

CHAPTER VI

DPEP IN OPERATION : THE FIELD EXPERIENCES

The study was conducted in the district of Cooch Behar of the state West Bengal during 1997-2001. The study is mostly based on structured schedule. Beside interview, office records, reports, relevant official publications were also used as sources of additional information. Thus, data and information so collected have been either from survey schedule or through participant observation method. Primarily, the field survey was conducted to understand the status of primary education of the district during the post implementation period of District Primary Education Programme. The principal objectives of the survey are : (1) status of retentivity of primary school children, (2) status of drop-outs of primary school children specially the girls children and children belonging to scheduled castes and scheduled tribes categories ; (3) availability of quality education after the fulfillment of basic provisions created out of DPEP efforts, and (4) level of perception of the teachers, guardians and VEC members on primary education.

I. Sample & Sampling Procedure

The survey was conducted on some selected villages and primary schools of the district of Cooch Behar in view of the fact that such primary schools and villages do have a representative components of the whole district. Cooch Behar block - II and Mathabhanga block - II have been identified as reference blocks due to i) high Gross Enrolment Ratio (GER), ii) high percentage of VEC constituted schools, iii) high percentage of post literacy campaign launched villages and iv) high density of population. Five Gram Panchayats of each block were selected with the help of random sampling technique. One hundred fifty number of primary schools have been brought under survey. Primary schools of the villages of the blocks under study may be projected as under.

Cooch Behar District

Block	Gram Panchayat	Mouja
Cooch Behar-II		
	i) Khagrabari G.P.	a) Khagrabari b) Banchukamari c) Mahisbatan d) Kharija Kakribari e) Bhogramguri
	ii) Dhangdhinguri G.P.	a) Pestarjhar b) Konamali c) Kachuban d) Basantapur e) Holonger Kuthi
	iii) Pundibari G.P.	a) Baghbhandar b) Angarkata c) Bastala Natibari d) Hoglabari e) Sajerpar Ghoramara
	iv) Gopalpur G.P.	a) Sonari b) Gopalpur c) Kankanguri d) Chhagalber e) Gayargaris
	v) Takagachh G.P.	a) Takagachh b) Kaminirghat c) Jatrapur d) Karishal e) Tenganmari

Mathabhanga-II

i) Nishiganj - I G.P.

- a) Nalangibari
- b) Bhōjanerchhara
- c) Sitkibari
- d) Khokabari
- e) Garerkuthi

ii) Fulbari G.P.

- a) Tengnamari
- b) Agna
- c) Ksheti
- d) Kharija Ksheti
- e) Rangapani Balashi

iii) A. K. Parodubi G.P.

- a) Manabari
- b) Baraibari
- c) Khalaigaon
- d) Tourikata
- e) Matiarkuthi

iv) Ruidanga G.P.

- a) Dawaguri
- b) Atpukuri
- c) Ramthenga
- d) Rangamati
- e) Chhat Dwarikamari

v) Unishbisha G.P.

- a) Gayabari
- b) Panikhawa
- c) Bamnikura
- d) Patakamari
- e) Sildanga

In order to have a kaleidoscopic view of the status of DPEP at its operational stage, separate schedules have been formulated to get access to all kinds of possible information on DPEP, Cooch Behar. Accordingly, respondents have been identified in a specific manner. Four categories of respondents have been chosen for the purpose of the study such as : (a) Children reading in primary schools ; (b) Guardians of primary school going children ; (c) Teachers of primary schools ; and (d) Members of Village Education Committee and DPEP personnel engaged in the implementational process of District Primary Education Programme.

II. The Tools and Techniques of Data Collection

The tools used for collecting data are based on the structured scheduled consisting of the various indices. The indices have been the caste of the respondent, age, educational status, occupation, family size, size of land, monthly family income, educational expenditure, parents' perception on the reasons behind drop-out, parents' responses towards value statements and parents' perception on DPEP.⁽¹⁾ Such indices are meant for students of primary schools. In addition, while constructing schedule for primary teachers, age of teachers, educational qualification, service experience, engagement in allied activities, social participation, interaction with allied organizations, attitude score, value score, use of teaching learning (TL) materials, opinion score and training efficiency have been taken into account. Similarly, the schedule for DPEP personnel has been framed with the indices which include age, educational qualification, family size, nature of job, participation in training, family income, Interaction with allied organizations, social participation, perception on DPEP, attitudinal score, attitude towards Village Education Committee (VEC) activities, interaction with Circle Level Resource Centre (CLRC) and opinion score. Besides, office records, reports, circular and other related publications were also used as tools of data collection.

III. Statistical Analysis

While collecting data through schedule composing of indices, the relative importance of bearing between the dependent variable and other contributory variables have been analyzed by means of zero order correlation. The correlation coefficient (r) between Y and X is defined from Pearson's product moment formula,⁽²⁾ as

$$r = \frac{\text{CoV}(Y,X)}{\sigma_X \sigma_Y}$$

where σ_X and σ_Y are the standard deviation of X and Y respectively and $\text{CoV}(Y,X)$ denotes the covariance of X and Y . The prediction about the dependent variable based on its covariance with all the concerned independent variables were done through multiple regression analysis. The coefficient of regression of X on Y is $b_{XY} = r \sigma_X / \sigma_Y$

Besides these statistical tools, step down regression, discriminant analysis, student t-test and percentages and averages have been used in appropriate situations.

IV. Definition and Operationalization of Concepts

A number of terminologies have been used in this investigation with specific meanings and concepts. Operational definition, according to Kerlinger (1965) is a specification of the activities of the researcher in measuring a variable or in manipulating it.⁽³⁾ He further argues that an operational definition is a sort of manual of instruction to the investigator. Rogers and Shoemaker (1971) have been of the view that it might be a scale, index, observation or the answer to a direct question.⁽⁴⁾ The operational definition makes the meaning of a concept more explicit. Accordingly, various concepts used in this study have been operationalised, explaining their epistemic relationships and empirical measures.

1. Caste

It refers to the caste to which an individual respondent belongs. The respondents were asked to mention their caste. Here caste has been categorized into five broad areas such as, General, OBC, S.C., Muslim, S.T. who are represented through scores such as, 1, 2, 3, 4 & 5 respectively.

2. Age

It refers to the total years completed by an individual respondent at the time of interview. The respondents were asked to mention their age in terms of completed years.

3. Educational Qualification

It refers to the formal education obtained from school to the university level by the individual respondent of all the three categories of respondents. The data pertaining to educational qualification from illiterate to Post Graduate. For quantification of levels of education eight categories have been identified such as, illiterate, literate, primary, below Matric, Matric, H.S., B.A./B.Sc. and M.A./M.Sc. which are represented through scores like 0, 1, 2, 3, 4, 5, 6 & 7 respectively.

4. Teaching Experience

This refers to the years of successful completion of service by an individual primary teacher. The respondents were asked to record their total length of service in terms of completed years. After screening the data, it was found that the total length of service of the respondents ranged from 3 to 35 years.

5. Inservice Training

This includes training which an individual primary teacher and DPEP/VEC personnel has received during the project period of DPEP implemented in the district. After screening the data, it was found that the number of training ranged from 1 to 7 and such trainings were of 1, 2, 3 and 6 days duration.

6. Occupation

It refers the primary as well as secondary occupation of the respondent. After screening the data, four categories of occupation have been identified such as, daily labour, agriculture, Business Service which are represented through scores 1, 2, 3 and 4 respectively.

7. Family Size

It includes all the members of the undivided family. The respondents were asked to record their family size. The family size of the respondents is ranged from 3 to 14 persons.

8. Size of land

It refers the cultivated land as well as house hold land. The respondents were asked to record their land size. The land size of the respondents varied from 0 to 20 bighas. For quantification of the size of land, has been categorized into three sizes such as, 0 - 2 bighas, 2 - 5 bighas and 5 to 20 bighas and have represented through scores like 1, 2, and 3 respectively.

9. Family Income

It means the total monthly income of the undivided family. Coming from primary as well as secondary occupation of the respondent. It has been found that the monthly family income varies 0 to 15,000. For quantification of the family income, income categories are sub-divided into four categories like 0 to 2000, 2000 to 5000 and above 10000 which are represented through scores 1, 2, 3 and 4 respectively.

10. Educational expenditure

It refers the specific portion of the total budget of the monthly family income which is allocated for the purpose of educational expenditure of the children. It was found that the educational expenditure of the family ranges from 0 to 1000. It also seems that the educational expenditure per child varies from 0 to 300. Higher educational expenditure does not always mean the higher educational expenditure per child

as it depends on the number of children. For quantification of data on the educational expenditure per child, categorization has been made, such as, into three categories i.e., 0-100, 100-200 and above 200 which are represented through scores 1, 2 and 3 respectively.

11. Drop-out

Drop-out has been conceived in terms of those children who have ceased to come to school, at primary level, for at least one year.⁽⁵⁾ A drop-out (6-11 age group) during his/her absenteeism can, otherwise be transformed into a repeater or a fresher and in the worst case, can be dropped.

Here, drop-out is calculated from different cohorts i.e., span of years (from I to IV standard) e.g.

$$\begin{aligned} & \text{Drop-out in the cohort 1990-93} \\ & = \frac{\text{Total enrolment in class I (1990) - Total enrolment in class IV (1993)}}{\text{Total enrolment in class I (1990)}} \times 100 \\ & = (E_1 - E_{IV}) \times 100 \div E_1 \end{aligned}$$

The equation so drawn will help to understand the level of drop-outs of primary school children under survey.

12. Level of Perception on DPEP

The level of perception has been conceived as a level of proper understanding and explicability developed and retained by primary teachers / parents of primary children / DPEP personnel after having been exposed to conceptual and empirical inputs of DPEP.⁽⁶⁾ Such subjective perceptions so collected in the form of information have been quantified for the purpose of study.

13. Engagement in allied activities

It refers the activities other than the occupational activities. After screening the data, it was found that the agricultural activities, engagement in private tuition and other social activities were the major allied activities. For quantification of the time span for allied activities, three categories have been identified i.e., 0 - 2 hrs, 2 - 4 hrs and above 4 hrs which are represented through scores such as 1, 2 and 3 respectively.

14. Social Participation

It refers the social interaction of the respondents with their commitment to the society. After screening the data, it was found that the respondent have the connection with the Club, Library, Co-operative Society, School Managing Committee, Women's Organization and Teachers Organization. Each of the association has been represented through scores such as 1. A respondent's achievement of score depends on the factor of his association with the number/numbers of organisations he is associated with.

15. Attitude Score

It means the respondents attitude towards education in general. The respondents were provided with specific starred questions to have information. For necessary quantification of data three scores such as 1, 2, and 3 have been used.

Although, interview schedule has the main instrument of data collection for the present study, in order to assess the reliability of the instrument a short test-retest method of reliability as suggested by Kerlinger (1964) was exercised one month after the data collection for the main study.⁽⁷⁾ The total schedule being too lengthy to administer again to the same respondents, nine questions three from each of the three major areas of Guardians' responses, Teachers responses and DPEP personnels' responses were readministered to a small sample of 20 respondents of each area. The responses were compared with the responses of the main study. The result between two responses for same question was computed and test retest reliability coefficients were obtained. The reliability coefficients for 3 questions in case of parents ranged from 0.76 to 0.81 and in case of primary teachers from 0.73 to 0.78. The same for 3 questions in case of DPEP personnel ranged from 0.74 to 0.79. All of them were found significantly different from zero at the 0.01 level of significance. This proves high reliability of the instruments used for data collection in this study. However, as all the questions in the interview schedule were not administered during the reliability test, this reliability is not free from the limitation.

Finding and Discussion

This part is devoted to the findings of the present investigation. It has been divided into four parts. First Part deals with the district level data regarding the enrolment, retentivity and drop-out status of primary children. A gender difference in en-

rolment has also been discussed. In the subsequent stages, guardians' responses of two identified surveyed blocks has been undertaken for justifying the level of perception about DPEP, the status of drop-out and its causes. The second part includes the district level data having access and physical facility available at school. In the next stage, teachers' responses of the surveyed blocks have been taken into consideration for justifying the knowledge, training and teaching efficiency of primary teachers. The third part deals with the perception of DPEP personnel on DPEP and VEC activities. The fourth part of the chapter includes the district level data of achievement level of learning during base line assessment survey, mid term assessment survey and external evaluation. Subsequently, survey has been organised to assess the achievement level of primary children in Language and Mathematics. Each part of the study has been conducted through questionnaires and data so collected have been rigorously analysed with the help of rigorous statistical designs. The entire survey report may be compartmentalised as under.

Part I

Table 40. Block wise Gross Enrolment Ratio over the years of operationalisation of DPEP (1996 - 2001) in the District of Cooch Behar

Block	Pop-91	96-97		2000 - 2001		Gross Enrolment Ratio	
		Pop	Enrol	Pop	Enrol	96-97	2000 - 2001
Cooch Behar -I	28756	33905	30839	36843	36534	90.96	99.16
Cooch Behar -II	33904	38632	34462	41981	37866	89.21	90.20
Tufanganj -I	25272	28796	25598	31170	30829	88.89	98.91
Tufanganj -II	19455	22169	22485	23996	26326	101.43	109.71
Dinhata -I	31675	36090	29472	39063	39627	81.66	101.44
Dinhata -II	24765	27998	26191	30305	31032	93.55	102.40
Mathabhanga -I	21454	24446	22191	25612	27004	90.78	105.43
Mathabhanga -II	22272	25378	25434	27577	28580	100.22	103.64
Sitalkuchi	20055	22852	21145	24735	25936	92.53	104.86
Sitai	1378	12964	9454	10433	15116	72.93	107.72
Mekhliganj	14655	16632	14248	18038	19528	85.67	108.26
Haldibari	10274	11683	9961	12695	13906	85.26	109.54
Total	264915	301545	271480	326048	332284	1073.07	1241.26

Here, Pop-91 means population as per census 1991; Pop means projected population; Enrol means actual enrolment

The table shows the block-wise population of 5-9 age group as per 1991 census and the projected population of 5-9 age group children projected on the basis of 2.2 per cent increase per annum over the population of 1991 with their corresponding enrolment. Age group population size has grown from 301554 in 1996-97 to 326048 in 2000-2001 by 24594 in the rural areas of Cooch Behar district. Gross enrolment has grown from 271480 in 1996-97 to 332284 in 2000-2001 by 60804. This scale growth is mainly due to introduction of the Mid day Meal Scheme in 1996-97. The gross enrolment ratio (GER) growth has been stable in case of Cooch Behar Block II and Mathabhanga Block II. GER growth rate has been highly positive in case of Dinhata Block I, Sitai, Mekhliganj and Haldibari Block where private schools are very few. Cooch Behar I and Cooch Behar II exhibit persistent low GER and low GER growth rates. This is mainly due to existence of many private schools as well as kindergartens.⁽⁶⁾ The following table helps us to understand the net enrolment ratio of the district over the years (1996 - 2001).

