

THE PRESENT STUDY

PROBLEM AND PURPOSE

The study examined the effect of social climate in school on student behaviour with a view to find out the differential effects of different social climates on selected aspects of student behaviour in terms of personality characteristics and scholastic attainment.

VARIABLES

The social climate in school was treated as an 'independent variable' in the study with selected aspects of student behaviour as dependent variables. Six types of social climate and student behaviour related to personal-social adjustment, value orientations, attitude toward certain educational objects, and scholastic attainment were included in the study.

HYPOTHESES

The following general hypotheses were formulated to study the effect of social climate in school on student behaviour:

- a. Different social climates in school, derived from the hierarchical and collegial interactions between the principal and teachers, tend to produce differences in student behaviour related to 'personal-social-adjustment' characteristics of personality;

- b. Different social climates in school tend to produce differences in student behaviour related to value orientations;
- c. Different social climates in school tend to produce differences in student behaviour related to students' attitude towards certain educational objects;
- d. Different social climates in school tend to produce differences in student behaviour in terms of scholastic attainment.

DESCRIPTION OF VARIABLES

School Climate:

The school climate was derived from the nature of hierarchical and collegial interactions between the principal and teachers in a school system. The principal's and teachers' behaviours considered for this purpose included the following behaviour dimensions:

Teachers' behaviour: Disengagement, Hindrance, Esprit, and Intimacy.

Principal's behaviour: Aloofness, Production Emphasis, Thrust, and Consideration.

A brief behavioural description of each of the above dimensions is given below:

Disengagement refers to teachers' tendency to be "not with it". This dimension describes a group which is

"going through the motions", a group that is "not in gear" with respect to task at hand. It corresponds to the more general concept of "anomie" as first described by Durkheim.* In short, this dimension focuses upon the teachers' behaviour in a task-oriented situation.

Hindrance refers to the teachers' feeling that the principal burdens them with routine duties, committee demands, and other requirements which the teachers construe as unnecessary "busywork". The teachers perceive that the principal is hindering rather than facilitating their work.

Esprit refers to morale. The teachers feel that their social needs are being satisfied, and that they are, at the same time, enjoying a sense of accomplishment in their job.

Intimacy refers to the teachers' enjoyment of friendly social relations with each other. This dimension describes a social-needs satisfaction which is not necessarily associated with task-accomplishment.

Aloofness refers to behaviour by the principal which is characterized as formal and impersonal. He "goes by

* Emile Durkheim, Le Suicide. Paris: Librairie Felix Alcan, 1930, p. 277. Anomie describes a planlessness in living, a method of living which defeats itself because achievement has no longer any criterion of value; happiness always lies beyond any present achievement. Defeat takes the form of ultimate disillusion - a disgust with the futility of endless pursuit.

the book" and prefers to be guided by rules and policies rather than to deal with teachers in an informal, face-to-face situations. The principal's behaviour, in brief, is universalistic rather than particularistic; nomothetic rather than idiosyncratic. To maintain this style, the principal keeps to himself — at least, "emotionally" — at a distance from his staff.

Production Emphasis refers to behaviour by the principal which is characterised by close supervision of the staff. He is highly directive and plays the role of a "straw boss". His communication tends to go in only one direction, and he is not sensitive to feedback from the staff.

Thrust refers to behaviour by the principal which is characterized by his evident effort in trying to "move the organisation". Thrust behaviour is marked not by close supervision, but by the principal's attempt to motivate the teachers through the example which he personally sets. Apparently, because he does not ask the teachers to give of themselves any more than he willingly gives of himself, his behaviour, though starkly task-oriented, is nonetheless viewed favourably by the teachers.

Consideration refers to behaviour by the principal which is characterized by an inclination to treat the teachers "humanly", to try to do a little something extra

for them in human terms.

Scores on the above behaviour dimension were utilized in deriving the social climate index. The procedure adopted in identifying a school climate is reported under Procedure.

