CHAPTER IV :

DATA PROCESSING AND INTERPRETATIONS

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4.1 INTRODUCTION

In the previous chapter a complete account of the approach to studying the main theme of the present investigation was elucidated. Both, the process of data collection and the methods to be applied in analysing and interpreting the data collected through various research instruments were described and discussed at length. The present chapter is devoted to the analysis and interpretation of the data according to the eighteen hypotheses as formulated in the previous chapter.

The major concern of the present investigation, as described in the previous chapter, is the study of school climate in the context of personality of school personnel, pupil control ideology and teachers' belief system. The school climate is studied also in the context of certain personal variables of the teachers, viz., sex, age, qualifications, experience and the SES. It is further studied in the context of certain school variables, viz., size of the school, region-wise location of the school and the extent to which they are sought to get their children educated by local communities. All these facets of the study of school-

climate are specifically organized under certain hypotheses. In the present chapter, these hypotheses will be tested through employing various sophisticated statistical techniques and the pertinent results will be analysed and interpreted.

4.2 IDENTIFICATION OF SCHOOL CLIMATE AND THEIR VARIATIONS

The Hypothesis is worded as under :

"Organizational Climate of Schools of Gujarat State would show marked variations."

(Hypothesis I)

The rationale of the hypothesis is that climate is conceptualised in the study as resulting from the patterns of reactions among three categories of behaviour, teachers', principals' and of the administration. Organizational climate, in this sense, becomes the complex but delicate web of several interlocking behaviour threads. The texture and the weaving of these behavioural patterns differ from school to school, as the motivating factors of social-needs satisfaction, esprit or morale and administrative control

differ from place to place. This invariably happens in all social institutions, including schools and colleges.

The Hypothesis has two main dimensions, identifications of organizational climate and then the determination of the extent of variation in the climate types identified. For identifying climate, Halpin (1966: 166) has described viable procedures step by step. But this procedure cannot be adopted in this study because the OCDQ is constructed on fresh lines, with four dimensions of administrative behaviour added to the newly developed tool. The onus of the burden to chalk out the new lines for identifying organizational climate fell upon the present investigator. He has endeavoured to face this task squarely by adopting the following procedures.

The Identification of the Three Organizational Climates :

The following procedure was devised and adopted by the investigator to classify the sampled school climate categories on a climate continuum.

Step 1 : The Construction and Standardization of the School Profiles.

After scoring each item of the OCDQ (Baroda Version) as indicated in the previous chapter, a respondent's each sub-test score was computed by summing up the item scores sub-test by sub-test and by dividing each of the twelve sums yielded by the twelve sub-tests by the number of items in the corresponding sub-test. To construct the school profile, school mean sub-test score for each of the twelve sub-tests was computed. These scores define the average response of teachers for each respective sub-test. Hence, the profile of scores shows how most of the teachers in a school characterize the organizational climate of their particular school. Specifically, the scores indicate how often certain types of behaviour "occur" among the teachers, with the school principal and school administration.

The 128 school profiles were now in terms of raw scores. These raw scores were converted into standard scores first normatively and then ipsatively. Normative standardization was done across the sample of the 128 schools so that each of the 12 sub-test scores could be compared on a common scale. Thus, each sub-test was standardized according to the mean and standard deviation of the total sample for that sub-test.

Ipsative standardization was made with respect to the mean and standard deviation of the profile scores for each school. For both standardization procedures, a standard score system based upon a mean of 50 and standard deviation of 10 was chosen.

These standardized scores indicated two things: First, a score above 50 on a particular sub-test indicated that the given school score was above the mean of the sample on that sub-test and second, that the score on that sub-test was above the mean of the school's other sub-test scores. The distribution of the 128 school mean standard scores for all the sampled schools is presented in Appendix

Step 2 : Construction of the Profile Chart.

As a next step, the 128 school mean standard scores of all the 12 dimensions were distributed over stanine score system ranging from 1 to 9 with the ranks Nos. 9 and 8 as indicating 'highest level'; ranks Nos.7 and 6 as 'high level', ranks Nos.5 and 4 as 'low level', and ranks Nos.3, 2 and 1 as 'the lowest level' respectively. Thus the profile chart was prepared for comparing the position of particular score of particular dimensions. The profile chart is given below :

Table 4.1 : Prototypic Profiles for Identifying Organizational Climate

Stanine Score	Dis-engage-ment	Hin-drance	Inti-macy	Esp-rit	Aloof-ness	Produ-ction Emphasis	Con-side-ration	Thrust	Non-graded order	Feed-back	Human-Rela-tions	Autono-my	
Highest													
90	69	68	60	61	67	61	61	59	59	60	60	62	90
80	66	64	56	58	64	57	57	57	57	57	57	58	80
High													
70	62	60	53	55	60	55	55	55	54	55	55	55	70
60	57	54	51	51	56	52	52	53	52	52	52	52	60
Low													
50	53	50	49	49	51	50	50	51	50	50	50	49	50
40	42	46	47	47	45	47	47	49	47	48	48	47	40
Lowest													
30	37	39	46	45	39	45	44	46	45	46	45	45	30
20	34	36	43	41	35	43	42	44	42	41	43	43	20
10	31	34	38	38	30	36	38	40	40	38	42	38	10

Step 3 : The attribution of Weightage or Numerical Value to Each Level of All the Climate Dimensions

The weights or numerical values for 8 sub-tests in which high scores are indicative of Open Climate (Intimacy, Esprit, Consideration, Thrust, Non-graded Order, Feedback, Human-Relations and Autonomy) were assigned by giving the highest (Ranks 9 and 8), high (Ranks Nos.7 and 6), low Ranks Nos.5 and 4), and lowest (Ranks Nos.3,2, and 1) the values of 4,3,2, and 1 respectively. Similarly the weights or numerical values for 4 sub-tests in which high scores are indicative of Closed Climate (Aloofness, Production Emphasis, Disengagement, and Hindrance) were assigned by designating the highest (Ranks Nos.9 and 8), high (Ranks Nos.7 and 6), low (Ranks Nos.5 and 4), and lowest (Ranks Nos. 3, 2, and 1) the value of 1,2,3 and 4 respectively.

Step 4 : To obtain School Stanine Score.

The mean standard scores of the 12 sub-tests of each of the 128 schools selected for the study were correspondingly compared with those of each of the stanine score system profile chart, and the scores labelled at each level of every sub-test was summed up and the total points possessed by each school were obtained. This was the "Stanine Score" which

each of the 128 sampled schools possessed and was utilized in identifying the school climate. This is shown in Table 4.1.

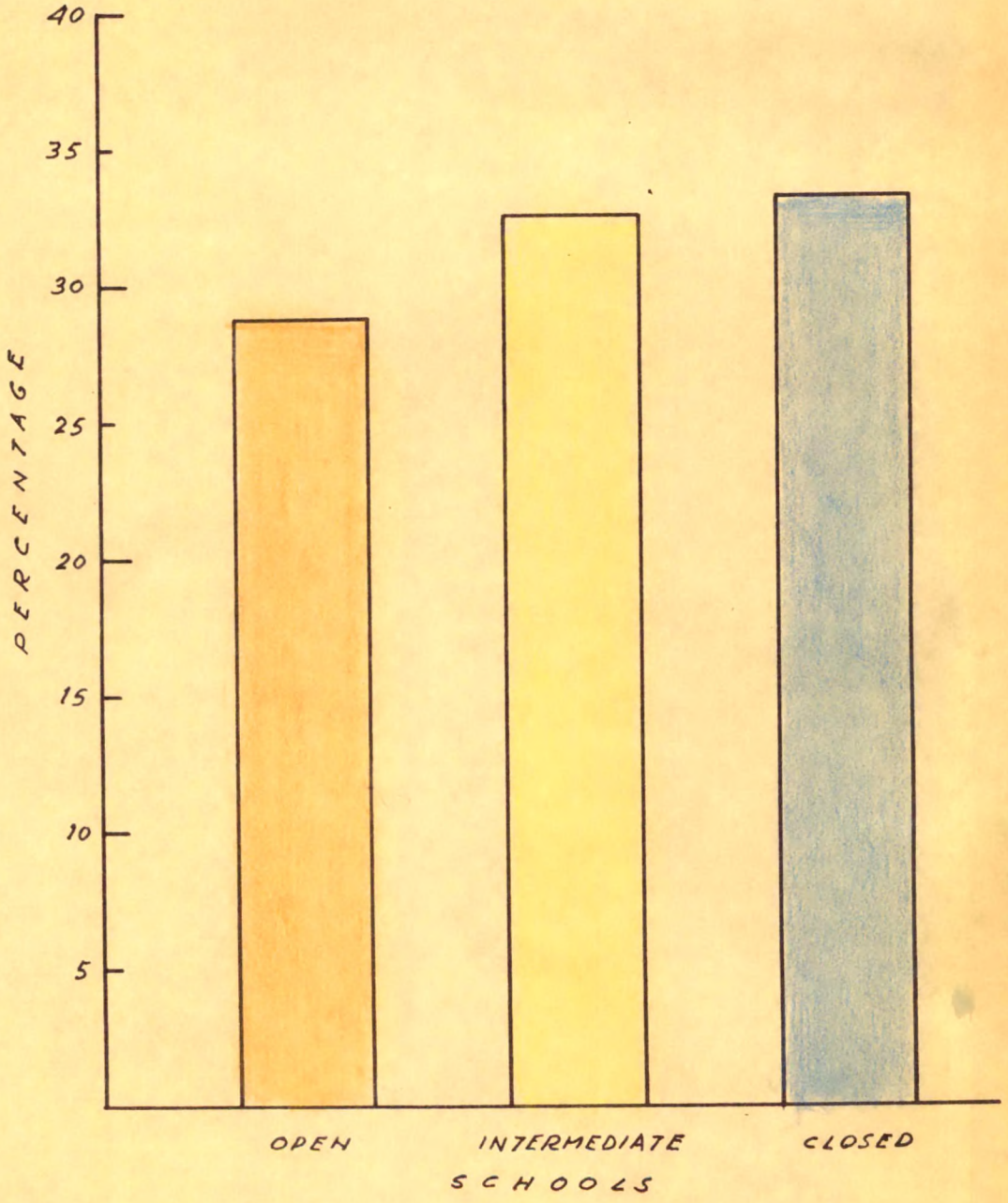
The table is given to illustrate how the school stanine score of school No.1 is obtained by summing the scores in all brackets at every sub-test channel of the table.

Table4.2 : Illustration of How the School Stanine Score of the School No.1 is obtained

Stanine level	OCDQ Sub-tests												Stanine Scores obtained
	1	2	3	4	5	6	7	8	9	10	11	12	
Highest													
9						61 (1)	57		62 (4)				
8		62 (1)					57 (4)						
High													
7										55 (3)	55 (3)		
6													
Low													
5								50 (2)					
4													
Lowest													
3			46 (1)										
2	33 (4)				35 (4)						44 (1)		
1				39 (1)									
													29

CHART - VI

CLIMATE-WISE DISTRIBUTION OF THE SAMPLED SCHOOLS OF GUJARAT STATE



The scores aver the brackets in the sub-test channels are the mean standard scores of the 12 sub-tests obtained by the school No.1 and the figures in brackets indicate the obtained stanine scores. The school stanine scores of the other schools are obtained by the same method illustrated in the case of school No.1 in Table 4.2.

Step 5 : The Classification of the Schools with Respect to Organizational Climate

The school stanine scores were obtained for all the 128 sampled schools by following the step 4 which yielded a range from 15 to 47. Each of the 128 schools in the sample was placed on a continuum from Open to Closed by considering its stanine score. Schools with scores in the upper one-third of the distribution were designated as Open schools (N=37, range = 37-47); schools with scores in the lowest one-third of the distribution were classified as closed schools (N=46, range = 15-25); and the remaining schools with scores in the middle one-third of the distribution were labelled as Intermediate Schools (N = 45, range = 26-36).

This was the procedure developed and adopted by the investigator in identifying the climate category of each of the 128 sampled schools.

With the sampled schools all classified according to the three climate categories (viz., Open, Intermediate and Closed) the second aspect of the Hypothesis - that of studying climate variations became quite easy.

The 128 sampled schools could be classified under Open, Intermediate and Closed climate types using the above five steps. This is shown in Table 4.3.

Table 4.3 : Climate Classifications of the 128 Schools in the Gujarat Sample

Climate	Schools in Climate (by School code number)	No.of schools falling in climate category	Percentage
Open (Range=31-47)	2,3,5,7,9,11,18,23,26,30,31, 33,34,35,44,46,50,66,69,79,82, 87,88,90,92,97,98,102,105,106, 112,118,120,121,122,126,128	37	28.90
Intermediate (Range=26-36)	1,4,6,8,10,12,16,17,19,22,24, 25,28,29,32,36,38,39,40,41,45, 51,52,63,64,65,67,71,73,84,85, 86,93,94,95,99,101,109,111, 113,115,116,117,119,124.	45	35.16
Closed (Range=15-25)	13,14,15,20,21,27,37,42,43,47, 48,49,53,54,55,56,57,58,59,60, 61,62,68,70,72,74,75,76,77,78,80, 81,83,89,91,96,100,103,104,107, 108,110,114,123,125,127	46	35.94
	Total	128	100.00

It is observed from the Table 4.3 that out of 128 schools 37 or 28.90 per cent of the total sampled schools fall under Open climate, 45 or 35.16 per cent under Intermediate climate and 46 or 35.94 per cent under Closed climate. It would thus be seen that the schools studied in Gujarat exhibit all types of organizational climate, from openness to closedness.

In order to determine significant differences of climate categories of the schools, the chi-square test was used.

Table 4.4 : Chi-square Value of Organizational Climate Types of 128 Sampled Schools

	Climate of Schools			Total
	Open	Intermediate	Closed	
No.of schools in each category	37 (28.90)	45 (35.16)	46 (35.94)	128 (100.00)
df = 2		$X^2 = 87.17$ Significant at .01 level		

It would be seen that in Gujarat State 'Closed' climate becomes the most frequently perceived climate (46 or 35.94 per cent) followed by the 'Intermediate' climate (45 or 35.16 per cent) and then by 'Open Climate' (37 or 28.40 per-cent). Hence, the schools can be described as tending toward

the 'Closed' end of the continuum of organizational climate.

The chi-square value, as given in Table 4.4, is significant which further points out that there exist significant differences in organizational climates of schools. The fact of climate variation is established. This supports the Hypothesis I formulated for the study and presented at the beginning of this section.

The swing to closedness of organizational climate of secondary schools in Gujarat State revealed in the present study is supported by climate studies of high schools in Gujarat previously attempted.This becomes evident from Table 4.5.

The Table 4.5 clearly shows a trend towards closedness of climate revealed in earlier studies. The same trend is also reflected in the present study. Like most of the studies on Secondary schools in Gujarat, the present study also reveals the highest percentages for closed climate and comparatively a lower percentage for Open Climate.

In all the climate studies done in Gujarat State, one similarity that stands out is that the least number of schools are found to be under the category "Intermediate climate".

Table 4.5 : Percentage Distribution of Secondary Schools Climate-wise as revealed in some Previous Studies on Organizational Climate of Secondary Schools in Gujarat

Sr. No.	Investigator	Area of the sample	Percentage Distribution of Schools over the Three Climate Types		
			Open	Intermediate	Closed
1.	M.L.Sharma, P.B.Buch and Kamala Rai (1971)	Gujarat as a whole*	33.33	28.43	38.24
2.	Kuldip Kumar (1972)	Baroda City	32.80	29.90	37.30
3.	B.N.Patel (1973)	South Gujarat Districts (Surat and Valsad)	32.69	30.78	36.53
4.	G.Mubazi and M.L.Sharma (1973)	South Gujarat Districts (Broach, Bulsar, Surat and Dang)	30.44	21.73	47.83
5.	Neela Shelat (1974)	Baroda District	34.00	24.00	42.00
6.	D.G.Pandya (1975)	Central Gujarat (Kheda and Panchmahals districts)	33.50	28.80	37.70
7.	D.R.Darji (1975)	Panchmahals district	27.00	26.00	47.00
8.	Present study (1976)	Gujarat State	28.40	35.16	35.94

* The study was done on 102 randomly selected schools.

This trend is in tune with the results of Mehra (1967) which revealed that in the State of Delhi 'Closed' was the most frequently perceived type followed by "Open", and intermediate types of climate forming a small group. Sharma (1973) found in his study of Rajasthan secondary schools highest number (41) manifesting Open Climate, 34 Closed Climate and the lowest number (31) Intermediate Climate. Kothai Pillai (1973) in her study of Tamil Nadu secondary schools found the highest number (84) having Openness of climate the second best number (77) having closedness of climate and the smallest number (29) possessing the Intermediate climate.

The present study on secondary schools of Gujarat shows a slight reverse with "closed climate" being the most frequently perceived, followed by "Open Climate" and "Intermediate Climate" showing the smallest size.

The present section on identification of organizational climate of schools in Gujarat State can be concluded with reiteration of the conclusion that the Hypothesis I to the effect that schools vary among themselves in the matter of climate types is sustained. A further conclusion is that

more or less, the trend revealed in earlier climate studies done on secondary schools in Gujarat State and elsewhere in the country is substantiated.

What are these climate variations due to? The answer to this question perhaps lies in differences in mean scores of different dimensions of the OCDQ (Baroda Version) under the two extreme and climates on climate continuum, namely, the Open Climate and Closed Climate. Looking to the interaction patterns of negative and positive teachers' and principals' behaviours and the size of the mean scores on the administrative behaviour dimensions it is expected that in regard to Open Climate schools, the mean scores on certain dimensions, such as, disengagement, hindrance, aloofness, and production emphasis should be smaller than their mean scores under Closed Climate schools, and the mean scores on other dimensions, such as esprit, intimacy, thrust, consideration, Non-graded order, Feedback, human relations and autonomy should be higher than their corresponding mean scores under Closed Climate schools. The Table 4.6 is developed to examine these assumptions.

CHART - VII

PROFILE OF MEAN SUB-TEST SCORES FOR OPEN, INTERMEDIATE AND CLOSED SCHOOLS

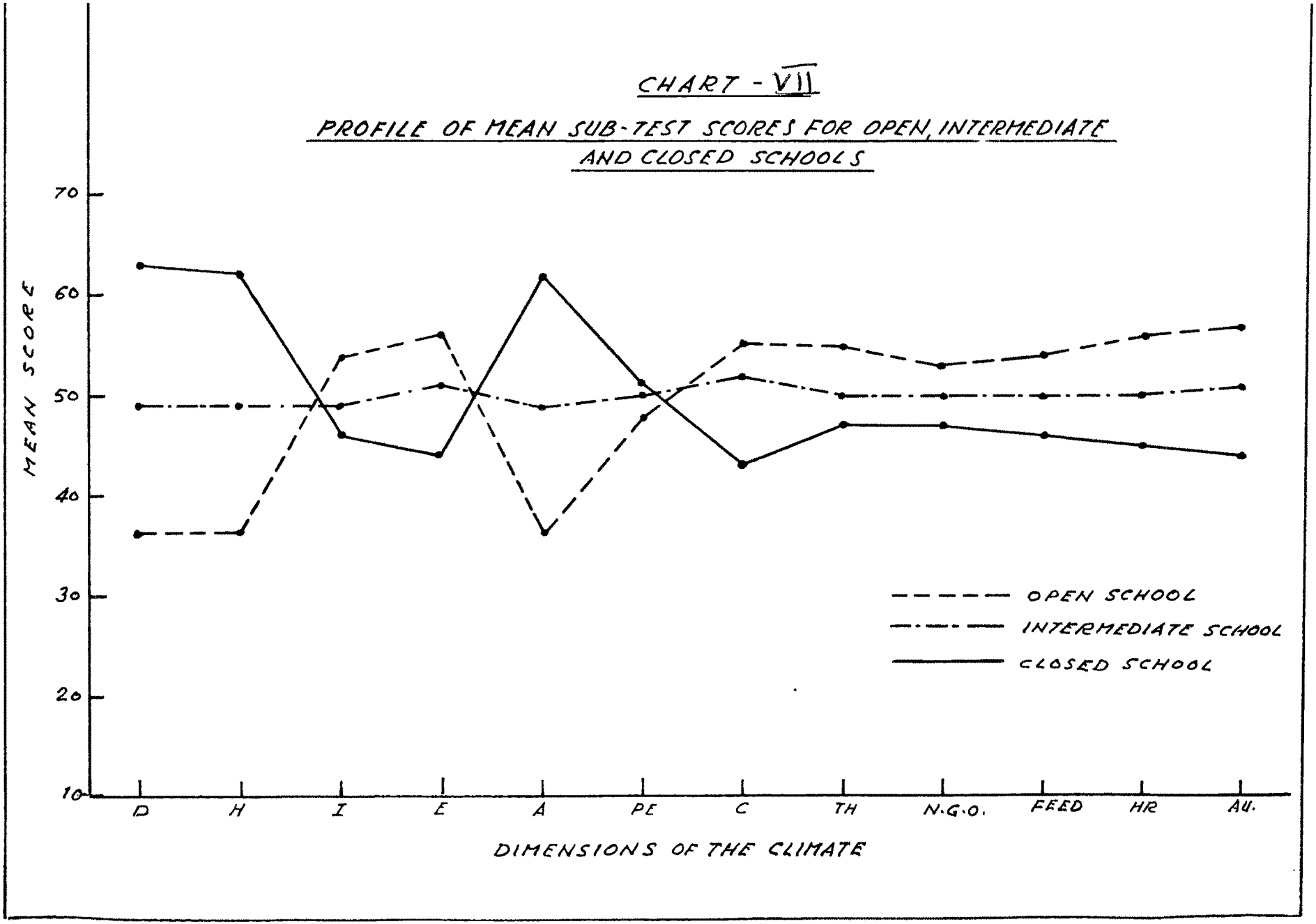


Table 4.6 : Mean Differences in Scores on OCDQ Dimensions (Baroda Version) in respect of Open and Closed Climate Schools

OCDQ subtest	Open Climate School		Closed Climate School		t value	Significant level
	Mean score	SD	Mean score	SD		
1.Disengagement	36.22	3.40	63.24	8.40	19.87	.01
2.Hindrance	36.27	2.24	62.02	6.21	26.03	.01
3.Intimacy	54.40	3.01	46.17	7.78	6.58	.01
4.Esprit	55.78	3.43	44.41	4.28	13.47	.01
5.Aloofness	36.19	3.87	61.83	8.90	17.56	.01
6.Production Emphasis	48.53	4.07	50.63	5.32	2.04	.05
7.Consideration	55.51	4.14	43.41	3.40	14.23	.01
8.Thrust	54.70	7.18	46.78	9.73	4.28	.01
9.Non-Graded Order	53.32	3.20	46.85	5.44	6.74	.01
10.Feedback	54.13	5.83	45.74	5.86	6.50	.01
11.Human Relations	56.43	2.42	44.48	5.92	11.56	.01
12.Autonomy	56.78	5.56	43.85	6.71	9.04	.01

The table shows that in the two negative dimensions of teachers' behaviour (Nos.1 and 2), the mean dimension scores are smaller in Open Climate than they are in Closed Climate. These differences are significant at .01 level. In two positive dimensions of teacher behaviour (Nos.3 and 4), the mean scores in Open Climate are higher than those in Closed Climate. The t-test values of these two dimensions are significant.