Table 41. Block wise Net Enrolment Ratio over the years of operationalisation of DPEP (1996 - 2001) in the District of Cooch Behar

Block	Pop-91	96-97		2000 - 2001		Net Enrolment Ratio	
		Pop	Enrol	Pop	Enrol	96-97	2000 - 2001
Cooch Behar -I	29756	33905	27465	36843	32185	81.01	87.36
Cooch Behar -II	33904	38632	29738	41981	33656	76.98	80.17
Tufanganj -I	25272	28796	21251	31170	26254	73.80	84.23
Tufanganj -II	19455	22169	17853	23996	21267	80.53	88.03
Dinhata -I	31675	36090	25323	39063	34227	70.17	87.62
Dinhata -II	24765	27998	22296	30305	27674	79.63	91.32
Mathabhanga -I	21454	24446	20811	25612	24077	85.13	94.01
Mathabhanga -II	22272	25378	20746	27577	24565	81.75	89.08
Sitalkuchi	2005	22852	18834	24735	21546	82.42	87.11
Sitai	11378	12964	8414	14033	12301	64.90	87.66
Mekhliganj	14655	16632	12046	18038	15619	72.43	86.59
Haldibari	10274	16683	8526	12695	11753	72.98	92.53
Total	264915	301545	233303	326048	285124	921.72	1056.36

The table reveals that the net enrolment has grown from 233303 in 1996-97 to 285124 in 2000-2001 by 51821, resulting the growth of mean NER from 76.80 per

cent to 88.02 per cent, The NER growth has been stable in case of Cooch Behar I, Cooch Behar II, Mathabhanga II and Sitalkuchi block while sharp rise of NER growth has been found in Dinhata I, Sitai and Haldibari block.⁽⁹⁾

If we put both the tables together, we can have the comprehensive picture of both the gross and net enrolment ratio in a composite manner. The table may be put as under.

Table 42(a). Block-wise Grossness (GER-NER) 1996-1997

Block	Gross Enrolment	Net Enrolment	GER	NER	NE as % of GE	Grossness
Cooch Behar -I	30839	27465	90.95	80.97	89.05	9.98
Cooch Behar -II	34462	29738	89.20	76.97	86.29	12.23
Tufanganj -I	25598	21251	88.89	73.79	83.01	15.10
Tufanganj -II	22485	17853	101.42	80.53	79.39	20.89
Dinhata -I	29472	25323	81.66	70.16	85.92	11.50
Dinhata -II	26191	22296	93.54	79.63	85.12	13.91
Mathabhanga -I	22191	20811	90.77	85.13	93.78	5.64
Mathabhanga -II	25434	20746	100.22	81.74	81.56	18.48
Sitalkuchi	21145	18834	92.53	82.41	89.07	10.12
Sitai	6454	8414	72.92	64.90	88.99	8.02
Mekhliganj	14248	12046	85.66	72.42	84.54	13.24
Haldibari	9961	8526	85.26	72.97	85.59	12.29
Total	271480	233303	1073.02	921.62	1032.31	151.04

Table 42(b). Block-wise Grossness (GER-NER) 2000-2001

Block	Gross Enrolment	Net Enrolment	GER	NER	NE as % of GE	Grossness
Cooch Behar -I	36534	32114	99.15	87.35	87.90	11.80
Cooch Behar -II	37866	31692	90.19	80.16	83.69	10.03
Tufanganj -I	30829	25214	98.90	84.22	81.78	14.68
Tufanganj -II	26326	20520	109.70	88.62	77.94	21.08
Dinhata -I	39627	33889	101.44	87.61	85.51	13.83
Dinhata -II	31032	27705	102.39	91.31	89.27	11.08
Mathabhanga -I	27004	24552	105.43	94.00	90.91	11.43
Mathabhanga -II	28580	23583	103.63	89.10	82.51	14.56
Sitalkuchi	25936	20999	104.85	87.10	80.96	17.75
Sitai	15116	12152	107.71	87.65	80.39	20.06
Mckhliganj	19528	15643	108.26	86.58	80.10	21.68
Haldibari	13906	11801	109.53	92.57	84.86	16.96
Total	332284	279864	1241.18	1056.24	1005.82	184.94

From table, it has been found that increase in GER is under control and has stabilized at 103+. Also NER growth is stagnating at 87-88 range during the period. These two features reveal strength and a weakness of the DPEP efforts in the district with regard to enrolment enhancement campaign. Since the district enrolment patterns indicate the achieved control over the increase in GER, gross enrolment increase is being possible to be sustained to keep GER from falling. But this has dampened the annual increase in NER making it stagnant at 87-88 during the last three years. It appears that any effort to increase NER above 88 will require efforts to increase GER as well. However, the picture can become clear with the help of following analyses.⁽¹⁰⁾

	NE as % GE	Grossness
1996-1997	86.02%	12.61
1997-1998	85.56%	14.88
1998-1999	86.40%	16.65
1999-2000	86.40%	15.09
2000-2001	83.81	15.41

GER at 103 is more or less ideal. Increase in NER and at the same time reduction in grossness, which too has been stagnating around 15-16, should be the target for achieving the objective like enrolment drive of DPEP. Although 15% grossness doesn't cause much worry. But what causes concern is the absence of a strong downward gradient in grossness. Hence, attempts should be done in such so that increasing NER and maintaining GER at its present level will also have to take into consideration.

The following table highlights the gender difference in enrolment during the operationalising of DPEP.

Table 43. Block-wise Gender Difference in Enrolment over the years 1998-99 to 2000-01.

Block	1998 - 1999			1999 - 2000			2000 - 2001		
	Boys	Girls	% Diff	Boys	Girls	% Diff	Boys	Girls	% Diff
Cooch Behar -I	19114	16866	8.59	18651	17428	6.55	18771	17763	5.36
Cooch Behar -II	19187	18440	3.52	19113	18501	3.20	19176	18690	2.53
Tufanganj -I	16161	17645	8.03	19916	18740	5.90	20024	19603	2.10
Tufanganj -II	15715	15155	6.22	16316	15517	4.89	15709	15323	2.45
Dinhata -I	13191	15114	3.82	15870	15381	3.08	15531	15298	1.50
Dinhata -II	13715	12977	1.62	13473	13274	1.47	13292	13034	1.94
Mathabhanga -I	14926	12965	5.45	14009	13332	4.83	13840	13161	4.90
Mathabhanga -II	11998	13944	6.58	14919	14203	4.79	14506	14074	2.97
Sitalkuchi	6669	10749	10.41	12660	11660	7.89	13369	12567	5.99
Sitai	9159	5965	10.55	7308	6611	9.53	7839	7277	7.16
Mekhliganj	6529	8464	7.58	9634	9169	4.82	9952	9576	3.77
Haldibari	164816	6099	6.58	6935	6669	3.83	7185	6721	6.45
Total		154383	78.96	168804	160485	60.78	169194	163090	47.11

From table, it has been found that the rate of increase in gross enrolment from 1998-1999 to 1999-2000 is 3.16 per cent while the rate of increase in gross enrolment from 1999-2000 to 2000-01 is 0.90 per cent. The mean enrolment difference between boys and girls of the Cooch Behar district for last three years (1998-99 to 2000-01) are 6.58, 5.06 and 3.92 per cent respectively which indicates that the district moves towards a positive direction so far as gender difference in enrolment is concerned.

Despite, blocks like Cooch Behar I, Mathabhanga I, Sitalkuchi, Sitai and Haldibari show enrolment difference above the district mean value in 2000-01.⁽¹¹⁾ These blocks may further be identified as 'Gender Intervention' blocks.

The Block-wise drop-out status may be presented in the following tables.

Table 44(a). Drop out rates (Class - wise) 96-97 to 97-98

Block	1997 - 1998		
	I	II	III
Cooch Behar -I	13.91	12.18	0.51
Cooch Behar -II	7.25	4.6	6.47
Tufanganj -I	12.72	3.94	5.05
Tufanganj -II	10.94	9.89	10.92
Dinhata -I	14.07	7.39	7.07
Dinhata -II	17.36	10.97	10.61
Mathabhanga -I	12.37	6.57	7.60
Mathabhanga -II	8.56	7.50	6.33
Sitalkuchi	44.27	20.38	11.31
Sitai	12.27	18.55	10.02
Mekhliganj	9.40	4.95	8.65
Haldibari	11.37	5.19	7.65
Total	174.96	112.11	107.19

Table 44(b). Drop out rates (Class-wise) 99-00 to 00-01

Block	2000 - 2001		
	I	II	III
Cooch Behar -I	4.77	8.88	9.42
Cooch Behar -II	5.35	8.42	5.10
Tufanganj -I	0.69	6.47	7.86
Tufanganj -II	0.96	10.25	8.87
Dinhata -I	1.24	10.07	11.25
Dinhata -II	2.24	8.96	8.61
Mathabhanga -I	2.42	9.46	6.48
Mathabhanga -II	1.88	10.87	10.0
Sitalkuchi	2.64	6.48	6.60
Sitai	8.11	8.09	9.11
Mekhliganj	1.80	8.91	9.97
Haldibari	6.95	7.88	10.0
Total	39.05	104.74	103.1

Note :

Hence drop out is calculated as follows :

$$\begin{aligned} \text{Drop-out Rate} &= (\text{Enrolment} - \text{Transition} - \text{Repetition}) \times 100\% \\ &= (100 - \text{Transition rate} - \text{Repetition rate})\% \end{aligned}$$

From the above table following findings can be shorted out. The mean drop-out in class I, II, III, and IV are 14.58, 9.34, 8.93, and 6.97 per cent respectively during 1997-98. The drop-out rate of class I in Sitalkuchi Block is very high, being 44.27 per cent where as excluding Sitalkuchi block, the mean drop-out rate is 11.88 per cent. On the other hand, the mean drop-out in class I, II, III, and IV are 3.25, 8.72, 8.59, and 9.43 per cent respectively during 2000-2001. Over the years, it has been found that drop-out rate of class I has been dropped down to a great extent where as the drop-out rate of class IV has been increased by 2.46 per cent.⁽¹²⁾

Keeping in mind the district level data, a thorough investigation has been conducted to have an understanding of the micro level status of enrolment and drop-out.

A 1. Response of the Guardians of Cooch Behar Block-II

The sample survey has been done with a structured schedule to study multidimensional aspects of universal access, enrolment and retention status of primary education in Cooch Behar district during the DPEP implementational period (1996 - 2003). For the study, five Gram Panchayats (G.P) out of thirteen G.Ps of Cooch Behar Block-II have been chosen. Taking twenty respondent guardians of the primary children from each G.P., the size of the total respondents were 100. For quantifying their opinion, a set of numbers were assigned for their selected opinion. The statistical analysis were done through correlation (r), multiple regression (β -value) to analyse both the linear and the multi linear character of the explanatory variables viz. caste of the guardian (X_1), age of respondent (X_2), fathers' educational status (X_3), mother's educational status (X_4), occupation of guardian (X_5), number of family member above age 14 (X_6), no. of children (X_7), family size (X_8), size of land (X_9), monthly income (X_{10}), income per head (X_{11}), educational expenditure (X_{12}), educational expenditure per child (X_{13}), financial status of the respondents (X_{14}), health status of the child (X_{15}), food and nutritional status of the school going child (X_{16}), communication to school (X_{17}), agriculture and family labour absorption (X_{18}), availability of dress materials (X_{19}), adequate environment at home (X_{20}), adequate seating facility at school (X_{21}), teachers' attitude towards primary children (X_{22}), access to text (X_{23}), availability of text books (X_{24}), adequate environment at school (X_{25}), use of TL materials (X_{26}), availability of girls' toilet at school (X_{27}), availability of drinking water at school (X_{28}), excess number of students at school (X_{29}), less number of teachers (X_{30}), less number of female teachers (X_{31}), perception on the cause of drop-out (X_{32}), perception on gender difference at society (X_{33}), perception on girl's labour at home (X_{34}), perception on poor girls' education (X_{35}), availability of mid day meal instead of giving rice (X_{36}), perception on teachers' other activity that hampered the school (X_{37}), education and environment of the private school (X_{38}), perception on less attention towards girls student (X_{39}), perception on guardians' less interest towards girls education (X_{40}), perception on higher education creates marriage problem for girls (X_{41}), perception of guardian on misuse of money for girls education (X_{42}), perception on mothers' education that affecting the girls' education (X_{43}), reaction of guardians

towards education as a whole (X_{11}), level of perception of guardian about DPEP (Y_1), and guardians' knowledge efficiency about DPEP (Y). The last two are the consequent variables (Y_1 & Y).

Table 45. Correlation between the level of perception of guardian about DPEP(Y_1) and other significant explanatory variables.

<u>Sl. No.</u>	<u>Variables</u>	<u>'r'- value</u>
1.	Caste (X_1)	-0.2710**
2.	Fathers' educational status (X_3)	0.2652 **
3.	Mothers' educational status (X_4)	0.2715 **
4.	No. of Member above age 14 (X_6)	0.2016 *
5.	Monthly family income (X_{10})	0.3545 **
6.	Income per head (X_{11})	0.2386 *
7.	Educational expenditure (X_{12})	0.2164 *
8.	Educational expenditure per child (X_{13})	0.2947 **
9.	Communication to school (X_{17})	-0.2410*
10.	Teachers' less attention towards girls student (X_{39})	0.2034 *
11.	Guardians' less interest towards girls education (x_{40})	0.2389 *

Level of perception has been conceived as a level of proper understanding and explicability developed and retained by a parents of the primary children after having been exposed to a score of conceptual empirical inputs of DPEP about the approach, content and techniques of DPEP and which has been measured from the responses against a set of questions exposed to them. The items collected had been rated by the judges and statistically found to be mutually discriminatory.

Table 45 shows that the level of perception on DPEP (Y) is being positively and significantly influenced by the nine contributory variables like educational status of the father (X_3), mother's educational status (X_4), No. of family member above the age 14(X_6), monthly family income (X_{10}), income per head (X_{11}), educational expenditure (X_{12}), educational expenditure per child (X_{13}), less attention towards girl's student (X_{39}), guardian's less interest towards girl's education (X_{40}), and two contributory variables like caste (X_1), and communication to school (X_{17}), were found significantly and negatively correlated.

Higher educational qualification (X_3), means enrichment in cosmopolite academic endowment in terms of innovations, new experiences and deeper insights and accordingly the fathers of the primary children could have associated themselves in the participatory interaction with DPEP activities and resultantly they built up higher perception on DPEP. Similarly, higher educational status of the mother (X_4) is the provider of academic guidance, motivation, ambition building in the children. That is why, higher educational profile of a mother has led to a lower incidence of drop-out. Number of family member above age 14 (X_6) influenced positively ($r = 0.2016^*$) on the level of perception. The aims and objectives of DPEP has been well conceived by the members and that is fostering to the mind of primary children of the family. Also, the positive and significant correlation (0.3545^{**}) of monthly family income (X_{10}) as well as income per capita (X_{11}) is suggestive of the perception that low family income steers the higher incidence of girls' drop-out because of its sheer incapability for providing a basic minimum support like food, dress materials etc.

The higher allocation of family income towards primary education (X_{12}) will reduce the level of drop-out. In general, the educational expenditure of the children in rural family are ignored or suppressed by overwhelming poverty, non-supportive attitude and measurable failure to somehow find a better economic prospect in future from investing after primary education. Most of the families of the area under-study, in pursuance with the most of the rural families in India had the least or no financial allocations for the childrens' education. What we found was just something like a causal outlook towards providing allocations of per capita expenditure (X_{13}) in education¹. So the study presented an observation that with the increase in the allotment of educational expenditures, the drop-out rate was decreased.