The climates examined in the study for their influence on dependent variables were: The Open, The Autonomous, The Controlled, The Familiar, The Paternal and The Closed. In functional terms, these climates may be described as follows:

The open climate: This climate depicts a situation in which the members enjoy extremely high Esprit. The teachers work well together without bickering and griping (low Disengagement). They are not burdened by mountains of busywork or by routine reports; the principal's policies facilitate the teachers' accomplishment of their tasks (low Hindrance). On the whole, the group members enjoy friendly relations with each other, but they apparently feel no need for an extremely high degree of Intimacy. The teachers obtain considerable job satisfaction, and are sufficiently motivated to overcome difficulties and frustrations. They possess the incentive to work things out and to keep the institution "moving". Furthermore, the teachers are proud to be associated with their school.

The behaviour of the principal represents an appropriate integration between his own personality and the

role he is required to play as a principal. Not only does he set an example by working hard himself (high Thrust) but, depending upon the situation, he can either criticize the actions of teachers or go out of his way to help a teacher (high Consideration). He possesses the personal flexibility to be genuine whether he be required to control and direct the activities of others or to show compassion in satisfying the social needs of individual teachers. He has integrity in that he is "all of a piece" and therefore can function well in either situation. He is not aloof, nor are the rules and procedures which he sets up inflexible and impersonal. Nonetheless, the rules and regulations that he adheres to provide him with subtle direction and control for the teachers. He does not have to emphasize production; nor does he need to monitor the teachers' activities closely, because the teachers do, indeed, produce easily and freely. He does not do all the work himself because he has the ability to let appropriate leadership acts emerge from the teachers (low Production Emphasis). Withal, he is in full control of the situation, and he clearly provides leadership for the staff.

The autonomous climate: The distinguishing feature of this climate is the almost complete freedom that the principal gives to teachers to provide their own structures-

for-interaction so that they can find ways within the group for satisfying their social needs. As one might surmise, the scores lean slightly more toward social-needs satisfaction than toward task-achievement (relatively high scores on Esprit and Intimacy).

When the teachers are together in a task-oriented situation they are engaged in their work; they achieve their goals easily and quickly (low Disengagement). There are few minority pressure groups, but whatever stratification does exist among the group members does not prevent the group as a whole from working well together. The essential point is that the teachers do work well together and accomplish the tasks of the institution.

The teachers are not hindered by administrative paper work, and they do not gripe about the reports that they are required to submit. The principal has set up procedures and regulations to facilitate the teachers' task. A teacher does not have to run to the principal every time he needs supplies, books, audiovisual aids, and so on; adequate controls have been established to relieve the principal as well as the teachers of these details (low Hindrance). The morale of the teachers is high, but not as high as in the Open Climate. The high morale probably stems largely from the social needs satisfaction

which the teachers receive. Esprit would probably be higher if greater task-accomplishment also occurred within the institution.

The principal remains aloof from the teachers, for he runs the institution in a businesslike and a rather impersonal manner (high Aloofness). His leadership style favours the establishment of procedures and regulations which provide guidelines that teachers can follow; he does not personally check to see that things are getting done. He does not force people to produce, nor does he say that "we should be working harder". Instead, appears satisfied to let the teachers work at their own speed; he monitors their activities very little (low Production Emphasis). On the whole, he is considerate, and he attempts to satisfy the social needs of the teachers as well as most principals do (average Consideration).

The principal provides thrust for the institution by setting an example by working hard himself. He has the personal flexibility both to maintain control and to look for personal welfare of the teachers. He is genuine and flexible, but his range of administrative behaviour, as compared to that of the principal in the Open Climate, is somewhat restricted.

The controlled climate: This climate is marked, above everything else, by a press for achievement at the expense

of social-needs satisfaction. Everyone works hard, and there is little time for friendly relations with others or for deviation from the established controls and directives. This climate is overweighted toward task-achievement and away from social-needs satisfaction. Nonetheless, since morale is high (Esprit), this climate can be classified as more Opened than Closed.