Dimensions 5 to 8 denote principals' behaviour, of which Nos.5 and 6 denote negative behaviour and Nos.7 and 8 denote

positive behaviour. In Open Climate schools, scores on dimensions 5 and 6 are smaller than those in Closed climate schools as they should be. The mean scores of dimensions nos.7 and 8 should be larger in Open Climate Schools than those in Closed Climate Schools. The trend revealed is also in the desired direction. The t-tests in all the four dimensions of principals have yielded significant results.

Dimensions 9 to 12 constitute administrative dimensions. They should be more favourable in Open climate schools than they are in Closed climate schools. The results support this assumptions. The differences between mean scores of Open and Closed climate schools are all also significant at .01 level.

Thus the results prove what was already theorized, namely, that the differences of mean scores on dimensions of teacher behaviour, principal behaviour and administrative behaviour in the two extreme end climates create Climate variations to them.

Sargent (1967:11) studied the degree of closeness in the estimates of principals and teachers of different dimensions of the OCDQ in Open Climate schools and Closed Climate schools. His finding was: "Although the principals in the more Open schools still were more favourable in their estimates than were their teachers, they were consistently nearer agreement with their teachers in Open schools than they were in Closed schools. The present investigator carried the similar feelings when she talked about their school climate with teachers and principals of some schools which were shown as Open Schools and Closed Schools by the results of the study earlier presented. The investigator also found that the teachers, among themselves, were in greatest agreement about their school climate dimensions in the more Open schools whereas comparatively less agreement among them was found in the Intermediate Climate schools and the least of all in the Closed climate schools.

4.3 AGREEMENT OF TEACHERS AND PRINCIPALS IN THEIR ESTIMATES OF THE VARIOUS DIMENSIONS OF ORGANIZATIONAL CLIMATE OF THEIR SCHOOLS

Organizational climates of schools are identified on the basis of the pooled perceptions of teachers and principals (as instructional leaders and administrators). In the school system in a traditional society with the embers of bureaucratic colonial rule still glowing and influencing the latter's perceptions, interpersonal relations and power orientation, one can hazard a guess that there would be striking and consistent differences between the estimates of teachers and principals of the twelve dimensions of the OCDQ (Baroda Version). Sargent (1967) had studied the differences between these two perspectives. His finding was that out of the eight dimensions of Halpin-Croft's OCDQ, the mean differences were significant either at .01 or .02 level in the case of seven dimensions, and it was not at all significant in the case of the dimension of "aloofness". None of the Indian studies on climate referred to earlier has examined this question. Therefore, the present investigator thought it fit to explore this hitherto unattempted issue. He formulated the following Null Hypothesis to test

the differences in two estimates. The Hypothesis is worded as under :

> "There are no true differences between mean principal perceptions and mean school teacher perceptions of organizational climate dimensions, as measured by the OCDQ (Baroda Version)".
>
> --- Hypothesis II

This Hypothesis will be tested by using the t-test techniques. On each of the 12 dimensions of the OCDQ (Baroda Version), the mean perception scores and their standard deviations of teachers and principals are computed. They are presented in Table 4.7 on the next page.

It will be seen from the table that significant differences exist between faculty's (teachers') and principals' estimates of the climate of their institution on all the twelve dimensions of the OCDQ (Baroda Version). These results differ from the results of Sargent whose results are reported earlier. That means that whereas in Sargent's study at least on the dimension of 'Aloofness', a small mean difference (.97) was found between the estimates of teachers and principals, in the present study

CHART - VIII

TEACHERS' AND PRINCIPALS' PERCEPTION MEAN SCORES ON THE VARIOUS DIMENSIONS OF ORGANIZATIONAL CLIMATE OF SCHOOLS

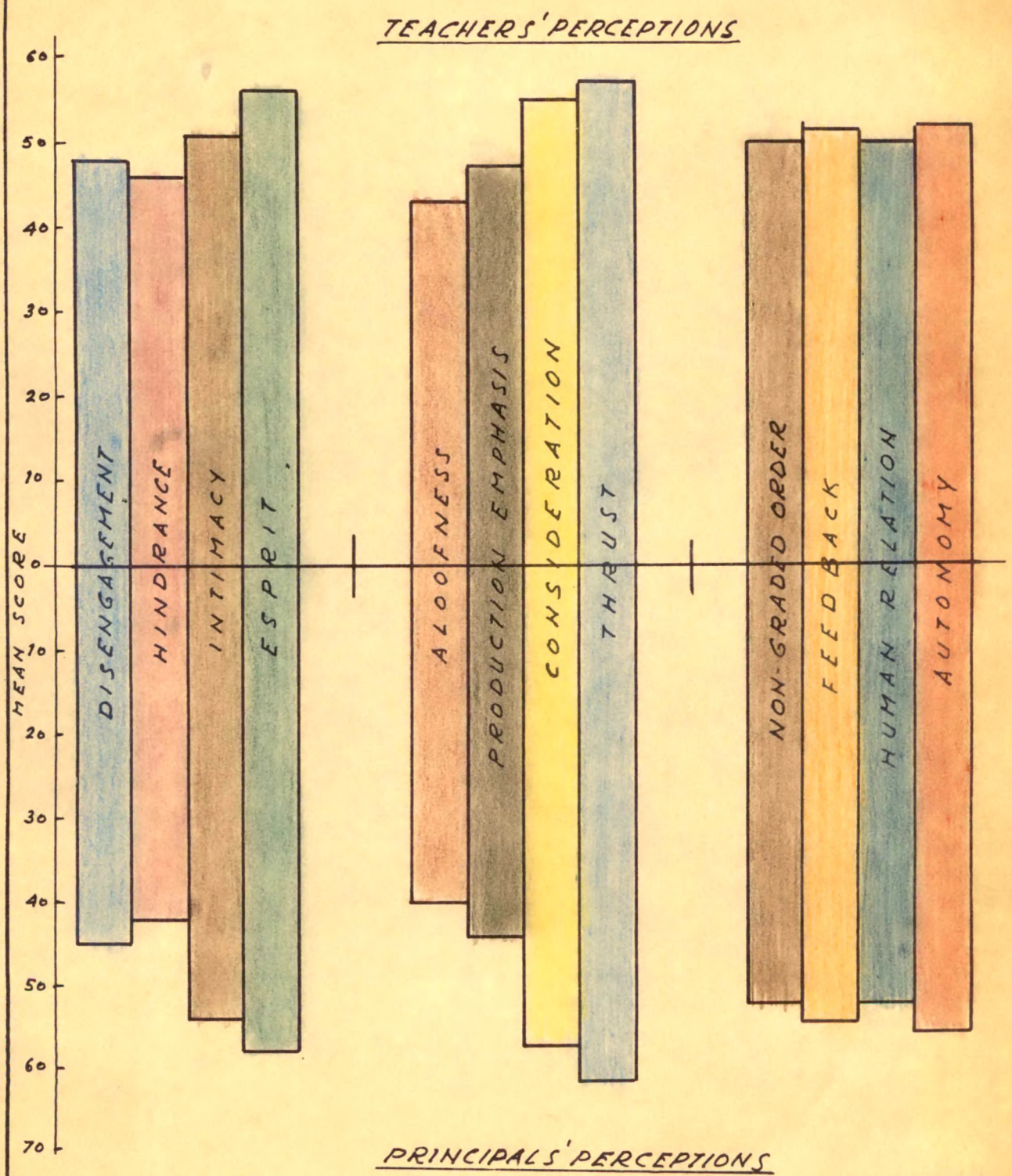


Table 4.7 : Results of Tests of No Mean Differences in Scores on OCDQ (Baroda Version) Dimensions for Teachers and Principals

OCDQ(Baroda Version) Subtests	Teachers Mean score	Teachers SD	Principals Meam score	Principals SD	t Value	Significant Level
1.Disengagement	48.36	5.27	45.27	4.12	2.53	.05
2.Hindrance	46.13	4.10	42.37	5.14	3.76	.01
3.Intimacy	51.20	4.73	54.17	6.26	2.08	.05
4.Esprit	56.28	3.12	58.31	4.03	2.18	.05
5.Aloofness	43.11	5.10	40.29	5.34	2.09	.05
6.Production Emphasis	47.20	4.02	44.04	5.12	2.87	.01
7.Consideration	54.80	3.13	56.56	3.24	2.14	.05
8.Thrust	57.54	7.33	60.63	7.60	2.08	.05
9.Non-graded order	50.19	3.02	52.26	3.14	2.62	.05
10.Feedback	51.03	4.17	53.57	4.29	2.33	.05
11.Human Relation	50.20	2.60	51.94	3.08	2.38	.05
12.Autonomy	52.03	4.80	55.28	5.15	2.54	.05

the estimates of teachers and principals differed on all the dimensions of the organizational climate of schools with a significance level of .05. Thus, principals perceive their school climate in altogether different ways. It would be seen from the results that principals have viewed those dimensions in a more favourable light than have been done by their teachers, for the behaviours in which they themselves are generally responsible. "Disengagement", "Hindrance", "Aloofness", "Production Emphasis", "Consideration", "Feedback",

"Human Relations", etc. are the examples. There are striking and consistent differences between the two perspectives of most of these dimensions. Sargent (1967:11) makes the following comments on these differences between principals' and teachers' per ceptions on climate dimensions :

> "These differences imply the presence of a 'communication barrier between principals and teachers. Perhaps, the principals have a greater emotional investment in their schools and hence are inclined to view climate less objectively. This may be so particularly since the items in this Questionnaire refer, in many cases, to situations for which a principal is obviously responsible or at least influential".

As the present study reveals true and significant differences between teachers' and principals' perspectives, the Null Hypothesis is rejected.

It would be seen from the table that principals have reviewed dimensions of "Disengagement", "Hindrance", "Aloofness", "Production Emphasis" less favourable than the teachers; whereas they have perceived dimensions of "Intimacy","Esprit", "Consideration", "Thrust" and all the four dimensions of administrative behaviour in more favourable light.

4.4 RELATION BETWEEN CLIMATE TYPOLOGY AND GEOGRAPHICAL LOCATION OF SCHOOLS

Gujarat State consists of 19 districts and divides itself into four distinct geographical regions. For convenience, these regions may be called Western Gujarat, North Gujarat, Central Gujarat and South Gujarat.

Western Gujarat includes Saurashtra and Kutch which, during the British rule of India were spread over numerous native states; these, excepting a few ones, were educationally backward. Their political life was characterized by feudalism, autocracy and bureaucracy. Most of the schools were Government schools. During the last 30 years of independence, the social, cultural, economic and political life in this part of the State has undergone remarkable transformation, yet the overtones of traditions of hundreds of years are still to be found.

North Gujarat has two districts - Banaskantha and Sabarkantha which are arid districts and social, economic and educational backwardness is still to be noticed. The Mehsana district was part of the former Baroda State and had, therefore, better deal in the past. Today, it is not

an advanced district, but is much better off than the districts of Sabarkantha and Banaskantha. The story of the Ahmedabad district is different. The metropolitan city of Ahmedabad and the surrounding areas have been developing very fast in all respects. It is quite an advanced district.

The Central Gujarat districts, excepting the Panchmahals district on the eastern boarder which has predominance of tribal population, are quite prosperous and advanced. The districts of Kheda and Vadodara have good spread of schools, physical facilities, and colleges of education. Economically these two districts have made good strides in the last two decades.

South Gujarat, too, is prosperous and progressive, excepting those talukas in Bharuch, and Surat districts which have tribal population. Surat and Valsad districts are agriculturally well off. They have good network of schools. The cultural and economic conditions, broadly speaking are viable.

When social, economic and educational backgrounds vary significantly, it was hypothesised that there will be variations in climate typology of high schools located in these four regions.

This variable of regional location of schools was not studied in earlier climate studies focused in Gujarat State. Only recently Anjani Mehta (1976) has studied this factor, but it was in the context of the affiliated colleges of the Gujarat University. Thus, there is a good case for formulating a Hypothesis on possible relationship between region-wise location of secondary schools and climate typology.

The Hypothesis is worded as under :

"The secondary schools in different regions of the State will not show significant variations in their Open and Closed Climate typology".

(Hypothesis III)

In the earlier Hypothesis, it was found that out of the total 128 sampled secondary schools 46 were found to possess Closed Climate, 45 Intermediate Climate and 37 Open Climate. These three categories are spread over all the four regions. So, even at the first look at the Table 4.3, climate variation is evident. The question is: how far these climate variations in the four regions are real and significant.

To test this question, the Chi-square test was employed. To calculate the Chi-square value between the two variables,

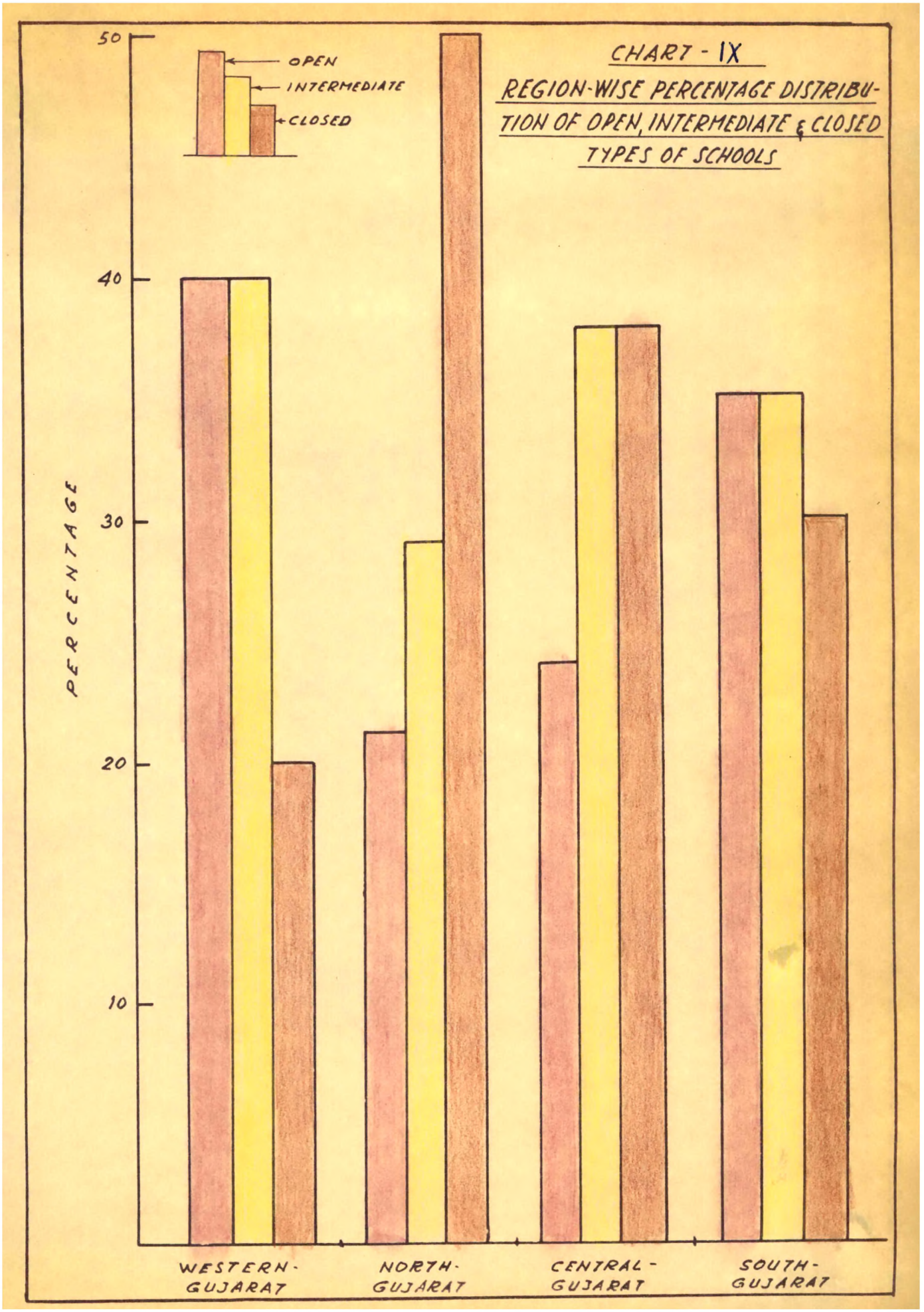


CHART - IX
REGION-WISE PERCENTAGE DISTRIBUTION OF OPEN, INTERMEDIATE & CLOSED TYPES OF SCHOOLS
OPEN
INTERMEDIATE
CLOSED
PERCENTAGE
50
40
30
20
10
WESTERN-GUJARAT
NORTH-GUJARAT
CENTRAL-GUJARAT
SOUTH-GUJARAT

viz., 'School Climate' and 'the Location of the School', a Contingency Table 4.8 was framed by arranging the frequencies into rows and columns. The Table 4.8 is 3x4 Contingency Table, where the climate frequencies are classified into three groups, viz., Open, Intermediate and Closed and the frequencies of the location of the school are grouped into four regions of Gujarat State, viz., West, North, Central and South.

Table 4.8 : Chi-Square Value for the Organizational Climate of Schools Located in Different Regions

Climate Typology of schools	Regional Location of Schools				Total schools
	West	North	Central	South	
Open	14 (40.00)	9 (21.43)	8 (23.54)	6 (35.29)	37
Intermediate	14 (40.00)	12 (28.57)	13 (38.23)	6 (35.29)	45
Closed	7 (20.000)	21 (50.00)	13 (38.23)	5 (29.42)	46
Total	35	42	34	17	128

*Note: df = 6 X^2= 9.00
Not significant at .05 level

The Chi-square value was then obtained. The computed Chi-square value (9.00) is not significant. As this Chi-square

* Figures in brackets indicate percentages.

value is not significant, it can be said that there is no true relationship between 'school climate' and 'the Location of the school'. Whatever relationship is apparently found is only a chance affair. Therefore, the Null Hypothesis III is substantiated.

4.5 SCHOOL SIZE AND THE CLIMATE TYPOLOGY

Secondary schools in Gujarat State can be broadly divided into two categories in term of its pupil population, small sized schools and large sized schools. The concept of the size of schools in the country is a limited one. In many Western countries of the world, the normal size of a secondary school exceeds the pupil population of 1000. In India, the Education Commission (1966, para 7.46) has given a norm of 400 to 500 students as the normal or average size for a secondary school. Schools having smaller enrolment than the range 400 to 500 are considered to be small sized; those whose enrolments exceed this range are considered to be large sized.

In smaller sized schools, principals are closer to teachers and the latter are closer to pupils. Therefore, there is greater possibility of satisfaction of psychological

and social needs in smaller schools; school supervision for task accomplishment does not pose problems, because teachers can be easily motivated by principals through personal examples. Even administrative behaviours are positive and smooth to a greater extent in small sized schools than in large sized schools. Therefore, the natural assumption is that small sized schools tend to manifest more openness than the two other size slabs. The Hypothesis IV is formulated to discover how far this assumption is true.

The Hypothesis is worded as under :

"Large sized secondary schools of the State will be significantly more Closed than small sized schools".

