsory for the children of school-going age, the expenses on education were met by the governments, children were fed, yet desirable results have not been achieved in the standard of education. The educational problems concerning these DNT children should be tackled by the apex educational organisations as a part of their extension programmes. It is with this background that it has been decided to study the educational pattern available to these DNT children with a view to improving the achievement levels of DNT children in the present settlement schools. The aims and objectives of the paper are to focus and examine to what extent education has reached among the DNT communities in ex-settlement schools in Andhra Pradesh and to suggest ways and means to improve the quality of education imparted to the children of the Denotified Tribe/Communities in Andhra Pradesh.

Introduction

Today, there is a strong objection raised regarding the pathetic conditions of education and educational institutions prevailing in the settlement schools. The status of Andhra Pradesh in respect of these tribes stands in unique contrast to the rest of the country. There are social and behavioural changes taking place among the members of the DNT settlement areas in Andhra Pradesh. The DNT villages such as Stuartpuram, Seethanagaram (Guntur district), Kaparallatippa and Bitragunta (Nellore district), Siddhapuram (Kurnool district) and Lingala (Mahaboobnagar district) constitute a major segment of the total scheduled tribe population in Andhra Pradesh. In all these settlement areas Yerukulas, Waddars, Katheras, Chenchus, Sugalis, Yanadis and other nomadic tribes form a major part of population. Some of the settlers are still having some serious problems of crime and

illiteracy. On the whole, the scenario in Andhra Pradesh offers contrast on any comparison.

Profiles of Schools in DNT Villages

One primary school is available (Classes 1 to 5) in each tribal village for the children to attend. The schools with higher classes (upper primary schools and high schools in most of these villages) are situated several kilometers away and hence only a few are able to pursue and continue their school education. Thus the education they receive in these lower primary schools lays foundation for their entire future life. Therefore, a study like this becomes relevant and necessary to enquire into the factors and problems affecting the education of these tribal children and to review the current status of educational attainment of the DNTs children in the present scenario and to suggest possible solutions and remedial measures for the improvement of education.

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Methodology

The present study is a census survey covering entire population of all the schools in the DNT settlements, not a sample survey of 2 or 3 schools out of 5 and some students out of the total population of 452 students. Hence descriptive statistics, Tables and graphs are used in data analysis.

With respect to parents, only a sample of 50 parents of children studying in the 5 schools taking 10 parents from each settlement, was used for collecting data. All the selected 5 schools' head-teachers were contacted and preliminary data regarding students' enrolment, retention and dropouts were gathered. Primary information about the problems relating to the schools, habitation, personality of the children, head-teachers, teachers, parents, community participants, school records, school health programmes, achievements of the children in the school and curriculum related information were gathered.

The following tools were prepared and used in order to gather data required for the study.

Tools to Assess Students' Performance

Achievement Tests in Telugu Classes 1 to 5 : A test in Telugu (maximum marks: 15) to assess the achievement of tribal students in class 1 was prepared. Similarly, achievement tests in Telugu for class 2 (maximum marks: 15), class 3 (maximum marks: 20), class 4 (maximum marks: 30) and class 5 (maximum marks: 35) were prepared. Thus the total number of achievement tests constructed in Telugu was 5. They were prepared with the assistance of the head-teachers of the five schools and experts by using the State Government textbooks currently used in the schools.

Achievement Tests in EVS Classes 1 to 5 : An achievement test in Environmental Science to assess the achievement of tribal students in class 1 (maximum marks: 25), class 2 (maximum marks:

30), class 3 (maximum marks: 50), class 4 (maximum marks: 50) and class 5 (maximum marks: 50) were prepared by the head-teachers and experts based on the State prescribed textbooks for the schools.

Achievement Tests in Maths Classes 1 to 5 : The achievement tests in Mathematics to assess the achievement of tribal students in class 1 (maximum marks: 10), class 2 (maximum marks: 20), class 3 (maximum marks: 20), class 4 (maximum marks: 50) and class 5 (maximum marks: 35) were prepared by the head-teachers and experts by using the State prescribed textbooks.

Attitude Test to Assess the Attitude (or Behavioural Pattern) of the Tribal Children : An attitude test to assess the behavioural patterns (desirable and undesirable) of the students studying from classes 3 to 5 was prepared by head-teachers with the help of State education experts.

Tools to Assess Other Variables

School Schedule : School schedule was prepared to gather data regarding furniture available, compound wall, drinking water facility, toilets for teachers and students (male and female), teaching aids, etc.

School Record Schedule : School record schedule was prepared to gather data regarding school management, student teacher strength, instructional time, number of teachers (male and female), school facilities such as teaching-learning material, audio material, kits, books, newspapers, charts, tables, etc.

Questionnaire for Head-Teachers : (a) The questionnaire was prepared to gather data regarding the enrolment of children from classes 1 to 5, number of school going children and (b) Regarding their perception/opinion about the students.

Teachers' Schedule: This was prepared to gather data regarding qualifications, training, teaching process, teacher opinion on tribal children, medium of instruction, etc.

Classroom Observation Schedule: This tool was prepared to gather data regarding engagement of classes, i.e. single, multiple class, preparation for the class, lessons taught, use of teaching, learning material and use of kits, charts, etc.

Interview Schedule for Parents (Focus Group Discussion): Parents' schedule was prepared to collect data regarding literacy level of parents, occupation, economic position of parents and their opinion on children's education, etc.

Habitation Schedule: Habitation schedule was prepared to gather data regarding the total number of families, school age and school going children, literacy levels of the DNTs in the habitation, facilities of the habitation such as roads, electricity, drinking water and children attending the school from nearby villages, etc. The above 11 tools were prepared and printed both in English and Telugu. The same tools were photocopied into the required number for the implementation to gather the required information from the selected schools. The head-teachers were also informed about the field survey in the selected schools and they accepted the use of the tools in the schools.

Selection of Sample and Sampling Techniques Used

All the 11 tests/tools were administered in the five schools where the DNT children are studying. The tools used for gathering data are of two types.

A: Tests administered to the school children.

B: Questionnaires administered to headmasters, teachers, parents and community members.

A Type: Tests

1. Test to assess the Achievement of Students in Telugu

2. Test to assess the Achievement of Students in Environmental Science
3. Test to assess the Achievement of Students in Mathematics. These three tests were administered to all the tribal children studying in classes 1 to 5 in all the five schools.
4. Test to assess the attitude of the students – administered to students of classes 3, 4 and 5 in all the five schools.

B Type: Questionnaires/Schedules :

5. School Schedule
6. School Record Schedule
Both these tools (5 and 6) were filled in by the head-teachers and they contain detailed information regarding the school: infrastructure, staff, incentives/ support received from the government, etc.
7. Questionnaire for head-teachers to gather information about the functioning of the schools: number of classes, students, teachers, facilities, special provision for ST students, etc., in each of these 5 schools – administered to the head-teachers and data were gathered.
8. Teachers' schedule used to collect information about the teachers, their qualification, experience and to elicit their opinion/perception regarding various aspects of the teaching-learning process prevailing in the schools.
9. Classroom Observation Schedule: Through direct observation of some classes while teaching was going on, actual data regarding the teaching-learning process, single class teaching, multigrade teaching, etc., were recorded using this tool.
10. Interview Schedule for Parents (Focus-Group Discussion) : The responses of parents to the items in this schedule were gathered to find out (a) their literacy level, occupation, economic condition, etc., and (b) their opinion about the learning and

education process of their children, reasons for dropout children and about the functioning of the schools. This was administered to a total of 50 parents taking 10 parents of children in each of the 5 schools.