Gender biasness plays a major role ($r = 0.2034^*$) in school environment. The non-friendly attitudes (X_{39}) of the teachers (measured through an attitude scale design and modify as per the requirement of the study) in the study had contributed towards the incidence of drop-out at the proportional rate. Non-involvement in the class-room interaction, fear-psychosis & morbidity are some of the outputs overshadowed the childrens' mind with a non-friendly atmosphere. Also, the guardians' attitude (X_{40}) towards their girls children is quite different ($r = 0.2389^*$). To their mind sending a girl child to a school is not rewarding as they thought "higher education for girls means problem at marriage", "girls education means more confrontation with tradi-

tional values” and “higher girls education means denials to rites and religious favour”. In stead of going school, girl students are eventually engaged in sibling care to their younger. Social taboo, specially in minorities, came up as an inhibitors in providing the educational continuity of the children. Social taboo breeds on inhibitory factors that refrain (specially for girl-children) the children from achieving educational goal and leads to an educational lethality in the form of school drop-outs. The caste of the respondent (X_1) plays a strong negative impact ($r = -0.2710^*$) on the level of perception of the respondent. In the study, caste of the respondent categorized into five categories such as general, OBC, SC, Muslim & ST who are represented through scores like 1, 2, 3, 4 & 5 respectively. Thus, the negative correlation implies that perception level on DPEP has fostering to the higher caste more than the others. Similarly, communication to school (X_{17}) affects adversely ($r = -0.2410^*$) on the level of perception. This indicates the extents of accessibility to a school structure in certain areas distribution of school facilities are not even and egalitarian under some compulsion of political, social and biophysical nature. However, the distance of a school from dwelling house come up with high negative correlational effect on the cause of drop-out.

Table 46. Correlation between the cause of drop-out and other causal variables

<u>Sl. No.</u>	<u>Variables</u>	<u>'r' - value</u>
1.	caste of the guardian (X_1)	0.2416 *
2.	size of land (X_9)	-0.3262**
3.	financial status of the respondents (X_{14})	-0.0012
4.	health status of the child (X_{15})	0.7011 **
5.	food and nutritional status of the school going child (X_{16})	0.6536 **
6.	communication to school (X_{17})	0.6176 **
7.	agriculture and family labour absorption (X_{18})	0.6802 **
8.	availability of dress materials (X_{19})	0.4786 **
9.	adequate environment at home (X_{20})	0.7337 **
10.	adequate seating facility at school (X_{21})	0.6829 **
11.	teachers' attitude towards primary children (X_{22})	0.5085 **
12.	access to text (X_{23})	0.7655 **

13. availability of text books (X_{24})	0.4435 **
14. adequate environment at school (X_{25})	0.7480 **
15. use of TL materials (X_{26})	0.7703 **
16. availability of girls' toilet at school (X_{27})	0.7638 **
17. availability of drinking water at school (X_{28})	0.7218 **
18. excess number of students at school (X_{29})	0.8180 **
19. less number of teachers (X_{30})	0.6687 **
20. less number of female teachers (X_{31})	0.7712 **
21. perception on teachers' other activity that hampered the school (X_{37})	0.4211 **
22. education and environment of the private school (X_{38})	0.3239 **
23. perception on less attention towards girls student (X_{39})	-0.4828 **
24. perception of guardian on misuse of money for girls education (X_{42})	-0.2087 *

* Significant at 0.05 level of probability

** Significant at 0.01 level of probability

Table 46 presents the correlational effect between cause of drop-out and other consequent variables. The result shows that financial status of the primary children (X_{14}), food and nutritional status of the child (X_{16}), communication to school (X_{17}), agriculture and family labour absorption (X_{18}), availability of dresses (X_{19}), home environment of the child (X_{20}), seating facility at school (X_{21}) and teachers' attitude (X_{22}) play a strong positive significance on the cause of drop-out.

Text book has been written for primary students of rural as well as urban areas and economically sound as well as economically backward areas. Thus, primary children of the rural areas who are also the first generation learner, cannot access the text easily. Access to text (X_{23}) shows a strong positive bearing ($r = 0.7655^{**}$) on drop-out. Similarly, text book facility (X_{24}) and hence the non-availability of the text book at a higher scale results into proportionate incidence of drop-out. In primary schools, books are supplied for 80 per cent of the enrolled children resulting the strong positive bearing ($r = 0.4435^{**}$) on the cause of drop-out. Non-friendly attitudes of the teachers, non-involvement in the class-room interaction, fear psychosis & morbidity

and excess number of students create the poor school environment and that has contributed towards the incidence of drop-out at the proportionate rate. Incapability for providing a basic minimum support like facility of drinking water at school (X_{28}), number of teachers (X_{30}) specially number of female teachers (X_{31}) steer higher incidence of drop-out. Teachers other activity hampered the environment of the schools and hence the guardians of the urban and semi urban areas have been motivated towards private schools. Guardians' less attention towards girls education (X_{39}) bears a strong negative significance (-0.4828^{**}) on the cause of drop-out. Similarly, the guardians' perception towards the misuse of money for girls education (X_{42}) has got a negative bearing ($r = -0.2087^*$) on the level of drop-out.

Table 47. Multiple Regression Analysis

Dependent Variable : Guardians' knowledge efficiency about DPEP (Y)

<u>Variable</u>	<u>Regression Coefficient</u>	<u>t-value (D.F = 58)</u>
X_{10}	1.1764	3.337**
X_{11}	-0.8248	-2.391*
X_{17}	-0.2350	-1.892*
X_{18}	0.3118	2.312*
X_{20}	0.2803	1.818*
X_{23}	0.2948	-1.807*
X_{24}	0.2750	2.562**
X_{30}	0.2283	-1.694*
X_{38}	-0.2386	1.729*
X_{39}	0.2511	1.660*
Multiple R	= 0.82352	
R^2	= 0.67819	
Adjusted R^2	= 0.45071	
Standard error	= 0.50057	
F	= 2.98127	

Analysis of variance

	DF	Sum of Squares	Mean Square
Regression	41	30.6271	0.747
Residual	58	14.53282	0.250

From table 47, it has found that the variables like monthly family income (X_{10}), income in per head (X_{11}), communication to school (X_{17}), agriculture and family labour absorption (X_{18}), adequate environment at home (X_{20}), access to text (X_{23}), availability of text books (X_{24}), less number of teachers (X_{30}), education and environment of the private school (X_{38}) and perception on less attention towards girls student (X_{39}) were found to record a significant regressional effect on guardians' knowledge efficiency about DPEP. The R^2 value is found to be 0.67819 i.e., 67.82 per cent variations of this multiple relations are being explained here.

Table 48. Step Down Regression Analysis

Dependent Variable : Guardians' knowledge efficiency about DPEP (Y)

Step	MultR	Rsq	F(Eqn)	SigF	Variable	BetaIn
1	0.3593	0.1291	14.530	.000	X_{10}	0.3593
2	0.4545	0.2066	12.630	.000	X_{40}	0.2786
3	0.5111	0.2613	11.317	.000	X_{24}	0.2419
4	0.5586	0.3120	10.771	.000	X_{38}	-0.2332

Variable(s) Entered on Step Number

4. X_{38}

Multiple R = 0.55858

R Square = 0.31201

Adjusted R Square = 0.28304

Standard Error = 0.57188

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	4	14.09031	3.52258
Residual	95	31.06969	.32705

F = 10.77078 Signif F = .0000

----- Variables in the Equation -----

Variable	B	SE B	Beta	t-value	Sig T
X ₁₀	1.82505E-04	3.6818E-05	.433133	4.957	.0000
X ₂₄	.319738	.095896	.303726	3.334	.0012
X ₃₈	-.188646	.071263	-.233166	-2.647	.0095
X ₄₀	.267667	.070430	.327945	3.800	.0003
(Constant)	-.605478	.230875		-2.623	.0102

By placing the variables into a step down model of regression analysis, it has been found that after step 4, four variables such as, monthly family income (X₁₀), guardians' less interest towards girls education (X₄₀), availability of text books (X₂₄) and education & environment of the private school (X₃₈) summatedly had explained 31.20 per cent of the total effect. The rest forty variables were explaining only about 36.61 per cent of the variables and accordingly their contributions had been drifted out in earlier steps. It is interesting to note that in the step down model monthly family income had come up innovately to characterise the agglomerated effect of these four variables on guardians' knowledge efficiency about DPEP.

A 2. Response of the Guardians of Mathabhanga Block-II

The sample survey has been attempted with a structured schedule to study the multidimensional characters of the objectives of Universalisation of Elementary Education (U.E.E.) For this study, five Gram Panchayats (G.P.) have been chosen out of Mathabhanga block-II. Taking twenty respondents as the guardian of the primary children from each G.P., the size of the total respondents were 100. The respondents were asked to response their opinion to the set of questionnaires. For quantifying their opinion, a set of numbers were assigned for their selected opinion. The statistical analysis were done through correlation (r), multiple regression (β -value) to analyse both the linear and the multi linear character of the explanatory variables viz. caste of the guardian (X₁), age of respondent (X₂), fathers' educational status (X₃), mother's educational status (X₄), occupation of guardian (X₅), number of family member above age 14 (X₆), no. of children (X₇), family size (X₈), size of land (X₉), monthly income (X₁₀), income per head (X₁₁), educational expenditure (X₁₂), educational expenditure

per child (X_{13}), financial status of the respondents (X_{14}), health status of the child (X_{15}), food and nutritional status of the school going child (X_{16}), communication to school (X_{17}), agriculture and family labour absorption (X_{18}), availability of dress materials (X_{19}), adequate environment at home (X_{20}), adequate seating facility at school (X_{21}), teachers' attitude towards primary children (X_{22}), access to text (X_{23}), availability of text books (X_{24}), adequate environment at school (X_{25}), use of TL materials (X_{26}), availability of girls' toilet at school (X_{27}), availability of drinking water at school (X_{28}), excess number of students at school (X_{29}), less number of teachers (X_{30}), less number of female teachers (X_{31}), perception on the cause of drop-out (X_{32}), perception on gender difference at society (X_{33}), perception on girl's labour at home (X_{34}), perception on poor girls' education (X_{35}), availability of mid day meal instead of giving rice (X_{36}), perception on teachers' other activity that hampered the school (X_{37}), education and environment of the private school (X_{38}), perception on less attention towards girls student (X_{39}), perception on guardians' less interest towards girls education (X_{40}), perception on higher education creates marriage problem for girls (X_{41}), perception of guardian on misuse of money for girls education (X_{42}), perception on mothers' education that affecting the girls' education (X_{43}), reaction of guardians towards education as a whole (X_{44}), level of perception of guardian about DPEP (Y_1), and guardians' knowledge efficiency about DPEP (Y). The last two are the consequent variables (Y_1 & Y).

Table 49. Correlation between the level of perception of guardian about DPEP(Y_1) and other significant explanatory variables.

<u>Sl. No.</u>	<u>Variables</u>	<u>'r'- value</u>
1.	age of the respondent (X_2)	0.2368*
2.	availability of girls' toilet (X_{27})	0.2762 **
3.	less no. of female teachers (X_{31})	0.2919 **

Table 49 presents that the level of perception of guardian about DPEP (Y) is being positively and significantly influenced on the three variables such as, age of the respondent (X_2), availability of girls' toilet (X_{27}) and less no. of female teachers (X_{31}).

Age of the respondent makes a significant and positive bearing ($r = 0.2368^*$) on the level of understanding and perception of the respondents about DPEP. Avail-

ability of girls toilet (X_{27}) had a significant positive role means that most of the girls student has dropped at the upper primary level due to the non-availability of girls toilet in the school. One of the principal objectives of DPEP is to minimise the gender difference and to enroll the out of school girls children into the main stream of the primary schools. To do this, more female teachers must be recruited in the school. Girls student are afraid to express their difficulties to the male teachers while female teachers are very much cordial to them.

Table 50. Correlation between the cause of drop-out and other causal variables.

<u>Sl. No.</u>	<u>Variables</u>	<u>'r' - value</u>
1.	Age of the respondent (X_2)	-0.2463*
2.	Fathers' educational status (X_3)	-0.3840**
3.	Occupation of the guardian (X_5)	-0.2362*
4.	Member above age 14 (X_6)	-0.2862**
5.	Family size (X_8)	-0.2720**
6.	Size of land (X_9)	-0.3751**
7.	Monthly family income (X_{10})	-0.4085**
8.	Income per head (X_{11})	-0.2791**
9.	Educational expenditure (X_{12})	-0.3311**
10.	Financial status of the respondents (X_{14})	0.6244**
11.	Food and nutritional status of the school going child (X_{16})	0.4581**
12.	Agriculture and family labour absorption (X_{18})	0.5219 **
13.	Availability of dress materials (X_{19})	0.5922 **
14.	Adequate environment at home (X_{20})	0.5692 **
15.	Adequate seating facility at school (X_{21})	0.4441 **
16.	Access to text (X_{23})	0.2801 **
17.	Availability of text books (X_{24})	0.1984 *
18.	Adequate environment at school (X_{25})	0.5886 **
19.	Availability of girls' toilet at school (X_{27})	0.5590 **
20.	Availability of drinking water at school (X_{28})	0.5926 **
21.	Less no. of teachers at school (X_{30})	0.4310 **
22.	Less no. of female teachers at school (X_{31})	0.3476 **
23.	Gender difference at society (X_{33})	0.2107 *

Table 50 represents the correlational effect between the cause of drop-out and other twenty three explanatory variables. The result shows that age of the respondent (X_2), fathers' educational status (X_3), occupation of the guardian (X_5), member above age 14 (X_6), family size (X_8), size of land (X_9), monthly family income (X_{10}), income per head (X_{11}) and educational expenditure (X_{12}) play a strong negative bearing on the cause of drop-out where as financial status of the respondents (X_{14}), food and nutritional status of the school going child (X_{16}), agriculture and family labour absorption (X_{18}), availability of dress materials (X_{19}), adequate environment at home (X_{20}), adequate seating facility at school (X_{21}), access to text (X_{22}), availability of text books (X_{24}), adequate environment at school (X_{25}), availability of girls' toilet at school (X_{27}), availability of drinking water at school (X_{28}), less no. of teachers at school (X_{30}), less no. of female teachers at school (X_{31}) and gender difference at society (X_{33}) positively influenced on the cause of drop-out.

Age of the respondent plays a negative bearing ($r = -0.2463^*$) means that experiences of life feels the evils of illiteracy and hence their children never be dropped out. Educational status of the father has influenced negatively ($r = -0.3864^{**}$) on the cause of drop-out. Educated father can well nurse to their child where as father having less educational status engaged their child to the sibling, agricultural and family activities. Occupation of the guardian influenced negatively ($r = -0.2362^*$) on the cause of drop-out which implies that service holder or the businessmen have had the sound monthly income and therefore, they well protected their child. Size of land plays a strong negative role ($r = -0.3751^{**}$) on the cause of drop-out. Agricultural land influenced on the financial status and hence lower the agricultural land provokes the child to drop-out from the school. Again, higher financial status may contribute a lower expenditure on education. The amount of money spent on education can never be predicted from the financial status. Thus, expenditure on education effects on the cause of drop-out.