The teachers are completely engaged in the task. They do not bicker, find fault, or differ with the principal's directives. They are there to get the job done, and they expect to be told personally just how to do it (low Disengagement). There is an excessive amount of paper work, routine reports, busy work, and general Hindrance which get in the way of teachers' task-accomplishment. Few procedures have been set up to facilitate their work; in fact, paper work seems to be used to keep them busy (high Hindrance). Accordingly, teachers have little time to establish very friendly social relations with each other and there is little feeling of camaraderie (low Intimacy). Teachers ordinarily work by themselves and are impersonal with each other. In fact, social isolation is common; there are few genuinely warm relations among the teachers. Esprit, however, is slightly above average. The job-satisfaction found in this climate results primarily from task-accomplishment, not from social-needs satisfaction.

The principal is described as dominating and directive; he allows little flexibility within the organisation, and he insists that everything be done "his" way (high Production Emphasis). He is somewhat aloof; he prefers to publish directives to indicate how each procedure is to be followed. These directives, of course are impersonal and are used to standardize the way in which teachers accomplish certain tasks. Essentially, the principal says, "My way of doing it is best and to hell with the way people feel". Means and ends have already been determined; the principal becomes dogmatic when members of the group do not conform to his views. He cares little about how people feel; the important thing is to get the job done, and in his way. Accordingly, he does not seek to satisfy the group's social needs (low Consideration). Nevertheless, he is trying to move the organisation by working hard (average Thrust), and he personally sees to it that everything runs properly. He delegates few responsibilities; leadership acts emanate chiefly from himself, rather than from the group.

The familiar climate: The main feature of this climate is the conspicuously friendly manner of both the principal and the teachers. Social-needs satisfaction is extremely high, while, contrariwise, little is done to control or direct the group's activities toward goal accomplishment.

The teachers are disengaged and accomplish little in a task-oriented situation, primarily because the principal exerts little control in directing their activities. Also, there are too many people trying to tell others how things should be done (high Disengagement). The principal does not burden the teachers with routine reports; in fact, he makes it as easy as possible for them to work. Procedural helps are available (low Hindrance). Teachers have established personal friendships among themselves, and socially, at least, everyone is part of a big happy family (high Intimacy). Morale, or job satisfaction, is average, but it stems primarily from social-needs satisfaction. In short, the Esprit that is found in this climate is one-sided in that it stems almost entirely from social-needs satisfaction.

The behavioural theme of the principal is essentially, "let's all be a nice happy family"; he evidently is reluctant to be anything other than considerate, lest he may, in his estimation, injure the "happy family" feeling (high Consideration). He wants everybody to know that he, too, is one of the group, that he is in no way different from anybody else. Yet his abdication of social control is accompanied ironically enough, by high Disengagement on the part of the group.

The principal is not aloof and not impersonal and official in his manner. Few rules and regulation are

established as guides to suggest to the teachers how things "should be done" (low Aloofness). The principal does not emphasize production, nor does he do much personally to insure that the teachers are performing their tasks correctly. No one works to full capacity, yet no one is ever "wrong"; also, the actions of members — at least in respect to task accomplishment — are not criticized (low Production Emphasis). In short, little is done either by direct or by indirect means to evaluate or direct the activities of the teachers. However, teachers do attribute Thrust to the principal. But, in this context, this probably means that they regard him as a "good guy" who is interested in their welfare and who "looks out for them".

The paternal climate: This climate is characterized by the ineffective attempts of the principal to control the teachers as well as to satisfy their social needs. This climate is partly Closed one.

The teachers do not work together; they are split into factions. Group maintenance has not been established because of the principal's inability to control the activities of the teachers (high Disengagement). Few Hindrances burden the teachers in the form of routine reports, administrative duties, and committee requirements, mainly because the principal does a great deal of this busywork himself (low Hindrance). The teachers do not enjoy friendly relationships

with each other (low Intimacy). Essentially, the teachers have given up trying; they let the principal take care of things as best he can. Obviously, low Esprit results when the teachers obtain inadequate satisfaction in respect to both task-accomplishment and social needs.

The principal, on the other hand, is the very opposite of aloof; he is everywhere at once, checking, monitoring, and telling people how to do things. In fact, he is so non-aloof that he becomes intrusive. He must know everything that is going on. He is always emphasizing all the things that should be done (Production Emphasis), but somehow nothing does get done. The principal sets up such items as schedules and class changes, personally; he does not let the teachers perform any of these activities. His view is that "Daddy knows best".