11. Habitation Schedule: This was administered to gather data regarding the total number of families, school-age children and school-

going children, facilities in the habitation such as roads, drinking water, electricity, etc., in order to understand the living conditions of the children and parents in their habitats. These 11 tools were administered and data gathered to meet the objectives of the present study.

Scoring: The maximum marks scorable in each test are as follows.

Table 1: Maximum Marks in Tests

Subject	Class 1	Class 2	Class 3	Class 4	Class 5
Telugu	15	15	20	30	35
Environmental Science	25	30	50	50	50
Mathematics	10	20	20	50	35
Total	50	65	90	130	120
Attitude Test	-	-	10	10	10

But for the purpose of analysis, the maximum score in each test was converted to 30 and the total in the three subjects came to 90. This was done for the 5 classes in order to facilitate inter-subject comparisons and between class comparisons.

Grouping of Students

Three Subjects: Out of the total of 90 marks scorable in the tests for Telugu, Environmental

Science and Mathematics put together, each student has scored a particular mark (obtained score) – may be 10, 25, 32, 45, 56, ... up to 70, 80 or any mark up to the total 90. Accordingly, the performance of students in each class has been classified into five groups based on the range of marks obtained by each student as follows.

Table 2: Performance Categories in Total of 3 Subjects

S.No.	Category	Range of marks out of 90
1	Group-1: Very Poor	0 to 12.9 (14.33%)
2	Group-2: Poor	13 (14.44%) to 31.4 (34.88%)
3	Group-3: Average	31.5 (35%) to 49 (54.44%)
4	Group-4: Good	49.1 (54.55%) to 64 (71.11%)

Data Analysis, the number of students in each class, coming under these five categories is presented below.

Attitude Test: Scoring and Grouping of Students

There are 10 items in this test to assess the Attitude or Behavioural Pattern of the

students. Based on the response of each student, each item is scored 1 or 0 – which means a student can score a maximum of 10 marks. Based on this quantification or score, students have been grouped into three categories, as follows:

Table 3: Grouping of Students on Attitude

S.No.	Category	Range of marks out of total 10
1	Negative attitude	0 to 3 marks
2	Positive attitude	4 to 6 marks
3	More positive attitude	7 to 10 marks

The number of students coming under each category in each class, data analysis, scoring, tabulation, data entry and analysis for all the tests mentioned above for students in classes 1 to 5, was completed and the analysis with results are presented.

Analysis of Data, Statistics Used and Results

The analysis of data was carried out using the computer software SPSS – after doing the appropriate paper tabulation, coding of variables and data entry. Descriptive statistics (mean, standard deviation, range, etc.) have been derived and presented (not inferential statistics like t-test, ANOVA, etc.) regarding the performance of students in the three school subjects. Data summary in the form of frequency tables, cross-tables and graphs have been used more in the analysis since they are very suitable for extensive survey type data gathered in the study. The analysis and results for each class, classes 1 to 5, are presented below.

Educational Attainments and Challenges

Problems faced by the DNT children in education can be classified into five categories such as: 1. Economic factors (poverty of parents,

lack of parental demand, child labour, and lack of early child care education), 2. Social factors (illiteracy of parents, early marriages, community loyalties, lack of awareness), 3. Cultural factors (tribal festivals, tribal traditions, value system and problems of language), 4. School factors (lack of access, incomplete schools, teacher absenteeism, poor quality of teachers, unserviceable curriculum, unsuitable working hours), and 5. Administrative factors (lack of coordination among different managements, delays in supplies and incentives, weak inspectorate, lack of enrolment campaigns, lack of community control, lack of incentives) are some of the important factors identified which is coming in the way of education of DNT children.

Class 1: Performance of Students in Three Subjects

The test marks in the 3 subjects, Telugu, Environmental Science and Mathematics add up to 90 total (30 in each subject). A total of 113 students are studying in the five schools under DNTS. Their overall performance is shown by the values of descriptive statistics in the Table given below:

Table 4 : Class 1: Descriptive Statistics – 3 Subjects (90 marks)

	N	Range	Minimum	Maximum	Sum	Mean	Standard Deviation
Total_(Telugu,EVS & Maths) for 90	113	77	0	77	4636	41.03	21.320

The mean achievement of 113 students in three subjects (Telugu, Environmental Science and Mathematics) out of a total of 90 marks is given as 41.03 which comes to 45.6 per cent. This average for the whole group comes between 40 and 50 per cent and may be termed

as average or medium performance. The fact that the marks are ranging from 0 to a maximum of 77 shows that it is a very heterogeneous group with poor students at one extreme and very bright students at the other.

Table 5 : Class 1: Summary of Performance in 3 Subjects - Comparison

	Telugu (Marks 30)	EVS (Marks 30)	Maths (Marks 30)
Total N	113	113	113
Mean	14.34	12.064	14.63
Sum	1620	1363.2	1653
Minimum	0	.0	0
Maximum	28	30.0	30
Range	28	30.0	30
Standard Deviation	7.824	8.2780	10.661

Comparison of Performance in 3 Subjects: Class 1

The performance of 113 students in five schools in three subjects is shown in Table 5. The maximum mark in each subject (Telugu, Environmental Science and Mathematics) is 30. The performance in two subjects, Telugu and Mathematics, is nearly equal as shown by the means 14.3 and 14.6, respectively – but the level

of performance in both is less than 50 per cent which is 15. The achievement in EVS is still lower: Mean 12.1.

Gender-wise Distribution in 5 Categories: Class 1

The following Table shows male/female distribution of students in class 1 with respect to total performance in 3 subjects.

Table 6: Students' Gender *Class 1 - 3 Subjects –Performance (90) Cross Tabulation

		Class 1 : 3 subjects – Performance (90)						
		Group-1	Group-2	Group-3	Group-4	Group-5	Total	
Students' Gender	Boys	Count	10	9	10	11	8	48
		% within Students' Gender	20.8%	18.8%	20.8%	22.9%	16.7%	100.0%
Students' Gender	Girls	Count	6	12	23	12	12	65
		% within Students' Gender	9.2%	18.5%	35.4%	18.5%	18.5%	100.0%
Total		Count	16	21	33	23	20	113
		% within Students' Gender	14.2%	18.6%	29.2%	20.4%	17.7%	100.0%

Discussion

The cross-table shows that 39.6 per cent of boys have performed in the top categories of group 4 and group 5 while 37 per cent of girls are in the same top two categories, which shows that the performance of boys and girls are nearly equal in the higher categories. But in the lower two categories (group 1 and 2) there are only

27.7 per cent of girls while the percentage of boys is 39.6 which shows poor performance of boys when compared to girls.