Provision of garments (X_{19}), as good as provision of food at school times, is an essential pre-requisite for sending the children to school properly. It is specially important for girls children learning at higher standards. District Cooch Behar endowed with some extreme meteorological parameters with extremities like high rain fall with a range 3000-5000 mm per year, prolonged winter (last of October to early part of march) creates an all time demand of cloths and garments to protect the school

going children from the bite of nature. In families, specially in rural areas, where most of the family are living below poverty line, lack of adequate garments accelerates occasional absenteeism of school going children.

Children spent a major part of the day in their home. Thus, home environment of the child influenced strongly ($r = 0.5692^{**}$) on the cause of drop-out. In urban areas of the district, school kids may avail the scope to entrance in a private school or Kindergarden but in rural areas, government aided primary school is the only way where the parents can educate their child. Thus, the sufficient no. of primary schools would be necessary to provide the education of the rural people. But the real picture denials the above fact result of which adequate seating facilities are not available at the rural primary schools for providing the adequate seating arrangement of the primary children. Again, text books supplied by the authority is not sufficient as required. Thus, students were discriminated by way of giving new and old books causing a small bearing ($r = 0.1984^*$) on the drop-out. Since supplied text books have been written for students of city, corporation, district urban & rural areas and hence it is not possible to access the text (X_{23}) for the 1st generation learner which accelerates them to the cause of drop-out. Non-involvement in the class-room interaction, fear-psychosis, morbidity and non-friendly attitudes of teachers may cause the poor school environment (X_{25}) which overshadowed the childrens' mind with a non-friendly atmosphere. Again, facility of drinking water, as well as facility of girls toilet at school is the necessary condition for the infrastructure of primary schools. One teacher four classes school, two teachers four classes school are the natural phenomenon of the village primary schools which violets the student-teacher ratio of 40 : 1. Also gender discrimination at society still exists which violets the student-teacher ratio of 40:1. Also gender discrimination at society still exists which provokes the higher girls drop-out. To resist this, a manageable no. of female teachers may be required for village schools.

Thus, the single reason of factor does not predict the causes of drop-out. The incidence of drop-out from a system of schooling is contextually a complex social process. Whenever, an innocent child is getting eroded of his beautiful and immaculate moments of life, he or she is helpless depicting a very painful and reeling experience of the social system.

Table 51. Multiple Regression Analysis

Dependent variable = Guardians knowledge efficiency about DPEP (Y)

Multiple R	0.7141
R ²	0.5099
Adj. R ²	0.1488
Std. Error	0.8199
F = 1.41202, Sig. F = 0.1120	

Variable	B	SE B	β	t-value	Sigt
X ₁	-0.5468	0.2697	-0.2898	-2.028*	0.0473
X ₂	0.0244	0.0161	0.2035	1.518	0.1346
X ₁₈	0.3510	0.2446	0.2863	1.435	0.1568
X ₂₇	0.8221	0.3278	0.4625	2.508*	0.0150
X ₃₁	0.4660	0.2842	0.2725	1.640*	0.150
X ₄₀	-0.2900	0.2209	-0.2194	-1.313	0.1945

From table 51, it has been found that six variables viz. caste of the guardian (X₁), age of the respondent (X₂), agriculture and family labour absorption (X₁₈), availability of girls' toilet at school (X₂₇), less number of female teachers (X₃₁) and perception on guardians' less interest towards girls education (X₄₀) were found to record a significant regressional effect on the guardians' knowledge efficiency about DPEP. The R² value is found to be 0.5099 i.e., 50.99 per cent variations of this multiple are being explained here.

Table 52. Step Down Regression Analysis

Step	Mult R	R ²	F (Egn)	Variable
1	.2919	.0852	9.128	X ₃₁
2	.3703	.1371	7.709	X ₁₄
3	.4296	.1845	7.242	X ₂₇
4	.4877	.2379	7.412	X ₁
5	.5191	.2695	6.936	X ₂

Dependent variable = Guardians knowledge efficiency about DPEP (Y)

Variables entered on step number

5.	X_2
Multiple R	0.5192
R^2	0.2695
Adj. R^2	0.2307
Std. Error	0.7795
F = 6.936	

Variable	B	SE B	β -value	t-value	Sigt
X_1	- 0.4266	0.1733	- 0.2260	- 2.461**	0.0157
X_2	0.0227	0.0112	0.1895	2.018*	0.0464
X_{14}	- 0.3184	0.1161	- 0.2665	- 2.741**	0.0073
X_{27}	0.5164	0.1739	0.2905	2.969**	0.0038
X_{31}	0.4016	0.1657	0.2349	2.423**	0.0173

By placing the variables into a step down model of regression analysis, it was found that after step 5, five variables viz. caste of the guardian (X_1), age of the respondent (X_2), financial status of the respondents (X_{14}), availability of girls' toilet at school (X_{27}) and less number of female teachers (X_{31}) summatedly had explained 26.95 per cent while the rest 39 variables were explaining only about 24.04 per cent of the total effect.

Drop-out being a product of psycho-social processes presents a wider scope of studying the causal variables like psycho-neurotic problems, alienation & morbidity, depression & frustration, gender issues, role & role conflicts etc. However, an attempt has only been made to predict the behaviour of drop-out character from selected variables. More introspective studies would present the higher magnitude of interdependencies and reciprocating nature of the set of variables which might have had a location specific responsiveness (for Cooch Behar Block II and Mathabhanga Block II). For other situation, same claster of variables may have had a unique nature of interfacing and mutual bearings.

Part-III

One of the principal objectives of the District Primary Education Programme is to create provision for infrastructure at the primary schools in such a way so that required congenialities to provide primary school teaching should be ascertained. The following analysis will present an honest picture of provision making at primary school level by way of DPEP intervention.

Table 53. Physical Facility Available (2000-2001) at the district

Block / Municipality	Nos. of Class	Existing Classrooms	Requirements
Cooch Behar -I	766	411	355
Cooch Behar -II	850	400	450
Tufanganj -I	622	447	175
Tufanganj -II	565	296	269
Dinhata -I	715	385	330
Dinhata -II	676	362	314
Mathabhanga -I	570	245	325
Mathabhanga -II	611	301	310
Sitalkuchi	471	208	263
Sitai	258	136	122
Mekhliganj	446	182	264
Haldibari	338	125	213
Total	6888	3498	3390
Cooch Behar (M)	213	161	52
Tufanganj (M)	57	49	8
Dinhata (M)	83	46	37
Mathabhanga (M)	52	17	35
Mekhliganj (M)	30	18	12
Haldibari	56	27	15
Total	481	308	125
Dist. Total	7369	3806	3515

The universalisation of provision for primary education is still illusory in the district of Cooch Behar. The number of primary classes of the district records 7369 with the total number of primary schools 1796 and students enrolment of 332284 making an average ratio of 45 students per class. These number of classes needs an equal number of classrooms. But the existing classroom covers a little over the 50 percent (51.64%) of the total demand and still requires 92.35 per cent of the existing classrooms. Specially blocks like Cooch Behar II, Mathabhanga I, Mathabhanga II, Sitalkuchi, Mekhliganj, Haldibari and Mathabhanga Municipality where number of required classrooms exceeds the number of existing classrooms. In five municipal areas other than Mathabhanga (Municipality) the problem is sustainable but it is more acute in rural areas of the district. The total enrolment of primary classes (I-IV) for the year 2000-01 in twelve blocks of the district has been 332284. Accommodating them within 888 no of classes indicating that each class hears an average of 48 no. of students. But the existing class rooms (3498) show the picture that each class room contains more than 90 students (94.99) in a single class.⁽¹³⁾ Hence the physical status as well as the class room environment are inadequate. Thus, the quality education and through child centric teaching learning process have been far to seek.

Moreover, 7369 number of classes require at least 7369 teachers. The number of existing primary teachers of the district is only 5650 with a short fall of 1791 primary teachers. After the additional footings given by District Primary Education Programme to the District Primary School Council, the district still is having 112 primary schools with single teachers, 530 with two teachers and 634 with three teachers resulting a total of 3074 primary teachers those who covered more than one class. There are 520 primary schools where 2576 number of primary teachers cover only one class. Also the standard students-teacher ratio (40:1) stands far behind the actual ratio of (349829 : 5650 = 61:1). Thus besides orienting and re-orienting the teaching learning process in favour of the learners, the emphasis should be given on the number of teachers specially female teachers with the skills of proper class room management for reaching towards every child in the class room.

The micro-level study of the blocks under survey corroborates the dismal picture of provisions available at the primary school. The following are mutually explanatory.

B 1. Response of the Primary Teachers of Cooch Behar Block-II

The study has been conducted in Cooch Behar Block-II during October, 2001 and has explored the perceptual level of primary teachers who have undergone different DPEP training with following objectives :

- i) To study the knowledge and training efficiency of the primary teachers about the DPEP objectives and functioning and this be treated as a consequent variable .
- ii) To assess the contributory / predictor variables influencing the knowledge efficiency (Y_1) and training efficiency level (Y_2) viz. caste of the teacher (X_1), age of teacher (X_2), academic qualification (X_3), training qualification (X_4), educational qualification (X_5), communication facility (X_6), size of land (X_7), engagement in allied activities (X_8), engagement in private tuition (X_9), social participation (X_{10}), time spent for preparatory activities (X_{11}), teaching and learning through mother tongue (X_{12}), drawbacks of the present curriculum (X_{13}), effectiveness of the present curriculum and its remedy (X_{14}), occurrence of multi grade teaching (X_{15}), availability of Teacher's Guide (X_{16}), availability of dictionary (X_{17}), availability of reference books (X_{18}), availability of map (X_{19}), availability of globe (X_{20}), availability of chart (X_{21}), availability of back board (X_{22}), availability of table (X_{23}), availability of chalk and duster (X_{24}), availability of scientific kits (X_{25}), availability of TL materials (X_{26}), facility of play ground (X_{27}), facility of drinking water (X_{28}), facility of primary health centre (X_{29}), availability of separate girls' toilet (X_{30}), minimum requirement of children (X_{31}), prevention of drop-out (X_{32}), possible measures for retention (X_{33}), possible measures for quality of education (X_{34}), efficiency of language teaching (X_{35}) & efficiency of mathematics teaching (X_{36}).
- iii) To assess the interrelationship between the dependent variables i.e. level of perception & 36 other independent / contributory variables (as in item ii) .

Table 54. Correlation between knowledge efficiency (Y_1) of the primary teacher and other significant explanatory variables.

<u>Sl. No.</u>	<u>Variables</u>	<u>'r'-value</u>
1.	Training qualification (X_4)	0.2249*
2.	Educational qualification (X_5)	0.2311*
3.	Communication facility (X_6)	-0.3649**
4.	Engagement in allied activities (X_8)	0.2963**
5.	Drawbacks of the present curriculum (X_{13})	0.2460*
6.	Effectiveness of the present curriculum & its drawbacks (X_{14})	0.2633**
7.	Prevention of drop-out (X_{32})	0.6667**
8.	Possible measures for retention (X_{33})	0.8329**
9.	Possible measures for quality of education (X_{34})	0.7437**

* Significant at 5 per cent level
** Significant at 1 per cent level

The above table shows that knowledge efficiency (Y) of the primary teachers is being positively and significantly influenced by eight variables like Training qualification (X_4), Educational qualification (X_5), engagement in allied activities (X_8), Drawbacks of the present curriculum (X_{13}), Effectiveness of the present curriculum & its drawbacks (X_{14}), Prevention of drop-out (X_{32}), Possible measures for retention (X_{33}) and Possible measures for quality of education (X_{34}) and negatively influenced by single variable like communication facility (X_6).

Academic qualification along with training qualification enriched a primary teacher to be a good teacher in the class room and hence knowledge efficiency strongly depends on them. Allied activities of a person has encouraged him to know the various subjects of nature which again helps him in his class room teaching and afternoon teaching. The present curriculum has been written for all children for all respect. Thus, to what extent the curriculum is fit for the rural children, whether all the topics of the subjects like bengali, history, geography, mathematics and science are effective or there may need some changes - these are typical part that a teacher may understand by his own will and then he will impart to the class room. Finally, to reduce the rate of drop-out and to retain the children in the class room, the high quality of teaching that

brings the immaculate children to their expected level. Again, communication to school is a prime factor to a teacher as the typical communication may damage the principal energy of teacher result of which he may not expose him significantly in the class room. Hence, it influenced negatively on the knowledge efficiency (Y_1) of the primary teacher.

Table 55. Correlation between training efficiency (Y) of the primary teacher and other significant explanatory variables.

<u>Sl. No.</u>	<u>Variables</u>	<u>'r'-value</u>
1.	Social participation (X_{10})	0.2412*
2.	Teaching through mother tongue (X_{12})	0.2310*
3.	Drawbacks of the present curriculum (X_{13})	-0.3216**
4.	Facility of drinking water (X_{28})	0.2913**
5.	Facility of girls' toilet (X_{30})	0.1986*
6.	Minimum availability of a school (X_{31})	0.2569**
7.	Efficiency of language teaching (X_{35})	0.3904**
8.	Efficiency of mathematics teaching (X_{36})	0.6449**

* Significant at 5 per cent level
 ** Significant at 1 per cent level

Table 55 presents the Correlation between training efficiency (Y_1) of the primary teacher and other significant explanatory variables like Social participation (X_{10}), teaching through mother tongue (X_{12}), drawbacks of the present curriculum (X_{13}), facility of drinking water (X_{28}), facility of girls' toilet (X_{30}), minimum availability of a school (X_{31}), efficiency of language teaching (X_{35}) and efficiency of mathematics teaching (X_{36}).

Social participation of a teacher brings him front to various social interaction. Teaching through mother tongue is the ideal process to the students. In that case, children may catch the subject matter easily and interest on that subject increases gradually. This would prevent the erosion of drop-out. Teaching efficiency does not indicate the teaching within the class room practices but also the out of class teaching practices where the children can move freely and can behave like a free particle. For this, the availability of play ground where pedagogical park may ensure the alternatively of text books, facility of drinking water which ensures the child health without

cotermination. Inadequate facility of girls' toilet may reduce the rate of girls drop-out at upper primary classes and facility of primary health centre may assure the parents of the primary children to take care of their children from any kind of danger. These are conditions if realised, will ultimately usher in an environment-friendly atmosphere at the primary schools. The major emphasis given on the two subjects such as, bengali and mathematics where efficiency of a teacher can be judged. Hence, efficiency of language teaching and efficiency of mathematics teaching influenced positively on the teaching efficiency of a primary teacher.