The school and his duties within it are the principal's main interest in life; he derives only minimal social-needs satisfaction outside his professional role. He is considerate, but his Consideration appears to be a form of seductive oversolicitousness rather than a genuine concern for the social needs of others. In a sense, he uses this Consideration behaviour to satisfy his own social-needs. Although he preserves an average degree of Thrust, as evidenced by his attempts to move the organization, he nonetheless fails to motivate the teachers,

primarily because he, as a human being, does not provide an example, or an ideal, which the teachers care to emulate.

The closed climate: This climate marks a situation in which the group members obtain little satisfaction in respect to either task-accomplishment or social needs. In short, the principal is ineffective in directing the activities of the teachers; at the same time, he is not inclined to look out for their personal welfare.

The teachers are disengaged and do not work well together; consequently, group achievement is minimum (high Disengagement). To secure some sense of achievement, the major outlet for teachers is to complete a variety of reports and to attend to a host of "housekeeping" duties. The principal does not facilitate the task-accomplishment of the teachers (high Hindrance). Esprit is at a nadir, reflecting low job satisfaction and social-needs satisfaction. The salient bright spot that appears to keep the teachers in school is that they do obtain satisfaction from their friendly relations with other teachers (average Intimacy).

The principal is highly aloof and impersonal in controlling and directing the activities of the teachers (high Aloofness). He emphasizes production and frequently says that "we should work harder". He sets up rules and

regulations about how things should be done, and these rules are usually arbitrary (high Production Emphasis). But his words are hollow, because he, himself, possesses little Thrust and he does not motivate the teachers by setting a good personal example. Essentially, what he says and what he does are two different things. He is not concerned with the social needs of teachers; in fact, he can be depicted as inconsiderate (low Consideration). His cry of "let's work harder" actually means "you work harder". He expects everyone else to take the initiative, yet he does not give them the freedom required to perform whatever leadership acts are necessary. Moreover, he himself, does not provide adequate leadership for the group. For this reason the teachers view him as a "phony". (see Halpin, 1966, p. 174-181).

Student Characteristics:

The dependent variables included in the study were characteristics related to personal social adjustment, value orientations, attitudes towards educational objects, and scholastic attainment.

The personality and attitudinal aspects of student behaviour included in the study were restricted to following characteristics: Cheerfulness, sociability, and lively disposition; quantitative and qualitative aspects of activity such as speed of work, planning and skillful

execution of work, persistence against mental boredom and physical fatigue; regard for moral values, social conventions, and altruistic motives; love for power and position, pride, and assertiveness; suspiciousness, ideas of reference and jealousy, rigidity of opinions or refractoriness to objective analysis with respect to certain inter-personal problems; feelings of unhappiness and inferiority; lack of emotional control and easy susceptibility to arousal of emotions, and inability to recover easily from emotional disturbances; social withdrawal and shyness; attitude toward basic values of Indian society and particular groups within this society; attitude towards school in general, and toward certain educational practices often followed in schools.

The index of scholastic attainment of pupils was derived from the school results in the Board's examination held at the end of school education.

THE RESEARCH DESIGN

The Groups-Within-Treatment Design (with the school as the unit of sampling) was adopted to suit the purpose of the study. Instead of creating different types of social climates in schools, the prevailing climates in a group of schools (selected randomly from a given population) were identified, and the simple random

sampling procedure was followed in selecting schools from the known climate-groups of schools. After selecting the schools on the basis of distinctive social climates, the criterion or dependent variables were measured or observed on a requisite number of subjects, the details of which are reported under Procedure.

SAMPLE

The population of schools which was identified for the existing social climates, comprised of non-governmental and co-educational high schools in the State of Gujarat, attended mostly by children of middle income group of families. Almost 90 percent of schools in Gujarat belong to this category.

The sample of schools for the identification of prevailing social climates consisted of 70 schools. These were drawn randomly from all over Gujarat.

The prevailing social-climate in each of these 70 schools was identified with the help of an objective measure, and schools were classified in six climate-groups on the basis of a climate score assigned to each school. (For details see under Procedure). Each of the six climate-groups of schools were treated as forming a hypothetical population, and a random sample of three schools was drawn from each of six climate-groups of schools, making a total of 18 schools.