The graph provided below, gives a visual representation of the gender-wise (boys, girls) Table. The height of the third bar (girls) stands out showing better performance of girls (23) in group 3 compared to only 10 boys in group 3.

Figure 1: Graph of Gender-wise Distribution

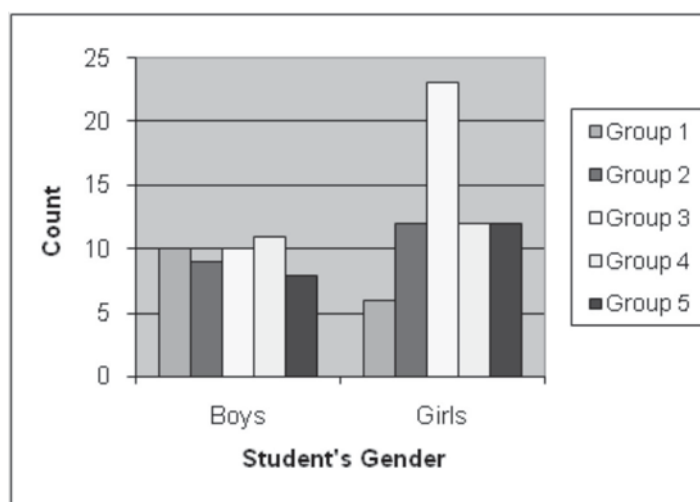


Table 7: Class 1: Schools * 3 Subjects – Performance (90) Cross Tabulation

			Class 1 : 3 subjects – Performance (90)					Total
			Group-1	Group-2	Group-3	Group-4	Group-5	
School	Government Elementary School, Siddapuram	Count % within School	3 9.4%	5 15.6%	13 40.6%	6 18.8%	5 15.6%	32 100.0%
	SA UP School, Bitragunta	Count % within School	6 13.0%	7 15.2%	15 32.6%	7 15.2%	11 23.9%	46 100.0%
School	Government UP School, Sitanagaram	Count % within School	0 .0%	1 33.3%	0 .0%	1 33.3%	1 33.3%	3 100.0%
	SA Elementary School, Stuartpuram	Count % within School	4 33.3%	5 41.7%	1 8.3%	2 16.7%	0 .0%	12 100.0%
School	S Bose Government Pr School, Lingala	Count % within School	3 15.0%	3 15.0%	4 20.0%	7 35.0%	3 15.0%	20 100.0%
	Total	Count % within School	16 14.2%	21 18.6%	33 29.2%	23 20.4%	20 17.7%	113 100.0%

School-wise Distribution of Students in Five Groups: Class 1

This is shown in Table 7. Out of 5 schools, one school, Government Upper Primary DNT School, Sitanagaram, has only three students and two of them are in group 4 and group 5 which shows good performance. Of the remaining four schools, Subash Chandra Bose DNT School, Lingala tops in the performance of three subjects since 50 per cent of the students (35 and 15 per cent) come in the top two categories (groups 4 and 5). Government Salvation Army UP School, Bitragunta (39.1 per cent) and Government DNT Elementary School, Siddapuram (34.4 per cent) respectively occupy the second and third ranks

considering the percentage of students in groups 4 and 5. The Salvation Army Aided Elementary School, Stuartpuram comes last in performance with 16.7 per cent of students in group 4 and none in group 5.

Summary of Class 1: Students' Performance:

It is found that the mean achievement in three subjects total 90 is 45.6 per cent marks which may be termed as Average Performance (in the range 35 and 54.4 per cent) according to the five categories shown in Table 15 in the previous section. Similar also is the result in the individual subjects (Telugu, EVS and Mathematics) – mean score below 50 per cent. Much remains to be done if the level of

performance is to be raised to the next category – Good performance: 54.5 to 71.1 per cent (group 4). There seems to be no relation between the gender and performance of students but there is moderate relation between schools and performance of students.

Class 2: Performance of Students in Three Subjects

The performance of students (total 90 marks) in class 2 (N = 97) in the 3 subjects (Telugu, EVS and Mathematics) is discussed and the relevant Tables and graphs are presented here.

Table 8 : Class 2: Class 2 Descriptive Statistics – 3 Subjects (90 Marks)

	N	Range	Mini- mum	Maxi- mum	Sum	Mean	Std Dev	Skew -ness	Kurtosis
Total (Telugu, EVS & Maths) for 90	97	74	0	74	3694	38.08	17.787	-.733	-.171

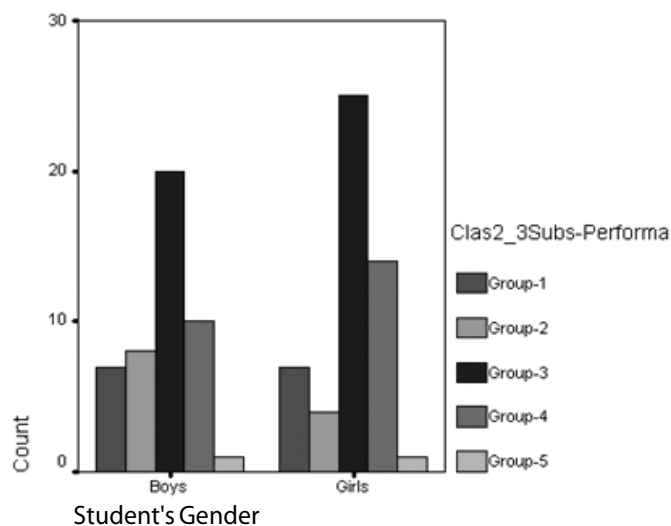
The mean marks (out of total 90 for three subjects) are 38.1 which works out to be 42.3 per cent which is even less than the mean for class 1: 45.6 per cent. The range of 74 also shows the wide disparity in performance of some students who have secured very low marks out of 90, and other students who have scored high marks approaching 74 which is 82 per cent.

Gender-wise Distribution in 5 Categories – Class 2

The following Table shows that the combined percentage of girls in groups 3 and 4 comes to 76.5 per cent (49 + 27.5) which is higher than the figure 65.2 per cent (43.5 + 21.7) for boys. Hence the overall performance of girls is better than that of boys in Class 2.