Table 56. Multiple Regression Analysis

Dependent variable = Teachers' training efficiency about DPEP (Y)

Multiple R	0.74917
R Square	0.56125
Adjusted R Square	0.30951
Standard Error	1.08759

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	35	92.29943	2.63713
Residual	61	72.15417	1.18286

Variable	B	SE B	Beta	t-value	Sig T
X_1	-0.012359	0.227105	-0.006445	-0.054	0.9568
X_2	-0.150264	0.464267	-0.037997	-0.324	0.7473
X_3	-0.021477	0.137787	-0.016067	-0.156	0.8767
X_4	0.013069	0.172672	0.009951	0.076	0.9399
X_5	0.055394	0.108790	0.069472	0.509	0.6125
X_6	-0.196324	0.241125	-0.104458	-0.814	0.4187
X_7	0.694978	0.720937	0.157953	0.964	0.3389
X_9	-.397376	0.691923	-.092801	-.574	.5679
X_{10}	.155019	.145793	.108815	1.063	.2918
X_{11}	.096756	.288488	.041069	.335	.7385
X_{13}	-.081601	.367833	-.062326	-.222	.8252
X_{14}	-.205853	.344262	-.224837	-.598	.5521

X ₁₅	.046020	.196098	.027802	.235	.8152
X ₁₆	-.068443	.254799	-.036881	-.269	.7891
X ₁₇	.171001	.254785	.082266	.671	.5047
X ₁₈	.138721	.338813	.048352	.409	.6837
X ₁₉	.047598	.425924	.020084	.112	.9114
X ₂₀	.281991	.406640	.116271	.693	.4906
X ₂₁	.059118	.290456	.025892	.204	.8394
X ₂₂	-.286509	.632004	-.068280	-.453	.6519
X ₂₃	.013541	.214043	.007578	.063	.9498
X ₂₄	-.097770	.613864	-.025674	-.159	.8740
X ₂₅	-.005086	.249220	-.002789	-.020	.9838
X ₂₇	.322405	.379993	.114444	.848	.3995
X ₂₈	.239556	.533915	.055945	.449	.6553
X ₂₉	-.129466	.415275	-.038654	-.312	.7563
X ₃₀	-.224919	.355512	-.079839	-.633	.5293
X ₃₁	-.027875	.185634	-.018829	-.150	.8811
X ₃₂	.108574	.140783	.102323	.771	.4436
X ₃₄	-.061033	.131139	-.054001	-.465	.6433
X ₃₅	.283597	.322133	.105844	.880	.3821
X ₃₆	.667172	.163017	.505621	4.093**	.0001
(Constant)	3.073778	2.568714		1.197	.2361

From table 56, it has found that R² value is found to be 0.5613 i.e., 56.13 per cent variations of this multiple relations are being explained here. This indicates that more number of variables to be included for explaining the total effect.

Table 57. Step down Regression Analysis

Step	MultR	Rsqu	F(Eqn)	SigF	Variable	Beta In
1	0.6455	0.4167	67.868	.000	X ₃₆	0.6455
2	0.6741	0.4543	39.135	.000	X ₁₃	-0.1981

Variable(s) Entered on Step Number

2. X₁₃

Multiple R	0.67405
R Square	0.45434
Adjusted R Square	0.44273
Standard Error	0.97705

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	2	74.71842	37.35921
Residual	94	89.73519	0.95463

F = 39.13477 Signif F = .0000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
X ₁₃	-0.259396	0.101870	-0.198124	-2.546	0.0125
X ₃₆	0.798750	0.102667	0.605339	7.780	0.0000
(Constant)	2.963558	0.455204		6.510	.0000

By placing the variables into a step down model of regression analysis, it has been found that after step 2, only two variables viz. efficiency of mathematics teaching (X₃₆) and drawbacks of the present curriculum (X₁₃) summatedly had explained 45.43 per cent of the total effect. The rest 34 variables can explaining only about 10.70 per cent of the total effect. It is interesting to note that teaching efficiency of a primary teacher largely depend upon the teaching efficacy in mathematics and this single variable can explain the 41.67 per cent of the total variables.

B 2. Response of the Primary Teachers of Mathabhanga Block-II

The study was conducted in Mathabhanga Block-II during August, 2001 and has travelled in exploring the perceptual level of female teachers who underwent different DPEP training with following objectives :

- i) To study the knowledge and training efficiency of the primary teachers about the DPEP objectives and functioning and this be treated as a consequent variable .

- ii) To assess the contributory / predictor variables influencing the knowledge efficiency (Y_1) and training efficiency level (Y_2) viz. caste of the teacher (X_1), age of teacher (X_2), academic qualification (X_3), training qualification (X_4), educational qualification (X_5), communication facility (X_6), size of land (X_7), engagement in allied activities (X_8), engagement in private tuition (X_9), social participation (X_{10}), time spent for preparatory activities (X_{11}), teaching and learning through mother tongue (X_{12}), drawbacks of the present curriculum (X_{13}), effectiveness of the present curriculum and its remedy (X_{14}), occurrence of multi grade teaching (X_{15}), availability of Teacher's Guide (X_{16}), availability of dictionary (X_{17}), availability of reference books (X_{18}), availability of map (X_{19}), availability of globe (X_{20}), availability of chart (X_{21}), availability of back board (X_{22}), availability of table (X_{23}), availability of chalk and duster (X_{24}), availability of scientific kits (X_{25}), availability of TL materials (X_{26}), facility of play ground (X_{27}), facility of drinking water (X_{28}), facility of primary health centre (X_{29}), availability of separate girls' toilet (X_{30}), minimum requirement of children (X_{31}), prevention of drop-out (X_{32}), possible measures for retention (X_{33}), possible measures for quality of education (X_{34}), efficiency of language teaching (X_{35}) & efficiency of mathematics teaching (X_{36}).
- iii) To assess the interrelationship between the dependent variables i.e. level of perception & 36 other independent / contributory variables (as in item ii).

Table 58. Correlation between training efficiency (Y) of the primary teacher and other significant explanatory variables.

<u>Sl. No.</u>	<u>Variables</u>	<u>'r'-value</u>
1.	Size of land (X_7)	-0.2889**
2.	Drawbacks of the present curriculum (X_{13})	-0.1997*
2.	Drawbacks of the present curriculum (X_{13})	-0.1997*
3.	Possible measures for retention (X_{33})	0.2101*
4.	Efficiency of language teaching (X_{35})	0.5553**
5.	Efficiency of mathematics teaching (X_{36})	0.9068**

* Significant at 5 per cent level

** Significant at 1 per cent level

The above table shows a correlation between training efficiency (Y) of the primary teacher and other significant explanatory variables. It has been found that 3 variables such as, Possible measures for retention (X_{33}), efficiency of language teaching (X_{35}) and efficiency of mathematics teaching (X_{36}) influenced positively on the teaching efficiency of the primary teacher and two variables namely, size of land (X_7) and drawbacks of the present curriculum (X_{13}) influenced negatively on the dependent variable Y.

Large amount of size of land and more time spent for agricultural land would hamper the preparatory activities of the teacher at home and hence causes strong negative bearing (-0.2889**) on the teaching efficiency. Drawbacks of the present curriculum of bengali, history, geography, mathematics and science also deviate the mind set of a primary teacher and bears negatively (-0.1997*) on the teaching efficiency. The possible measure for retention can be solved by the way of quality of teaching which bears a positive influence (0.2101*) on the teaching efficiency of a primary teacher. Again, the efficiency of teaching language and mathematics would help largely on the teaching efficiency of a primary teacher as language and mathematics are the major subjects of primary classes. Thus, the variables like X_{35} and X_{36} strongly influenced (0.5553** and 0.9068**) on the dependent variable Y.

Table 59. Multiple Regression Analysis

Dependent variable = Teachers' training efficiency about DPEP (Y)

Multiple R	0.6960
R Square	0.4845
Adjusted R Square	0.2267
Standard Error	0.7956

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	33	39.26113	1.18973
Residual	66	41.77887	0.63301

$$F = 1.87947 \quad \text{Signif } F = 0.0149$$

Variable	B	SE B	Beta	t-value	Sig T
X ₇	-0.194433	0.097033	-0.237179	-2.004*	0.0492
X ₉	-0.673495	0.271494	-0.293497	-2.481**	0.0157
X ₁₆	-0.280279	0.150158	-0.213447	-1.867*	0.0664
X ₁₉	-0.479161	0.255617	-0.282203	1.875*	0.0653
X ₂₁	-0.441713	0.199101	-0.297818	-2.219*	0.0300
X ₂₇	1.148711	0.393542	0.566506	2.919**	0.0048
X ₃₁	-0.610838	0.240983	-0.679186	-2.454**	0.0168

Table 59 presents multiple regression analysis with β values and corresponding t values. It is discernible that the variables like size of land (X₇), engagement in private tuition (X₉), availability of Teacher's Guide (X₁₆), availability of map (X₁₉), availability of chart (X₂₁), facility of play ground (X₂₇) and minimum requirement of children (X₃₁) have been found to exercise significant regressional effect on the teaching efficiency (Y) of the primary teacher.

It has been found that engagement in private tuition (X₉) has put up a negative influence on the teaching efficiency of a primary teacher at school which indicates that higher rate of private tuition may hamper the preparatory as well as the teaching process of the school. Most of the primary schools do not have any teacher's guide result of which primary teachers do not prepare themselves with better tools and techniques for taking a better class and hence availability of Teacher's Guide (X₁₆) has recorded a negative significant regressional effect on the teaching efficiency (Y) of the primary teacher. It is also noteworthy to mention that all variables put together, 48.45 per cent ($R^2 = 48.45$) of the variations are explained here. This demands inclusion of more variables for being studied across the heterogeneous microsituations to generate higher level of explicability.

Table 60. Step down Regression Analysis

Step	MultR	Rsqr	F(Eqn)	SigF	Variable	Beta In
1	0.2889	0.0835	8.924	0.004	X ₇	-0.2889
2	0.3674	0.1350	7.568	0.001	X ₃₃	0.2273

Variable(s) Entered on Step Number

2. X_{33}

Multiple R	0.3674
R Square	0.1350
Adjusted R Square	0.1171
Standard Error	0.8501

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	2	10.93875	5.46937
Residual	97	70.10125	0.72269

F = 7.56804 Signif F = 0.0009

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
X_7	-0.247475	0.077541	-0.301882	-3.192	0.0019
X_{33}	0.198302	0.082507	0.227338	2.403	0.0181
(Constant)	6.276722	0.199201		31.510	0.0000

By placing the variables into a step down model of regression analysis, it has been found that after step 2, only two variables viz. size of land (X_7) and possible measures for retention (X_{33}) summatedly had explained 13.50 per cent of the total effect. The 34 variables were explaining only about 34.95 per cent. It is interesting to note that in the step down model size of land and time spent for agricultural land had come up innovately to characterise the agglomerated effect of the other variable on the teaching efficiency (Y) of the primary teacher.

Part - III**C 1 . Level of Perception of DPEP Personnel of Cooch Behar Block II**

While operationalising District Primary Education Programme, a specialised group of personnel has been recruited with the assigned responsibility to realise the DPEP objectives. The district of Cooch Behar has experienced with such a specialised personnel structure which is assigned with the responsibility of transforming DPEP

interventioing commitment to a reality. The survey has tried to explore the level of perception of such personnel working at different levels to operationalise the programme.

Table 61 . Correlation between level of perception and other significant explanatory variables.

<u>Sl. No.</u>	<u>Variables</u>	<u>'r'- value</u>
1.	Age (X_1)	-0.0255
2.	Functional Area (X_2)	0.0000
3.	Status in DPEP (X_3)	0.0644
4.	Educational qualification (X_4)	-0.0601
5.	Family size (X_5)	0.0646
6.	Nature of job (X_6)	0.0383
7.	Participation in training programme (X_7)	-0.1629
8.	Monthly family income (X_8)	-0.2136*
9.	Occupation (X_9)	-0.0012
10.	Organisational attachment (X_{10})	0.0094
11.	Social interaction (X_{11})	0.3328**
12.	Time spent for social welfare education (X_{12})	0.0431
13.	Reaction towards value statement (X_{13})	-0.2118*

The table shows a correlation between the level of perception (Y) and other 13 explanatory variables like age (X_1), functional area (X_2), status in DPEP (X_3), educational qualification (X_4), family size (X_5), nature of job (X_6), participation in training programme (X_7), monthly family income (X_8), occupation (X_9), organisational attachment (X_{10}), social interaction (X_{11}), time spent for social welfare education (X_{12}) and reaction towards value statement (X_{13}).

The monthly family income plays a negative bearing ($r = -0.2136^*$) on the level of perception indicates that financial enrichment cannot bear the sense of responsiveness through which they can implement the aims and objectives of DPEP. The District Primary Education Programme can be well achieved through community mobilisation, sensitisation campaign among the guardians, panchayats and the people of all stages. In that respect, social interaction via club, library, co-operative, school managing committee, women's organisation and teachers' organisation would help

the DPEP personnel to convey the aims and objectives of DPEP among the society. Hence, it bears a strong positive impact (0.3328**) on the level of perception. The attitude towards value statements like 'for social development the women's education is necessary', 'only education brings the real integrity' and 'development cannot be possible without the people's participation' has a negative bearings (-0.2118*) on the level of perception of DPEP personnel.

Table 56. Multiple Regression Analysis

Dependent variable = Level of perception of DPEP Personnel (Y)

Multiple R	0.5982
R Square	0.3578
Adjusted R Square	0.2692
Standard Error	1.2214

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	12	72.31381	6.02615
Residual	87	129.79619	1.49191

F = 4.03922 Signif F = 0.0001

Variable	B	SE B	Beta	t-value	Sig T
X ₁	0.015680	0.014574	0.111682	1.076	0.2849
X ₃	0.326256	0.178486	0.181791	1.828*	0.0710
X ₄	0.025703	0.130363	0.020831	0.197	0.8442
X ₅	0.083942	0.071906	0.110114	1.167	0.2462
X ₆	0.663571	0.367395	0.241816	1.806*	0.0744
X ₇	-0.320867	0.134767	-0.242782	-2.381*	0.0195
X ₈	-0.770086	0.214426	-0.525712	-3.591**	0.0005
X ₉	0.225639	0.190600	0.159500	1.184	0.2397
X ₁₀	0.110652	0.277995	0.044139	0.398	0.6916
X ₁₁	0.731815	0.170069	0.400193	4.303**	0.0000
X ₁₂	0.050050	0.197267	0.024215	0.254	0.8003
X ₁₃	-0.213828	0.086550	-0.224400	-2.471**	0.0154
(Constant)	2.816875	1.114578		2.527	0.0133

Table 62 presents multiple regression analysis with β values and corresponding t values. It is discernible that the variables like status in DPEP (X_3), nature of job (X_4), participation in training programme (X_7), monthly family income (X_8), social interaction (X_{11}) and reaction towards value statement (X_{13}) have been found to exercise significant regressional effect on the level of perception (Y) of the DPEP personnel. It is also noteworthy to mention that all variables put together, only 35.78 per cent ($R^2 = 35.78$) of the variations are explained here. This demands the inclusion of more variables for being studied across the heterogeneous microsituations to generate higher level of explicability.