Characteristics of students of class ten of these 18 schools were examined for the effect of different social climates. Class ten was selected for reasons of relatively higher maturity of students of this class, and also the fact that behavioural characteristics get fairly crystallized by this time.

RESEARCH TOOLS

The main requirements of the study with respect to psychological tests and inventories were: (a) a suitable measure of social climate in school, and (b) suitable measures for assessing the selected behavioural characteristics of students.

School Climate:

The literature of educational research related to institutional climate was examined. The scales developed so far to measure various dimensions of institutional environment were considered for their suitability to assess the social climate component of institutional environment in terms of teacher-teacher and teacher-principal interactions under school settings.

The instruments taken into account were: The College and University Environment Scales — Pace (1963), The High School Characteristics Index — Stern (1963), The Activities Index — Stern (1963), The College Characteristics Index — Stern (1963), The Protest Scales

— Peterson (1966), Medical College Environment Scales —
Hutchins (1962), The Environmental Assessment Techniques —
Astin and Holland (1961), The Learning Environment
Inventory — Anderson (1970), The Pupil Activity Inventory
Anderson (1970), The Experience of College Questionnaire —
Chickering (1969), The School Survey Inventory — Coughlan
et al (1964, 1970), The Transactional Analysis of
Personality and Environment — Pervin (1967), The Teacher
Description Instrument — Deshpande et al (1970), The
Phenomenal-Self and Phenomenal-Environment Scales —
Kubiniec (1970), and The Organizational Climate Description
Questionnaire — Halpin and Croft (1963).

A close scrutiny of the above mentioned instruments revealed that, except the Organizational Climate Questionnaire of Halpin and Croft, others were mostly developed for assessing either the College and University Environment or they were related to learning environment of these and other similar organizations. The only exception was Stern's Organizational Climate Index which was found to be too time consuming, and which did not fulfil the requirements of the study, namely, giving a climate index based on teacher-teacher and teacher-principal interactions related to academic functioning of a school organisation. Halpin and Croft's Climate Questionnaire

was considered to be better suited than others and was, therefore, selected for use in the study.

Halpin and Croft's Climate Questionnaire consists of 64 Likert-type items to be answered by the Principal and staff of a school. It gives eight sub-scores on the basis of which the social-climate of a given school can be derived. Six types of social-climate can be identified with this questionnaire. It takes about thirty minutes to complete the questionnaire.

Although originally developed on primary school staff, the instrument has been found to be equally effective for high school staff (Andrews, 1965). The instrument has been found to be an objective and a reliable measure of school climate (Andrews, 1965, Pritchard, 1966).

The climate questionnaire was first tried out on a small sample of 20 school teachers to see whether the language of the tool was easily understood by the Indian teachers, and whether situations depicted in the questionnaire were applicable in the educational set up prevalent in the country. Discussions and interviews with teachers revealed that, except for a few words, the questionnaire was workable in the Indian setting. The difficult words were substituted by simpler Indian equivalents, and the modified version of the questionnaire

was used for climate identification purpose. (The modified version is given in Appendix XIII.)

Student Characteristics:

Characteristics of students examined in this study were limited to selected personality traits related to personal social adjustment of pupils, attitude towards some basic values in Indian society and specific groups within that society; attitude towards school and certain educational practices, students' perception of how teachers teach, and students' academic performance reflected in the school pass percentage in the Board's Examination at the end of school education.

Personality characteristics: For personality characteristics, the Sen Personality Traits Inventory (1963) was used. The 120-item inventory provides separate scores for eight traits. These are described below:

Activity: This trait includes qualitative and quantitative aspects of activity. It also includes persistence against mental boredom and physical fatigue.

Hypomanic Temperament: This trait mainly includes three aspects of hypomanic temperament, namely, cheerfulness, sociability and, active and lively disposition.

Moral Values: This includes regard for moral values, social conventions, and altruistic motives.

Dominance: This trait includes love for power and position, pride and assertiveness.