Table 9: Students' Gender * Class 2 – 3 Subjects – Performance Cross Tabulation

		Class 2 – 3 subjects – Performance (90)					Total	
			Group-1	Group-2	Group-3	Group-4	Group-5	
Students' Gender	Boys	Count	7	8	20	10	1	46
		% within Students' Gender	15.2%	17.4%	43.5%	21.7%	2.2%	100.0%
	Girls	Count	7	4	25	14	1	51
		% within Students' Gender	13.7%	7.8%	49.0%	27.5%	2.0%	100.0%
Total		Count	14	12	45	24	2	97
		% within Students' Gender	14.4%	12.4%	46.4%	24.7%	2.1%	100.0%

Figure 2: Graph of Gender-wise Distribution-Class:2**School-wise Distribution of Students in Five Groups: Class 2****Table 10: Class 2: Schools - 3 Subjects – Performance Cross Tabulation**

School		Class 2 – 3 subjects – Performance					Total
		Group-1	Group-2	Group-3	Group-4	Group-5	
Government Elementary School, Siddapuram	Count	0	7	22	13	0	42
	% within School	0%	16.7%	52.4%	31.0%	0%	100.0%
SA UP School, Bitragunta	Count	5	3	16	6	0	30
	% within School	16.7%	10.0%	53.3%	20.0%	0%	100.0%
Government UP School, Sitanagaram	Count	0	0	1	1	0	2
	% within School	.0%	.0%	50.0%	50.0%	.0%	100.0%
SA Elementary School, Stuartpuram	Count	2	0	3	1	2	8
	% within School	25.0%	.0%	37.5%	12.5%	25.0%	100.0%
Government Pr School, Lingala	Count	7	2	3	3	0	15
	% within School	46.7%	13.3%	20.0%	20.0%	.0%	100.0%
Total	Count	14	12	45	24	2	97
	% within School	14.4%	12.4%	46.4%	24.7%	2.1%	100.0%

Two schools (Government DNT UP School, Sitanagaram and Salvation Army Aided Elementary School, Stuartpuram) have only two and eight students, respectively. Observation of the frequencies in the third and fourth rows reveals clearly that the performance of Stuartpuram school students is lower than Sitanagaram school students considering the frequencies in the very low performance category: group 1. But it is compensated by the fact that 25 per cent of students in Stuartpuram are in the very high performance category: group 5 which points to better performance compared to the other school.

Regarding the other three schools, the ranks in performance are: first is Government, Elementary School, Siddapuram with 83.4 per cent students in groups 3 and 4 (52.4 + 31); second is Salvation Army Aided School, Bitragunta with 73.3 per cent students in Groups 3 and 4 and third Subash Chandra Bose School, Lingala with 40 per cent in group 3 (Average) and in group 4 (Good Performance). The above statement refers only to the relative performance between the three schools. But in absolute performance there is not much to claim since the number of students in group 5 is zero in all these three schools.

Comparison of Performance in Three Subjects: Class 2

Table 11: Class 2: Summary of Performance in 3 Subjects - Comparison

	Telugu (Marks 30)	EVS (Marks 30)	Maths (Marks 30)
Total N	97	97	97
Mean	13.44	8.62	16.02
Median	12.00	9.00	16.50
Sum	1304	836	1554
Minimum	0	0	0
Maximum	30	22	30
Range	30	22	30
Standard Deviation	8.370	4.805	8.673
Kurtosis	-.980	-.116	-.800
Skewness	.171	-.010	-.295

Findings from Table are given below. The mean values obtained by 97 students in class 2 shows that the achievement in Mathematics is moderately good: Mean score of 16 out of 30, which is 53.3 per cent, followed by mean 13.4 in Telugu (44.6 per cent). The performance of class 2 students in Environmental Science is poor with mean 8.6 (28.7 per cent).

Summary of Class 2 Students' Performance

The mean performance of students in the total of three subjects (90 marks) is 42.3 per

cent, lower than that of class 1 students: 45.6 per cent. The performance in the separate individual subjects (presented in the previous part) shows poor performance in Environmental Science.

Class 3: Performance of Students in Three Subjects

The achievement of 77 students in class 3 in the five schools considering the total of 3 subjects (90) in Telugu, EVS and Mathematics and also considering separate performance in each of the subject subjects, are presented here.

Table 12: Class 3: Descriptive Statistics - 3 Subjects (90 marks)

	N	Range	Minimum	Maximum	Sum	Mean	Std Dev	Skewness	Kurtosis
Total (Telugu, EVS & Maths) for 90	77	77	11	88	4341	56.37	17.184	-.600	-.229

According to Table 12, the mean score of 77 students out of total 90 in 3 subjects, is 56.4 i.e. 62.6 per cent which shows good performance. This is much better than the mean for class 1: 45.6 per cent and the mean for class 2: 42.3 per cent. The range of scores from

minimum 11 to the maximum 88 shows the widespread dispersion of scores – but a much better picture compared to classes 1 and 2 where the minimum is zero in both classes.

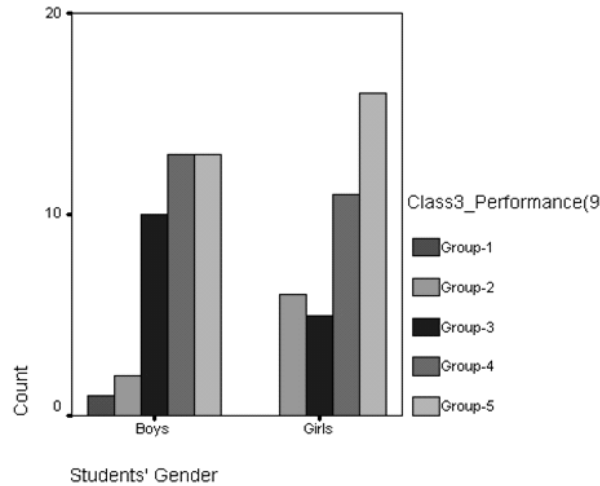
Gender-wise Distribution in 5 Categories: Class 3

Table 13: Students' Gender * Class 3 Subjects Performance (90) Cross Tabulation

		Class 3 – Performance (90)					Total
		Group-1	Group-2	Group-3	Group-4	Group-5	
Students' Gender	Boys	Count 1	2	10	13	13	39
		% within Students' Gender 2.6%	5.1%	25.6%	33.3%	33.3%	100.0%
Girls		Count 0	6	5	11	16	38
		% within Students' Gender 0%	15.8%	13.2%	28.9%	42.1%	100.0%
Total		Count 1	8	15	24	29	77
		% within Students' Gender 1.3%	10.4%	19.5%	31.2%	37.7%	100.0%

The following Table shows the better performance of girls: 71 per cent in group 4 (28.9

per cent) and group 5 (42.1 per cent) together, compared to 66.6 per cent of boys in groups 4 and 5.

Figure 3: Gender-wise Performance of Class 3**School-wise Distribution of Students in Five Groups: Class 3****Table 14: Class 3 - School Performance (90) Cross Tabulation**

			Class 3 – Performance (90)					
			Group-1	Group-2	Group-3	Group-4	Group-5	Total
School	Government							
	Elementary	Count	0	0	3	8	11	22
	School,	% within						
	Siddapuram	School	.0%	.0%	13.6%	36.4%	50.0%	100.0%
	SA UP	Count	0	1	1	10	8	20
	School,	% within						
	Bitragunta	School	.0%	5.0%	5.0%	50.0%	40.0%	100.0%
	Government	Count	0	0	0	3	0	3
	UP School,	% within						
	Sitanagaram	School	.0%	.0%	.0%	100.0%	.0%	100.0%
	SA Elementary	Count	0	3	5	0	7	15
	School,	% within						
	Stuartpuram	School	.0%	20.0%	33.3%	.0%	46.7%	100.0%
	S Bose	Count	1	4	6	3	3	17
	Government	% within						
Pr School, Lingala	School	5.9%	23.5%	35.3%	17.6%	17.6%	100.0%	
Total	Count	1	8	15	24	29	77	
% within School		1.3%	10.4%	19.5%	31.2%	37.7%	100.0%	

Table 14 shows that there are only three students in Government DNT School, Sitanagaram, but their performance is good – all three in group 4. Regarding the other four schools, notable is the performance of

Bitragunta Salvation Army UP School, which comes first with 90 per cent of students in groups 4 and 5 put together and Government DNT School, Siddapuram comes second with 86.4 per cent of students in groups 4 and 5. The performance of the other two schools is poor.