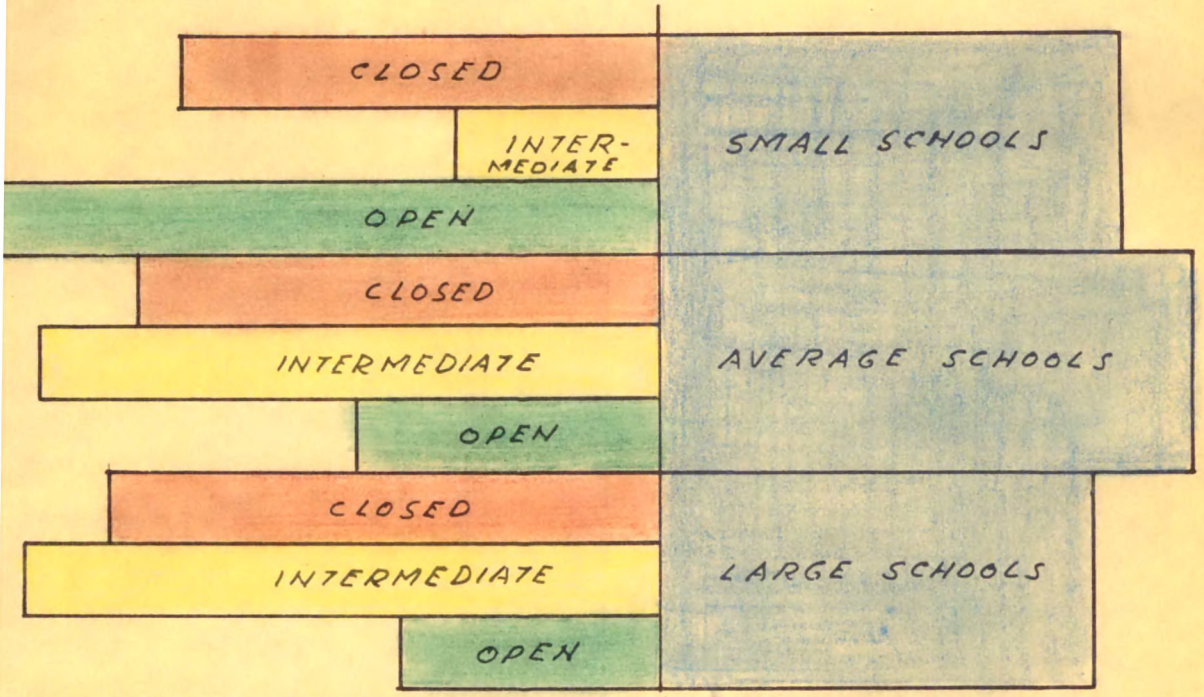
(Hypothesis IV)

Out of the 128 sampled schools, 39 schools were found to be large sized, 47 of average size and 42 small sized. The distribution of these schools across the climate categories is shown in Table 4.9 on the next page.

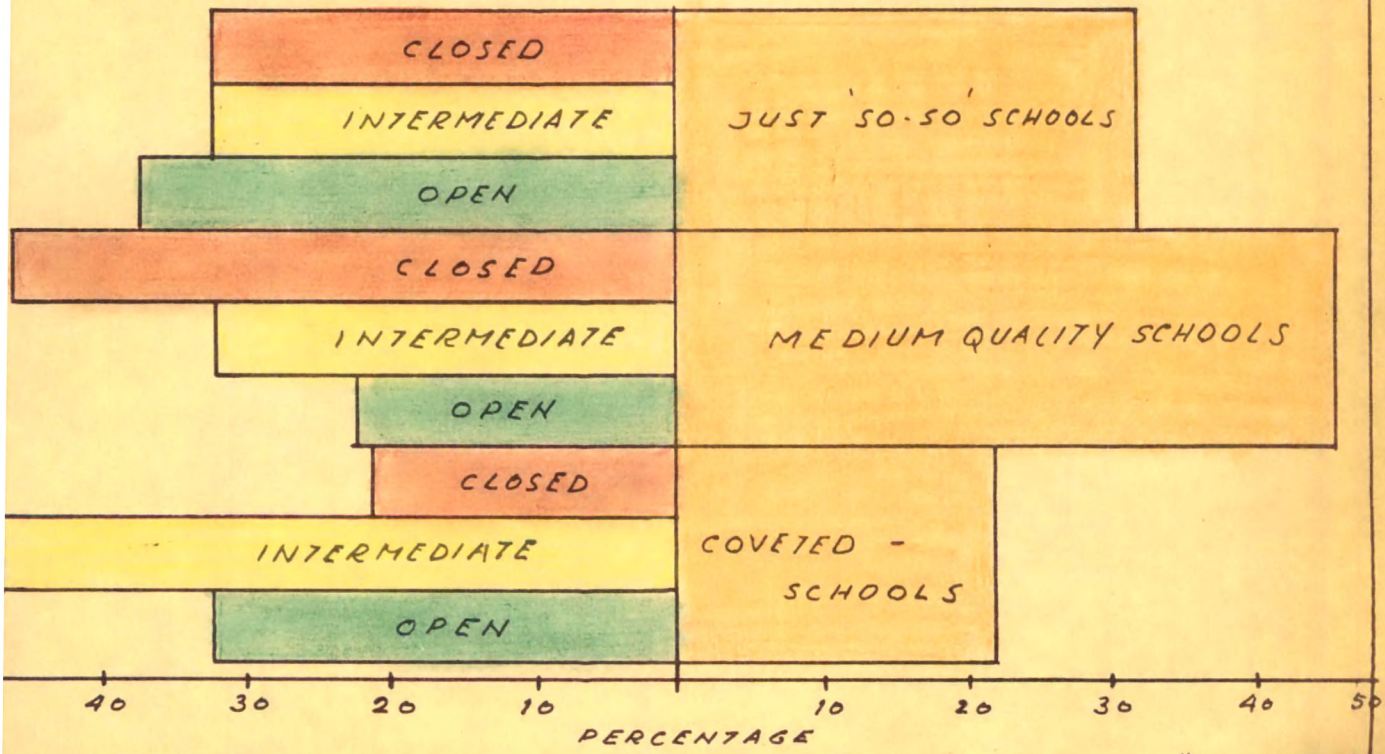
At the first glance, at the above table, it is seen that the highest number (N=20) of Open Climate schools belongs to "Small sized" category, of Intermediate Climate

CHART - X

SIZE-QUALITY VARIABLES AND CLIMATE TYPOLOGY



SIZEWISE DISTRIBUTION OF OPEN, INTERMEDIATE AND CLOSED SCHOOLS



CATEGORYWISE (COVETED SCHOOLS, MEDIUM QUALITY SCHOOLS AND "JUST SO-SO" SCHOOLS) PERCENTAGE DISTRIBUTION OF OPEN, INTERMEDIATE & CLOSED SCHOOLS

Table 4.9 : Testing of Significance of Relationship between School Size and School Climate Typology

Size of school	Climate types of Schools			Total
	Open	Intermediate	Closed	
Large	7 (17.95)	17 (43.59)	15 (38.46)	39 (100.00)
Average	10 (21.28)	20 (42.55)	17 (36.17)	47 (100.00)
Small	20 (47.62)	8 (19.05)	14 (33.33)	42 (100.00)
Total	37	45	46	128

Note : Figures in brackets indicate percentages.
df=4, X^2=19.21

schools (N=20) belong to schools having "average size" and of Closed Climate schools (N=17) also to "average size" category.

These results are tested for their significance by using the Chi-square test. Table 4.9 is a 3x3 contingency table, i.e. a double entry or two-way table in which facts of school size and school climate types are represented. The Chi-square value was computed and its value was found to be 19.21. This value was tested for its significance. It was found to be significant at.01 level with df=4. This would mean that there exists positive and significant relationship between school size and school climate.

The table further shows that 38.46 per cent larger sized schools have Closed Climate as against 33.33 per cent small sized schools and only 17.95 per cent large sized schools have Open climate as against 47.62 per cent small schools. This clearly shows that the Hypothesis IV is well supported by percentage distribution of Closed climate schools over large and small sized schools and the significant Chi-square value at .01 level.

In some of the earlier school climate studies, this relationship between school size and climate was investigated. Cook (1966) found small sized schools to be significantly more Open than large sized schools. Flanders (1967), Carver and Serquiovani (1969) and others had also found that large sized schools tended to be closed climate schools. These studies support the finding of the present study in this regard. However, studies by Flagg (1965), Creaser (1966), Sargent (1967), Gentry and Kenney (1969), Marcum (1969), Winter (1969), Guy (1970) and others reported non-significant trends of relationship between school size and school climate.

Sharma (1973) in his study of Rajasthan secondary schools found that schools of different climate types do not differ

significamtly in terms of their size. However, Neela Shelat's (1975) study on Gujarat secondary schools is in conformity with the finding of the present study. She (p.387) observes: "A greater percentage of small schools falls in Open and Autonomous climate types as against a considerable number of large schools have Controlled and Familiar types of climate. Large schools show a less tendency to possess Open and Autonomous climate types."

4.6 SCHOOL CLIMATE IN RELATION TO CERTAIN CATEGORIES OF SCHOOLS

In the post-independence years particularly after 1960s, there has been unprecedented expansion in education at all levels, including the secondary school stage. Three distinct types of secondary schools have emerged on the educational scene, at least in Gujarat State.

Schools of one type are described in the present study as the "coveted" schools. They are sophisticated schools. These schools are in great demand. They are prestigious institutions, known for their high standards of instruction, facilities, discipline, and task accomplishments.

They are high fee charging institutions. They either teach through English medium, or Gujarati or Hindi medium or through English and Gujarati media. They are very well organized and efficiently conducted institutions. Their leadership is in hands of academically and professionally sound and well experienced hands. They have good space facilities, good equipment and fairly rich instructional materials and aids. Though there is a marked accent on task achievement in these schools, the variety of programme is such and methods of teaching are so varied and group oriented that teachers do have their psychological and social needs satisfied to some extent if not to most extent.The prestige attached to their job in the schools gives teachers a fair measure of justification.The leadership is so vigilant and dynamic that there are little chances for teachers to develop disengagement, and as leadership is interested in good and demonstrable results, they hardly think of hindering the work of their teachers. Though consideration and human relations do not touch high level, there is a constant flow of communication to and from teachers.

The middle quality schools are less sophisticated than the 'Coveted' category of schools. They have fairly

good staff, fairly good awareness of giving a better ideal to teachers and students. But they are considerably handicapped by paucity of funds and other resources. These schools also have their standards of admission. They also try to preserve the quality of their teaching-learning to the level possible within their means. Leadership does not come in the way of social needs satisfaction of their teachers. In most cases, esprit is the function of the type of staff of teachers that is in the school - it is the result of individual factors or personality traits of teachers. The role of the management may not be pronounced either in keeping teacher morale high or deteriorating it to low level. The administrative control does not transgress the limit of reasonableness.

The "Just 'so so'"schools are typical Indian high schools - they are least sophisticated schools where children are admitted and taught according to the prescribed curriculum of the Department. They do not have any special educational pretentions. They have come into existence because in the locality, there was the need of a school as more children have been knowcking the doors of high schools. Most of these schools meet in rented premises which are, in many cases,

not constructed for school purposes. They are schools, because there are rooms in which different classes can be held for instruction. Their resources and facilities are, by and large, limited. They have trained but young staff with limited professional experience. They may or may not be effective in instruction. Such schools have all kinds of leadership - well informed, efficient and honest, or commercial minded, scheming and manipulating. School accounting may be straight or is so cleverly manipulated that the under current overtones are not suspected. The staff may or may not have security. They may or may not get the full salary as mentioned in the school pay register. Library, laboratory and other equipment may be limited and slowly growing. As the existence of such schools depends upon their results, there is an accent on task accomplishment. Teachers themselves take a lead in meeting their own social needs satisfaction. These schools are more active on undertaking such co-curricular and extra-curricular programmes that can bring additional revenues to schools. Some of the schools of this category are likely to be good, but some may be so bad as not to mention the name of 'school'. In any case, they wear an unsophisticated look.

Against such a perspective of three categories of schools, the Hypothesis V is formulated. It reads as under :

> "The 'Coveted' secondary schools would tend to manifest Open climate typology to a greater extent than the 'Middle Quality' schools and the "Just-'so so'" would [illegible] manifest Closed climate to a greater extent than the 'Middle Quality' level schools."
>
> (Hypothesis V)

In the sampled 128 secondary schools, 28 schools belong to the category of 'Coveted' or sophisticated schools, 59 schools to the 'Middle Quality' or less sophisticated school category and 41 schools to the 'Least Sophisticated' school category.

Their climate-wise distribution is given in Table 4.10 on the next page.

The results are surprising. One would have expected more Open climate schools falling under the category of Coveted schools than under the category of the Least Sophisticated school category. But the contrary is the case. The Least Sophisticated schools have among them 36.58 per-

Table 4.10 : Relationship between Categories of Secondary Schools and Climate

Type of School	Climate of Schools			Total
	Open	Intermediate	Closed	
Coveted	9 (32.14)	13 (46.43)	6 (21.43)	28 (100.00)
Middle Quality	13 (22.03)	19 (32.21)	27 (45.76)	59 (100.00)
Just So So	15 (36.58)	13 (31.71)	13 (31.71)	41 (100.00)
Total	37 (36.58)	45 (31.71)	46 (31.71)	128 (100.00)

df = 4 X^2 = 6.61

Not significant at .05 level.

cent schools possessing Open Climate. The largest number of Closed Climate schools (45.76 per cent) belongs to the category of 'Middle Quality' category schools, whereas the 'Just So So' school categories have 21.71 percent Closed climate schools. This means that climate typology of schools does not seem to bear any relationship with the three categories in which the sampled secondary schools were divided.

This relation was further tested through using the Chi-square test. The Table 4.10 is a 3x3 contingency table

where the 'organizational climate of schools is classified under the three columns viz., Open, Intermediate and Closed, and three categories of schools under three rows. The Chi-square value was computed. It was found to be 6.61 which was not at all found significant.

The Hypothesis V, therefore, is not substantiated.

4.7 RELATIONSHIP BETWEEN BIOGRAPHICAL CHARACTERISTICS OF TEACHERS AND THEIR PERCEPTIONS OF CLIMATE CATEGORIES OF THEIR SCHOOLS

In some of the earlier studies on organizational climate of schools, some teacher and school variables have been studied. As conflicting results are reported on relationship of these variables and climate in the global sense or in regard to its various dimensions, the investigator thought it appropriate to examine his data and explore whether some teacher variables like sex, age, qualifications, teaching experience, socio-economic status, etc. bear any significant relationship with school climate. This he thought pertinent to do because school climate in the study is identified and evaluated through teacher perceptions. The investigator formulated the following Hypothesis :

> "The school climate is independent of certain biographical characteristics of teachers".
>
> (The Hypothesis VI)

In the form of a null hypothesis, it may be stated that the varying biographical characteristics of teachers bear no significant relationship with the type of climate their school manifests. Sharma (1973:109) includes

biographical characteristics of principals and teachers in stable inputs to the organizational climate of schools. In the present study the biographical characteristics selected for examination are : (a) sex, (b) age, (c) qualifications, (d) teaching experience and (e) the socio-economic status (the SES). This inquiry, along with the results of the earlier exploration on the relationship with personality, dogmatism and pupil control ideology of teachers, is calculated to throw more light on what variables - factors influence teacher perceptions of the climate typology of their school.

To test the Hypothesis, it was decided to use the Chi-square test. It was decided to consider the perceptions of the majority of teachers of a school as a contributing factor to the climate type it manifests. In considering sex-climate relationship, 70 per cent or more formed each sex group whose perceptions were fed into the data for analysis. In the case of other variables of age, qualifications, experience and the SES, the perceptions of 50 per cent or more teachers belonging to a particular category formed the basis.

Each of the five teacher variables will now be taken up

for testing the significance of its relationship with climate typology.

(a) Sex

The sub-hypothesis in this regard was as under :

"The male teachers do not differ significantly from female teachers with respect to their perceptions of school climate."

To calculate the Chi-square value between the two dimensions viz., 'School Climate' and 'the Sex of the Teachers', a contingency table was prepared by arranging the frequencies into rows and columns. The table is 3x3 contingency table, where the climate frequencies are classified into three types, viz., Open, Intermediate and Closed and the frequencies of the sex of the teachers are grouped into two types, viz., Male and Female teachers.

As stated earlier, in each climate category, relationship will be examined on the basis of the perceptions of 70 per cent or more of the male and female teachers of schools possessing different types of climates.

The analysed data are presented in Table 4.11 (a).

Table 4.11(a) : Testing of Significance of Relationship Between Sex of the Teachers and School Climate Typology

Sex of Teachers	Climate Types of Schools			Total
	Open	Intermediate	Closed	
Male	35 (30.44)	38 (33.04)	42 (36.52)	115
Female	2 (15.38)	7 (53.85)	4 (30.77)	13
Total	37 (28.9)	45 (35.00)	46 (35.9)	128

Note: Figures in brackets indicate percentages.

df = 2 $X^2 = 2.43$

Not significant at .05 level

The Chi-square value yielded by the data on the relationship between sex of teachers and climate type is 2.43. This value is not significant. That means that the male teachers did not perceive their school climate differently from what their female teachers did. The sex does not seem to be a determinant factor of teacher perception of climate type. Climate variations may be the results of other influencing variables.

The relationship between sex and climate has been investigated by several researchers.

The studies by Ernest (1965), Franklin (1968), Farber

(1969), Reitz (1973), and Kobayashi (1974) revealed that there was no significant relationship between the principals' sex and the climate of the schools but the studies of McLeod (1969) and Seidman (1973) reported that there was significant difference in organizational climate between schools administered by female principals and schools administered by male principals.

The nature of relationship between climate and sex of teachers has been studied by Brown (1965), Hamlin (1967), Hoagland (1968), Brink-Meyer (1968), Harkin (1969), Farber (1969), Winter (1969), Hill (1973), Evans (1973), and Dicaprio (1974), found that there were significant differences between average scores of males and females on the Disengagement, Thrust and Consideration sub-tests.

Hoagland (1968), Brinkmeyer (1968), Harkin (1969), Farber (1969), Winter (1969), and Evans (1973) found that no significant relationship existed between teacher's sex and climate in schools. The same were the findings in three recent Thai studies - Samrong Pengnu (1976), Sangchen Sorsena (1977) and Taotipaya Prachak (1977).

Hamlin (1967) found that female teachers tended to perceive "Consideration" lower than male teachers.

Hill (1973) reported that the teacher biographical variable of sex was the best predictor for each of the eight OCDQ subtest scores.

Dicarprio (1974) found that there was a significant relationship between the perceptions of organizational climate and the biographical characteristics - sex. Women tended to have higher climate scores.

(b) Age

The second biographical characteristic of teachers studied in regard to its relationship with climate typology is age of teachers. The sub-hypothesis formulated in this regard was as under :

"The perceptions of school climate do not differ with the age of teachers."

To test the relationship, the perceptions of 50 percent or more teachers belonging to different school climate were taken into consideration. The Chi-square technique was used to test the significance of the hypothesised relationship.

The distribution of the 128 teachers according to their age-group across the climate categories is shown in 5x3

Contingency Table (Vide- Table 4.11-b), where frequencies of the age groups are classified into five age-slabs, viz., (1) 20-25 years, (2) 26-30 years, (3) 31-35 years, (4) 36-40 years and (5) above 40 years.The climate categories were formed on the lines similar to those in previous sub--hypothesis (a).

Table 4.11(b) presents the classified data.

Table 4.11(b) : Testing of Significance of Relationship between Age of the Teachers and School Climate Typology

Climate Typology of schools	Age Groups of Teachers (In Years) 20-25	26-30	31-35	36-40	Above 40	Total
Open	3 (33.33)	12 (34.28)	10 (30.31)	6 (24.00)	6 (23.08)	37
Intermediate	4 (44.44)	12 (34.28)	4 (12.12)	10 (40.00)	15 (57.69)	45
Closed	2 (22.22)	11 (31.44)	19 (57.57)	9 (36.00)	5 (19.23)	46
Total	9 (100.00)	35 (100.0)	33 (100.0)	25 (100.0)	26 (100.0)	128

df = 8 $X^2 = 19.04$

Significant at .05 level.

Note: Figures in brackets indicate percentages.

At the first glance, it would be seen that more of younger teachers (age-groups of 20-25 and 26-30) are associated with Open Climate than teachers of older age groups. In the case of schools possessing Intermediate Climate, the highest group is above 40 years, but next to it is the group of 20-25 age-group. But the emergent picture is not clear. In the case of Closed Climate, the highest group is of the above 40 years age group.

When the Chi-square test was applied, it yielded the value of 19.04 which was significant at .05 level with df=8. This would mean that in the present study, a significant relationship was found to exist between the age of teachers and their perceptions of climate typology.

The relationship between the age of principals and teachers and organizational climate was also studied by some researchers. Results relating to the influence of principal's age on the climate of schools have been reported in their studies by Ernst (1965), Watkins (1966), Franklin (1968), McLeod (1969), Roosa (1969), Esporite (1971) and Reitz (1973). Ernst (1965), Franlin (1968), McLeod (1969), Esporite (1971) and Reitz (1973) reported that no significant relationship was found between principal's age and

climate. Watkins (1966) reported that this variable was significantly but negatively correlated with perceived "production Emphasis", dimension of the OCDQ, whereas Roosa (1969) found it negatively correlated with perceived "Consideration" dimension of the same tool.