Paranoid Tendency: The main components of this trait are suspiciousness, ideas of reference, and jealousy. It also refers to rigidity of opinions or refractoriness to objective analysis with respect to certain inter-personal problems.

Depressive Tendency: This refers to persistent feeling of unhappiness and inferiority.

Emotional Instability: This trait refers to lack of emotional control and easy susceptibility to arousal of emotions, inability to recover easily from emotional disturbance.

Introversion: This refers to social withdrawal, shy and sensitive temperament.

The Personality Inventory was standardized and validated on a large sample of normal and clinical subjects. The Hindi adaptation, which was rendered into Gujarati, was standardized on 900 school students in Delhi and correlated significantly with the self-rating and personality ratings obtained from a group discussion session.

Values: Attitude towards basic values was estimated with the help of a Value Inventory developed by Bhatt and

Advani (1970). The 48-item abridged inventory was made out of the original 114-item inventory by retaining the 48 better discriminating items. The inventory provides estimates of attitude towards eight aspects of school-going students' behaviour, namely, norms relating to behaviour towards parents, moral values, teachers, social values, civic values, religion, boy-girl relationship, and education.

The reported reliability of the inventory is in the range of .70 to .80 for various sections of the inventory. The inventory is reported to have satisfactory empirical validity. Item-analysis of the condensed version and also its reliability study provided satisfactory results.

Attitudes: Students' attitude towards school, in general, was measured with the help of an attitude inventory developed by the International Association for the Evaluation of Educational Achievement (1970). The 24-item inventory was translated into Gujarati. The item-analysis and the reliability of the Gujarati version were carried out. The inventory was found to discriminate between the upper and the lower groups. Its reliability was .79 (test-retest).

Mitchell's attitude inventory was used to study students' view on certain aspects of education. (See

Shaw and Wright, 1967). The 34-item inventory included items on educational policies and practices on the strict-lenient continuum. The reported reliability of this inventory is .71 (test-retest). The validity was established by correlating attitude scores with class grades. The reported correlation between attitude and class grade is .73. This inventory was also rendered into Gujarati.

Students' perceptions of how teachers teach were obtained through Davenport's How Teachers Teach rating scale (Davenport, 1944). The 25-item scale covers general areas of teacher-pupil relationship such as maintaining discipline in the classroom, teacher effort to install or correct personal and social habits of pupils, means of progress within school by grading et cetera, teacher attempts to meet the problems of pupils' fears, and democracy-dictatorship problems within the classroom. The reported reliability of the scale is .83 (split-half). Validity of the scale was determined empirically by getting the judgments of competent judges on each item of the scale.

Scholastic performance: Estimate of academic performance of a school was obtained by averaging the pass percentage of a school.

the Board's Examination at the end of school education for the previous five-year period.

Specimens of questionnaires and inventories used in this study are given in Appendix XIII at the end of this report. It may be mentioned that the tools used in the study were tested on small samples of students, and necessary modifications were carried out before these were employed for the data collection purpose. The try-out studies revealed that, by and large, pupils experienced some difficulty in the language of items which was mainly English. It was, therefore, considered necessary to translate all the tools to be administered to students into Gujarati, which was also the medium of instructions in the schools. The tools were rendered into Gujarati with the help of Gujarati friends who had lot of experience in doing educational research and in translation of technical educational matter from English or Hindi into Gujarati. The translated versions of tools were checked by experts.

PROCEDURE

The first step for the study was to identify six social climate groups prevailing in schools, namely the Open, the Autonomous, the Controlled, the Familiar, the Paternal, and the Closed. The procedure adopted in identifying school climate is detailed below:

Identification of School Climate:

A sample survey was conducted to know the climate of a group of schools. The Directorate of School Education in Gujarat was consulted for making a list of such schools. Seventy High schools were drawn randomly — using a table of random numbers — from a school population of non-governmental and co-educational high schools in Gujarat State attended mostly by students of middle socio-economic strata of society, and in existence for at least ten years.

These selected schools were approached through the Centre of Advanced Study in Education, at the M.S. University of Baroda, for cooperation and necessary facilities in conducting the survey. Principals of all these schools readily agreed to extend every possible help to the investigator who then fixed up appointments for collecting basic data from the principal and teachers to identify the school climate.