Comparison of Performance in 3 Subjects: Class 3

Table 15: Class 3: Summary of Performance in 3 Subjects - Comparison

	Telugu (Marks 30)	EVS (Marks 30)	Maths (Marks 30)
Total N	77	77	77
Mean	23.94	11.59	20.84
Median	27.00	9.60	21.00
Sum	1844	892	1605
Minimum	6	2	2
Maximum	30	28	30
Range	24	26	29
Standard Deviation	6.919	6.501	7.046
Kurtosis	-.218	-.483	-.565
Skewness	-.985	.754	-.487

Table 15 shows that the performance of students in Telugu and Mathematics is quite good: a mean of 23.9 out of 30 in Telugu which is 79.6 per cent and a mean of 20.8 in Mathematics which is 69.3 per cent. The performance in Environmental Science is poor in comparison: mean of 11.6 which comes to 38.6 per cent only.

Summary of Class 3 Students' Performance

The mean achievement in the total (90 marks) of three subjects (Telugu, EVS and Mathematics) is good with 62.6 per cent – much better than the mean achievement of class 1

students (45.6 per cent) and class 2 students (42.3 per cent). The performance of students depends to some extent on the schools which they attend, shown by the contingency coefficient of 0.6. In individual subjects, the performance in Telugu is very good (79.6 per cent) and the achievement in Mathematics is good; but the achievement in EVS is poor: 38.6 per cent.

Class 4: Performance of Students in 3 Subjects

The performance of class 4 students in Telugu, EVS and Maths is presented here.

Table 16: Class 4: 3 Subjects Total - Descriptive Statistics

	N	Range	Minimum	Maximum	Sum	Mean	Std Dev	Skewness	Kurtosis
Total (Telugu, EVS & Maths) 90	76	73	16	89	3690	48.56	14.281	0.175	.067

The mean score of 76 students in class 4 in the 3 subjects is 48.6 out of 90, which comes to 53.9 per cent - better than the performance of class 1 and 2 students but less than class 3

students. The marks range from 16 to a maximum of 89 which is a record 98.9 per cent.

Gender-wise Distribution in 5 Categories: Class 4

Table 17: Students' Gender * Class 4 – 3 Subjects Performance (90) Cross Tabulation

		Class 4 – 3 Subjects Performance (90)				Total	
		Group-2	Group-3	Group-4	Group-5		
Students' Gender	Boys	Count	4	18	8	4	34
		% within Students' Gender	11.8%	52.9%	23.5%	11.8%	100.0%
Girls	Count	5	17	10	10	42	
		% within Students' Gender	11.9%	40.5%	23.8%	23.8%	100.0%
Total	Count	9	35	18	14	76	
		% within Students' Gender	11.8%	46.1%	23.7%	18.4%	100.0%

Table 17 shows that the percentage of girls coming under the top two categories (groups 4 and 5 – good and very good performance) is 47.6, evidence of their superior performance compared to the achievement of boys whose percentage in the top two

categories combined, is 35.3. There is not a single boy or girl in group 1 (very poor performance) as already mentioned above under 2.

The Graph reflects the better performance of girls as already stated under 2.

Figure 4: Performance of Boys and Girls

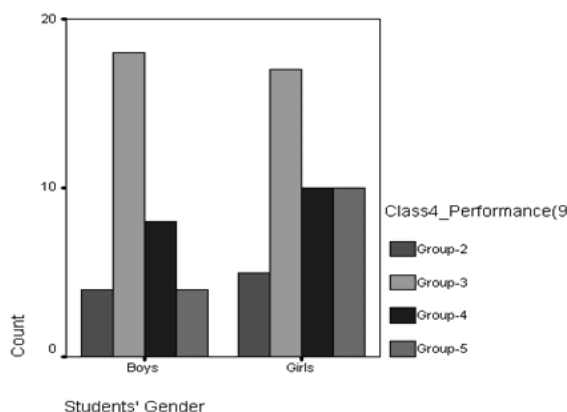


Table 18: Class 4 School *- 3 Subjects Performance (90) Cross Tabulation

			Class 4 – 3 Subjects Performance (90)				Total
School			Group-2	Group-3	Group-4	Group-5	
Government Elementary School, Siddapuram	Count		6	16	7	1	30
	% within School		20.0%	53.3%	23.3%	3.3%	100.0%
SA UP School, Bitragunta	Count		1	5	3	5	14
	% within School		7.1%	35.7%	21.4%	35.7%	100.0%
Government UP School, Sitanagaram	Count		0	0	2	2	4
	% within School		0%	0%	50.0%	50.0%	100.0%
SA Elementary School, Stuartpuram	Count		1	5	0	5	11
	% within School		9.1%	45.5%	0%	45.5%	100.0%
S Bose Government Pr School, Lingala	Count		1	9	6	1	17
	% within School		5.9%	52.9%	35.3%	5.9%	100.0%
Total	Count		9	35	18	14	76
	% within School		11.8%	46.1%	23.7%	18.4%	100.0%

School-wise Distribution of Students in Five Groups : Class 4

As shown in Table 18 there is not a single student in group 1: very poor performance category in any of the 5 schools which was mentioned earlier also. There are only 4 students in Sitanagaram school, but their performance is quite good with two students coming under the group 4 category (good) and two under group 5 category (very good).

Out of the remaining 4 schools, Salvation Army School, Bitragunta comes first in performance with 57.1 per cent (21.4 + 35.7) of students in the top two categories (group 4 and 5). On close analysis of group 4 and group 5 cells pertaining to Stuartpuram school and Lingala school (45.5 per cent and 41.2 per cent students, respectively in group 4 and 5 combined), the performances of students in these two schools are nearly equal, with the Stuartpuram school having an edge over Lingala school.

Table 19 : Class 4 Summary of Performance in : 3 Subjects – Case Summaries - Comparison

	Telugu (Marks 30)	EVS (Marks 30)	Maths (Marks 30)
Total N	76	76	76
Mean	23.55	13.48	11.53
Median	25.00	11.40	11.40
Sum	1790	1024	876
Minimum	8	4	4
Maximum	39	29	25
Range	31	25	21
Standard Deviation	6.455	6.725	4.003
Kurtosis	-.179	-.721	1.246
Skewness	-.634	.738	.709

Comparison of Performance in 3 Subjects

As per Table 19, the best performance of students among the three subjects is seen to be Telugu with 23.6 marks out of 30, that is, 78.6 per cent. The performance in the other two subjects (EVS and Maths) is average with 13.5 out of 30 for EVS which is 45 per cent and with 11.5 for Maths which comes to 38.3 per cent only.