Table 63. Step down Regression Analysis

Step	MultR	Rsq	F(Eqn)	SigF	Variable	BetaIn
1	0.3328	0.1107	12.204	0.001	X_{11}	0.3328
2	0.4221	0.1782	10.516	0.000	X_8	-0.2620
3	0.4677	0.2187	8.958	0.000	X_6	0.2746
4	0.5033	0.2533	8.057	0.000	X_{13}	-0.1866
5	0.5359	0.2871	7.573	0.000	X_3	0.1903
6	0.5676	0.3222	7.368	0.000	X_7	-0.2091

Variable(s) Entered on Step Number

6. X_7

Multiple R	0.56763
R Square	0.32221
Adjusted R Square	0.27848
Standard Error	1.21367

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	6	65.12146	10.85358
Residual	93	136.98854	1.47300
F =	7.36837	Signif F = 0.0000	

Dependent Variable = Level of perception of DPEP Personnel (Y)

----- Variables in the Equation -----

Variable	B	SE B	Beta	t-value	Sig T
X ₃	0.407827	0.161338	0.227242	2.528	0.0132
X ₆	0.685203	0.324640	0.249699	2.111	0.0375
X ₇	-0.276345	0.125996	-0.209095	-2.193	0.0308
X ₈	-0.584487	0.181273	-0.399010	-3.224	0.0017
X ₁₁	0.722817	0.164584	0.395272	4.392	0.0000
X ₁₃	-0.212300	0.082412	-0.222797	-2.576	0.0116
(Constant)	3.911091	0.826007		4.735	0.0000

By placing the variables into a step down model of regression analysis, it was found that after step 6, six variables such as, social interaction (X₁₁), monthly family income (X₈), nature of job (X₆), reaction towards value statement (X₁₃), status in DPEP (X₃) and participation in training programme (X₇) summatedly had explained only 32.32 per cent of the total effect. The rest 7 variables were explaining only about 3.46 per cent. It is interesting to note that social interaction largely influenced on the others and this single variable can explain the 11.07 per cent of the total variables.

The following table analyses the statistical relation between the activities of VEC members on DPEP and other explanatory variables.

D 1. The activities of VEC members of Cooch Behar Block II on DPEP

The ultimate aims and objectives of DPEP, its plans and programmes all have been operated in the grass root level i.e, in the village. The success of DPEP in the district depends largely on the Village Education Committee (at Village Panchayat level) or Ward Education Committee (at Municipal level) activities.

Table 64. Correlation between VEC activities and other significant explanatory variables.

<u>Sl. No.</u>	<u>Variables</u>	<u>'r'- value</u>
1.	No. of meetings occurred per month (X ₁)	-0.2136*
2.	Functioning of VEC/WEC register (X ₂)	-0.1990*
3.	Effective VEC activities (X ₃)	-0.0482
4.	Exchange of reports with CLRC (X ₄)	0.3052**

5.	Interaction with primary teachers (X_5)	0.3134**
6.	No. of disabled child (X_6)	0.0639
7.	Placement of disabled child (X_7)	-0.1344
8.	Arrangement of cultural programmes (X_8)	0.2246*

The above table presents the correlation between VEC activities (Y) and other eight explanatory variables namely, no. of meetings occurred per month (X_1), functioning of VEC/WEC register (X_2), effective VEC activities (X_3), exchange of reports with CLRC (X_4), interaction with primary teachers (X_5), no. of disabled child (X_6), placement of disabled child (X_7) and arrangement of cultural programmes (X_8).

From the study, it is found that number of meetings occurred per month (X_1) influenced negatively (-0.2136*) on the activities of VEC indicates that the activities of VEC cannot be raised by the number of meetings occurred in a month. It is the motivation that force to do the work. In most of the villages of Cooch Behar Block II, the data regarding the child below the age 5, has not yet registered through VEC/WEC register. Hence, it bears a negative impact (-0.1990*) on the VEC activities. The DPEP is a reversible chain process i.e., instruction from district has been transmitted to village via circle level resource center (CLRC) and again the analysed data has fed back to the district via CLRC. Thus, in operationalising DPEP, CLRC plays a major role in transforming the data and others information. Hence, exchange of reports with CLRC (X_4) has strongly influenced (0.3052**) on the activities of VEC. It is the teachers who ultimately convey or exchange the new approach of education among the students. In that respect, interaction with primary teachers (X_5) is as important as with CLRC and it has strong positive bearing (0.3134**) on the dependent variable (Y). In order to inculcate education in the psyche of common people mass-base programmes such as, Ma-O-Meya mela, Anganwadi mela, Sishu Siksha mela, folk cultural arrangement, organising birth day of Vivekananda, Rabindranath, Vidyasagar, Netaji etc., and physical exercise like games & sports in a village level, block level, sub-division level, district level and state level have been organised. Hence, arrangement of such cultural programmes (X_8) has a positive bearing (0.2246*) on the activities of VEC.

Table 65. Multiple Regression Analysis

Dependent variable = VEC activities of DPEP Personnel (Y)

Multiple R	0.52731
R Square	0.27805
Adjusted R Square	0.21458
Standard Error	1.68008

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	8	98.92783	12.36598
Residual	91	256.86217	2.82266

F = 4.38096 Signif F = .0002

Variable	B	SE B	Beta	t-value	Sig T
X ₁	-8.69097E-04	0.399008	-2.161E-04	-0.002	0.9983
X ₂	-0.890412	0.361401	-0.237862	-2.464**	0.0156
X ₃	-0.129248	0.141031	-0.097144	-0.916	0.3619
X ₄	0.697511	0.385445	0.229478	1.810*	0.0737
X ₅	1.308998	0.843736	0.191818	1.551	0.1243
X ₆	-0.056816	0.559525	-0.009876	-0.102	0.9193
X ₇	-1.316220	0.711698	-0.189309	-1.849*	0.0676
X ₈	0.575825	0.191323	0.316356	3.010**	0.0034
(Constant)	2.370426	0.963754		2.460	0.0158

Table 65 presents the multiple regression analysis with β values and corresponding t values. It is identified that the variables like functioning of VEC/WEC register (X₁), exchange of reports with CLRC (X₄), placement of disabled child (X₇) and arrangement of cultural programmes (X₈) have been found to exercise significant regressional effect on the activities of VEC (Y). It is also noteworthy to mention that all variables put together, 27.80 per cent ($R^2 = 27.80$) of the variations are explained here. This demands inclusion of more variables for being studied across the heterogeneous microsituations to generate higher level of explicability.

Table 66. Step down Regression Analysis

Step	MultR	Rsq	F(Eqn)	SigF	Variable	BetaIn
1	0.3134	0.0982	10.674	0.001	X ₄	0.3134
2	0.3802	0.1446	8.198	0.001	X ₇	0.2154
3	0.4649	0.2161	8.822	0.000	X ₁	-0.2770

Variable(s) Entered on Step Number

3.. X₁

Multiple R	0.46488
R Square	0.21611
Adjusted R Square	0.19162
Standard Error	1.70447

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	3	76.89041	25.63014
Residual	96	278.89959	2.90520

F = 8.82215 Signif F = .0000

----- Variables in the Equation -----

Variable	B	SE B	Beta	t-value	Sig T
X ₁	-1.036967	0.350376	-0.277013	-2.960	0.0039
X ₄	2.098818	0.616934	0.307556	3.402	0.0010
X ₇	0.523495	0.170435	0.287606	3.072	0.0028
(Constant)	1.399850	0.807334		1.734	0.0861

By placing the variables into a step down model of regression analysis, it has been found that after step 3, three variables such as, exchange of reports with CLRC (X₄), placement of disabled child (X₇) and no. of meetings occurred per month (X₁) summatedly had explained 21.61 per cent of the total effect. The rest 5 variables were explaining only about 6.19 per cent. It is interesting to note that exchange of reports with CLRC (X₄) largely influenced on the others and this single variable can explain the 9.82 per cent of the total variables.

C 2. Level of Perception of DPEP Personnel of Mathabhanga Block II

The study has been conducted in five gram panchayats of Mathabhanga block II with a structural schedule to DPEP personnel and VEC members to study the relationship between the level of perception (Y) and other 13 explanatory variables like age (X_1), functional area (X_2), status in DPEP (X_3), educational qualification (X_4), family size (X_5), nature of job (X_6), participation in training programme (X_7), monthly family income (X_8), occupation (X_9), organisational attachment (X_{10}), social interaction (X_{11}), time spent for social welfare education (X_{12}) and reaction towards value statement (X_{13}).

Table 67. Correlation between level of perception and other significant explanatory variables.

<u>Sl. No.</u>	<u>Variables</u>	<u>'r'- value</u>
1.	Age (X_1)	-0.1160
2.	Functional Area (X_2)	-0.0005
3.	Status in DPEP (X_3)	0.0138
4.	Educational qualification (X_4)	-0.0723
5.	Family size (X_5)	-0.2834**
6.	Nature of job (X_6)	0.0039
7.	Participation in training programme (X_7)	0.0594
8.	Monthly family income (X_8)	-0.0716
9.	Occupation (X_9)	-0.3550**
10.	Organisational attachment (X_{10})	0.2128*
11.	Social interaction (X_{11})	0.1094
12.	Time spent for social welfare education (X_{12})	-0.0733
13.	Reaction towards value statement (X_{13})	-0.8892**

The table shows a correlation between the level of perception (Y) and other thirteen explanatory variables such as, age (X_1), functional area (X_2), status in DPEP (X_3), educational qualification (X_4), family size (X_5), nature of job (X_6), participation in training programme (X_7), monthly family income (X_8), occupation (X_9), organisational attachment (X_{10}), social interaction (X_{11}), time spent for social welfare education (X_{12}) and reaction towards value statement (X_{13}).

The occupation plays a strong negative bearing ($r = -0.2834^{**}$) on the level of perception indicates that occupational status cannot bear the sense of responsiveness through which they can implemented the aims and objectives of DPEP. The District Primary Education Programme can be well achieved through community mobilisation, sensitisation campaign among the guardians, panchayats and the people of all stages. In that respect, social interaction via club, library, co-operative, school managing committee, women's organisation and teachers' organisation would help the DPEP personnel to convey the aims and objectives of DPEP among the society. Hence, organisational attachment bears a strong positive impact (0.2128^*) on the level of perception. The attitude towards value statements like 'for social development the women's education is necessary', 'only education brings the real integrity' and 'development cannot be possible without the people's participation' has a strong negative bearings (-0.8892^{**}) on the level of perception of DPEP personnel.

Table 68. Multiple Regression Analysis

Dependent variable = Level of perception of DPEP Personnel (Y)

Multiple R	0.9115
R Square	0.8308
Adjusted R Square	0.8052
Standard Error	0.84042

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	13	298.24842	22.94219
Residual	87	60.74158	0.7063

F = 4.03922 Signif F = 0.0001

Variable	Beta	t-value	Sig T
X ₁	-0.0995	-1.802*	0.0751
X ₂	-0.1101	-2.276*	0.0254
X ₃	0.0845	1.508	0.1352
X ₄	4.10E-04	0.008	0.9937
X ₅	-0.0755	-1.352	0.1798
X ₆	-0.0090	-0.154	0.8778
X ₇	0.1176	2.250*	0.0270

X_8	-0.0415	-0.652	0.5476
X_9	0.0491	0.652	0.5163
X_{10}	-0.0018	-0.038	0.9697
X_{11}	0.0557	1.110	0.2701
X_{12}	-0.0308	-0.616	0.5398
X_{13}	-0.8954	-16.696**	0.0000

Table 68 presents multiple regression analysis with β values and corresponding t values. It has been noticed that the variables like age (X_1), functional area (X_2), participation in training programme (X_7) and reaction towards value statement (X_{13}) have been found to exercise significant regressional effect on the level of perception (Y) of the DPEP personnel. It is surprising to mention that all variables put together, 83.08 per cent ($R^2 = 83.08$) of the variations are explained here.

Table 69. Step down Regression Analysis

Step	MultR	Rsq	F(Eqn)	SigF	Variable	BetaIn
1	0.8892	0.7907	370.202	0.000	X_{13}	-0.8892
2	0.8943	0.7998	193.707	0.000	X_2	-0.0958
3	0.8997	0.8094	135.909	0.000	X_7	0.0989
4	0.9043	0.8178	106.630	0.000	X_1	-0.0953

Variable(s) Entered on Step Number

6.. X_1

Multiple R	0.9044
R Square	0.8178
Adjusted R Square	0.8102
Standard Error	0.8297

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	4	293.59664	73.39916
Residual	95	65.39336	0.68835

F = 106.63040 Signif F = 0.0000

Dependent Variable = Level of perception of DPEP Personnel (Y)

----- Variables in the Equation -----

Variable	Beta	t-value	Sig T
X ₁	-0.0953	-2.096	0.0388
X ₂	-0.1056	-2.385	0.0190
X ₇	0.1239	2.716	0.0078
X ₁₃	-0.8989	-20.370	0.0000
(Constant)		15.029	0.0000

From step down model of regression analysis, it has been found that after step 4, four variables viz. age (X₁), functional area (X₂), participation in training programme (X₇) and reaction towards value statement (X₁₃) summatedly had explained 81.78 per cent of the total effect. The rest 4 variables were explaining only about 1.30 per cent. It is interesting to note that reaction towards value statement (X₁₃) largely influenced on the others and this single variable can explain the 79.07 per cent of the total variables.

D 2. Activities of VEC of Mathabhanga Block II

Activities of VEC are mainly to organise the regular VEC meeting, formation of Village Construction Committee, regular close communication with guardians of the primary children, primary teachers, Mother-Teacher Associations, different voluntary organisations and Non-Government Organisations.

Table 70. Correlation between VEC activities and other significant explanatory variables.

<u>Sl. No.</u>	<u>Variables</u>	<u>'r'- value</u>
1.	No. of meeting per month (X ₁)	0.0299
2.	Functioning of VEC/WEC register (X ₂)	0.0573
3.	Effective VEC activities (X ₃)	-0.0185
4.	Exchange of reports with CLRC (X ₄)	0.1003
5.	Communication with primary teachers (X ₅)	0.1250
6.	No. of disabled child (X ₆)	-0.1325
7.	Placement of disabled child (X ₇)	0.1450
8.	Arrangement of cultural programmes (X ₈)	0.3322**

The above table presents the correlation between VEC activities (Y) and other eight explanatory variables namely, no. of meeting per month (X_1), functioning of VEC/WEC register (X_2), effective VEC activities (X_3), exchange of reports with CLRC (X_4), communication with primary teachers (X_5), no. of disabled child (X_6), placement of disabled child (X_7) and arrangement of cultural programmes (X_8). It is seen that only arrangement of cultural programmes (X_8) makes a positive influence (0.3322**) on the activities of VEC.

Table 71. Multiple Regression Analysis

Dependent variable = VEC activities of DPEP Personnel (Y)

Multiple R	0.3870
R Square	0.1498
Adjusted R Square	0.0750
Standard Error	2.1149

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	8	71.72387	8.96548
Residual	91	407.02613	4.47281

F = 2.00444 Signif F = 0.0545

Variable	Beta	t-value	Sig T
X_1	0.0344	0.344	0.7316
X_2	-0.0859	-0.664	0.5085
X_3	-0.0262	-0.242	0.8097
X_4	0.0333	0.306	0.7603
X_5	0.0764	0.724	0.4709
X_6	-0.1205	-1.159	0.2495
X_7	0.1588	1.356	0.1786
X_8	0.3050	3.052**	0.0030
(Constant)		3.821	0.0002

Table 65 presents multiple regression analysis with β values and corresponding t values. It is discernible that the only variable like arrangement of cultural programmes (X_8) has been found to exercise significant regression effect on the activities of VEC (Y). It is also noteworthy to mention that all variables put together,

14.98 per cent ($R^2 = 14.98$) of the variations are explained here. This demands inclusion of more variables for being studied across the multidimensional aspects to generate higher level of explicability.