The studies by Hightower (1965), Brown (1965), Cook (1966), Bushlinger (1966), Wall (1967), Hamlin (1967), Eberlein (1968), Brinkmeyer (1968), Hoagland (1968), McLeod (1969), Winter (1969), Marcum (1969), Harkin (1969), Mann (1973), English (1973), Hill (1973), Evans (1973), Manning (1973), Cummings (1974), Petasis (1974) and Parker (1975) have dealt with the relationship between the climate of schools and the age of teachers. Hightower (1965), Cook (1966), Eberlin (1968), Brinkmeyer (1968), McLeod (1969) and Munning(1973) found that teachers in open schools were significantly older and teachers in closed schools were significantly younger. However, Brown (1965), Bushlinger (1966), Hamlin (1967), Marcum (1969), and English (1973) reported that open climates were associated with less age.

Whereas Wall (1967), Harkin (1969), and Mann (1973), Sangchen Sorsena (1977), Taotipaya Prachak (1977) reported that no significant relationship existed between age and

climate, Winter (1969), Hoagland (1969), Hill (1973), Evans (1973), Cummings (1974), Petasis (1974) and Parker (1975) found a significant relationship between age and climate, but they did not indicate the direction of relationship.

Some Indian studies on organizational climate of schools have also reported their findings on relationship between the age of teachers and their perceptions of climate typology of their schools. Lulla (1972) found that the mean age of teachers increased as schools moved from openness to closedness of climate. Sharma (1973), however, found negative correlationship between faculty age and organizational climate. He observed (p.291) that "the negative sign further indicates that higher the faculty age, more closed is the climate." Neela Shelat's (1975) doctoral study did not reveal any definite relationship between the age of teachers and their perceptions of the school climate. In the present study, however, the significant relationship between teacher's age and their climate perception is borne out.

(c) Qualifications of Teachers

Qualifications of teachers were the third variable studies in perspective of its relationship with climate

typology. On this variable also research work has been done, and here also the findings are not consistent. This investigator, therefore, desired to examine his data and see the type of relationship between qualifications of teachers or their academic and background and climate categories. The following sub-hypothesis (c) was formulated from this angle.

> "Teachers having various levels of educational background do not differ in their perceptions of the climate typology of their school."

To test this sub-hypothesis, the data were classified under a Contingency Table (Vide- Table 4.11-c). It is a 3x2 Contingency Table where the school climate is classified under the three columns, viz., "Open Climate", "Intermediate Climate" and "Closed Climate" and teacher qualifications under two categories, viz., "Trained Graduate Teachers" and Trained Post Graduate Teachers" under two rows. This sub-hypothesis was also tested by applying the Chi-square test. The results are presented in Table 4.11(c). As in the case of sub-hypothesis (b), 50 per cent or more teachers from each qualification group constituted the majority groups whose climate perceptions were analysed.

Table 4.11(c) : Chi-Square Value for the Perception of School Climate by Teachers bearing Different Qualifications

Qualifications of teachers	Climate Typology of Schools			Total
	Open	Intermediate	Closed	
Trained Graduate	31 (27.44)	39 (34.51)	43 (38.05)	113
Trained Post-graduate	6 (40.00)	6 (40.00)	3 (20.00)	15
Total	37	45	46	128

Note: Figures in brackets indicate percentages.

df = 2 $X^2 = 2.89$

Not significant at .05 level

The results show that greater percentages of trained post-graduate teachers perceive Open and Intermediate Climate types than do the Trained Graduate teachers. In the case of Closed Climate, this picture changes - here more trained graduate teachers than post-graduate trained teachers perceive Closed Climate.

The results were subjected to Chi-square test which yielded a value of 2.89 which was found not significant at .05 level with df=2. Therefore, qualifications of teachers do not appear to bear significant relationship with their perception of climate type of their school.

Some previous climate studies also investigated the effect of educational level of teaching personnel on school climate. These studies include research work by Anderson (1965), Ernst (1965), Brinkmeyer (1968), Hoagland (1968), Winter (1969), Harkin (1969), English (1972), Mann (1972), Manning (1973), Hill (1973), Seidmann (1973) and Cummings (1974).

Anderson (1965) reported that those principals having attended teachers' colleges were more often found in high Esprit Schools. Seidmann (1973) revealed that percentage of principals with advanced education was higher in schools having Open Climate characteristics.

Ernst (1965), and Manning (1973) found that there was no significant relationship between climate and formal education of principals.

Brinkmeyer (1968) reported that teachers with less than a Bachelor's degree tend to be associated with Open Climate Schools. Winter (1969) found that the degree held by the teachers was significantly related to climate. English (1972) found that teachers serving in relatively Closed Climate schools were found to have attained a significantly higher educational level than teachers serving in

relatively Open Climate schools. Hill (1973) discovered that the educational background of the teachers was the best predictor for each of the eight OCDQ sub-test scores. Hoagland (1968), Harkin (1969), Mann (1972), and Cummings (1974), however, revealed that the educational background of the teachers was not related to the climate of the schools.

Attempts were made to measure the influence of principal's experience (length of period) on school climate. The studies worth noting in this area are by Ernst (1965), Anderson (1965), Watkins (1966), Franklin (1968), McLeod (1969), Farber (1969), Esporite (1971), Reitz (1973), Petasis (1974), Carroll (1975) and Cunningham (1975).

Ernst (1965), Watkins (1966), Farber (1969), Esporite (1971), and Franklin (1968) found no significant relationship between experience and school climate whereas Anderson (1965), McLeod (1969), and Cunningham (1975) found that principals with longed duration of service tended to perceive a more open climate than those with shorter duration of service.

Reitz (1973) reported that those principals having fewer years of experience tended to have school climate

perceived by their staff; as being more closed than their counterparts having more years of experience.

Petasis (1974) and Carrol (1975) found a significant relationship between years of experience and climate, but they did not indicate the direction of relationship.

Neela Shelat (1975) in her doctoral study found that the variable of teacher qualifications did not correlate with teacher perceptions of climate categories. The present finding of no significant relationship between teacher qualifications and climate receives support from Shelat's study.

(d) Teacher Experience

The factor of teacher experience in perceptions on climate categories was also previously investigated, and the studies yielded conflicting results. This motivated the present investigator to find out how this factor has operated in his study. To that end he formulated the fourth sub-hypothesis. It reads as under :

> "There are no significant differences in perceptions about climate types of teachers with varying teaching experience".

To test the sub-hypothesis, the strategy of selecting 50 per cent or more teachers from the three climate groups was employed. Teaching experiences were divided into five slabs, viz., (1) 0-5 years, (2) 6-10 years, (3) 11-15 years, (4) 16-20 years and (5) above 20 years. A 5x3 Contingency Table (Vide- Table 4.11-d) was prepared. The data were subjected to Chi-square test. The results are reported below :

Table 4.11(d) : Chi-square value for the School Climate of Teachers with Different Teaching Experiences

Climate Classification	Experience of Teachers (In years) 0-5	6-10	11-15	16-20	Above 20	Total
Open	10 (31.35)	12 (28.57)	11 (36.66)	3 (25.00)	1 (8.33)	37
Intermediate	12 (37.50)	13 (30.95)	7 (23.34)	4 (33.33)	9 (75.00)	45
Closed	10 (31.25)	17 (40.48)	12 (40.00)	5 (41.67)	2 (16.67)	46
Total	32 (100.0)	42 (100.0)	30 (100.0)	12 (100.0)	12 (100.0)	128

df = 8 $X^2 = 15.70$

Significant at .05 level.

Note: Figures in brackets indicate percentages.

It would be seen that, by and large, the percentage of teachers having longer teaching experience decreases in Open Climate schools. No definite trend is seen in the case of Intermediate Schools.

In Closed Climate schools, by and large, the percentage of teachers with longer teaching experience increases.

When the results were examined by the Chi-square test, it yielded a value of 15.70 which was found to be significant at .05 level with df=8. Therefore, the hypothesised relationship between teaching experience and teacher perceptions of climate is supported by the test of significance.

In earlier researches on climate, this relationship was also investigated.

(e) Socio-Economic Status

The socio-economic status of the teachers was the last biographic characteristic studied in perspective of its possible relationship with climate typology. Neela Shelat (1975:153) concluded her review of research on personal variable of teachers by observing that "the non-reciprocal

input variables of size, location and the SES status of teachers do not show conclusively whether any significant relationship exists between them and the school climate." This variable was also selected for study to investigate the relationship of the social economic status of teachers with climate categories. He, therefore, formulated the following sub-hypothesis (e)

> "Perceptions of teachers belonging to different socio-economic status on the climate category of their schools would vary significantly."

In other words, it is assumed here that there will not be any significant difference among the teachers with different SES in regard to their perception of the organizational climate of their schools.

To test the sub-hypothesis, the procedures adopted in the case of last three sub-hypotheses will be followed. Fifty per cent or more teachers from each climate category schools will provide data on the SES variable, and the Chi-square test will be used to test the significance of difference in regard to climate perceptions of teachers belonging to different SES groups.The SES of each teacher will be computed as per the procedures described in the Appendix

Table 4.11(e) given below presents the classified data in 4x3 contingency table. The columns represent the four SES categories and the rows three climate categories.

Table 4.11(e) : Distribution of Teachers of Different SES according to their Perceptions of School Climate.

Climate Types	SES of Teachers				Total
	Low Class	Low-Middle Class	Middle Class	High-Middle Class	
Open	1 (33.33)	18 (31.58)	12 (26.09)	6 (27.28)	37
Interme-diate	1 (33.33)	15 (26.31)	21 (45.65)	8 (36.36)	45
Closed	1 (33.33)	24 (42.11)	13 (28.26)	8 (36.36)	46
Total	3 (100.00)	57 (100.00)	46 (100.00)	22 (100.00)	128

Note: Figures in brackets indicate percentages.

df = 6 $X^2 = 9.08$

Not significant at .05 level.

It is seen, at the first glance, that in Open Climate schools, the percentages of teachers go on decreasing as one moves from Low SES category to High-Middle SES category. In the case of Intermediate Climate schools, the highest percentage of teachers came from the middle SES group. In

the case of Closed Climate schools, the majority group of teachers were from the Low Middle SES group.

When the Chi-square test was applied to the results in Table 4.11(e), it yielded the value of 9.08, which was not significant at .05 level with df=6. This means that the present study rejects the existence of any significant relationship between the four SES categories of teachers and their perceptions of three categories of organizational climate of their schools. The sub-hypothesis(e), thus, fails to get substantiated.

Feldvebel (1964), Nicholas (1965), Gentry and Kenney (1967), Pumphray (1969) and others investigated the nature of relationship between school climate and the SES of the teachers. Feldvebel found no significant relationship between the SES of the school community and school climate, although he did find a significant relationship between the SES and "Hindrance" and "Consideration" dimensions of the OCDQ. Nicholas's finding also had similar overtones - he found school climate to be too powerful to be influenced by the SES variable. Gentry and Kenney's finding, however, struck a different note. They found that high SES schools were more Open and the low SES schools were more Closed. Pumphrey

found no significant relationship between the SES of teachers and their perceptions of the organizational climate types of their schools.

Climate studies in India by Mehra (1968), Patel (1973), Pillai (1973), Sharma (1973), Pillai (1975), Darji (1975), Franklin (1975), Pandya (1975), Choksi (1976), Tikmani (1976) and Gupta (1977) have not investigated the relationship between SES of teachers and their perceptions about climate categories.

The Hypothesis is substantiated in its sub-hypotheses on Age and Teacher Experience and it fails on its other sub-hypotheses. Thus, the findings of the testing of the present Hypothesis can be thus summed up: whereas some teacher variables like age and teaching experiences are correlated positively and significantly with teacher perceptions of three climate categories, other teacher variables like sex, qualifications and the SES status fail to pass the critical test of significant relationship.

4.8 HOW PERSONALITY FACTORS OF TEACHERS AFFECT THEIR PERCEPTION OF THE CLIMATE OF THEIR SCHOOLS

In the present scheme of the study, climate of schools is perceived by teachers in regard to its twelve components or dimensions. It is possible that personality factors possessed by teachers influence their perception of their schools' climate. It is, therefore, very much interesting and illuminating to find out whether the assumption stated above that personality factors of teachers influence their perception of the climate of their institutions is true or not. The present Hypothesis is formulated in that perspective.

The Hypothesis is worded as under :

> "There are no true differences in mean personality factors as measured by the 16 P.F. questionnaire, among teachers in schools characterized by different climates, as determined by the pattern of subtest scores on the OCDQ (Baroda Version)."
>
> (Hypothesis VII)

As stated earlier each of the 128 schools in the sample was placed on a continuum from Open at one extreme to the

Closed at the other extreme. The 37 schools with the highest scores were classified as Open, the 46 schools with the lowest scores were described as Closed, and the remaining 45 schools were designated belonging to as Intermediate Climate. Three mean personality scores were calculated for each of the sixteen personality factors, and the 't' test (significance of the difference between means) was used to isolate significantly different pairs of means associated with each personality factor. The Table 4.12,given on the next page, reports the pertinent data.

The data presented in the Table show that the means of the Factors B, C, G and H are significantly higher for teachers belonging to Open Climate schools than the teachers belonging to Closed climate schools. The teachers in Open Climate schools have mean scores of 4.84, 5.34, 6.40 and 4.44 for Factors B, C, G and H respectively, while those in Closed climate schools have mean scores of 4.47, 4.83, 5.96 and 3.93 for teachers, B, C, G and H respectively. The calculated 't'-values of teachers in Open climate and teachers in Closed climate were 2.60 ($P < .01$), 3.51 ($P < .01$), 2.72 ($P < .01$), and 4.01 ($P < .01$) for

Table 4.12 : Comparison of Scores on the 16 Personality Factors of Teachers of Schools Categorized as Open, Intermediate and Closed

Sr. No.	16 P.F. Factors	Type of Climate	Mean	S.D.	t-test value	Pair combination
1.	A	Open	4.80	1.82	0.36	Open-Inter
		Intermediate	4.75	1.82	1.52	Inter-Closed
		Closed	4.54	1.96	1.74	Open-Closed
2	B	Open	4.84	1.76	2.02*	Open-Inter
		Intermediate	4.54	1.75	0.56	Inter-Closed
		Closed	4.47	1.78	2.60**	Open-Closed
3.	C	Open	5.34	1.82	1.81	Open-Inter
		Intermediate	5.06	1.82	1.74	Inter-Closed
		Closed	4.83	1.76	3.51**	Open-Closed
4.	E	Open	5.81	1.69	1.17	Open-Inter
		Intermediate	5.64	1.76	2.78**	Inter-Closed
		Closed	5.98	1.64	1.23	Open-Closed
5.	F	Open	4.76	1.46	0.04	Open-Inter
		Intermediate	4.76	1.65	0.58	Inter-Closed
		Closed	4.69	1.60	0.50	Open-Closed
6.	G	Open	6.40	1.86	1.98*	Open-Inter
		Intermediate	6.08	2.00	0.77	Inter-Closed
		Closed	5.96	2.08	2.72**	Open-Closed
7.	H	Open	4.44	1.65	1.63	Open-Inter
		Intermediate	4.22	1.61	2.53*	Inter-Closed
		Closed	3.93	1.56	4.01**	Open-Closed

cont...

Table 4.12 (continued)

Sr. No.	16 P.F. Factors	Type of Climate	Mean	S.D.	t-test value	Pair Combination
8.	I	Open	5.47	2.01	0.57	Open-Inter
		Intermediate	5.87	2.18	1.47*	Inter-Closed
		Closed	6.16	1.88	1.22	Open-Closed
9.	L	Open	6.74	1.85	0.04	Open-Inter
		Intermediate	6.75	1.93	1.91	Inter-Closed
		Closed	7.01	1.83	1.82	Open-Closed
10.	M	Open	5.84	2.00	0.79	Open-Inter
		Intermediate	5.97	1.98	1.02	Inter-Closed
		Closed	6.12	2.00	1.75	Open-Closed
11.	N	Open	5.57	1.95	1.05	Open-Inter
		Intermediate	5.40	1.95	0.28	Inter-Closed
		Closed	5.44	1.94	0.85	Open-Closed
12.	O	Open	6.67	2.00	2.27*	Open-Inter
		Intermediate	6.99	1.81	1.00	Inter-Closed
		Closed	7.13	1.66	2.91**	Open-Closed
13.	Q_1	Open	6.27	1.97	1.00	Open-Inter
		Intermediate	6.10	2.03	0.48	Inter-Closed
		Closed	6.03	1.93	1.53	Open-Closed
14.	Q_2	Open	3.46	1.44	2.24*	Open-Inter
		Intermediate	3.84	2.09	1.74	Inter-Closed
		Closed	3.58	2.09	0.71	Open-Closed
15.	Q_3	Open	4.23	1.74	2.04*	Open-Inter
		Intermediate	3.93	1.70	0.78	Inter-Closed
		Closed	4.04	1.62	1.57	Open-Closed

cont...

Table 4.12 (continued)

Sr. No.	16 P.F. Factors	Type of Climate	Mean	S.D.	t-test value	Pair Combination
16.	Q_4	Open	5.30	1.82	0.26	Open-Inter
		Intermediate	5.26	1.92	0.74	Inter-Closed
		Closed	5.36	1.87	0.41	Open-Closed

* Significant at .05 level.
** Significant at .01 level.

Factors B, C, G and H respectively. The mean Factor O Score for teachers belonging to Open climate (6.67) was significantly lower than for teachers belonging to Closed climate (7.13). The calculated t-values of teachers in Closed climate schools and teachers in Open climate schools are 2.91 ($P < .01$) for Factor O.

The table further indicates that the mean Factor E score of teachers in schools with Closed climate is significantly higher than the mean Factor E score of teachers of schools having Intermediate climate. The same situation is true with Factor I, but the mean Factor H score of teachers in schools with Intermediate climate is significantly higher than the mean Factor H score of teachers in schools with closed climate. The teachers in Closed schools have mean scores of 5.98 and 6.16 for Factors E

and I respectively. The calculated t-values of teachers in Closed climate and teachers in Intermediate climate are 2.78 ($P < .01$) and 1.47 ($P < .05$) for Factors E and I respectively. The teachers in Intermediate schools have a mean score of 4.22 on Factor H and the mean Factor H score of teachers in schools with Closed climate is 3.93. The calculated t-values of teachers in Intermediate climate and Closed climate are 2.53 ($P < .01$) for Factor H.

One more look at the Table 4.12 revealed that the means of the Factors B, G and Q_3 are significantly higher for teachers belonging to Open climate schools than the teachers belonging to Intermediate climate schools, but the means of the Factor O and Q_2 are significantly lower for teachers belonging to Open climate schools than for the teachers belonging to Intermediate climate. The teachers in Open schools have mean scores of 4.84, 6.40 and 4.23 for Factors B, G and Q_3 respectively while those in Intermediate Schools have mean scores of 4.54, 6.08, and 3.93 for Factors B, G and Q_3 respectively. The calculated t-values of teachers in Open climate and teachers in Intermediate climate are 2.02 ($P < .05$), 1.98 ($P < .05$) and 2.04 ($P < .05$) for Factors B, G and Q_3 respectively. The teachers

in Intermediate schools have mean scores of 6.99 and 3.84 for Factors O and Q_2 respectively while those in Open schools had mean scores of 6.67 and 3.46 for Factors O and Q_2 respectively. The calculated t-values of teachers in Intermediate Schools and teachers in Open Schools are 2.27 ($P < .05$) and 2.24 ($P < .05$) for Factors O and Q_3 respectively.

Because of the significant differences in means associated with these nine personality factors, the null hypothesis as stated at the beginning of this section is rejected.

The personality characteristics of teachers associated with Open and Closed climate schools yielded by testing this Hypothesis are reported in the Table 4.13 below:

Table 4.13 : Personality Characteristics of Teachers Associated with Open Climate and Closed Climate Schools

No.	Characterization of teachers in Open Climate Schools	Characterization of Teachers in Closed Climate Schools
1.	Bright	Dull
2.	Mature	Emotional
3.	Conscientious	Casual
4.	Adventurous	Timid
5.	Confident	Insecure
6.	Dependent	Dominant
7.	Self-controlled	Sensitive

Correlational Analysis :

In this section, the relationship of climate dimensions with sixteen different personality variables (provided by 16 P.F. questionnaire) has been studied using correlational technique.

As the Null Hypothesis VII is not sustained, it is felt that the correlational technique, as a more powerful statistical test, would measure the degree of relationship between the dependent and independent variables. Hence, this technique is used.

The Pearson Product Moment Correlation Coefficient was computed to determine the relationship between each of the 192 pairs of variables (Twelve OCDQ dimensions and sixteen personality characteristics). Table 4.14, given on the next page, reports the results.