A modified form of the Climate Description Questionnaire of Halpin and Croft (1963), with eight sub-tests related to eight dimensions of school climate, was used to collect necessary information about the hierarchical relations between the principal and teachers, and collegial relations within the teacher group, in a school system.

The questionnaire was administered to teachers and the principal separately in each school. Teachers were

given the questionnaire in the staff room and they were requested not to write their names on the questionnaire to elicit their frank responses. They were also assured that their responses would be kept confidential and used only for research purpose. The principal was requested to fill the questionnaire in his own office. Mostly, this work was done after the regular school hours.

Items in the questionnaire required each respondent to indicate the extent to which each statement characterised his school on a four-point scale. The response categories were:

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

Completed questionnaires were classified school-wise, and each respondent's questionnaire was scored for eight dimensions of school climate by assigning 1 score for responses checked under "rarely occurs", 2 score for "sometimes occurs", 3 score for "often occurs", and 4 score for "very frequently occurs".

Sub-test or dimension-wise score for each respondent was computed by simply summing up his item scores, sub-test by sub-test, and dividing each of the eight sums by the number of items in the corresponding sub-test.

School profiles were constructed by summing up the sub-tests scores of all respondents of a particular school

sub-test by sub-test, and dividing each of the eight sums by the number of respondents in that school. The school-mean sub-test scores, for each of the eight sub-tests for 70 schools, are given in Appendix I.

To facilitate the examination of relationship between the scores on the sub-tests, with differences among the means of the subtest scores for each school in the sample held statistically constant, the scores for each school were standardized twice, first normatively, and second ipsatively, as recommended by Halpin (Halpin, 1966, p. 167).

Each subtest score was converted into a standard score across the sample of 70 schools with the mean and standard deviation of the total sample for that subtest. These standardized subtest scores were then treated as raw scores and converted again into standard scores, this time ipsatively, using the mean and standard deviation of the profile scores for each school. For both standardization procedures, a standard score system based on a mean of 50 and a standard deviation of 10 was applied.

School profiles in terms of double standard scores are given in Appendix II.

To classify schools with respect to climate the "profile-similarity" method (see Halpin, 1966, p. 186) was used. A profile-similarity score was obtained for each subtest score in a school's profile and the corresponding

score in the prototypic climate profiles derived by Halpin and Croft (1963) for each of six climates: the open, the autonomous, the controlled, the familiar, the paternal, and the closed. In each instance, the sum of absolute differences between a school profile and each of six prototypic climate profiles was computed. The obtained absolute differences were ranked from low to high. A school was classified under that climate for which the absolute difference between the school profile and the prototypic climate profile was found to be the lowest.

The prototypic profile scores for all the six climates are given in Appendix III. These were derived by the authors of the instrument using factor-analytic techniques (Halpin, 1966, p. 181 and 186-192). The obtained absolute difference scores between a school profile and each of six prototypic profiles are given in Appendix IV. The school profiles classified under respective climate group are given in Appendix V.

Formation of Treatment Groups:

Six climate groups were treated as hypothetical populations, and a random sample of three schools from each of six climate groups was selected to form six treatment groups.

The profile scores of selected 18 schools are presented in Appendix VI.

Particulars regarding the length of service of the principal and teachers in the school in which they were serving at the time of the study, the nature of socio-economic strata of students served by the school, whether the school was residential, the catchment area of the school with respect to students, the source of funds and the management of the school, the location of school, and whether the school was co-educational, were collected from the selected 18 schools. Analysis of this information revealed that all the schools were in urban or semi-urban areas, financed mostly by the State Government and governed by the rules of the State Directorate of School Education, but managed by public trusts or private organisations, attended mostly by students of middle socio-economic strata coming from the nearby localities, non-residential, and co-educational. The median length of service of principals and teachers in their respective schools was 14.50 years for principals, and 10.62 years for teachers. This confirmed the information obtained earlier from the school Directorate, and clarified that the selected schools had many common characteristics, that the same staff was in the service of the school for quite some time, and the principal-staff and within staff relations were fairly established.