Table 72. Step down Regression Analysis

Step	MultR	Rsq	F(Eqn)	SigF	Variable	BetaIn
1	0.3322	0.1104	12.159	0.001	X_8	0.3322

Variable(s) Entered on Step Number

3.. X_8

Multiple R	0.3322
R Square	0.1104
Adjusted R Square	0.1013
Standard Error	2.0847

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	52.84229	52.84229
Residual	98	425.90771	4.34600

F = 12.158847 Signif F = 0.0007

----- Variables in the Equation -----

Variable	B	SE B	Beta	t-value	Sig T
X_8	0.566066	0.162338	0.332228	3.487	0.0007
(Constant)	4.551816	0.451931		10.072	0.0000

It is the step down model of regression analysis from which it has been found that after 1st step, only one variable like arrangement of cultural programmes (X_8) had explained 11.04 per cent of the total effect. The rest seven variables were explaining only about 3.94 per cent.

Part - IV

Keeping in consonance with DPEP objectives the district of Cooch Behar has experienced with a kind of objective intervention in enhancing the teaching quality and learners' achievement. It has been attempted to know numerically what exactly the status of learning achievement level of primary school children.

Table 73(A). Time Series-Transition Rate

Block	1996-1997 to 1997-1998					
	I to II		II to III		III to IV	
	Boys	Girls	Boys	Girls	Boys	Girls
Cooch Behar -I	64.47	63.85	81.44	81.55	83.47	81.42
Cooch Behar -II	66.70	67.40	82.60	86.35	84.00	84.06
Tufanganj -I	59.51	58.25	87.60	86.40	87.45	86.75
Tufanganj -II	52.16	53.09	82.39	79.64	80.45	81.18
Dinhata -I	59.79	59.32	83.94	80.27	84.10	83.65
Dinhata -II	56.81	56.85	82.79	80.17	82.21	80.47
Mathabhanga -I	72.94	72.96	85.51	86.64	83.92	85.12
Mathabhanga -II	56.01	57.15	81.16	78.97	82.87	81.59
Sitalkuchi	37.65	35.77	69.59	72.47	82.41	77.26
Sitai	79.41	74.32	76.02	78.90	80.42	80.59
Mekhliganj	60.95	59.41	85.26	82.87	78.06	85.82
Haldibari	59.54	64.25	87.33	85.86	81.18	84.54
Total	725.94	723.44	985.63	980.09	990.54	992.45

Table 73(B). Time Series-Transition Rate

Block	1999 - 2000 TO 2000 - 2001					
	I to II		II to III		III to IV	
	Boys	Girls	Boys	Girls	Boys	Girls
Cooch Behar -I	53.87	55.50	74.13	74.78	78.63	78.48
Cooch Behar -II	59.11	62.05	76.13	77.22	81.77	81.21
Tufanganj -I	51.43	53.18	76.40	77.29	78.75	78.07
Tufanganj -II	51.03	51.19	75.72	73.72	78.22	75.27
Dinhata -I	51.61	55.47	75.44	75.21	74.48	76.54
Dinhata -II	52.63	56.46	75.03	75.79	75.64	77.67
Mathabhanga -I	58.62	59.71	76.08	75.83	81.00	76.79
Mathabhanga -II	48.25	49.84	69.53	71.09	69.21	77.77
Sitalkuchi	51.78	55.85	78.31	79.48	77.51	79.18
Sitai	64.58	69.44	81.03	80.78	79.18	82.52
Mekhliganj	51.72	53.26	78.66	79.97	77.11	81.57
Haldibari	59.90	57.08	82.11	82.89	82.88	80.52
Total	654.53	679.03	918.57	924.23	934.38	945.59

From table 73(A) and 73(B), it is clear that the overall transition rate in general is not only very low but also decreasing over the years. Transition rate from class-I to class-II is the lowest. No significant difference has been found in class-wise transition rates of boys and girls over the implementation period. Tufanganj-I, Tufanganj-II, Mathabhanga-II, and Sitalkuchi Blocks consistently show the lower class-wise transition rate than the district mean(s).

Table 74. Achievement Levels of Class-I Students - BAS (96) & MAS (99)

District	Achievement Levels in BAS (96)		Achievement Levels in MAS (99)		Difference	
	Maths %	Lang%	Maths %	Lang%	Maths %	Lang%
Cooch Behar	50.66	45.56	64.75	53.98	14.09	8.42

Table 75. Percentage Distribution of the pupil of class-I on the basis of MAS 99

Subject	Nos. with the Score % with the Score	Score - range			
		70-60	40-60	20-40	0-20
Lang.	Nos. with the Score	361	175	209	134
	% of children with Score	41.06	19.90	23.77	15.24
Maths.	Nos. with the Score	497	182	125	75
	% of children with Score	56.54	20.70	14.22	8.53

During the initial period, the students were tested through base line assessment survey (BAS, 1996) and after three years DPEP activities, again they were examined by the midterm assessment survey (MAS, 1999). It has been found from table 74 that though the achievement levels in numerical competencies during MAS has been raised little above 25 per cent over the BAS but in language, increase in achievement level has been raised little below 25 per cent. From table 75, 61 per cent students of class I scored above 40 per cent in language and 77 per cent students scored above 40 per cent in mathematics in MAS.⁽¹⁴⁾

Table 76. Rural -Urban Difference in Achievement Levels of Class III Students - BAS '96 & MAS '99

District	Area	Achievements Levels in BAS(96)		Achievements Levels in MAS(96)		Difference	
		M%	L%	M%	L%	M	L
		Cooch Behar	Rural	36.23	46.07	31.74	37.90
Urban	29.12		45.46	22.68	41.45	-6.44	-3.43

Table 77. Gender Difference in Achievement Levels of Class III Students - BAS '96 & MAS '99

District	Sex	Achievements Levels in BAS(96)		Difference		Achievements Levels in MAS(96)		Difference	
		Math%	Lang%	M	L	Math%	Lang%	M	L
Cooch Behar	Boy	36.29	47.53			33.11	40.15		
	Girl	33.48	4.11	2.81	3.42	28.43	36.41	4.68	3.74

It is seen from table 76 that the achievement levels of class III students in language and Mathematics was higher than the students of urban counterpart. It is surprising that the achievement levels in both language and mathematics of MAS has been fallen down in respect of BAS. This picture has influenced the rural as well as urban area. Also, from table 77, it has been found that gender difference existed in both BAS and MAS is less than 5 per cent, the stipulation mark of the national norms.⁽⁴⁵⁾

Table 78. Subjectwise Comparision of District Mean Percentage 1999 and 2000.**Subjects : First Language & Mathematics**

First Language					
1999	2000	1999	2000	1999	2000
0 - 40 %	0 - 40 %	41 - 80 %	41 - 80 %	81 - 100 %	81 - 100 %
44.32	26.40	47.84	59.81	7.80	12.33

Mathematics					
1999	2000	1999	2000	1999	2000
0 - 40 %	0 - 40 %	41 - 80 %	41 - 80 %	81 - 100 %	81 - 100 %
36.98	22.48	53.39	60.04	9.97	17.41

An external evaluation similar to MAS, 1999 has been conducted by DPSC, Cooch Behar during 2000. It is found from table 78 that the overall achievement level in the first language as well as mathematics has been increased during 2000 compared to MAS, 1999. In first language, over the score range 0 - 40%, the mean percentage has been decreased from 1999 to 2000 by 17.92 per cent while over the score range 41-80%, the same has been increased from 1999 to 2000 by 11.97 per cent. In Mathematics, over the score range 0 - 41%, the mean percentage has also been decreased

from 1999 to 2000 by 14.50 per cent while over the score range 41-80%, the same has been increased from 1999 to 2000 by 6.65 per cent. Hence the achievement levels of the primary students of the district in both language and numerical competencies have been increased over the base line assessment survey by more than 25 per cent.⁽¹⁶⁾

Keeping in mind, the findings of different surveys on learning achievement level of school children, the present study has attempted to understand the issue by taking micro-level data during research survey.

E. A study on Learning Achievement Level of School Children : A Micro Environment Approach

The study has been conducted in Cooch-Bihar to understand the status on learning achievement level of primary school children in terms of some contributory factors such as, age(X_1), distance from school(X_2), time spent on learning practice(X_3), time spent for game (X_4), family labour absorption(X_5), cooperation of guardian(X_6), assistance of private tutor(X_7), adequate food at school time(X_8), health status(X_9), preference of school teacher(X_{10}), land(X_{11}), father's education(X_{12}), mother's education(X_{13}), family income(X_{14}). The variables like time spent on learning practice(X_3), adequate food at school time(X_8), preference of school teacher(X_{10}), family income(X_{14}) were found to bear substantial impact on the learning achievement level(Y) of the school going children of class IV i.e. the targeted respondents of the study.

The objectives of the study are as follows :

1. To study the Learning Achievement Level (Y) of school children (class IV)
2. To assess the nature and content of contributory factors viz. age(X_1), distance from school(X_2), time spent on learning practice(X_3), time spent for game (X_4), family labour absorption(X_5), cooperation of guardian (X_6), assistance of private tutor(X_7), adequate food at school time(X_8), health status(X_9), preference of school teacher(X_{10}), land(X_{11}), father's education(X_{12}), mother's education(X_{13}), family income(X_{14}) effecting the level of Learning Achievement Level (Y) .
3. To study the interrelationships between the consequent variable i.e. Learning Achievement Level (Y) and the causal variables viz. age(X_1), distance from school(X_2), time spent on learning practice(X_3), time spent for game (X_4), family

labour absorption(X_5), cooperation of guardian(X_6), assistance of private tutor(X_7), adequate food at school time(X_8), health status(X_9), preference of school teacher(X_{10}), land(X_{11}), father's education(X_{12}), mother's education(X_{13}), family income(X_{14}).

4. To screen out the causal variables of substantial effect on the Learning Achievement Level (Y) out of these fourteen causal variables for formulating a befitting strategy intervention at micro-environment.

TABLE 79. CORRELATION ANALYSIS

	<u>Variables</u>	<u>'r' Value</u>
X_1	Age	0.0960
X_2	Distance from School	0.0372
X_3	Time spent on learning practice	0.4012**
X_4	Time spent for game	0.1541
X_5	Family labour absorption	0.0147
X_6	Cooperation of guardian	0.0909
X_7	Assistance of private tutor	0.1886*
X_8	Adequate food at school time	0.2357**
X_9	Health status	0.0565
X_{10}	Preference of school teacher	0.2659**
X_{11}	Land	0.1020
X_{12}	Father's education	0.1770*
X_{13}	Mother's education	0.2766**
X_{14}	Family income	0.1592

* Significant at 5 per cent level

** Significant at 1 per cent level

From table 79, it is revealed that the variables such as time spent on learning practice(X_3), assistance of private tutor(X_7), adequate food at school time(X_8), preference of school teacher(X_{10}), father's education(X_{12}), mother's education(X_{13}) were found to be significantly correlated with learning achievement level (LAL).

Home environment, as we know, has got tremendous impact on the learning achievement level of a child learner. Again, a home environment is an exclusive sub-

ject of father's and mother's education. And thus the variables father's education(X_{12}), mother's education(X_{13}) were been bestowed with conspicuous potential to influence the learning achievement level of children.

Where school is the seedbed of learning, the role of teachers and their access to children are of prime concern beyond any other factors influencing the classroom environment. Accordingly, preference of a school teachers as expressed by the people had come up as an influencing factors in learning achievement level. Time spent on learning practice (X_3) has been found to influence the learning achievement level by the children. Also the variable like assistance of private tutor (X_7) is influencing the learning achievement level (Y) in the same way. It, did raise, no question that more of time on learning practice could help a proportionate achievement but it had come up as surprising outcome that even at the primary school level in a rural area, the role and contribution of private tutor were cropping up as substantial effect. Food being the prime concern for a family of marginal capability, adequate food at school time (X_8) had shown a substantial effect on the learning achievement level.

TABLE 80. REGRESSION ANALYSIS

Dependent variable = Y

Variable	Regression Coefficient	t-value (DF = 85)
X_1	0.5819	0.664
X_2	0.1295	0.431
X_3	1.3804	3.475**
X_4	0.4781	0.856
X_5	0.8794	1.373
X_6	-0.0149	-0.016
X_7	1.1505	1.535
X_8	2.7251	1.964*
X_9	-1.1574	-0.809
X_{10}	0.2495	2.613**
X_{11}	-0.0966	-0.672
X_{12}	-0.0664	-0.348
X_{13}	0.2972	1.580
X_{14}	9.17029E-04	1.614*
CONSTANT	-9.1935	

STD. ERROR OF EST. = 5.7910
 ADJUSTED R SQUARED = 0.2468
 R SQUARED = 0.3533
 MULTIPLE R = 0.5944

From table 80, it is found that the variables like time spent on learning practice(X_3), adequate food at school time(X_8), preference of school teacher(X_{10}), family income(X_{14}) were found to record a significant regression effect on the learning achievement level of the school children. While the potential impact of variables like time spent on learning practice(X_3), adequate food at school time(X_8), and preference of school teacher(X_{10}) have been shown in the already presented tables, the variable like family income is found to yield substantial regression effect on learning achievement level. Income of a family is the incontrovertible provider of basic incentives to schooling amenities. The R^2 value is found to be 0.3533 i.e., 35.33 per cent variations of this multiple relations.

Table 81. STEP DOWN REGRESSION ANALYSIS

STEP - 1 VARIABLE : X_3 ENTERED.

VAR.	REGRESSION COEFFICIENT	STD. ERROR	F (1, 98)	PROB.
X_3	1.6410	0.3784	18.802	.00004
CONSTANT	10.8583			

STD. ERROR OF EST. = 6.1432
 R SQUARED = 0.1610
 MULTIPLE R = 0.4012

STEP - 2. VARIABLE : X_{10} ENTERED.