The Table 4.14 points out the following things :

(1) The coefficients of correlation between the scores on Factor B and eight dimensions in which high scores are indicative of Open climate exhibit significant positive relationship (Intimacy, $r=0.06$, $P < .05$; Esprit, $r=0.06$, $P < .05$; Consideration, $r = .07$, $P < .05$; Thrust,

CHART-XI

MEAN SCORES(CLIMATE-WISE) ON 16 PESONALITY FACTORS OF TEACHERS

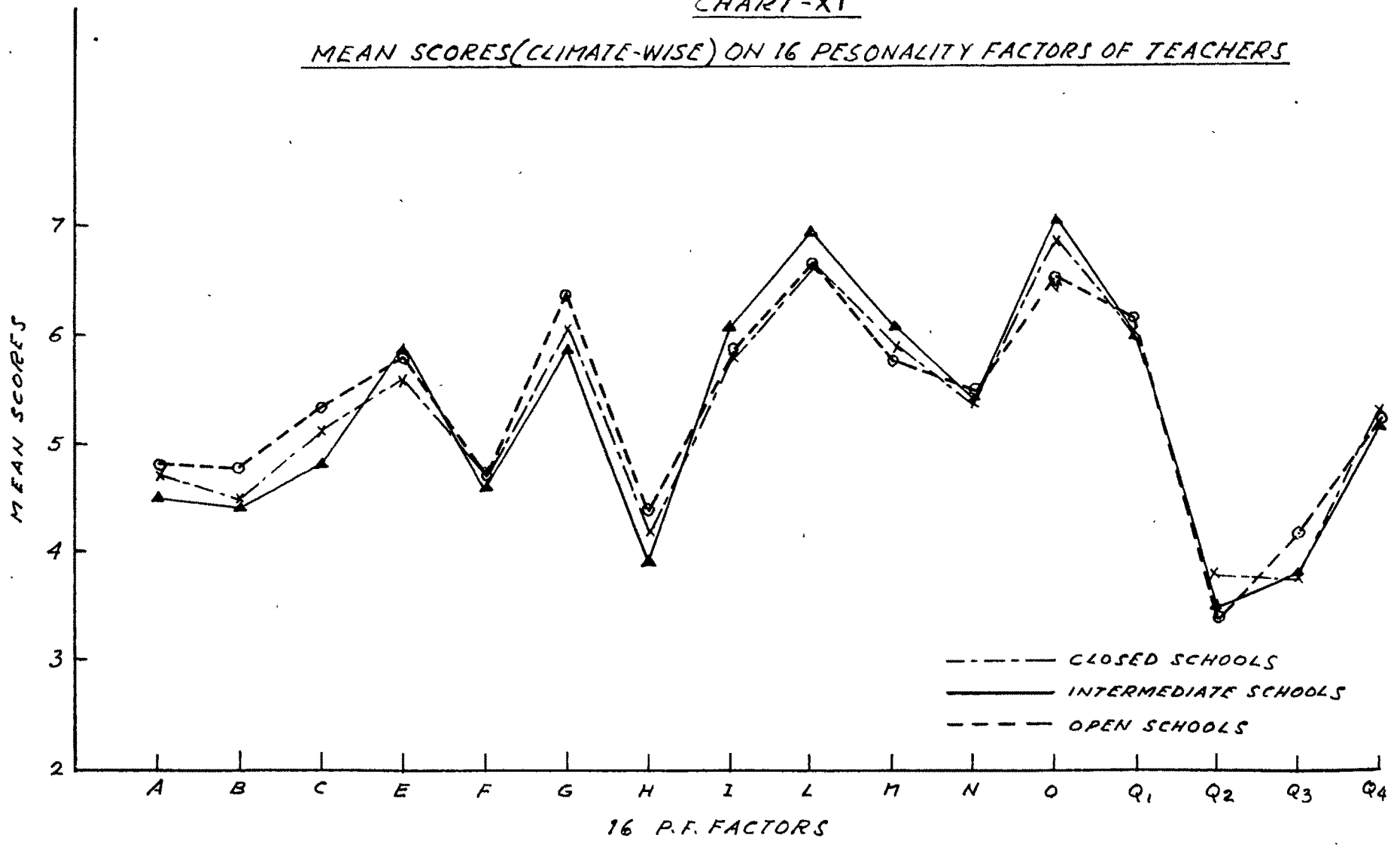


Table 4.14: Significant Correlations Between High School OCDQ Dimensions and Teachers' Personality Factors

16 P.F. Factors	OCDQ (Baroda Version) Dimensions											
	Dis-engagement	Hind-rance	Inti-macy	Esp-rit	Aloof-ness	Production Emphasis	Consi-deration	Thru-st	Non-graded order	Feed-Back	Human-Rela-tions	Auto-nomy
B	-.08**	-.18**	.06*	.06*	-.06*	-.07*	.07*	.58**	.23**	.50**	.87*	.26**
C	-.14**	-.11**	.07*	.08**	-.06*	-.08**	.06*	.01*	.07*	.07*	.12**	.08**
G	-.06**	-.07*	.08**	.09**	-.07*	-.06*	.10**	.09**	.17**	.68**	.18**	.04**
H	-.06*	-.06*	.07*	.06*	-.06*	-.06*	.06*	.31**	.06*	.34**	.06*	.06*
O	.10**	.07*	-.08**	-.10**	.06**	.08**	-.06*	-.34**	-.07*	-.33**	-.06*	-.09**
I	.06*	.07*			.06*			-.28**	-.22**	-.10**	-.21**	-.07*
I	.07*		-.07*			.06*	-.06*	-.31**	-.06*	-.34**		-.06*
Q_2	.09**	.11**			.07*	.08**	-.08**	-.07*	-.13**	-.54**	-.07*	-.29**
Q_3	-.09**	-.07*			-.06*		.07*	.11**	.06*	.12**	.09**	.06*

* Significant at .05 level

** Significant at .01 level

r=.50, P < .01; Non-graded order, r=.23 P < .01; Feedback, r=.07, P < .05 and Autonomy, r=.26, P < .01)

The four dimensions in which high scores are indicative of Closed Climate show significant negative relationship with the scores on Factor B (Disengagement, r=-.08, P < .01; Hindrance, r=-.18, P < .01; Aloofness, r=-.06 and Production Emphasis, r=-.07, P < .05).

(2) Correlations between the scores on Factor C and eight dimensions in which high scores are indicative of Open climate demonstrate significant positive relationship (Intimacy, r=-.07, P < .05; Esprit, r=-.08, P < .01; Consideration, r=.06, P < .05; Thrust, r=.07, P < .05; Non-graded order, r=.07, P < .05; Feedback, r=.07, P < .05; Human Relations, r=.12, P < .01 and Autonomy, r=.08, P < .01).

There exist significant negative correlations between the scores on Factor C and four dimensions in which high scores are indicative of Closed climate (Disengagement, r=-.14, P < .01; Hindrance, r=-.11, P < .01; Aloofness, r=-.06, P < .05 and Production Emphasis, r=-.08, P < .01).

(3) Significant positive correlations resulted between scores on Factor G and Intimacy (.01), Esprit (.01), Consideration (.01), Thrust (.01), Non-graded order (.01), Feedback (.01), Human Relations (.01), and Autonomy (.01).

Significant negative correlations have been found between scores on Factor C and Disengagement (.05), Hindrance (.05), Aloofness (.05), and Production Emphasis (.01 level).

(4) There exist significant positive correlations between the scores on Factor H and Intimacy (.05 level), Esprit (.05 level), Consideration (.05 level), Thrust (.01 level), Non-graded order (.05 level), Feedback(.01 level), Human Relations (.05 level), and Autonomy (.05 level).

Correlations between scores on Factor H and Disengagement, Hindrance, Aloofness, and Production Emphasis are negative and significant at .05 level of significance.

(5) The eight dimensions in which high scores are indicative of Open climate display significant negative relationship with the scores on Factor O (Intimacy, r=-.08,

$P < .01$; Esprit, $r=-.10$, $P < .01$; Consideration, $r=-.06$, $P < .05$; Thrust, $r=-.34$, $P < .01$; Non-graded order, $r=-.07$, $P < .05$; Feedback, $r=-.33$, $P < .01$; Human Relations $r=-.06$, $P < .05$ and Autonomy, $r=-.09$, $P < .01$).

The four dimensions in which high scores are indicative of Closed climate manifest positive correlations on scores on Factor O (Disengagement, $r=.10$, $P < .01$; Hindrance, $r=.07$, $P < .05$; Aloofness, $r=.06$, $P < .05$, and Production Emphasis, $r=.13$, $P < .01$)

(6) There exist significant negative correlations between the scores on Factor E and five of the eight dimensions in which high scores are indicative of Open climate (Thrust, $r=-.28$, $P < .01$; Non-graded order, $r=-.10$, $P < .01$; Feedback, $r=-.21$, $P < .01$ and Autonomy, $r=-.07$, $P < .05$).

The magnitude of the positive correlations between scores on Factor E and three of the four dimensions in which high scores are indicative of closed climate are statistically significant at .05 level of significance (Disengagement, $r=.06$, $P < .05$; Hindrance, $r=.07$, $P < .05$; and Aloofness, $r=.06$, $P < .05$).

(7) The negative correlations of scores on Factor I were found to be significant with Intimacy (.05 level), Consideration (.05 level), Thrust (.01 level), Non-graded order (.05 level), Feedback (.01 level), and Autonomy (.05 level).

Positive correlations resulted between scores on Factor I and Disengagement and Production Emphasis which are significant at .05 level of significance.

(8) There exist significant negative correlations between the scores on Factor Q_2 and Consideration(.01 level), Thrust (.05 level), Non-graded order (.01 level), Feedback (.01 level), Human Relations (.05 level), and Autonomy (.01 level).

Significant positive correlations have been found between scores on Factor Q_2 and Disengagement (.01 level), Hindrance (.01 level), Aloofness (.05 level), and Production Emphasis (.01 level).

(9) The positive correlations of scores on Factor Q_3 were found to be significant with Consideration (.05 level), Thrust (.01 level), Non-graded order (.05 level), Feedback

(.01 level), Human Relations (.01 level), and Autonomy (.05 level).

The magnitude of the negative correlations between scores on Factor Q_3 and three of the four dimensions in which high scores are indicative of Closed Climate are statistically significant at .05 level of significance (Disengagement, r=-.09, $P < .05$, Hindrance, r=-.07, $P < .05$ and Aloofness, r=-.06, $P < .05$).

In relation to these findings, it may be interpreted that those teachers who are intelligent, emotionally stable, conscientious, adventurous, self-controlled, expressive, self-confident and group dependent tended to apprehend all twelve dimensions of climate in a manner indicative of an Open Climate while those teachers who are less intelligent, worrying, impatient, shy, fussy, assertive, resourceful and lax tended to apprehend all twelve dimensions in a manner indicative of a closed climate. These results provide additional support to reject the Null Hypothesis VII.

The teachers' personality variables, yielded by the correlational analysis are reported in terms of the twelve organizational dimensions. (See Table 4.15)

Table 4.15 : Significant Relationships Between Climate Dimensions And Personality Factors

Climate Dimensions	Characterization of Teachers in High Scoring Schools	Characterization of Teachers in Low Scoring Schools
Dis-engagement	Boorish, Evasive, Fickle, Aloof, Anxious, Hard, Imaginative Uncontrolled Self-sufficient.	Conscientious, Calm, Determined, Genial, Cheerful, Soft-hearted, Self-reliant, Controlled, Sociably Group dependent.
Hindrance	Dull, Worrying, Quitting, Shy, Depressed, Assertive, Solemn, Resourceful.	Persevering, Phelgmatic, Responsible, Responsive, Tough, Expressive, Controlled.
Intimacy	Bright, Mature, Persevering, Frivolous, Self-confident, Unaffected by Fancies.	Dull, Changeable in Attitudes, Demanding, Cold, Moody, Artistically Fastidious.
Esprit	Intelligent, Stable, Attentive to people, Impulsive, Vigorous	Of Lesser Intelligence, Neurotically Fatigued, Obstructive, Aloof, Anxious.
Aloofness	Quitting, Immature, Impatient, Careful, Tender, Unconventional, Uncontrolled	Intellectual, Placid, Attentive to people, Carefree, Resilient, Conventional, Controlled.
Production Emphasis	Of Lower Morale, Lacking in Frustration Tolerance, Frivolous, Withdrawn, Fussy, Impatient, Resourceful.	Cultured, Realistic About Life, Ordered, Adventurous, Cheerful, Socially Group Dependent.
Consideration	Persevering, Calm, Group Dependent, Determined, Responsive, Resilient, Controlled, Realistic.	Quitting, Evasive, Fickle, Shy, Worrying, Self-Assured, Subjective, Lax, Self-sufficient.
Thrust	Cultured, Phlegmatic, Ordered, Adventurous, Tough, Submissive, self-reliant, controlled Fashionabic.	Boorish, Immature, Indaent, Restrained, Depressed, Independent Minded, [illegible], Uncontrolled, Resolute.

...cont.

Table 4.15 (contd.)

Climate Dimensions	Characterization of Teachers in High Scoring Schools	Characterization of teachers in Low Scoring Schools
Non-graded order	Conscientious, Mature, Planfull, Active, Bold, Expedient, Masculine Temperament, Self-controlled Goes with the Group.	Weaker Strength of Interest, Emotional, Casual, Withdrawn, Sensitive, Not courageous, Over Protected, Uncontrolled, Dissatisfied with group integration.
Feedback	Bright, Stable, Able to concentrate, Active, Feel no Fears, conventional, Acts on Logical Evidence, Values Social Approval More, Shows Foresight.	Dull, Easily Annoyed, Pickle, Slow, Ineffective Speaker, Unconventional, Acts on sensitive Intuition, Accustomed to making his own Decisions, uncontrolled.
Human Relations	Intelligent, Maintains Better Group Morale, Energetic, Friendly, Vigorous, Soft-hearted, Controlled, Group dependent.	Of Lesser Intelligence, Dissatisfied with the world situation, Obstructive, Apt to be embittered, Exacting, Stern, Lax, Self-sufficient.
Autonomy	More Intelligent, Emotionally Stable, Responsible, Venturesome, Cheerful, Humble, Expects little, controlled, Group Dependent.	Less Intelligent, Affected by Feelings, Friovolous, Shy, Brooding, Assertive, Seeking help, Undisciplined, Self-sufficient.

4.9 SCHOOL CLIMATE TYPOLOGY AND ITS RELATIONSHIP WITH PUPIL CONTROL TYPOLOGY

School is a social system. One of the salient aspects of school culture, as it appears on copious literature published on philosophy, sociology and administration is pupil control. Pupil control seems to be a natural part of the structural and the normative aspects of school culture. Therefore, pupil control ideology marks the behaviour of school administrators and teachers. As Willower, Eidell and Hoy (1967) found, pupil control was a thread running through the fabric of the school's culture.

As discussed in Chapter I, in the present study control ideology is conceptualised on a continuum ranging from "custodialism" at one extreme to "humanism" at the other. The question that naturally arises is what relationship does climate typology bear with control ideology typology? What Halpin (1966: 203) says about the authenticity of Open Climate in terms of real-genuine relations among teachers and between teachers and the principal and the inauthenticity of Closed Climate in terms of absence of genuine relations among teachers and between teachers and

between teachers and the principal is true, in Open climate schools, one can assume, teachers must have humanistic control ideology orientation to a greater extent, and in Closed Climate schools, teachers' control ideology must be characterised by custodial ideology to a greater extent.

Willower and Jones (1967) found that although many factors influenced school climate ("the personality of the school), pupil control was a dominant motif. Appleberry and Hoy (1969) found that public elementary schools with relatively Open climates were found to be significantly more humanistic in pupil control ideology than with relatively closed climates.

The present investigator, in the light of the research evidence on relationship with climate typology and pupil control ideology available in the U.S.A., thought it desirable to examine whether the same kind of relationship obtains in Indian schools between their climate typology and pupil control typology. In this perspective, the present Null Hypothesis is formulated :

"There are no true differences in mean orientation towards pupil control ideology, as measured by

the PCI (Baroda Version) of teachers in schools characterized by different climate types, as determined by the patterns of sub-test scores on the OCDQ (Baroda Version)".

(Hypothesis VIII)

Appleberry and Hoy (1969) provide a further rationale for the Hypothesis when they stress authenticity of the interactions among professional staff in schools with Open climates and the inauthenticity of the interactions among professional staff with Closed climates. They assume that if the interactions among teachers and between teachers and principals were authentic, then authenticity would also tend to pervade teacher-pupil interactions. Therefore, it can be theorised that a humanistic pupil control ideology would facilitate and be facilitated by authentic interactions between teachers and pupils.

As done earlier, in order to test the above Hypothesis, the format of three climate typology - Open, Intermediate, Closed was retained. The mean scores and S.D. of each of the three climate type schools were computed. Mean differences of Open and Intermediate Climate schools, of Intermediate and Closed schools and Open and Closed schools were

calculated and applying the t-test to each pair, its t-value was computed. These three t-values were tested for their level of significance. The results are presented in Table 4.16 below :

Table 4.16 : t-Test values for testing significance of Relationship between Organizational Climate of Schools and Pupil Control Ideology of Teachers

Sr. No.	Type of Climate	PCI Scores Mean	S.D.	Mean difference	t value	P (Level of significance)
1.	Open	112.87	18.93	1 and 2	0.43	NS
2.	Intermediate	113.53	17.81	2 and 3	5.39**	.01
3.	Closed	120.92	19.71	1 and 3	5.18**	.01

It is seen from the above Table that the mean PCI Scores for teachers in Open and Closed climate schools were 112.87 and 120.92 respectively. The mean PCI score for teachers in Open climate schools was lower than the mean PCI score for teachers in Closed climate schools ($t=5.18$, $P < .01$). Moreover, the teachers in Intermediate schools had significantly lower mean ($P < .01$) PCI score than the teachers in Closed schools. Further more, the relationship

between the degree of 'openness' of the climate of all schools and the PCI or teachers was also significant ($r=-.18$, $P < .01$), implying thereby that the more 'Open' the climate of the schools is, the more humanistic is the pupil control ideology of their teachers. This would mean that schools with relatively Open climates would be significantly more humanistic in pupil control ideology than schools with relatively closed climates and that teachers serving in schools with relatively Open climates would be significantly more humanistic than teachers serving in schools with relatively Closed climates.

As a result of these findings the Null Hypothesis at no differences in mean scores was rejected.

In addition to the t-test to isolate significantly different pairs of means associated with the PCI, the relationship between the dimensions of the sampled high schools' organizational climate and their teachers' PCI have been determined by correlation technique. The magnitude of calculated 'r' is shown in Table 4.17.

Table 4.17 : Correlations between PCI Scores and OCDQ (Baroda Version) sub-test Scores

Pupil Control Ideology	Dimensions of Climate	Coefficients of Correlation
PCI	Disengagement	.07*
PCI	Hindrance	.06*
PCI	Intimacy	-.11**
PCI	Esprit	-.12**
PCI	Aloofness	.07*
PCI	Production Emphasis	.07*
PCI	Consideration	-.08**
PCI	Thrust	-.07*
PCI	Non-graded order	-.10**
PCI	Feedback	-.09**
PCI	Human Relations	-.08**
PCI	Autonomy	-.11**

* Significant at .05 level
** Significant at .01 level

The Pearson's Product-Moment Correlation (Table 4.17) resulted in significant correlations between PCI score and Disengagement (.05 level), Hindrance (.05 level), Intimacy (.01 level), Esprit (.01 level), Aloofness (.05 level),

Production Emphasis (.05 level), Consideration (.01 level), Thrust (.05 level), Non-graded order (.01 level), Feedback (.01 level), Human Relations (.01 level), and Autonomy (.01 level). Though all the twelve r's are low, confidence interval showed that all the r's are significant at the prescribed levels of significance. In addition, negative correlations were found between the PCI scores and scores of the eight dimensions (Intimacy, Esprit, Consideration, Thrust, Non-graded order, Feedback, Human Relations, and Autonomy) in which high scores are indicative of an Open Climate, while positive correlations were found between the PCI scores and scores of the four dimensions (Disengagement, Hindrance, Aloofness, and Production Emphasis) in which high scores are indicative of a Closed Climate. Since teachers having humanistic pupil control ideology tended to perceive all twelve dimensions of climate in a manner indicative of Open Climate while teachers with a custodial pupil control ideology tended to view all twelve dimensions in a manner indicative of a closed climate, these constituted further evidence to reject the Null Hypothesis of no differences.

4.10 SCHOOL CLIMATE AND BELIEF SYSTEMS OF TEACHERS

The open-minded person, according to Rokeach (1960), perceives the world as friendly. The need to ward off threat is absent; authority is not worshiped for its own sake, and a high degree of tolerance is present. The Open climate characterized by a high degree of flexibility, freedom of communication, and receptivity to new ideas may be consistent with the characteristics of open-minded individual. The closed-minded individual, on the contrary, sees the world as threatening. The need to ward off threat is predominant; authority is worshipped, and a high degree of intolerance is present. The Closed climate characterized by rigidity, authoritarianism, and resistance to new ideas may be consistent with the characteristics of closed-minded individual.Thus, it may be theorised that the teachers serving in Open schools will be open-minded while the teachers serving in Closed schools will be closed-minded.