Summary of Class 4 Performance

The overall performance of 76 students in the three subjects put together may be termed average or moderately good since the mean is 48.6 out of 90 which comes to nearly 54 per cent and there are no students in group 1

category. The performance of girls is better than that of boys. Regarding schools, Salvation Army School, Bitragunta comes first. There is moderately high relationship between schools and students' performance but very little relationship exists between gender of students and their performance.

Class 5: Performance of Students in Three Subjects

The achievement of 89 students in class 5 in the five schools considering the total of three subjects (90) in Telugu, EVS and Mathematics and also considering separate performance in each of the three subjects are presented here.

Descriptive Statistics: Class 5

Table 20: Class 5: Descriptive Statistics - 3 Subjects (90 Marks)

	N	Range	Minimum	Maximum	Sum	Mean	Std. Deviation	Skewness	Kurtosis
Total_Tel, Evs, Maths	89	69	19	87	4995	56.13	17.610	-.440	-.762

According to Table 20, the mean score of 89 students out of total 90 in 3 subjects, is 56.1 which is 62.3 per cent which shows good performance. This is much better than the mean for class 1 : 45.6 per cent and the mean for class

2 : 42.3 per cent, class 3 : 62.6 per cent and class 4 : 54.0 per cent.

The range of scores for minimum 19 to the maximum 87 shows the widespread dispersion of scores – but a much better picture when compared to other classes.

Gender-wise Distribution in 5 Categories: Class 5

Table 21 shows the better performance of girls: 67.5 per cent in group 4 (17.5 per cent)

and group 5 (50.0 per cent) together compared to 61.3 per cent of boys in groups 4 and 5.

School-wise Distribution of Students in Five Groups: Class 5**Table 21: Students' Gender * Class 5 - 3 subjects – Performance Cross Tabulation**

			Class5_Performance(90)				Total
			Group-2	Group-3	Group-4	Group-5	
Students' Gender	Boys	Count	4	15	9	21	49
		% within Students' Gender	8.2%	30.6%	18.4%	42.9%	100.0%
	Girls	Count	4	9	7	20	40
		% within Students' Gender	10.0%	22.5%	17.5%	50.0%	100.0%
Total	Count		8	24	16	41	89
	% within Students' Gender		9.0%	27.0%	18.0%	46.1%	100.0%

Table 22: Class 5 Performance Cross Tabulation

			Class5_Performance (90)				Total
			Group-2	Group-3	Group-4	Group-5	
School	Gov-ElemSchool_Siddapuram	Count	1	5	8	7	21
		% within School	4.8%	23.8%	38.1%	33.3%	100.0%
	SA_UPSchool_Bitragunta	Count	2	5	1	13	21
		% within School	9.5%	23.8%	4.8%	61.9%	100.0%
	Govt_UPSchool_SNagaram	Count	0	0	1	3	4
		% within School	.0%	.0%	25.0%	75.0%	100.0%
	SA_ElemSchool_StuartPuram	Count	2	5	2	10	19
		% within School	10.5%	26.3%	10.5%	52.6%	100.0%
	SBose_GovtPrSchool_Lingala	Count	3	9	4	8	24
		% within School	12.5%	37.5%	16.7%	33.3%	100.0%
Total	Count		8	24	16	41	89
	% within School		9.0%	27.0%	18.0%	46.1%	100.0%

There are only 4 students in Govt. DNT School, Sitanagaram, but their performance is good – all 4 in group 4 and 5 whereas only 50 per cent of the students in Govt. Primary DNT School, Lingala belong to group 4 and 5. Regarding the other remaining schools, notable is the performance of Govt. Elementary school, Siddhapuram, which comes with 71.4 per cent. Regarding other remaining schools, notable is the performance of Siddhapuram, which comes first with 71.4 per cent of students in Groups 4 and 5 put together. The performance of other two schools is fairly good (66.7 per cent).

Summary of Class 5 Students' Performance

The mean achievement in the total (90 marks) of three subjects (Telugu, EVS and Mathematics is 56.1 with 62.3 per cent) much higher than the mean achievement of class 4 students (54 per cent). The performance of

students does not depend on the schools which they attend, shown by the contingency coefficient of 0.4. In individual subjects, the performance in Telugu is very good (68.9 per cent) and the achievement in Mathematics (66.4 per cent) is good and the achievement in EVS is 51.8 per cent.

Performance of Students' Attitude

The following Tables and graphs show the clear picture of the attitude of the children studying in the selected 5 DNT schools towards their education. As already stated in the previous section, the attitude scales of the 100 selected DNT students in all the schools has been presented here. The total marks for the attitude of each student in each class in the 5 schools are 10 points. The overall perceptions, attitudes of the students are shown by the values of descriptive statistics in the Table given below.

Table 23: Students' Attitude Groups

		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	Negative	14	14.0	14.0	14.0
	Positive	22	22.0	22.0	36.0
	More Positive	64	64.0	64.0	100.0
	Total	100	100.0	100.0	

The negative perception of 100 students in the DNT selected schools is 14 per cent. There are a good number of students (25 per cent) who have positive attitude towards their

education. Sixty four per cent of the DNT students have more positive attitude in the schools. The graph in Figure 5 shows the clear picture of the DNT students' attitude in the schools.

Figure 5: Graph of Attitude Groups

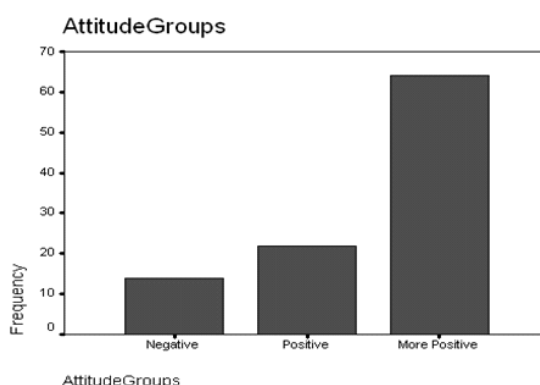


Table 24: Students' Gender – 5 DNT Schools – Performance

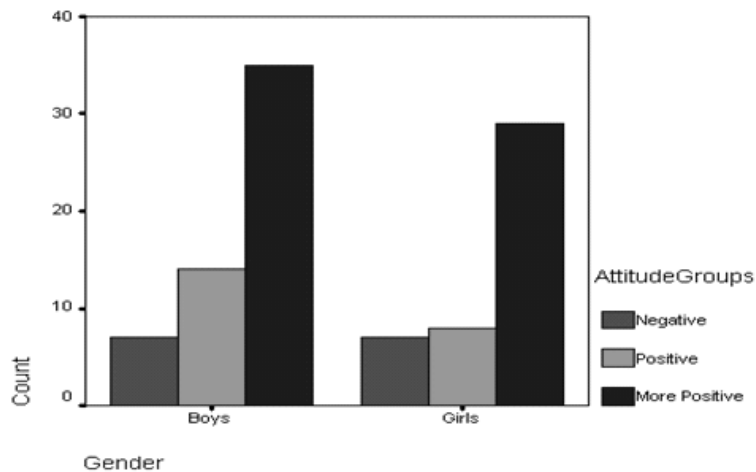
Gender * Attitude Groups Cross Tabulation

			Attitude Groups		
			Negative	Positive	More Positive
Gender	Boys	% within Gender	12.5%	25.0%	62.5%
	Girls	% within Gender	15.9%	18.2%	65.9%

The above Table shows that girls have better attitude than boys. However, both boys and girls have more positive and good qualities than negative qualities. The Table shows that there

is co-relation between boys and girls in their attitudes and perception. Both have the same qualities and attitudes towards their schooling and education.

