CHAPTER IX

Summary and Conclusions

Introduction

The socio-psychological characteristics of the learners and the satisfying relationships among students, teachers and parents are important aspects of an encouraging atmosphere of any educational organization. As in many other world countries, Thailand underwent rapid and marked changes in various areas, including the educational, due to the advancements in technology, communication systems, and extensive engagement with the world community. Being aware of the fact that the current educational provisions were not sufficiently responsive to the changing needs of individual, community and national development, the state deemed it necessary to revitalize the educational system in order to ensure that education can help improve the quality of life for the Thai people in directions appropriate to the changing context of Thai society.

The effect of schooling on students has been of interest to educational researchers. Nearly for the past five decades, school climate has been studied with a multitude of variable, methodologies, theories, and models. The difficulty of defining school climate is reflected in the diversity of climate typologies that have evolved, despite their common roots. However, school climate is
clearly the dimension of both organizational climate research and school effects research, having inherited instruments, theory and method from both types of researches.

Within the theoretical framework of climate as the 'personality' of an organization, school climate is viewed as the personality of a school (Halpin, 1960) and has been described in terms of the social interactions between teachers and principal and among members of the teaching staff. Organizational climate has also been defined as the global assessment of the interaction between the task-achievement dimension and the needs-satisfaction dimension within the organization (Lonsdale, 1964); as the relatively enduring pattern of shared perceptions about the characteristics of an organization and its members (Kerfe and others, 1985); how people feel about their school (Sweeney, 1988); and as the prevailing conditions affecting life and activities (Taylor II, 1989). Viewed within various definitions, it may be said that climate is multidimensional and is characterized by attitudinal and qualitative aspects of the interpersonal relationships within the organization.

Satisfaction assessment is a valuable tool to those who are concerned with the school organization for providing opportunities for learning outcomes especially the students' academic achievement. Research findings indicate that higher the production emphasis and humanized thrust in an
organization, the higher is the satisfaction (Veeraraghwan, 1986; that satisfaction is derived from being engaged in a piece of work or in any pursuit of a higher order and is essentially related to human needs and their fulfilment through work (Sinha, 1972); that satisfaction is the personal, affective response of the individual to a specific situation, or condition (Schmitt and Loher, 1986); that satisfaction is a reintegration of the effect and attitude produced by an individual’s perception of the fulfilment of his/her needs in relation to his/her work and the situation surrounding it; and that the best predictors of overall satisfaction were the effect of the work on principals personal lives, and the community standing of principals (Johnson, 1988).

Further, studies reveal that it is the environment for learning in the classroom rather than the physical characteristics of the class and classroom (Blook, 1976; Pandey, 1981; Puri, 1984) and strong administrative leadership in instruction which is significantly associated with student academic success (The New York State Department, 1976; Edmonds, 1979; Elett and Walberg, 1979; Young, 1980; Behling, 1984; Hopkins and Crain, 1985). The most significant indicators of high achieving students are the relationship between the student and particular teacher, the supportive environment of the home and the cultural impact of home, school, and the community (Eberle, 1988);
the extent of opportunities provided to students to participate in activities in the school on the one hand and learning outcomes including their achievements on the other hand (Rutter et al., 1979).

In India, the creation of satisfactory conditions of effective work for teachers was pleaded by the Education Commission (1964-1966). More recently, the teacher has been considered as the most crucial input in the field of education by way of his or her role in the interpretation and implementation of educational policies (Balvinder, 1986) and as an agent of social change (National policy on education, 1986, revised version, 1992).

The importance of positive school environment is the foundation for effective learning and it is achieved through the cooperation of teachers, administrators, support staff members, and parents. Besides, the students should be expected to achieve at their optimum level; that boards of education and school principals must take responsibility for school effectiveness and environment; and that student outcomes must be emphasized (Crisci, 1986).

The present study, exploratory in nature, has been taken with a view to identifying and comparing the status of demonstration and non-demonstration schools of Thailand in respect of school climate characteristics and satisfaction variables as perceived by students, teachers and parents. The selection of variables of education environment has been made within the framework of NASSP (National Association of
Secondary School Principals) Task-Force Interacting Model of School Environment (Halderson, Kelley and Keefe, 1988). The study is also concerned with examining the relationship of school climate characteristics and satisfaction (students', teachers', and parents') variables with the academic achievement of students.

Statement of the Problem

A COMPARATIVE STUDY OF SCHOOL CLIMATE AND SATISFACTION AS MEDIATING VARIABLES OF EDUCATIONAL ENVIRONMENT AND THEIR RELATIONSHIP WITH STUDENTS' ACADEMIC ACHIEVEMENT IN DEMONSTRATION AND NON-DEMONSTRATION SCHOOLS OF THAILAND.