The reasonable basis for the foregoing discussion has been provided by the Davis model of behaviour in a social institution. This model is a modified form of Gatzels-Guba model of behaviour in a social institution. While the Getzels-Guba model incorporates Murray's theory of

personality (need dispositions), this model incorporates Rokeach's personality theory of disbelief-belief systems. This discussion led to following Hypothesis :

> "There are no differences in mean belief systems, as measured by the Dogmatism Scale, among teachers in schools characterized by different climates, as determined by the pattern of sub-test scores on the OCDQ (Baroda Version)."
>
> (Hypothesis IX)

The classification of schools used in the investigation of the earlier Null Hypothesis is retained in the examination of the present Null Hypothesis. The 37 schools with the highest scores were classified as Open, the 46 schools with the lowest scores were designated as Closed, and the remaining 45 schools were shown as possessing the Intermediate climate. Three mean scores on Dogmatism Scale were calculated; each was the mean score of teachers who responded to the instrument in schools classified in a particular category. By applying the t-test between three possible sets of mean scores, pairs of means that were significantly different were identified. The analysis of the data is reported in the Table 4.18.

Table 4.18 : Comparison of Dogmatism Scores of Teachers of Open, Intermediate and Closed Types of Schools

Type of Climate: Pair combination	Dogmatism Score				t-value	P (level of significance)
	Mean	S.D.	Mean	S.D.		
Open-Intermediate	194.50	24.63	197.75	26.08	1.59	NS
Intermediate-Closed	197.75	26.08	200.61	24.66	1.54	NS
Open-Closed	194.50	24.63	200.61	24.66	2.96	.01

From the above table, it will be seen that the mean scores on Dogmatism scale for teachers in Open and Closed school climates were 194.50 and 200.61 respectively. The mean score on Dogmatism Scale for teachers in Open climate schools was significantly lower than the mean score on Dogmatism Scale for teachers in Closed climate schools ($t=2.96$, $P < .01$). Furthermore, the relationship between the degree of 'openness' of the climate of all schools and the dogmatism level of teachers was also significant ($r=-.06$, $P < .01$); the more 'open' the climates of the schools, the more open-minded are the teachers.

As the results of the t-test did not provide evidence

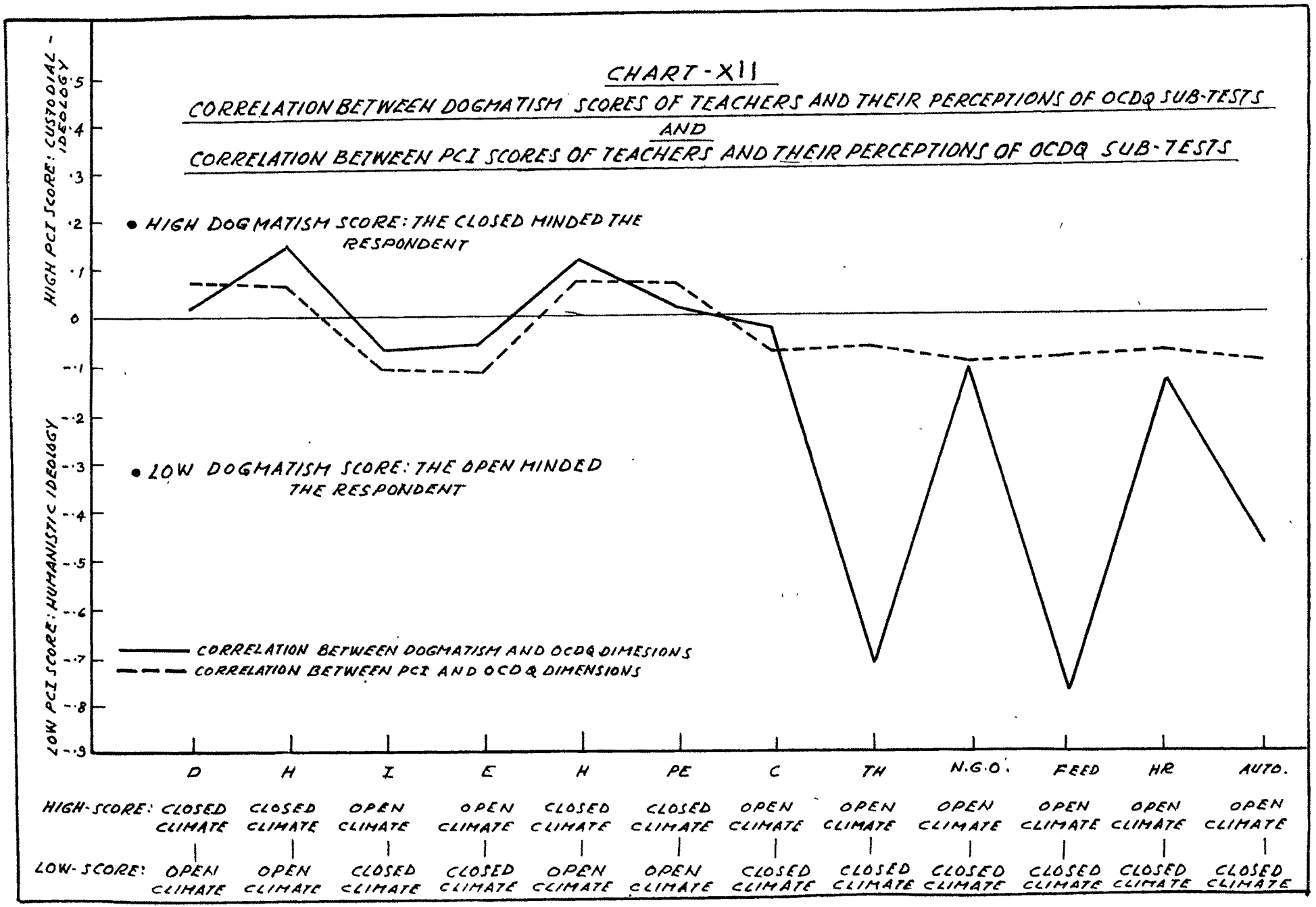


CHART - XII
CORRELATION BETWEEN DOGMATISM SCORES OF TEACHERS AND THEIR PERCEPTIONS OF OCDQ SUB-TESTS
AND
CORRELATION BETWEEN PCI SCORES OF TEACHERS AND THEIR PERCEPTIONS OF OCDQ SUB-TESTS
HIGH PCI SCORE: CUSTODIAL - IDEOLOGY
LOW PCI SCORE: HUMANISTIC IDEOLOGY
• HIGH DOGMATISM SCORE: THE CLOSED MINDED THE RESPONDENT
• LOW DOGMATISM SCORE: THE OPEN MINDED THE RESPONDENT
CORRELATION BETWEEN DOGMATISM AND OCDQ DIMESIONS
CORRELATION BETWEEN PCI AND OCDQ DIMENSIONS
D H I E H PE C TH N.G.O. FEED HR AUTO.
HIGH-SCORE: CLOSED CLIMATE | CLOSED CLIMATE | OPEN CLIMATE | OPEN CLIMATE | CLOSED CLIMATE | CLOSED CLIMATE | OPEN CLIMATE | OPEN CLIMATE | OPEN CLIMATE | OPEN CLIMATE | OPEN CLIMATE | OPEN CLIMATE
LOW-SCORE: OPEN CLIMATE | OPEN CLIMATE | CLOSED CLIMATE | CLOSED CLIMATE | OPEN CLIMATE | OPEN CLIMATE | CLOSED CLIMATE | CLOSED CLIMATE | CLOSED CLIMATE | CLOSED CLIMATE | CLOSED CLIMATE | CLOSED CLIMATE

to support the present Null Hypothesis, further testing was carried out by computing the Pearson Product Moment correlation coefficients to determine the extent of relationship between the sub-tests of the OCDQ (Baroda Version) for high schools and the dogmatism level of their teachers. The twelve Pearson Product Moment coefficients of correlations are depicted in Table 4.19 below :

Table4.19 : Correlations between Dogmatism Scores and OCDQ sub-test scores

Dogmatism level	Dimensions of Climate	Coefficient of Correlation
DOGMA	Disengagement	.02
DOGMA	Hindrance	.14**
DOGMA	Intimacy	-.07*
DOGMA	Esprit	-.06*
DOGMA	Aloofness	.11**
DOGMA	Production Emphasis	.01
DOGMA	Consideration	-.03
DOGMA	Thrust	-.72**
DOGMA	Non-graded order	-.12**
DOGMA	Feed-back	-.78**
DOGMA	Human Relations	-.14**
DOGMA	Autonomy	-.48**

* Significant at .05 level

** Significant at .01 level.

The following findings emerge about correlations between the dimensions of the OCDQ (Baroda Version) and dogmatism level of teachers (Vide- Table 4.19) :

(1) The seven of the eight dimensions in which high scores are indicative of Open Climate exhibit negative significant relationship with dogmatism scores of the teachers (Intimacy, $r=-.07$, $P < .05$; Esprit, $r=-.06$, $P < .05$; Thrust, $r=-.72$; $P < .01$; Non-graded order, $r=-.12$, $P < .01$; Feedback, $r=-.78$, $P < .01$: Human Relation, $r=-.18$, $P < .01$ and Autonomy, $r=-.48$, $P < .01$).

The correlation coefficients ranged from -.06 to -.78.

(2) The two of the four dimensions in which high scores are indicative of Closed climate exhibit positive relationship with dogmatism scores of the teachers (Hindrance, $r=.14$; Aloofness, $r=.11$; $P < .01$ for both).

(3) Correlations between dogmatism score on one hand and disengagement, Production Emphasis and Consideration on the other hand are not significant.

Though the correlations of Disengagement and Production

Emphasis with Dogmatism score are low, the association is positive, while the association is low but negative in the case of Consideration. Therefore the relationship of school climate and belief system of teachers is either confirmed or atleast is not denied (Disengagement, Production Emphasis, and Consideration bear no significant relationships).

The Null Hypothesis, therefore, does not stand - it is not substantiated.

4.11 THE PERSONALITY FACTORS, THE PCI AND THE BELIEF SYSTEM OF TEACHERS IN RELATION TO CERTAIN STATIC VARIABLES

IT may be recalled that the present study has shown earlier that the personality factors of teachers, their pupil control ideology and their belief system contribute wholesomely to the development of organizational climate of schools. Therefore, the investigator has deemed it fit to examine teachers' personality factors, pupil control ideology of teachers, and their belief system in relation to some static variables such as categories of the schools and size of the schools.

To examine the relationship between personality factors and the categories of the schools, the PCI and the categories of the schools, teachers' belief system and the categories of the schools, the analysis of variance technique was applied. Moreover, to find out the relationship between personality factors of teachers, their PCI scores and their dogmatism level on one hand and the size of the schools on the other hand the same technique of analysis of variance was applied.

The analysis of variance is a single composite test to compare all sample means simultaneously, which tells us whether or not a statistically significant difference exists somewhere in the data - in the mean scores. It answers the question: is the variability between groups large enough in comparison with the variability within groups to justify the inference that the means of the population from which the different groups were sampled are not the same? In other words, if the variability between group means is large enough, it can be concluded that they probably come from different populations and that there is a statistically significant difference in the data. The particular statistical test yielding the answer is the 'F' ratio :

$$F = \frac{\text{Between Group variance}}{\text{Within group variance}}$$

The 'F' ratio is just a preliminary and explanatory tool. If a significant 'F' ratio is obtained, it indicates that somewhere in the data, something other than chance is probably operating. To attempt to isolate the presence, nature and content of this non-chance influence the Scheffe' test is used.

To examine the relationship between the personality factors of teachers and the type of the schools, a related Hypothesis was formulated. It reads as under :

"The personality factors of teachers of the 'Coveted' schools, the Middle Quality schools and the Just 'so so' [illegible] schools will differ."

(Hypothesis X)

The one-way analysis of variance test was used to test the Hypothesis. The Table 4.20 contains a summary of the F-ratios for the analysis of variance for one way design for the three categories of the schools for sixteen personality factors as measured by the 16 P.F.questionnaire.

Table 4.20 : The Analysis of Variance Data for the Relationship Between The Categories of the Schools and Personality Factors of their Teachers

16 P.F. Factors	df	F-Ratio	P
A	2/223	2.13	
B	2/223	1.80	
C	2/223	6.67	P < .01
E	2/223	0.85	
F	2/223	2.16	
G	2/223	0.67	
H	2/223	0.66	
I	2/223	1.37	
L	2/223	0.09	
M	2/223	1.10	
N	2/223	0.38	
O	2/223	3.03	
Q_1	2/223	0.76	
Q_2	2/223	4.91	P < .01
Q_3	2/223	4.91	P < .01
Q_3	2/223	2.93	

As can be seen from the Table 4.21, the analysis yielded significant 'F' ratios for the 16 P.F. Factors C, Q_2, and Q_3.

The significance of these three 'F' ratios demanded further testing of the Hypothesis by making groups on the basis of school categories, using all possible combinations of pairs. Mean differences in case of all these pairs were tested by using the Scheffe' test. Table 4.21 shows the K-values of different comparisons.

Table 4.21 : Test of Significance for pairs of Means on Factors C, Q_2 and Q_3 of Teachers of Different Categories of Schools using the Scheffe' Test.

16 P.F. Factors	Category of School	Mean	K	Pair combination	P
C	Coveted	5.53	2.26	Coveted-Just soso	-
	Middle quality	5.03	1.76	Middle-Quality -Just so so	-
	Just 'so so'	4.66	3.66	Coveted-Just so so	$P \leq .01$
Q_2	Coveted	4.25	1.73	Coveted-Middle	-
	Middle Level	3.65	1.45	Middle-Quality Just soso	-
	Just so so	3.15	3.14	Coveted-Just so so	$P < .01$
Q_3	Coveted	4.42	2.60	Coveted-Middle-Quality	-
	Middle Quality	3.72	0.05	Middle-Quality Just so so	-
	Just so so	3.62	2.96	Coveted-Just so so	$P < .05$

The Table 4.21 shows that -

(1) The difference between the mean scores on Factor C of the teachers of coveted and Just 'so so' schools is .87 in favour of teachers of coveted schools, which is significant at .01 level of significance. This means that the teachers of the coveted schools are mature, emotionally stable, realistic about life and calm while the teachers of Just 'so so' schools are worrying, lacking in frustration-tolerance, emotionally unstable and evasive in facing personal decisions.

(2) The difference between the mean score on Factor Q_2 of the teachers of coveted and Just 'so so' schools is 1.10 in favour of teachers of coveted schools, and the K-value is 3.14 which is significant at .01 level of significance meaning thereby that the teachers of coveted schools are self-sufficient and resourceful and the teachers of Just 'so so' schools are dependent.

(3) The mean score on Factor Q_3 for teachers of coveted schools was significantly higher than the mean score on Factor Q_3 for teachers of Just so so schools ($K=2.96$, $P < .05$), which indicates that the teachers of

coveted schools are self-controlled while those of Just 'so so' schools are uncontrolled.

It is interesting to note from the Table that the mean personality factor scores (on factors C, Q_2 and Q_3) in case of teachers of Just 'so so' schools are lowest as compared to their counterparts in the rest of the two categories of schools whereas the teachers' mean personality scores (on factors, C, Q_2 and Q_3) in the case of coveted schools are highest.

In conclusion, it can be stated that teachers of coveted schools are mature, emotionally stable, realistic about life, calm, self-sufficient, resourceful and controlled while those of Just 'so so' schools are worrying, lacking in frustration-tolerance, emotionally unstable, evasive in facing personal decisions, dependent and uncontrolled.

It should be noted that this Hypothesis was upheld only in case of three (C, Q_2 and Q_3) of the sixteen personality factors as illustrated in Table 4.21. Hence the Hypothesis remains essentially unsupported.

This would mean that in whatever ways the personality factors of teachers may be influencing the organizational climate of secondary schools, the quality structure of schools do not seem to play their part. In fact, quality does form an important part of school environment. Ordinarily, qualitative differences in schools should have their impact on climate. But this is not reflected in the present study. This part of the study, that is to say, how differences in quality of schools do not leave their imprint on school climate needs to be investigated.

4.12 RELATIONSHIP BETWEEN SCHOOL CATEGORIES AND THEIR TEACHERS' PCI SCORES

In an earlier Hypothesis, the personality factors of teachers in the three categories of schools - the Coveted Schools, Middle Quality Schools and the Just 'so so' schools were studied. The Coveted schools are the schools heavily in demand. Therefore, they can select their students and afford to exercise on them strict control in terms of attendance, regularity of work, mode of behaviour, mode of

participation in school programme, and they can set norms of achievement in curricular, co-curricular and extra curricular activities. The Middle Quality Schools are also institutions where admissions to pupils are not available merely by asking. They can also afford to be selective in their admissions of students, but they may not be as stiff and fastidious in their attitudes and demands to meet their norms. They have considerable scope for controlling their pupils, but such schools are more realistic, understanding and flexible in their demands, prescriptions and constraints. The 'Just so' schools, in many cases, are schools where entry for pupils does not pose a problem. These schools, like all other schools, also try to enforce discipline, control, and conformity to the extent that is possible depending upon the personality characteristics, abilities and efforts of the principal, the atmosphere that is prevailing in the schools, the type of teachers on the staff and the types of homes from which their student population is drawn. Pupil participation may come voluntarily or it may be forced or it may be an uncertain factor depending upon so many subjective variables determining the role played by principal, teachers, pupils and parents.

Schools are, in a way, service organizations. But the utilisation of the services schools can render depends upon the climate prevailing in schools, the level of intrinsic and extrinsic motivation obtaining in different sections of the school community and the type of leadership which is directing services whithin schools. Willower (1965) assumes that employment of external control by teachers will be inversely related to the extent to which school is perceived as attractive by pupils.

As the three categories of schools envisaged in the present study vary among themselves in a number of inputs - philosophy, objectives, value systems, attitudes, traditions, atmosphere, motivation types and levels, tone, dynamism, sense of commitments, etc. it is expected that they would vary in their orientation to pupil control ideology. The Hypothesis XI is in that perspective formulated. It is worded as under :

> "The pupil control ideology of teachers in the "Coveted Schools", the "Middle Quality Schools" and "Just so so Schools" will differ".
>
> (The Hypothesis XI)

As shown earlier, the study includes in its sample of 128 schools, 28 Coveted schools, 59 Middle Quality schools and 41 Just so so schools. To examine the possible relationship between pupil control ideology of teachers and these three school categories, one-way analysis of variance test was applied. Relevant data are presented in Table 4.22 below :

Table 4.22 : Analysis of Variance Data for the Influence of Categories of School on Pupil Control Ideology

Source of Variance	df	SS	MS(v)	F
Between Mean	2	4068.92	2034.46	5.01**
Within Conditions	223	90634.54	406.43	

** Significant at .01 level.

From Table 4.22 it is observed that the analysis of variance yielded an F-ratio of 5.01 which is significant at .01 level. Hence, the Hypothesis that the pupil control ideology of teachers in the 'Coveted Schools', the 'Middle Quality' Schools and the 'Just soso' schools will differ was supported by the statistical analysis of the present data. Significant results at this stage demand further comparisons taking two groups of different categories

of schools at a time: groups of schools for such comparisons in terms of three categories resulted in three such pairs. To test the mean difference, the Scheffe' test was used. 'K' values of different pairs are given in Table 4.23 below :

Table 4.23 : Significance of Mean PCI Scores of 'Coveted', 'Middle Quality' and 'Just soso' Categories of Schools Using Scheffe' Test.

Categories of School	Mean PCI Score	K	Pair Combination	P
Coveted schools	110.72	1.58	Coveted-Middle quality	-
Middle Quality schools	116.74	1.63	Middle quality-Just 'so so'	-
Just so so schools	121.38	3.24	Coveted-Just so so	P < .01

A study of the Table 4.23 shows that the mean difference between 'Coveted' category of schools and the 'just soso' category of schools in PCI scores is 10.66. This difference is statistically significant at .01 level. The mean PCI scores revealed that the teachers of Coveted category of schools (the mean PCI scores 110.72) are humanistic in their pupil control orientation while the teachers of the Just so so category of schools (mean PCI Score 121.38) are custodial in their pupil control orientation. The Hypothesis is, therefore, upheld.

4.13 AN INQUIRY INTO THE EXTENT TO WHICH BIOGRAPHICAL VARIABLES OF TEACHERS INFLUENCE THEIR PUPIL CONTROL IDEOLOGY

In earlier sections, the pupil control ideology of teachers of sampled schools was studied, and the relationships with teachers' PCI scores with the category of schools in which the teachers work, their personality factors, etc. were examined. One ideological orientation in certain areas is likely to be influenced by one's biographical variables like sex, age, levels of educational background, their socio-economic status, etc. In the present section, an attempt will, therefore, be made whether the PCI scores of teachers differ according to factors such as (1) sex, (ii) age, (iii) educational background, (iv) teaching experience and (v) their SES levels. To study the possible influence of these biographical variables of teachers on their pupil control orientation, the following Hypothesis is formulated:

> "Teachers' orientation toward pupil control ideology is independent of certain of their biographical characteristics."
>
> (Hypothesis XII)

The above Hypothesis is split up into following sub-Hypotheses :

(1) The male teachers do not differ significantly from female teachers with respect to their PCI Scores.

(2) The PCI Scores of teachers do not differ with their age variation.

(3) The PCI Scores of teachers having various levels of educational background do not differ.

(4) There are no significant differences in PCI scores of teachers in regard to their level of teaching experience.

(5) The PCI scores of teachers belonging to different SES levels do not differ.

To test each of the above five sub-Hypotheses, t-test techniques will be used.

(1) Sex of the Teachers and the Pupil Control Ideology

Table 4.24 given on the next page, seeks to relate the variable of 'sex' of the teachers with their pupil control ideology.