Figure 6: Graph of Gender-wise Distribution

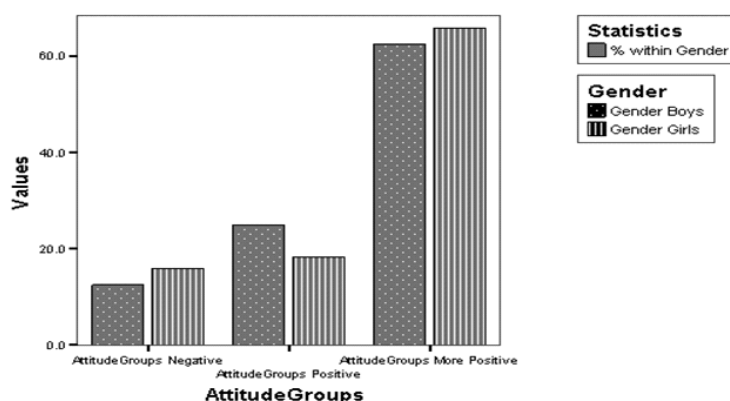


The graph in Figure 6 gives a clear picture of the gender-wise (boys and girls) attitudes. The height of the third bar in boys and

girls stands out showing more positive attitude in the schools. This is also shown in the following Figure.

Figure 7: Attitude Groups Gender

Gender * Attitude Groups Cross Tabulation



The graph shown in 7 is self-explanatory. It shows the performance of all the students'

attitude in the DNT schools. Most of them have more positive attitude towards their schools and education.

Table 25: Students Gender – 5 DNT Schools – Attitudes
Gender * Attitude Groups Cross tabulation % within Gender

		Attitude Groups			Total
		Negative	Positive	More Positive	
Gender	Boys	12.5%	25.0%	62.5%	100.0%
	Girls	15.9%	18.2%	65.9%	100.0%
Total		14.0%	22.0%	64.0%	100.0%

Table 25 shows the male/ female (boys and girls) distribution of students in all the DNT schools of classes 1 to 5 with respect to their overall attitude towards schooling and education.

Discussion

The cross Table shows that 12.5 per cent boys have negative attitude, 25 per cent of the boys have positive attitude and 62.5 per cent of boys have more positive attitude in the schools. Similarly, 15.9 per cent of girls have negative

attitude. 18.2 per cent of girls have positive attitude and the remaining 65.9 per cent of girls have more positive attitude. The Table also clearly shows that there is no gender disparity in their attitude. Boys and girls have the same attitude in the school and their attitude and perception of the school and education is more or less the same. The negative attitudes of some of the students in the Table shows the poor socio-economic conditions of the parents, unattractive schools and influence of their surroundings where the children are living.

Table 26: School * Attitude Groups Cross Tabulation % within Schools

		Attitude Groups			Total
		Negative	Positive	More Positive	
School	Gov-ElemSchool_Siddapuram	33.3%	37.5%	29.2%	100.0%
	SA-UPSschool_Bitragunta		14.3%	85.7%	100.0%
	Govt_UPSchool_Sitanagaram		40.0%	60.0%	100.0%
	SA_ElemSchool_Stuartpuram	6.5%	6.5%	87.1%	100.0%
	Sbose_GovtPrSchool_Lingala	15.4%	26.9%	57.7%	100.0%
Total	14.0%	22.0%	64.0%	100.0%	

The above Table shows the attitude of the students' school-wise. Thirty three per cent of the students have negative qualities, 37.5 per cent of students have positive qualities and 29.2 per cent of the students have more positive qualities in Siddhapuram school. It means the attitude of the students in Siddhapuram school is negative. In Bitragunta and Sitanagaram schools, the students do not have any negative attitude. The children possess more positive attitude than the other schools. Likewise the DNT school Lingala also has the students of negative attitude. The students in Stuartpuram have more positive attitude. A few students have negative attitude in the two DNT schools, Siddhapuram and Lingala schools. However, majority of the students have more positive attitude towards their schooling and education.

Results and Findings

The following are the results and findings of the analysis and interpretation of the data collected from the five selected DNT schools of Andhra Pradesh. There is an average or medium performance of boys and girls in class I. The students in all the DNT schools constitute a heterogeneous group (Waddars, Sugalis, Yerukulas, Yanadis, Dasaries, etc.) The students hail from poor family background. There are two categories of DNT students in Class 1 that is, poor performance students on the one hand and better performance students on the other. The performance of boys and girls are almost equal in the three subjects – Telugu, Mathematics and EVS. However, when compared to the boys, the

performance of girls is better. The students of DNT schools at Sitanagaram and Bitragunta performed better than the remaining students in three other DNT schools. The performance of the students of Stuartpuram school is the lowest. The performance of boys and girls in Telugu and Mathematics subjects are better. The achievement of the primary class students in EVS is very poor. This clearly shows the link between the DNT settlement surroundings, schools and also the socio-economic conditions of the parents on the academic achievement of their children.

The performance of the students in class 2 is poor when compared to the performance of class 1 students. Further, there is a wide disparity in the students' performance in class 2. Some students have very low achievements while others have high achievement level. The overall performance of class 2 students is poor in Telugu, Mathematics and EVS. The performance of girls in class 2 is better than boys. The performance of the students in Stuartpuram is very low. The performance of the students in Siddhapuram is better. The achievement levels of the students in all DNT schools in Mathematics and Telugu is better. But, their performance in EVS is poor. The students' performance in class 3 is better than class 1 and 2.

The percentage of the achievement levels of the students has increased in class 3. The performance of girls is better than the boys in classes 2 and 3. The performance of the Sitanagaram school is better. The performance

of Bitragunta school is also better when compared to the other three schools. The performance of Stuartpuram and Lingala schools are very poor. The performance of students in Telugu and Mathematics is good. Their performance in Environmental Science is poor. Class 3 students' achievement is better than class 1 and 2 students. The performance of class 4 students is much better than classes 1, 2 and 3. Girls performed better than boys in all the classes. In class 4 the performance of all students in DNT schools are good. Out of the five schools, the DNT school, Bitragunta performed better. The performance of the Lingala DNT school is poor. The performance of students in class 4 is better in Telugu. The performance of students in Mathematics and EVS is average. The overall performance of girls is better than boys in class 4. The attitudes of the students in the DNT schools are more positive towards their education. Among all the categories of children, girls are more positive than boys. There is a small per cent of children having negative attitudes (14). There is also a negative attitude of children in the higher classes (classes 4 and 5). The students of Stuartpuram have more positive attitudes. The students in Siddhapuram and Lingala schools have more negative attitudes in the schools. This clearly shows the relationship between their surroundings, settlements where they are living, the school conditions, parental background, the poor socio-economic conditions of parents and the poor performance of teachers in the DNT schools. During the interviews, it was found from the settlers that their children could not reach higher echelons of society because of the psychological barriers they suffer from. For this, revamping the present school set up on ashram or gurukula type would make a considerable difference. Trained teachers and well-equipped schools would be a significant factor in moulding the personalities of children in these colonies. This is what was observed in Siddhapuram settlement. There is no proper schooling for the children. Hence no advancement is found in that settlement. There

should be a major drive to eradicate illiteracy among these people. It goes without saying that any positive change in their attitude towards earning their livelihood necessarily drives them towards a positive realisation of the important aspect like education.