Var.	Regression Coeff.	Std. Error	F (1,97)	Prob.	Partial r^2
X_3	1.5297	0.3723	16.880	0.00008	0.1482
X_{10}	0.2324	0.0963	5.821	0.01771	0.0566
CONSTANT	6.7791				

STD. ERROR OF EST. = 5.9975

ADJUSTED R SQUARED = 0.1922
 R SQUARED = 0.2085
 MULTIPLE R = 0.4566

STEP - 3. VARIABLE : X_8 ENTERED

Var.	Regression Coeff.	Std. Error	F (1,97)	Prob.	Partial r^2
X_3	1.4533	0.3632	16.010	0.00012	0.1429
X_8	3.3267	1.2928	6.622	0.01160	0.0645
X_{10}	0.2524	0.0940	7.212	0.00853	0.0699
CONSTANT	0.9876				

STD. ERROR OF EST. = 5.8309

ADJUSTED R SQUARED = 0.2364
 R SQUARED = 0.2595
 MULTIPLE R = 0.5095

STEP - 4. VARIABLE : X_{13} ENTERED

Var.	Regression Coeff.	Std. Error
X_3	1.3584	0.3610
X_8	3.0301	1.2824
X_{10}	0.2320	0.0932
X_{13}	0.3142	0.1590
CONSTANT	0.4781	

STD. ERROR OF EST. = 5.7446

ADJUSTED R SQUARED = 0.2588
 R SQUARED = 0.2888
 MULTIPLE R = 0.5374

By placing the variables into a step down model of regression analysis, it has been found that after step 4, four variables viz. time spent on learning practice (X_3), adequate food at school time (X_8), preference of school teacher (X_{10}), and mother's education (X_{13}) summatedly had explained 28.68 per cent variables of the above mentioned relations. Thus rest 10 variables were explaining only about 7 per cent of the variables and, accordingly their contributions had been drifted out in earlier steps.

It is interesting to note that in the step down model, mothers' education had come up innovatively to characterise the agglomerated effect of these four variables on learning achievement level of school children in the study area.

A brief note on the operationalisation of DPEP in other four districts and Cooch Behar (DPEP 1st phase District in W.B.) may not be out of place to mention. All the dimensions of DPEP interventions in the five districts have been shown on a comparative scale which would help one to perceive the status of DPEP in operation in the districts.

1. Teacher - School Ratio in five DPEP districts in West Bengal

The picture of the teacher-school ratio in five DPEP districts in West Bengal is not hopeful. The average teacher-school ratio in all the five districts does not exceed the required number four. Thus, in an average, no four class primary school has have the equal number of primary teachers. The district Bankura has the lowest teacher-school ratio (2.41) whereas South 24 Parganas has the highest ratio (3.33).

District	Teacher-School Ratio
Bankura	2.41
Birbhum	3.28
Cooch Behar	3.13
Murshidabad	3.25
South 24-paganas	3.33

Source : District wise data have been collected from the office of the State Project Director, DPEP, West Bengal during March to June, 2002.

2. Student - teacher ratio in five DPEP district in West Bengal

The average student-teacher ratio in four out of five DPEP districts in West Bengal has crossed the standard ratio of 40:1. Only Bankura has fulfilled the norms. The ratio is highest in Murshidabad district and lowest in Bankura.

District	Student-Teacher Ratio
Bankura	39.00
Birbhum	46.60
Cooch Behar	61.35
Murshidabad	72.66
South 24-paganas	70.28

Source : District wise data have been collected from the office of the State Project Director, DPEP, West Bengal during March to June, 2002.

3. Student - School ratio in five DPEP districts in West Bengal

The above table depicts the student school ratio in five DPEP district in West Bengal. The student - school ratio is lowest in Bankura District indicated that the average number of students per class has the lowest number. The ratio is highest in Murshidabad and South 24 Parganas districts.

District	Student-School Ratio
Bankura	94.14
Birbhum	153.12
Cooch Behar	192.40
Murshidabad	236.48
South 24-parganas	234.52

Source : District wise data have been collected from the office of the State Project Director, DPEP, West Bengal during March to June, 2002.

4. Availability of Lavatory

Availability of Lavatory is not upto the mark in all of the five DPEP districts in West Bengal. Cooch Behar has yet covered only 37.93 per cent of the total primary schools and Birbhum has covered only 4.09 per cent of the total primary schools.

District	Facility Available
Bankura	357 (10.41 %)
Birbhum	143 (4.09 %)
Cooch Behar	687 (37.93 %)
Murshidabad	580 (18.35 %)
South 24-parganas	992 (26.58 %)

Source : District wise data have been collected from the office of the State Project Director, DPEP, West Bengal during March to June, 2002.

5. Drinking water facility at schools

Out of five DPEP districts in West Bengal, South 24 Parganas has the highest number of primary schools (3731) and the district Cooch Behar has the lowest number of primary schools (1811). So far as facility of drinking water is concerned, Cooch Behar has covered 77.58 per cent of the total schools where as Birbhum has covered the minimum number (33.11 per cent) of primary schools.

District	Facility Available	No. of Schools
Bankura	2351 (68.56 %)	3829
Birbhum	1155 (33.11 %)	3488
Cooch Behar	1405 (77.58 %)	1811
Murshidabad	2145 (67.87 %)	3160
South 24-paganas	1965 (52.66 %)	3731

Source : District wise data have been collected from the office of the State Project Director, DPEP, West Bengal during March to June, 2002.

Drop out status in five DPEP districts in West Bengal

According to DPEP guideline, the efforts would be there to lower down the drop-out tendency at least 10 per cent. Only the district of Cooch Behar out of five DPEP districts of West Bengal fulfills the national norms: Drop out of class-I in Murshidabad is highest whereas Cooch Behar reads the lowest drop-out rate. The drop-out rate of class-II is highest in Murshidabad. Similarly, the drop-out rate of class-III in Bankura is highest. In all the classes, the drop-out rate in Cooch Behar has been minimum.

District	Rate of Drop-out		
	I	II	III
Bankura	14.74	19.60	18.60
Birbhum	21.27	21.27	14.12
Cooch Behar	3.25	8.72	8.59
Murshidabad	32.41	12.19	12.01
South 24 parganas	14.38	16.25	13.66

Source : District wise data have been collected from the office of the State Project Director, DPEP, West Bengal during March to June, 2002.

III. Retention and Stagnation status

A comparative study on promotion rate has been made during 2000-2001 in five DPEP districts in West Bengal. The overall findings reveal that the promotion rates show higher trend for the upper primary grades except in South 24 Parganas where promotion rates are found to be lowest at the upper classes. The promotion rates at class-I in Cooch Behar district is lowest, that is, stagnation is highest. The overall promotion rates in Bankura and Murshidabad have crossed the level of 80 per cent.

District	Promotion Rate		
	I to II	II to III	III to IV
Bankura	84.16	87.15	88.28
Birbhum	84.94	84.62	84.44
Cooch Behar	56.56	76.78	78.33
Murshidabad	71.25	75.89	72.69
South 24 parganas	80.31	78.14	73.52

Source : District wise data have been collected from the office of the State Project Director, DPEP, West Bengal during October, 2001.

IV. Quality of Education

Achievement of Class-I students in Language and Mathematics in five DPEP districts in West Bengal may be presented.

District	Language		Mathematics	
	Mean (%)	SD	Mean (%)	SD
Bankura	88.56	11.25	88.69	18.15
Birbhum	84.51	22.70	84.51	22.70
Cooch Behar	53.98	29.40	64.75	28.25
Murshidabad	70.01	31.15	73.97	27.45
South 24 parganas	79.17	20.45	82.89	20.35

Source : District wise data have been collected from the office of the State Project Director, DPEP, West Bengal during October, 1999.

Thus, for the district of Bankura, the mean percentages of achievement levels in Language and in Mathematics are encouraging. The mean percentage achievement in Language and Mathematics are 88.56 and 88.69 respectively. The students have been shown balanced improvement both in Language and Mathematics. The performance of students of this district is highest in both the subjects and also the identical pattern of growth and sequence have been seen in both subjects. While for the district of Birbhum, the mean percentage of achievement in Language and in mathematics are also encouraging, but not as high as that of Bankura. The mean percentages of achievement in both the subjects have the same value 84.51. The students of this district have been appeared to be the second highest scores in both the subjects and here the identical pattern of growth and sequence have also been seen in both subjects. The performances of the students of class I in both Language and Mathematics for Cooch Behar district have been moderate. The mean percentages of achievement in both the subjects are 53.98 and 64.75 respectively and also the identical pattern of growth and sequence have not been followed in both subjects. While in case of the district of Murshidabad, the average performance of the students have been within the range

between 70 and 75. The students have shown a better result in Mathematics compared to the achievements in Language and also the identical pattern of growth and sequence have been seen in both subjects. In the district of South 24 Parganas, the mean percentage of achievements in both subjects are encouraging but the district ranked third according to the level of achievement of class I students among the five districts. The mean percentages achievement in Language and Mathematics are 79.17 and 82.89 respectively. In Mathematics, the students did well by 3.72 per cent as compared to achievement in language and also the identical pattern of growth and sequence have been followed in the subjects.

The measure of variability have been found varying from district to district. The measures of variability are shown in Standard Deviation (SD) which shows that with the highest performace of the students of class-I of Bankura the variability was only 11.25 per cent in Language and 10.95 in Mathematics, Though the students of class-I of Birbhum scored the second highest marks. The variability was high. In Language, the variability was 22.70 per cent while in Mathematics the variability was being 22-70 per cent. The range of variability of scores of students of Cooch Behar was high enough as lowest was the achievement levels. The variability was 29.40 per cent in language while that in Mathematics was 28.25 per cent. Although the students of Murshidabad scored between 70 and 73.97 per cent in Language and Mathematics respectively that variability range was highest in that district. The SD in Language was as high as 31.15 percent while that in Mathematics was 27.45 per cent. The students of South 24 parganas ranked third. But the variability was 20.45 per cent in Language and 20.35 %in Mathematics.

Achievement of class III students in Language and Mathematics in five DPEP districts in West Bengal may be shown below.

District	Language		Mathematics	
	Mean (%)	SD	Mean (%)	SD
Bankura	66.35	21.88	65.89	22.32
Birbhum	59.75	24.48	59.95	25.95
Cooch Behar	38.29	18.82	30.78	20.68
Murshidabad	53.24	21.68	51.44	26.60
South 24 parganas	52.70	21.92	48.83	26.50

Source : District wise data have been collected from the office of the State Project Director, DPEP, West Bengal during October, 1999.

The figures of the above table shows a discouraging achievement level of students of class-III in Language as well as in mathematics of all the districts. Achieve-

ment level in language ranges from 38.29 per cent to 66.35 per cent among the districts. Here also Bankura deserves credit for securing highest scores both in Language and Mathematics. Bankura is the highest score in Language and Mathematics of Class-I students.

The figures of the above table also shows slightly elevated range of measures of variability in class-III in Language. The measures of variability are shown in standard deviation percentage (SD). The variability ranges from 18.82 per cent to 24.48 per cent. In Bankura, the variability appears to be slightly on the higher side, the SD being 21.87 per cent. In Birbhum, the variability is highest, the SD being 24.48 per cent. In Cooch Behar, the students' achievement level is lowest. But the measure of variability is only 18.82 per cent. Murshidabad and South 24-parganas have almost similar SDs being 21.68 and 21.92 per cent respectively.

A brief summary of the entire exercise may be in order. The overall enrolment status of the primary schools in the district is satisfactory. The demand for enrolment of children to the primary schools has been steadily increased. The level of retentivity of the primary children of the district is moderately high for lower primary classes i.e., class I to class III however, for class IV, it is below the level of expectation. The overall stagnation in primary classes of the district of Cooch Behar has been very high. Such high rate of stagnation is varying from 50 per cent to 90 per cent in different classes of primary schools.

Primary schools of the district have been established keeping in consonance with the principal balanced geographical distribution. As a result, schools are within the reach of 1 km of every child of the district. Despite efforts to create provisions for primary schools in the form of modification, extension and new construction of such schools by DPEP, the required number of classes for primary school children and corresponding availability of existing number of classes has been proved to be mismatch. The required number of primary teachers and their availability in the district has still been a myth. Moreover, availability of female teachers in comparison to their male counterpart is, till date, microscopic. Adequate arrangement for seating facility for all the children at primary schools is far from satisfaction. Barring few, most of the primary schools of the district are without toilet specified for girls, most of the schools do not have play grounds and most of them are devoid of other congenialities required for a healthy school environment. However, the DPEP interventions has made

an important landmark in the field of teaching of children by way of providing extensive training to the teachers. As a result, the teacher-centric approach to teaching has been shifted to child-centric approach. Such change has registered growth in the efficiency level of the student. The assessment survey reports have adequately proved that the students, especially the rural children have been doing very well both in language and mathematics. The teaching-learning materials used in most of the primary schools are not at all user-friendly and content and quality of such materials, in most of the cases have lost relevance. The overall drop-out rate of primary children in the district is satisfactory i.e., less than the stipulated national norms.

The study has identified sharp gender bias both in family as well as in primary schools on the issues like admission, retentivity and drop-out of girl children vis-a-vis their male counterpart. The role of the Village Education Committee in operationalising DPEP has been very much bleak. The community mobilisation and sensitisation campaign have not been able to yield desired results. Though the learning achievement level of primary students of the district has crossed the target fixed by DPEP guideline i.e., 25 per cent over the base line assessment survey, the overall performance level in both the language and mathematics is very poor. It is surprising to note that girls' achievement level in the district is better than boys. Also the performance of the rural children is far better than the urban counterpart. For a long use of multigrade teaching at school and private tutor base learning at home have damaged both the approach and objectives of DPEP.

It was expected that the demands for primary education would generate from the families. Most unfortunately, the expected demands from the guardians for primary education have not been adequately generated. However, the DPEP interventions have been able to sensitise rural people either in one form or other which resulted a moderate growth in the health status of primary schools in the district both in quantitative and qualitative perspectives. The DPEP has been able to establish the message that primary education for every child of the district is the bench mark of development. The primary school teachers have been sensitised and have been made interested, barring few exceptions. The total literacy mission campaign coupled with DPEP interventions have made the people a little more conscious on the urgency of educating their children and in some cases guardians of the school children and villagers have become much more vigilant and vibrant to the cause of primary education.

References

1. Acharjee S.K & Deb P. A Study On School Drop-outs At The Primary Level Among The Minority (Muslim) girls in Cooch-Behar District of West Bengal, Interacademia, Kalyani, W.B. 1998.
2. Das, N. G. Statistical Methods, Part I, M. Das & Co., Salt Lake, Calcutta, 1997, P. 318.
3. Kerlinger, N. Fred, Foundations of Behavioural Research. Holt, Rinehart and Wiston, Inc. 1965, New York, pp. 616-617.
4. Rogers, E.M. and Shoemaker, F. F. Communication of Innovations : A cross-culture Approach. 1971, New York Press.
5. Acharjee S.K & et. all. Opcit.
6. Deb, P. and Acherjee, S. K. Estimate of Level of Perception of Female Teachers on DPEP from Some Predictor Variables in Cooch Behar, Journal of Environment and Ecology, Kalyani, W.B., Vol. 17(4), 1999, P. 109.
7. Kerlinger: Opcit.
8. Annual Revised Work Plan for the Year 2001-2002, DPEP, Cooch Behar, 2001.
9. Ibid.
10. Ibid.
11. Status Report on District Information on School Education (DISE), DPEP, Cooch Behar, 1998-99 and 2000-2001.
12. Status Report on DISE, Opcit, 1996-97, 1997-98, 1999-2000, and 2000-01.
13. Annual Administrative Reports and Relevant Papers on District Educational Administration collected from District Primary School Council, Cooch Behar, 2000-2001.
14. Report on Midterm Assessment Survey, 1999, and Baseline Assessment Survey, 1996, WBDPEP, Calcutta.
15. Ibid.
16. Report on Midterm Assessment Survey, 1999, and External Evaluation, 2000, DPEP, Cooch Behar.