The table shows that the mean PCI scores of male and female teachers are 117.51 and 112.17 respectively. The difference between the mean scores of the two groups on this

Table 4.24 : Mean Pupil Control Ideology Scores of Male and Female Teachers

Sex	Number	Pupil Control Ideology Scores		t-ratio	Level of Significance
		Mean	SD		
Male	820	117.51	19.31	3.49**	.01
Female	194	112.17	18.48		

variable is 5.34 in favour of male teachers which is significant at .01 level of significance. This shows that a significant relationship exists between the sex variable of the teachers and their pupil control ideology. It can be inferred from the above results that the male teachers are custodial in pupil control ideology while the female teachers are humanistic in pupil control ideology.

(2) Age of the Teachers and Pupil Control Ideology.

The Table 4.25 given on the next page deals with the relationship of the age of the sampled teachers with their pupil control ideology.

Table 4.25 : Comparison of Pupil Control Ideology of Teachers of Various Age Groups

Age Group		PCI Scores				
		M	SD	M	SD	t-value
20-25	26-30	113.98	16.33	117.02	20.43	1.66
20-25	31-35	113.98	16.33	116.10	19.57	1.26
20-25	36-40	113.98	16.33	117.78	20.56	2.10*
20-25	Above 40 (40+)	113.98	16.33	119.29	17.30	2.36*
26-30	31-35	117.02	20.43	116.10	19.57	0.51*
26-30	36-40	117.02	20.43	117.78	20.56	0.39
26-30	Above 40	117.02	20.43	119.29	17.30	0.86
31-35	36-40	116.10	19.57	117.78	20.56	0.95
31-35	Above 40	116.10	19.57	119.29	17.30	1.29
36-40	Above 40 (40+)	117.78	20.56	119.29	17.30	0.57

t-values significant at .05 level = *

The table clearly indicates that the mean PCI scores of teachers of the age group of 20-25 years is significantly lower ($P < .05$ using the t-test procedure) than the mean PCI scores of the teachers of the age group of 36-40 years and 40+. Moreover it is observed from the Table 4.25 that the mean PCI scores of the teachers of the age groups of 20-25, 26-30, 31-35, 36-40, and 40+ years are 113.98, 117.02, 116.10, 117.78 and 119.29 respectively. The mean PCI score is the lowest (113.98) in the case of the age group of 20-25 years and its value increases as the year in age groups decreases except in the case of age group of 31-35 years. Therefore, it can be concluded that the younger teachers tend to be more humanistic than their older colleagues.

(3) Experience of the Teachers and Pupil Control Ideology

The Table 4.26 presents the data on the relationship between teaching experience of the teachers and their pupil control ideology.

The Table 4.26 A reveals that the mean PCI score of teachers having the experience of 11-15 years is the lowest and this PCI score is significantly lower than the mean PCI scores of teachers having the experience of above 20 and 16-20 slab of years.

Table 4.26 (A): Means and SD of PCI Scores of Teachers Representing Different Experience Groups

Sr. No.	Experience of the Teachers in years	PCI Scores Mean	SD
1.	0-5	114.45	16.76
2.	6-10	116.02	18.00
3.	11-15	112.65	19.04
4.	16-20	118.75	18.50
5.	Above 20	116.83	20.66

Table 5.26 (B) : Critical Ratios of the Differences Between Means of PCI Scores of Teachers belonging to Different Experience Groups.

Variables	t-values	P-values
1:2	0.65	Not significant
1:3	0.80	Not significant
1:4	0.94	Not significant
1:5	1.86	Not significant
2:3	1.65	Not significant
2:4	1.33	Not significant
2:5	1.32	Not significant
3:4	3.59	.01
3:5	3.68	.01
4:5	0.04	Not significant

* Variables 1,2,3,4,5 indicate (0-5), (6-10), (11-15), (16-20) and (above 20) years respectively.

Moreover, it is also clear from table that the increase in experience is accompanied by increase in the PCI scores, except in the case of the slab of 11-15 years of experience. Though the mean PCI score of the teachers having the experience of 11 to 15 years is the lowest, it is not significantly lower ($P > .05$ using the t-test technique) than the mean PCI scores of the teachers having the experience of 0 to 5 years and 6 to 10 years. Hence, in general it can be said that the less experienced teachers were found to be more humanistic than their colleagues possessing more teaching experience. The latter were found to be more custodial in their pupil control ideology.

(4) Qualifications of the Teachers and Pupil Control Ideology

The data regarding the qualifications of the teachers and pupil control ideology are reported in Table 4.27, given on the next page.

From the table one finds that the mean PCI scores of the undergraduate, graduate, trained graduate, post-graduate and trained post-graduate teachers are 124.00, 118.07, 116.43, 124.75 and 115.99 respectively.The CR values for the PCI scores were calculated to be .42 (between undergraduates and graduates), .58 (between undergraduates and trained graduates),.07 (between undergraduates and post-graduates),

Table 4.27 : Qualifications of the Teachers and PCI Scores

Qualifications	Mean	S.D.	Difference Between Means				
			Under Graduate	Graduate	Graduate with training	Post graduate	Post graduate with training
Undergraduate	124.00	12.83	-	0.42	0.58	0.07	0.51
Graduate	118.07	19.56	-	-	0.47	1.05	0.48
Graduate with training	116.43	18.37	-	-	-	1.56	0.30
Post-graduate	124.75	15.40	-	-	-	-	1.35
Post-graduate with training	115.99	22.21	-	-	-	-	-

None of the t-value is significant.

.51 (between undergraduates and trained post-graduates), .47 between graduates and trained graduates; 1.05 (between graduates and post-graduates), .48 (between graduate and trained post-graduate), 1.56 (between trained Graduates and post-graduates), .30 (between trained graduates and trained post-graduates), and 1.35 (between post-graduates and trained post-graduates). None of the critical ratios was significant. Therefore, there is no

significant relationship between the qualifications of the teachers and pupil control ideology.

A closer examination of the table would reveal that the mean PCI scores of the untrained teachers are higher than the mean PCI scores of trained teachers. Hence, it can be noted that the trained teachers tend to be less custodial than the untrained teachers. Perhaps this may be an impact of study of educational psychology imbibed during their teacher education.

(5) The SES of the Teachers and Pupil Control Ideology

The fifth variable studied is the SES categories of the teachers. It is examined in relation to the PCI scores of the teachers. Table 4.28, on the next page, represents the pertinemt data.

The study of the table clearly indicates that the teachers belonging to the poor class have significantly higher ($P < .05$ using the t-test technique) mean PCI score than the teachers belonging to the middle class and the higher class (C.R. values 1.98 and 2.19). Moreover, the teachers belonging to the low middle class have significantly

Table 4.28 : Mean PCI by the SES Categories of Teachers

Variables SES categories	Mean	SD	Mean	SD	t value	Level of significance .05	.01
1:2	121.68	19.75	118.41	19.85	0.91		
1:3	121.68	19.75	114.93	18.63	1.98	*	
1:4	121.68	19.75	114.97	18.84	1.87		
1:5	121.68	19.75	104.57	12.58	2.19	*	
2:3	118.41	19.85	114.93	18.63	2.53	*	
2:4	118.41	19.85	114.97	18.84	1.99	*	
2:5	118.41	19.85	104.57	12.58	1.84		
3:4	114.93	18.63	114.97	18.84	9.02		
3:5	114.93	18.63	104.57	12.58	1.46		
4:5	114.97	18.84	104.57	12.58	1.45		

Note: The numericals of SES categories stand for the following: 1 - Poor Class, 2 - Low Middle Class; 3 - Middle Class, 4- High Middle Class, and 5 - Higher Class.

higher ($P < .05$ using the t-test technique) mean PCI score than the teachers belonging to the middle class and high middle class (C.R. values 2.53 and 1.99).

The above table further reveals that the mean PCI

scores of teachers of the poor class, low middle class, middle class, high middle class and higher class are 121.67, 118.41, 114.93, 114.97 and 104.57 respectively. Though there is a difference (.04) between the mean PCI scores of teachers of middle class and high middle class, the difference is not wide. The difference that is existing is not statistically significant. This leads one to conclude that the higher the socio-economic status of the teachers, the greater is the propensity toward humanistic pupil control orientation.

4.14 RELATIONSHIP BETWEEN CATEGORIES OF SCHOOLS AND THEIR TEACHERS' DOGMATISM LEVEL

In the Section 4.12, it was found that a significant relationship exists between teachers' pupil control ideology and the category of their schools. As the study has also yielded data on teachers' dogmatism level - their Open mind and closed mind as reflected in their belief systems, he has deemed appropriate to investigate whether similar significant relationship obtains between the belief system of teachers and the category of schools in which they are employed. He, therefore, formulated the following Hypothesis.

"The belief systems of teachers in "Coveted Schools", the "Middle Quality" schools and the "Just 'so so' Schools" will differ".

(The Hypothesis XIII)

To test the significance of relationship between the dogmatism level of teachers and the category of schools in which they operate as instructors, one-way analysis of variance technique was used. The pertinent data are given in Table 4.29 below :

Table 4.29: Summary Data and Analysis of Variance for Dogmatism Scores of Teachers of three Different Categories of Schools

	Coveted Schools	Middle Quality schools	Just 'so so Schools
Mean	202.21	197.24	193.50
S.D.	4.28	4.20	4.69

Source	df	SS	MS	F	P
Between Groups	2	3607.53	1803.76	2.45	-
Within Groups	223	163973.38	735.30		

A look at the Table 4.29 shows that the F ratio of 2.45 is not significant. Therefore the Hypothesis XIII is rejected. The results further indicate that the mean dogmatism scores of teachers of the Coveted schools, Middle Quality Schools and the Just so so types of schools are 202.21, 197.24 and 193.50 respectively. Hence it can be said that the teachers of Coveted, Middle Quality and the Just so so schools did not show significant difference in their level. However, the emergent trend in the results is that the teachers of the Coveted Schools are more Closed minded than the teachers of the other two categories of schools.

4.15 SIZE OF SCHOOL AND THE THREE MAJOR TEACHER VARIABLES

It should be remembered that the size of the schools was one of the independent variables used to find out whether climate and its correlates differ in small and large sized schools. Personality factors, pupil control ideology and dogmatism are teacher variables. It is true that smallness or largeness of school size does create an environment which may influence teachers' attitudes and through wider exposures with more teachers in large sized schools, their belief systems may undergo some perceptible changes. It may be that small

sized schools may provide narrow and limited environmental influences, the interaction patterns may be limited and with persons who move in narrow grooves, the liberalising and humanising influences may be far and few between and, therefore, teachers tend to develop custodial pupil control ideology to a greater extent than they develop humanistic control ideology. But the influences to which teachers of small sized or large sized schools are exposed can hardly be expected to affect their personality factors which may be the products of both heredity and environment, and if marked variations are found in teachers of small sized or larged sized schools, the causative factors are to be looked for some where else than the size of the schools. Against such background thinking, the following Hypothesis is formulated.

> "No true differences are to be found between teachers of small sized and large sized schools in respect of (a) their personality factors, (b) pupil control ideology and (c) belief system". (Hypothesis XIV)

Each of these three sections of the Hypothesis will be taken up, one by one, for discussion.

(a) Size of Schools and Personality Factors

The one-way analysis of variance technique was taken up to find out statistically significant differences among the mean scores of the teachers of three different sizes of schools ('large', 'average' and 'small') with respect to each of the sixteen personality factors: Factors A, B, C, E, F, G, H, I, L, M, N, O, Q_1, Q_2, Q_3, and Q_4.

A summary of each of the sixteen analyses of variance is presented in Table 4.30 below :

Table 4.30 : Summary of the Analysis of Variance on 16 Personality Factors for Teachers of Large Sized Schools, Average, Sized Schools and Small Sized Schools

16 P.F. Factors	df	F-Ratio	P
A	2/236	0.72	-
B	2/236	2.73	-
C	2/236	0.49	-
E	2/236	2.30	-
F	2/236	0.07	-
G	2/236	0.10	-
H	2/236	1.87	-
I	2/236	1.47	-
L	2/236	0.81	-
M	2/236	1.65	-
N	2/236	0.81	-
O	2/236	0.61	-
Q_1	2/236	0.60	-
Q_2	2/236	0.53	-
Q_3	2/236	1.63	-
Q_4	2/236	0.26	-

An inspection of Table 4.30 reveals that none of the obtained F ratios attained the critical value necessary to accept this part of the Hypothesis. Therefore, the Hypothesis XIV(a) is not accepted. The conclusion is that the teachers of different sizes of schools do not differ significantly with respect to their personality factors.

(b) Size of Schools and Teachers' Pupil Control Ideology

Only a few studies have focused on the relationship between pupil control ideology of teachers and the size of the schools.

Jones (1969), and Day (1973) revealed that the size of a school is unrelated to the PCI scores of the teachers.

Hedberg (1973) reported significant relationship between small sized schools and humanistic pupil control ideology.

Williams (1972) found a significant relationship between the PCI scores and the size of school, but he did not indicate the direction of relationship.

This review of the studies does not show conclusively whether any significant relationship exists between school size and the PCI of school teachers. Hence, the issue needs

further investigation. Therefore, one more effort is made to study the bearing of school size on the PCI of school teachers. The Hypothesis XIV (b) has been formulated to inquire into the relationship of school size and the PCI of the sampled school teachers.

To compare the mean PCI scores of teachers of the three different sizes of schools ('large', 'average' and 'small') this study used one-way analysis of variance technique. The results of the analysis are tabulated in Table 4.31 below :

Table 4.31 : Analysis of Variance data For the Relationship Between Size of Schools and Pupil Control Ideology of Teachers

Source of Variance	df	SS	MS(v)	F
Between Mean	2	6874.59	3437.29	10.82**
Within Conditions	236	74955.16	317.60	

** Significant at .01 level

From the Table, it is seen that the F of 10.82 surpasses the F at .01 level of significance. Therefore, the Hypothesis-(b) on the relationship of school size with the PCI scores of the teachers is supported.

As this ratio (10.82) is significant at .01 level the

Scheffe' test was used to identify the pairs of means that were significantly different. The K values of different pairs are shown in Table 4.32 below :

Table 4.32 : Comparison of the Differences of Means of the PCI Scores of Teachers of Three Different Pairs ('Large-average', Average-Small, and Large-Small) Using the Scheffe' Test

Size of School	Mean PCI Score	K	Pair Combination	P
Large	124.34	3.19	Big-Average	-
Average	115.71	1.71	Average-Small	-
Small	110.79	4.07	Big-Small	$P < .01$

The following inferences can be drawn from the K values presented in Table 4.32:

(1) There was no significant difference between the PCI scores of teachers of large (mean=124.34) and average (mean=115.71) sized schools.

(2) Though the mean PCI score of teachers (mean=115.71) of average sized schools was greater than the mean PCI score of teachers (mean=110.79) of small sized schools, the difference was not significant.

(3) There was a significant difference ($P < .01$) between the mean PCI scores of teachers of large and small sized schools.The mean scores indicate that the teachers of large sized schools (mean=124.34) are more custodial as compared to their counterparts of small sized schools (mean=110.79).

It can be seen from the table that out of the three pairs one pair has turned out to be statistically significant. The PCI scores of teachers of large sized schools do differ quite significantly from those of the teachers of small sized schools. Hence, it can be concluded that larger the size of the school, more custodial the pupil control ideology of the teachers.

(c) Size of the Schools and their Teachers' Dogmatism Level

The relationship concerning the dogmatism level of teachers and the size of the school is sought to be tested through section C of of the Hypothesis.

For finding out the difference in belief system of teachers of the three different sizes ('large', 'average', and 'small'), the F test was made use of. The results of the analysis have been presented in Table 4.33 below :

Table 4.33 : Summary Data and Analysis of Variance for Dogmatism Score of Teachers of the Three Different Sizes of Schools

	Large schools	Average schools	Small schools
Mean	201.42	194.63	146.38
SD	2.82	3.04	3.63

Source	df	SS	MS	F	P
Between Groups	2	1361.82	680.91	1.98	-
Within Groups	236	80911.89	342.84		

As the yielded F ratio (1.98) did not reach an acceptable level of significance, the Hypothesis (c) that the belief systems of teachers of larger sized and smaller sized schools will differ was not accepted. Moreover, the data presented in Table 4.33 further reveal that the mean dogmatism scores of teachers of the large sized, average sized, and small sized schools are 201.42, 194.63, and 196.38 respectively. Therefore, it can be concluded that the teachers of different sizes of schools did not differ significantly in their dogmatism level. However, the scrutiny of the results showed that the teachers of the large sized schools are more closed minded than the teachers of the small sized schools.

Thus, the Hypothesis XIV is substantiated in its section (b) and is not accepted in regards to its Sections (a) and (c).

4.16 THE RELATIONSHIP BETWEEN THE PUPIL CONTROL IDEOLOGY OF TEACHERS AND THEIR PERSONALITY FACTORS

Pine and Levinson (1957) revealed that the aideswith custodial ideologies tend to have authoritarian trends at the personality level; humanistically oriented aides are more equalitarian. Moreover, Gilbert and Levinson (1957) reported that there is a considerable evidence that the autocratic-democratic continuum of ideology is one aspect of a broader authoritarian-equalitarian continuum of personality. In other words, social ideologies have a psychological basis in the personalities of their adherents. Thus, ideological diversity goes hand-in-hand with diversity in personality. Hence it seems plausible to assume that pupil control ideology is, in part, a function of personality factors.

From the foregoing framework and discussion, the following Hypothesis was deduced :

"There is no linear relationship between the pupil control ideology of teachers as measured by the PCI (Baroda Version) and teachers' personality characteristics as measured by the 16 PF questionnaire".

(Hypothesis XV)

The Pearson Product Moment Correlation Coefficient was computed to determine whether a linear relationship existed between each of the factors of personality and the PCI Scores. The sixteen Pearson Product Moment Coefficient of Correlation are shown in Table 4.34, given on the next page.

The table reveals the following facts :

(1) Factor A : Correlation between the scores on Factor A and PCI of the respondents (r=-.06) is significant at .05 level. The negative correlation indicates that those teachers who are kind and trustful are humanistic and those teachers who are hard and suspicious are custodial in their pupil control ideology.

(2) Factor B : Correlation between the scores on Factor B and the PCI scores of the respondents (r=-.06) is significant at .05 level. This means that persevering and intellectual teachers are humanistic and dull and quitting types of teachers are custodial in their pupil control ideology.

CHART: XIII

CORRELATION BETWEEN PCI SCORES AND TEACHERS' PERSONALITY FACTORS

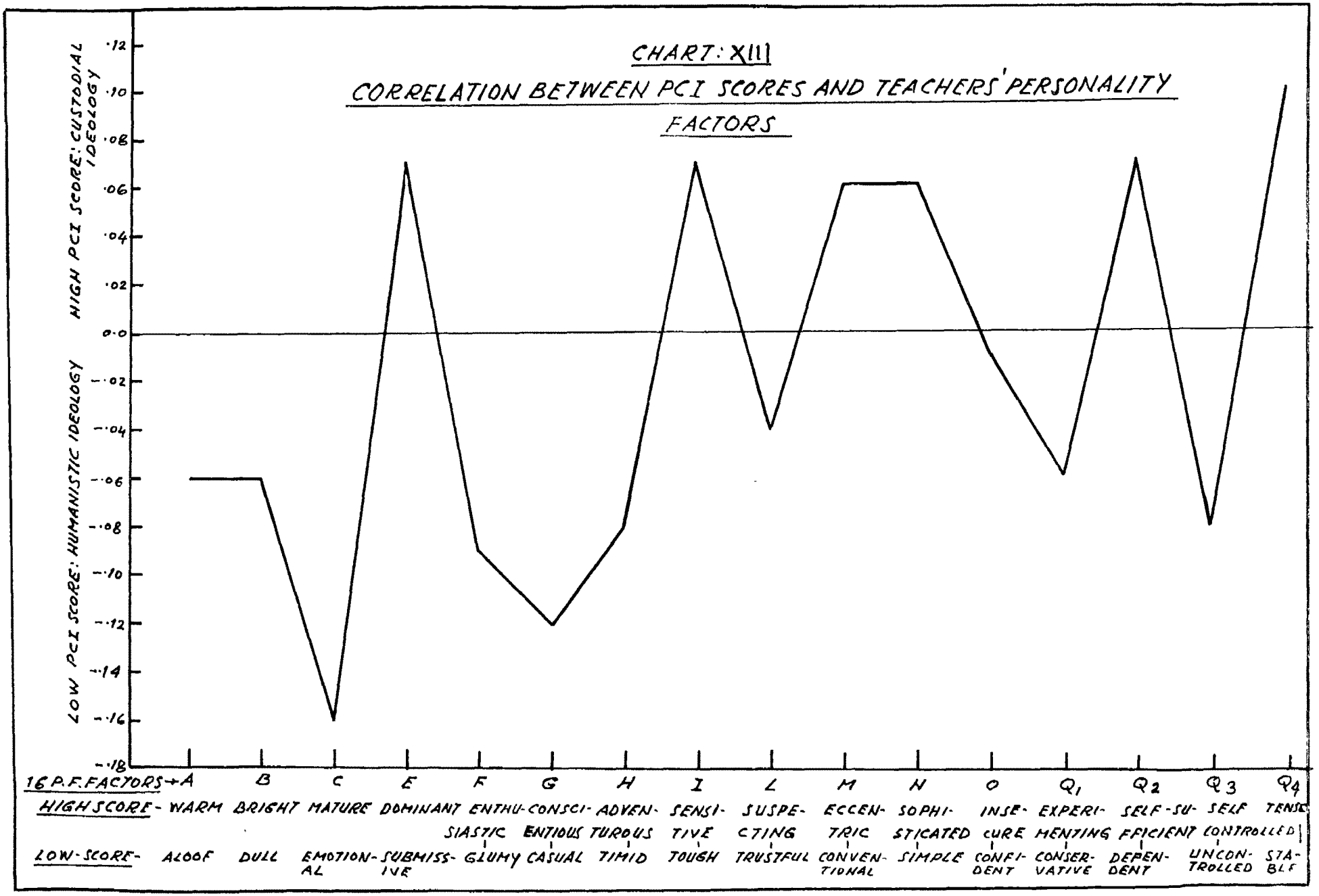


Table 4.34 : Correlations Between the PCI Scores and Teachers' Personality Factors

Pupil Control Ideology	16 P.F. Factors	Coefficients of Correlation
PCI	A	-.06*
PCI	B	-.06*
PCI	C	-.16**
PCI	E	.07*
PCI	F	-.09**
PCI	G	-.12**
PCI	H	-.08**
PCI	I	.07*
PCI	L	-.04
PCI	M	.06*
PCI	N	.06*
PCI	O	-.01
PCI	Q_1	-.06*
PCI	Q_2	.07*
PCI	Q_3	-.08**
PCI	Q_4	.10**

* Significant at .05 level
** Significant at .01 level

(3) Factor C : There exists a significant negative relationship of the respondents ($r=-.16$, $P < .01$). This suggests that those teachers who are calm and emotionally stable are humanistic while those teachers who are evasive

and neurotically fatigued are custodial in their pupil control ideology.