Objectives of the Study

1. a) To identify the school climate characteristic of demonstration schools as perceived by students, teachers and parents.

   b) To identify the school climate characteristics of non-demonstration schools as perceived by students, teachers and parents.

2. To compare the school climate characteristics profiles of demonstration and non-demonstration schools in terms of inter and intra differences.

3. To study and compare demonstration and non-demonstration school in regard to (a) students,
(b) teachers and (c) parents satisfaction.

4. To examine the relationship of school climate and satisfaction variables with the academic achievement of students.

5. To prepare an outcome-based evaluation for demonstration and non-demonstration schools. That is, to identify and compare the perceived strength and weakness in demonstration and non-demonstration schools.

6. To suggest what changes or interventions are needed for improving the school environment of both demonstration and non-demonstration schools.

Hypotheses

The first objective of the study is exploratory in nature and thus does not need formulation of specific hypothesis. Likewise, no hypotheses have been framed for the last two objectives (No. 5 & 6) which are concerned with evaluation and working out of suggestions on the basis of results obtained in the present study. Directed to the remaining objective, following hypotheses have been framed:

1. Significant differences exist between the demonstration and non-demonstration schools on school climate variables.
2. There are significant differences in the satisfaction of students of demonstration schools as compared to students' satisfactions of non-demonstration schools.

3. Perception of teachers' satisfaction of demonstration schools is significantly different from those of non-demonstration schools.

4. Significant differences exist between the demonstration and non-demonstration schools in the perception of satisfaction of parents.

5. School climate is significantly related to the academic achievement of students.

6. Significant relationship exists between the perceived satisfaction of students and parents on the one hand and the academic achievement of students on the other.

9.5 Design Of the Study

The present study is scheduled to be conducted in two phases. The first phase is, primarily, a status study involving comparisons also wherein the demonstration and non-demonstration schools will be studied and compared in respect of students', teachers', and parents' perceptions on ten subscales of school climate (teacher-student relationships, security and maintenance, administration,
student academic orientation, student behavioural values, guidance, student-peer relationships, parent and community-school relationships, instructional management, and student activities) as also on three types of satisfaction variables namely, students', teachers' and parents' satisfaction variables.

It may be mentioned here that as viewed in an interactive model of the school environment (Keefe, Kelley, and Miller, 1985), the students', the teachers' and the parents' satisfaction variables are mediating variables whereas students' satisfaction is both mediating and an outcome measure in as much as it both influences school success and corroborates it. However, within the scope of present study, all the three satisfaction variables have been taken as only mediating variables. Academic achievement, is an output variable within the framework of this model.

The second phase of the study will be comparative and correlational in nature. Relationships of educational environment variables namely, school climate and satisfaction as perceived by students, teachers, and parents with academic achievement of the student will be separately worked out and further compared for demonstration and non-demonstration schools.
Sample

For the purpose of the present study, five education regions (number eight, two, twelve, nine and one) were randomly selected as representative regions from North, South, East, Northeastern and Central of Thailand. Five demonstration [school No. 1 (Chiengmai D.S.) school No. 2 (Prince Songkla D.S.) school No. 3 (Phiboonbumphen D.S.) school No. 4 (Mordindang D.S.) and school No. 5 (Chulalongkorn D.S.)] and five non-demonstration higher secondary schools [school No. 1 (Yoppharaj Vidhayalai), school No. 2 (Benjamarachuthid School), school No. 3 (Chonkayanukul School), school No. 4 (Kaennakorn Vidhayalai) and school No. 5 (Sattreevidhaya II)] were drawn randomly from regions mentioned above. In other words, two schools, one demonstration and one non-demonstration school were randomly selected from each region. Next, 30 teachers and 50 higher secondary students (of class X, XI and XII) were randomly drawn from each of the selected demonstration school and an equal number of teachers, students and parents was also drawn on the basis of randomization from each non-demonstration school. Further, based on the randomization technique of sampling, 30 parents of students selected from demonstration schools, and the same number of parents of students selected from non-demonstration schools were taken as sample of parents. Thus, the sampling procedure could be called as multi-stage stratified random sample technique.
Stratification was resorted at zonal and school levels, and selection of students, teachers and parents for each school was done randomly. In all, 249 teachers, 453 students and 271 parents constituted three sub-samples from both the demonstration and non-demonstration schools. The total number of teachers who responded to the scales came to be 103; for students the number was 218; and the number of parents was 126 from demonstration schools. The counterpart number from non-demonstration schools for teachers was 146; for students, 235; and for parents it was 145.