Collection of Data on Student Variables:

Observations on the selected aspects of student behaviour were collected with the help of inventories and

questionnaires for personality and attitude variables, and School Boards' records were utilised for deriving an index of academic performance of a school in the Board Examination at the end of school education.

Personality and attitude characteristics: Selected Psychological inventories were administered to students of class ten of the selected schools. Only one section of class ten, picked up randomly, was taken up for data collection purpose. Tests were administered under normal classroom situations available in Indian schools. Students were seated in such a way that no two students could see each others responses. The class teacher remained in the class throughout the test-administration session to maintain necessary seriousness among the students, and to maintain normal discipline. In the test administration work, the investigator was assisted by a couple of Gujarati speaking research fellows who were working in the Centre of Advanced Study in Education for their respective research.

Instructions for each test were given separately and students were asked not to write their name on the test booklets. A recess of about 10 minutes was provided after one hour of testing. The testing lasted for about two hours.

Following tests were administered to students in the order in which they are listed: The Personality Traits

Inventory, How Teachers Teach Inventory, The School Questionnaire, Attitude Toward Educational Practices Inventory, and The Value Inventory. A specimen copy of these inventories is given at the end in Appendix XIII, along with an English version.

Scoring of Students' Responses:

The personality inventory was scored following a three point scoring system. Items checked under "yes" were assigned a score of 2, for "no" a score of 0 was given, and for checking "?" a score of 1 was allotted for positive items. The system was reversed for negative items. Each student's responses were scored for eight personality traits. These were: Activity (which includes quantitative and qualitative aspects of activity such as speed of work, planning and skilful execution of work, persistence against mental boredom and physical fatigue); Hypomanic Temperament (including cheerfulness, sociability and lively disposition aspects of temperament); Moral Values (comprising regard for moral values, social conventions, and altruistic motives); Dominance (characteristics such as love for power, and position, pride and assertiveness); Paranoid Tendency (related to suspiciousness, ideas of reference and jealousy, rigidity of opinions or refractoriness to objective analysis with respect to certain interpersonal problems); Depressive

Tendency (of feeling of unhappiness and inferiority); Emotional Instability (that is, lack of emotional control and easy susceptibility to arousal of emotions, inability to recover easily from emotional disturbance); and Introversion (referring to social withdrawal, shy and sensitive temperament).

A copy of the key used for scoring responses on the personality trait inventory is also given at the end in Appendix XIII.

Students' responses on The Value Inventory were scored for eight types of values: religious, social, civic, and moral, values related to parental behaviour, teachers, heterosexual relations, and education. Responses were scored on a five-point scale with a score of 5 for "strongly agree", 4 for "agree", 3 for "indefinite", 2 for "disagree" and 1 for "strongly disagree" response categories for positive items. The scoring system was reversed for negative items.

Responses on the School Questionnaire were scored by assigning a weight of 1 score for checking "A" item in the pair and weight of 0 for checking "B" item in case of positive items, and the reverse weights for negative items. The total score was a simple addition of scores on the alternatives checked by a student.

The Attitude Towards Educational Practices Inventory was scored by giving 1 score for checking a "strict practice"

and 0 for checking "lenient practice". The total score was the difference between the number of statements checked which indicated strict attitude and those which indicated less strict or lenient attitude. A constant of 10 was added to each total score to avoid minus scores.

Student's ratings on the How Teachers Teach Inventory were added up teacher-wise to get a score for each teacher. Scores for all the teachers rated by a student were then summed up and divided by the number of teachers rated to derive an over all score of a student as to how he perceives his teachers' behaviour on the specified aspects of teacher-behaviour.

Index of Academic Performance:

The average of school pass percentage in the Board's examination for the last five years was taken into account for deriving the index of academic performance of students studying in a school.

School Mean Scores:

As the unit of analysis in the present study was a school, the school means were worked out for variables related to student behaviour. School means for each variable are reported in Appendix VII to XI. It may be mentioned that the school means for academic performance

which were derived from percentages were converted into radians for analysis purposes. The figures in the table for academic performance are transformed values.

The statistical analysis carried out to study the effect of school climates on students characteristics is presented in the following section.