Conclusion

The social conditions, living standards, income and educational level of the DNT tribal people living in these settlements are much below than the conditions of tribal and non-tribal people (Dalits, OBCs) living in various parts of Andhra Pradesh. Lack of census data, absence of policy-level discussions on DNTs, treatment of DNT issues seem outside the purview of Planning Commission estimates (always Primitive Tribal Groups (PTGs) other than DNTs are covered), weak community participation in the settlements or tandas and lack of need-based training (contextual) given to teachers teaching in settlement schools, are some of the gaps identified during the visit of the settlements which are seriously affecting the progress of education of the DNTs in their present existing colonies. A complete and comprehensive survey conducted in the five settlements hints at the establishment of separate schools with English as the medium of instruction. Many of the reformed parents in the selected settlements wish to send their wards to schools at different places. For, they perceive English medium of instruction as one important tool of mainstream social integration. The NGOs working in the settlements look for a time-bound tie-up between SCERT/NCERT and wish to ground a separate school with an eye on social integration. NGOs also expressed their wish to shoulder the responsibility of land procurement, construction, recruitment, school infrastructure and admissions of students from settlements (also from non-settlement areas of the surrounding settlements). The NGOs are also looking at SCERT/NCERT or similar apex educational bodies for help in training the teachers. The NGOs should be in a position to shoulder complete

responsibility of the education of the DNT children. The future tie-up will be confined to teacher training and teaching aid support from SCERT/NCERT or similar institution. A comprehensive census data collection may be undertaken in all the existing settlement areas by the apex educational organisations as part of their educational survey reports. The government should undertake advocacy campaigns and networking meets with government departments such as NCERT/SCERT so that issues and problems of these tribes in transition will be put on the agenda of general discussion on tribal welfare.

In view of the above analysis, few suggestions can be made to improve the educational scenario of the DNTs of Andhra Pradesh: 1. Educational facilities as they exist today are not adequate. A few more school buildings along with adequate furniture, teaching staff, and all infrastructure facilities may be provided in all DNT schools. 2. Rigid enforcement of the provisions of the compulsory primary education Act is highly essential under RTE. The government should issue strict orders to the various school boards to enforce primary education in schools situated in areas where the members of DNTs are residing in considerable number. 3. Extra coaching facilities for out of school hours to children with learning difficulties may be provided. 4. Reduction of dropout rate among Nomadic, Semi-Nomadic and DNT children. 5. Distance is actually affecting DNT children's education which is contextual for the NT/DNT/SNT communities' children (upper primary-secondary levels). The government should provide bicycles, free transport to school going children to attend schools. 6. Scholarships for the tribal children for the classes –I to V. 7. Girl-child friendly toilets in tribal schools. 8. Qualification norms for teachers working in NT/DNT schools adhered to RTE norms. 9. Teachers working in the DNT schools should be versatile in local languages. 10. Reservation of seats in District Institutes of

Teacher Education (DIETs) for tribal teachers or in-service tribal teachers to ensure to teach in mother tongue. 11. Teacher skills need to be enhanced. Ensure teacher regularity in the DNT tribal schools and affective monitoring system in DNT schools. 12. Community participation in DNT schools and communitisation of education for NT/DNT children. 13. Local self-help groups, NGOs intervention/help, to be extended to the education system of DNT children. 14. Tribal child friendly curriculum in DNT schools. 15. For migrant workers among the DNTs alternative schools/tent schools/mobile schools. 16. More hostels for DNT tribal children including basic security measures for the girls and boys to be ensured. RTE compliance to be ensured for the residential system in tribal schools. 17. Kasturba Gandhi Balika Vidyalayas for DNT girls and effective skill development norms for girl child's education in DNT colonies, safety, infrastructure norms, other programmes for the welfare of the girl children, enhancing the unit cost for the development of the girl child in NT/DNT villages. 18. Safety for the tribal children in Naxalite, inertial forest areas to be enhanced. 19. More realistic budgeting to school level programmes in tribal areas, effective midday meals scheme for tribal children, more fund allocation for enrolling of children in NT/DNT colonies/villages. 20. Health and nutrition for NT/DNT children. Child survival and health across the ages of childhood till 18 years including cultural and traditional practices with the causes of child marriages, denial of educational opportunities and other rights to the girl children for the DNTs need remedial action. There is high level of malnutrition and forced insecurity across the NT/DNT colonies-the influence of other sections forced NT/DNTs to leave their hamlets, water scarcity for children, lack of safe drinking water, they are living in squalor amidst snakes, wild animals, their locality filled with breeding mosquitoes and factory waste, unhygienic conditions at home front-these require due attention. 21. Prompt action in the cases of atrocities on the DNT children reported to the

government authorities and the civil society. 22. Increased rate of selling of children in some of the DNT colonies, villages with false promises of bright future. Exploitation of the children of DNTs through various means must be stopped. 23. Increase of State and Central government budget for the education of the children of DNT/NT/SNT communities. 24. By the time the DNT children reach higher grades a substantial number of students in the schools across the State exhibit a decline in their learning achievement levels compared with their record in the previous classes. To improve the quality of education the government should provide a clear cut direction to the teachers, head-teachers in the DNT schools by the education department authorities to improve the quality of education in DNT schools. The education department authorities should obtain the learning outcomes of the children which is generally not up to the mark and assess the situation in order to improve the educational standards in tribal schools.

One of the main problems identified by the field experiences and the field survey is about the social treatment meted out to the families of these tribes. For generations together, the families and their members have been labeled as criminals, suffered dishonour and social negligence. The reasons are not far to seek given the background of the socially despicable avocation as practised by some of the people

belonging to these tribes. Children and women, in particular, have suffered ignominy from mainstream society. The stigma of criminality is still one of the major impediments in the smooth run of educational progress of children and youth. Children often faced a kind of social alienation in most of the walks of social life. Social alienation particularly in young age hampers the growth of psycho-social faculties of the children. Social practices of the mainstream society have denied opportunities for the children coming from the so-called criminal families residing in the settlement areas. The approaches of the government often times remain impersonal and lack human element and eye on social cohesiveness. However, there can be education without even the formal modes and methods of schooling. But mere efforts on mainstream socialisation do not open wide social canvas for the children because there is already a hostile attitude in the outside society. The school or the process of schooling in settlement areas or settlement schools may be used as instruments or tools to impart feelings of common fraternity, community approach, adjustment mentality, atmosphere of working and learning together and finally moral dynamics of social and cultural behaviour. The schools in settlement areas are to be treated or perceived from a different angle where they are expected to combine the role of an instructor, and change agent.

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