(4) Factor E : A significant positive relationship has been found between the scores on Factor E and the PCI scores of the respondents ($r=.07$, $P < .05$). The positive correlation reveals that the pupil control ideology of the unconventional and assertive teachers is custodial but the pupil control ideology of the submissive and soft-hearted teachers is humanistic.

(5) Factor F : Correlation between the scores on Factor F and the PCI scores of the respondents is significant ($r=-.09$, $P < .01$), which shows that the pupil control ideology of the cheerful and frank teachers is humanistic and the pupil control ideology of the brooding and incommunicative teacher is custodial.

(6) Factor G : A significant negative correlation has been found between scores on Factor G and the PCI scores of the teachers ($r=-.12$, $P < .01$), which exhibits that the pupil control ideology of the conscientious and responsible teachers is humanistic and the pupil control ideology of the impatient and indolent teachers is custodial.

(7) Factor H : The scores on Factor H has negative significant correlation ($r=-.08$, $P < .01$) with the PCI scores, meaning thereby that the teachers with a custodial pupil control orientation are self-contained and shy, and the teachers with a humanistic pupil control orientation are carefree and genial.

(8) Factor I : The scores on Factor I has positive significant correlation ($r=.07$, $P < .05$) with the PCI scores, which implies that those teachers who are custodial in their pupil control ideology are subjective and demanding but the teachers who are humanistic in their pupil control ideology are realistic and self-reliant.

(9) Factor L : Correlation between the scores on Factor L and the PCI scores of the teachers ($r=-.04$, $P < .05$) is not significant).

(10) Factor M : The scores on Factor M has positive significant correlation ($r=.06$, $P < .05$) with the PCI, which indicates that the teachers with a custodial pupil control orientation are immature in practical judgement and self-absorbed and the teachers with a humanistic pupil control orientation are steady and alert to practical needs.

(11) Factor N : There exists a significant positive relationship between the scores on Factor N and the PCI scores of the respondents ($r=.06$, $P < .05$). This means that those teachers who are sophisticated and emotionally disciplined are custodial in their pupil control ideology while those teachers who are gregarious and simple are humanistic in their pupil control ideology.

(12) Factor O : Correlation between scores on Factor O and PCI scores is negative and low which is insignificant ($r=-.01, P < .05$).

(13) Factor Q_1 : Correlation between the scores on Factor Q_1 and the PCI scores of the respondents ($r=-.06$) is significant at .05 level. This means that the teachers with humanistic pupil control orientation are experimenting and the teachers with custodial pupil control orientation are conservative.

(14) Factor Q_2 : The scores on Factor Q_2 has positive significant correlation ($r=.07$, $P < .05$) with the PCI scores, meaning thereby that those teachers who are custodial in their pupil control ideology are resourceful and self-sufficient but the teachers with humanistic control ideology are dependent.

(15) Factor Q_3 : Correlation between the Scores on Factor Q_3 and the PCI scores of the respondents is significant ($r=-.08$, $P < .01$) which shows that the pupil control ideology of the self-controlled teachers is humanistic and the pupil control ideology of the lax and uncontrolled teachers is custodial.

(16) Factor Q_4 : There exists a significant positive relationship between the scores on Factor Q_4 and PCI scores of the respondents ($r=.10$, $P < .01$). This exhibits that tense and excitable teachers are custodial in their pupil control ideology and phlegmatic and composed teachers are humanistic in their pupil control ideology.

It can be concluded on the basis of the analysis which is described above that the pupil control ideology of the teachers has a negative relation with respect to factors A, B, C, F, G, H, Q_1 and Q_3 and positive relation with respect to factors E, I, M, N, Q_2 and Q_4. This suggests that the pupil control ideology of the trustful, persevering, calm, soft-hearted, cheerful, conscientious, carefree, realistic, steady, simple, experimenting, dependent, self-controlled, and phlegmatic teachers is humanistic while the pupil control ideology of the suspicious, dull, evasive,

assertive, incommunicative, impatient, shy, subjective, immature, sophisticated, conservative, self-sufficient, lax, and tense teachers is custodial. In short, it can be stated that the personality traits of the teachers directly influence their pupil control ideology. Out of sixteen personality variables, fourteen showed strong relationship with teachers' pupil control ideology. Therefore the null hypothesis of no relationship was rejected.

Fourteen personality factors have been identified which have strong relationship with pupil control ideology of the teachers; they are summarized in Table 4.35.

Table 4.35 : Significant Relationships Between Pupil Control Ideology and Personality Factors

16 P.F. Factors	Pupil Control Ideology		
	Humanistic		Custodial
A	Outgoing	Vs	Aloof
B	Bright	Vs	Dull
C	Mature	Vs	Emotional
E	Submissive	Vs	Dominant
F	Enthusiastic	Vs	Glum
G	Conscientious	Vs	Casual
H	Adventurous	Vs	Timid
I	Tough	Vs	Sensitive
M	Conventional	Vs	Eccentric
N	Simple	Vs	Sophisticated
Q_1	Experimenting	Vs	Conservative
Q_2	Dependent	Vs	Self-sufficient
Q_3	Self-controlled	Vs	Uncontrolled
Q_4	Stable	Vs	Tense

4.17 RELATIONSHIP OF CERTAIN BIOGRAPHICAL VARIABLES OF TEACHERS WITH THEIR BELIEF SYSTEM

The last Hypothesis that has been formulated for the present study pertains to theorisation that the degree of open mindedness of teachers is independent of certain of their biographical characteristics. It is worded as under :

> "The degree of open mindedness of teachers is independent of some of their biographical characteristics".
>
> (The Hypothesis XVI)

Under this major Hypothesis the following sub-hypotheses will be tested :

(a) The male teachers do not differ significantly from female teachers in their level of dogmatism.

(b) The dogmatism level does not differ with the age of the teacher.

(c) The degree of open mindedness of teachers having various levels of educational background does not differ.

(d) There are no significant differences in dogmatism level of teachers in respect of their level of teaching experience.

(e) The dogmatism level of teachers coming from the different SES does not differ.

Tables 4.36 to 4.37 summarize relationship between belief system and the sex of the teachers, age of the teachers, educational level of the teachers, level of teaching experience of the teachers, and SES category of the teachers respectively.

(1) Sex of the Teachers and Belief System

In Table 4.36, information concerning sex and belief system of teachers is presented.

Table 4.36 : Significance of Difference between the Means of the Dogmatism Scores of the Male and the Female Teachers

Sex						Level of Significance
Male		t value	Female			
Mean	SD		Mean	SD	SD	
197.50	25.18	1.07	199.66	26.00	199.	Not significant

From the table, it is evident that the difference between the mean PCI scores of the two sex groups is not at all significant at any level of significance. That is to say, the difference in mean scores of male teachers and female

teachers is not real, but only a chance affair. This would mean that male teachers and female teachers do not differ in their level of dogmatism or in their open mindedness or closed mindedness. So, the sub-Hypothesis (a) is accepted.

(b) Age of the Teachers and their Belief System

Relationship between age and belief system of teachers is delineated in Table 4.37 below :

Table 4.37 : A Comparison of Dogmatism Scores of Teachers of Various Age Group

Age-Group	Dogmatism Score M	SD	t	Age-Group	Dogmatism Score M	SD	t
20-25	194.12	21.33	0.77	26-30	196.42	22.90	2.24*
26-30	196.42	22.90		36-40	201.56	25.31	
20-25	194.12	21.33	0.77	26-30	196.42	22.90	1.05
31-35	196.78	28.13		Above 40	198.84	24.79	
20-25	194.12	21.33	2.28*	31-35	196.78	28.13	1.97*
36-40	201.56	25.31		36-40	201.56	25.31	
20-25	144.12	21.33	1.46	31-35	196.78	28.13	0.84
Above40	198.84	24.79		Above 40	198.84	24.79	
26-30	196.42	22.90	0.16	36-40	201.56	25.31	1.10
31-35	196.78	28.13		Above 40	198.84	24.79	

* t values significant at .05 level.

From the table it appears that the mean dogmatism score is the highest in the age-group of 36-40 years and this mean is significantly higher ($P < .05$) using t-test technique) than the mean dogmatism scores of the teachers of the age--group of 31-35, 26-30, and 20-25 years.

Moreover, it is clear from the table that the increase in years in age-groups is accompanied by increase in dogmatism scores, except in the age-group of above 40 years. The mean dogmatism score of the teachers of the age-group of above 40 years is lower than the mean dogmatism score of the teachers of the age group of 36-40 years, but the difference between the two group is not significant ($t=1.10$, $P < .05$). From this, it can be said that the older teachers, particularly those of 36 years of age and above, tended to be more closed minded than their younger colleagues. Therefore, the sub-Hypothesis(b) is not acceptable.

(c) Experience of the Teachers and their Belief System

The third variable selected for study is the experience in years of school teachers. It is examined in relation to their belief system of teachers in sub-Hypothesis (c). Data concerning the experience and dogmatism of school teachers are presented in Table 4.38.

Table 4.38 : Mean Dogmatism Scores of Five Experience Groups and their Critical Ratios

Experience of the teachers in years (range)	Dogmatism Scores 0-5 M=194.61 SD=26.11	6-10 M=201.08 SD =54.98	11-15 M=201.54 SD=56.63	16-20 M=205.02 SD=71.97	Above 20 M=196.95 SD=24.35
0-5	x	1.64	1.69	1.97*	0.74
6-10	x	x	0.10	0.62	0.70
11-15	x	x	x	0.52	0.75
16-20	x	x	x	x	1.03
Above 20	x	x	x	x	x

* Significant at .05 level

The above table clearly shows that the mean dogmatism score of teachers having the range of experience of 16 to 20 years is the highest and this dogmatism score is significantly higher ($P < .05$ using the t-test technique) than the mean dogmatism score of teachers having the range of experience of 0-5 years. Moreover, the table further reveals that the mean dogmatism scores of teachers having the range of experience of above 20 years, 16 to 20 years, 11 to 15 years, 6 to 10 years, and 0 to 5 years are 196.95, 205.02, 201.54, 201.08, and 194.61 respectively. The mean dogmatism score is lowest in (194.61) the case of teachers having the experience of 0 to 5 years and its value increases as the experience

increases except in the case of teachers having the experience of above 20 years. Thus, it can be concluded that the less experienced teachers were more open-minded than their more experienced colleagues. Therefore, the Sub-Hypothesis (c) remains unsubstantiated.

(d) Qualifications of the Teachers and their Belief System

Another variable selected for study is qualifications of the teachers. Here, the concern is to find out whether there exists any relationship between the qualification of the teachers and their belief system. The Table 4.39 classifies data on this issue.

The Table 4.39 given on the next page, shows mean scores on dogmatism according to the educational level of the teachers. But none of these mean score is significant, which suggests that dogmatism is not related to educational background of the teachers. Therefore, the sub-Hypothesis(d) is substantiated.

(e) The SES of the Teachers and their Belief System

The last selected biographical variable is the SES of the Teachers. The Table 4.40, given on the next page, seeks to relate the variable 'SES' of the teachers with their belief system.

Table 4.39 (A) : Means and S.D. of Dogmatism Scores for Different Qualifications Groups

Qualifications	Dogmatism Scores	
	Mean	SD
Under-graduate	185.50	19.09
Graduate	197.83	25.26
Graduate with training	197.87	25.14
Post-graduate	188.75	25.76
Post-graduate with training	198.68	26.06

Table 4.39 (B) : t-values between means of Dogmatism Scores for Different Qualification Groups

Variables	t-values	P-value
1 Vs 2	0.67	NS
1 Vs 3	0.69	NS
1 Vs 4	0.17	NS
1 Vs 5	0.71	NS
2 Vs 3	0.01	NS
2 Vs 4	1.04	NS
2 Vs 5	0.17	NS
3 Vs 4	1.25	NS
3 Vs 5	0.42	NS
4 Vs 5	1.28	NS

N.B.: The numericals of qualification groups stand for the following :

1 = Undergraduate
2 = Graduate
3 = Graduate with training
4 = Post-graduate
5 = Post-graduate with training

Table 4.40 : Comparisons of Significance of Differences between Means on Dogmatism Scale of Teachers Classified on the basis of their SES

Variables *SES category	Mean SD	t-value	Mean SD	Level of Significance .01	.05
1:2	185.97 20.31	2.28	196.13 24.92		*
1:3	185.97 20.31	2.77	199.01 26.34	**	
1:4	185.97 20.31	3.39	201.19 24.28	**	
1:5	185.97 20.31	3.19	212.86 20.04	**	
2:3	196.13 24.92	1.58	199.01 26.34		
2:4	196.13 24.92	2.31	201.19 24.28		
2:5	196.13 24.92	1.76	212.86 20.04		
3:4	199.01 26.34	0.95	201.19 24.28		
3:5	199.01 26.34	1.38	212.86 20.04		
4:5	201.19 24.28	1.25	212.86 20.04		

* The numericals of SES categories stand for the following: 1 - Low; 2 - Low-middle; 3 - Middle; 4 - High-Middle; and 5 - hg

The study of the Table 4.40 reveals that the mean dogmatism score of teachers belonging to low SES is the lowest and this dogmatism score is significantly lower than the mean dogmatism scores of teachers belonging to the low middle SES, middle SES, high middle SES and high SES. Moreover, the teachers belonging to low middle SES have significantly lower ($t=2.31$, $P < .05$) mean dogmatism scores than the teachers belonging to high middle SES.

The above table further discloses that the values of mean dogmatism scores gradually increases in magnitude as the socio-economic status increases as the means found in SES categories 1,2,3,4, and 5 are 185.97, 196.13, 199.01, 201.19, and 212.86 respectively. Hence it can be concluded that the higher the socio-economic status, the more closed minded the teacher. The Sub-Hypothesis (e) is not supported.

4.18 MULTIPLE CORRELATION AND REGRESSION EQUATION

In this last Section, Multiple Correlation and Regression equation are presented. The strength of the Multiple Correlation indicates the strength of the relationship between one dependent variable and two or more independent variables taken together. From Regression Equation, one can predict the

value of criterion variable for every individual. The Multiple R and Regression Equation for climate score of the secondary schools are given in the Table 4.41 below :

Table 4.41 : Multiple R and Regression Equation for 'Climate Score'

$R \quad 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18 = .29$

$$\bar{Y} = 39.88 + .09X_1 + .30x_2 + .40X_3 - .31X_4 - .30X_5 + .18X_6 + .51X_7 - .22X_8 - .35X_9 - .21X_{10} + .26X_{11} - .08X_{12} + .08X_{13} - .21X_{14} - .16X_{15} + .13X_{16} - .07X_{17} - .01X_{18}$$

Where

$\bar{Y}$ = Climate Score (Criterion Variable)

1 : Factor A - Reserved Vs. outgoing

2 : Factor B - Dull Vs. Bright

3 : Factor C - Emotional Vs. Mature

4 : Factor E - Submissive Vs. Dominant

5 : Factor F - Glum, Silent Vs. Enthusiastic

6 : Factor G - CasualVs. Conscientious

7 : Factor H - Timid Vs. Adventurous

8 : Factor I - Tough Vs. Sensitive

9 : Factor L - Trustful Vs. Suspecting

10: Factor M - Conventional Vs. Eccentric

11: Factor N - Simple Vs. Sophisticated

...cont.

12: Factor O Confident Vs. Insecure

13: Factor Q_1 Conservative Vs. Experimenting

14: Factor Q_2 Dependent Vs. Self-sufficient

15: Factor Q_3 Uncontrolled Vs. Self-controlled

16: Factor Q_4 Stable Vs. Tense

17: Pupil control ideology of Teachers.

18: Dogmatism level of Teachers.

It can be seen from the Table 4.41 that the R between criterion variable climate score and the predictor variables, namely, Factor A,B,C,E,F,G,H,I,L,M,N,Q, Q_1,Q_2, Pupil Control Ideology (the PCI) of Teachers and Dogmatism level of teachers came out to be 0.29 which is highly significant beyond .01 level of probability (F=4.89).

In all, there are 18 predictor variables, out of which 8 (Factors A,B,C,G,H,N,Q, and Q_4) have positive relation and 10 (Factor E,F,I,L,M,O,Q_2,Q_3, PCI and Dogmatism level) have negative relation with the dependent variable climate score.

The variable H has the highest positive relation (+.51) and the variable L has highest negative relation (-.35) with the climate score.

For every unit increase in $X_1, X_2, X_3, X_6, X_7, X_{11}, X_{13}$ and X_{16} Y increases .09 unit, .30 unit, .40 unit. .18 unit, .51 unit, .26 unit, and .08 unit respectively. But for every unit increase in X_4, X_5, X_8, X_9, X_{10}, X_{12}, X_{14}, X_{15}, X_{17} and X_{18} Y decreases .31 unit, .30 unit, .22 unit, .35 unit, .21 unit, .08 unit, .21 unit, .16 unit, .07 unit and .01 unit respectively.

A particular teacher whose X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9 X_{10}, X_{11}, X_{12}, X_{13}, X_{14}, X_{15}, X_{16}, X_{17} and X_{18} scores are 9, 6, 5, 6, 5, 6, 3, 8, 9, 6, 7, 10, 9, 8, 4, 4, 87, and 211 respectively as his most probable Y score as under :

$$\bar{Y} = 39.88 + .81 + 1.80 + 2.0 - 1.86 - 1.50 + 1.08 + 1.53 - 1.76 - 3.15 - 1.26 + 1.82 - .080 + .72 - 1.68 - .64 + .52 - 6.09 - 2.11$$

$$= 29.31$$

These are the results of the Multiple Correlation and Regression Equation.

4.19 CONCLUSION

Thus ends the present chapter on the analysis of the data and their interpretation. One more attempt made to map out organizational climate of secondary schools of Gujarat is reported in the foregoing pages. The distinguishing features of this attempt to describe and evaluate organizational climates of secondary schools of Gujarat are seven. Firstly, the random sample is stratified and drawn from all over the State, a task which turned out to be really a challenging one for one who is a full time teacher educator in a college of education in Gujarat. Secondly, for the first time a new OCDQ tool suited to Indian conditions was developed and standardised to collect the data. Thirdly, for the first time, organizational climate of schools has been studied across the personality factors of school teachers on whose perception, climate structure and typology are based. Fourthly, a tool to measure school teachers' custodial and humanistic ideology is constructed and refined by subjecting it to essential sophisticated statistical procedures. This tool was used to yield data on the sampled teachers' pupil control ideological orientation, which were used to study possible relationship between climate typology and teachers' pupil control ideology.

Fifthly, organizational climate of schools was related with the belief systems - open mindedness and closed mindedness of teachers. Sixthly, climate, teachers' personality factors, pupil control ideology, and dogmatism are studied in a set against certain biographical characteristics of the respondents also, perhaps, for the first time in India. Lastly, an approach of Multiple Correlation and Regression analysis was used to perceive and predict relationship of organizational climate with teachers' personality factors, their pupil control ideology and their dogmatism level. Thus, the present study, in some critical essentials, goes beyond the earlier climate studies by Mehra (1968), Sharma, Rai and Buch (1972), Sharma (1973), Patel (1973), Neela Shelat (1975), Dalsukh Pandya (1975), Shah (1975), Franklin (1975), Choksi (1976), Tikmani (1976) and Gupta (1976). This constitutes the salient features of the study and they are not intended to be construed as points of uniqueness over previous studies.

The next chapter would be the concluding one, which will present major findings of the study, broad conclusion and would examine the implications of the study for improving climate and control ideology of schools.