Tools
Since the selection of variables under study was done within the framework of an interactive model of the school environment, the preference for tool also was given to those developed & standardised by NASSP at the University of Nebraska. Following tools were employed for the collection of data for the present investigation.

i) School climate survey (Kelley, Glover, Keefe, Haiderson, Sorenson and Speth, 1985).

ii) Student satisfaction survey (Neal Schmitt and Brain Loher, 1987).

iii) Teacher satisfaction survey (Neal Schmitt and Brain Loher, 1987).

Techniques Used for Analyses of the Data

I) Descriptive Analysis: Means, standard deviations, skewness and kurtosis were worked out to study the nature and distribution of scores on different characteristics of school climate.

II) t-ratios: t-test was employed to compare the perception of students, teachers and parents of demonstration and non-demonstration schools on different variables under study.

III) Bivariate Analysis: Pearson Product Moment Correlations were worked out in order to examine the nature and degree of relationship among different variables, by taking two variables at a time.

Results and Conclusions

The main findings of the study are as follows:

1) The school climate characteristics of demonstration schools (names given in sample p. 415) as perceived by students, teachers and parents in respect of 10 subscales yielded the following results.

a) All the three sub-samples that is students, teachers and parents responded in the category of agreement i.e. 'satisfaction' on four of the ten school climate characteristics, namely (i)
student academic orientation, (ii) guidance, (iii) student-peer relationships and (iv) student activities.

b) Both students and teachers of demonstration schools perceived two school climate characteristics favourably, namely; teacher-student relationships and security and maintenance subscales, whereas parents expressed their neutrality on both these scales.

c) The subscale of parent and community-school relationships was perceived favourably by both students and parents but teachers' perception indicates uncertainty.

d) On two subscales, namely; administration and instructional management, only teachers of demonstration schools showed their agreement indicating their satisfaction.

e) Student behavioural values subscale has been perceived as neutral by all the three samples.

f) None of the school climate characteristics has been identified as unsatisfactory by students, teachers and parents.

2) Analysis of intra-differences among demonstration schools on various school climate characteristics in terms of significance of differences between mean (t-ratio) yielded the following results: a) As
far as students' perception is concerned no significant differences could be located between various pairs of schools on five of the ten characteristics of school climate that is; teacher-student relationships, student academic orientation, student behavioural values, student-peer relationships, and parent community-school relationships. School No. 1 (Chiengmai Demonstration School) is ranked highest by the students with regard to administration and guidance of their school as compared to other schools. Likewise, students perceived school No. 1 and 2 as having better instructional strategies and more variety of student activities than their counterparts in other schools. Students have singled out school No. 3 as the lowest of all demonstration schools in the sample in respect of the required standard of security and maintenance.

b) Teachers perceived school No. 1 as having the healthiest school climate of all the demonstration schools on teacher-student relationships, student academic orientation, guidance and student-peer relationships followed by school No. 2 on security and maintenance, student behavioural values and student activities. School No. 2 was lower in parent and community-school relationships than the schools.
No. 3 and 4, school No. 4 was at the lowest in teacher-student relationships.

c) With respect to parents' perception, there were no significant differences between various pairs of schools on six of the ten characteristics, namely teacher-student relationships, administration, student behavioural values, guidance, student-peer relationships and student activities. Parents also perceived schools No. 3 and 5 as more or less parallel, that is without any significant differences in their perception of all subscale. Parents of students studying in school No. 2 felt more satisfied with student academic orientation than their counterparts in schools No. 1, 3, 4 and 5. Results amply depicted that provision of security and maintenance to the students and the staff needed strengthening in school No. 3 and the instructional management of school No. 5 was perceived by parents as poorer than that of schools No. 2 and 4.

3) As far as the school climate of non-demonstration schools is concerned, all the three samples (students, teachers and parents) felt satisfied with seven out of ten subscales of school climate characteristics (teacher-student relationships, security and maintenance, student academic orientation, guidance, student-peer relationships,
parent and community-school relationships and student activities). On the remaining three subscales, analyses yielded the following results;

a) Two subscales namely; administration and instructional management have been perceived favourably by students and their teachers although parents felt uncertain about these characteristics.

b) Student behavioural values, have been perceived by all groups of samples as neutral.

c) None of the characteristics of school climate was perceived as unsatisfactory.

4) With respect to the intra-differences among non-demonstration schools on school climate characteristics the following results were obtained:

a) Students of schools No. 1 and No. 2 perceived the parent and community-school relationships and student activities dimensions significantly better than their counterparts whereas the students' perception of school No. 3 in terms of instructional management is significantly lower than that of the others.

b) According to the teachers' perception, the results obtained from school No. 3 were definitely more appreciable and satisfactory on security and maintenance, student behavioural
values, guidance and parent and community-schools dimensions than other schools. The dimensions of guidance and student-peer relationships were perceived favourably by teachers of school No. 5, while student academic orientation and student-peer relationships of school No. 2 were viewed as needing improvement by the teachers and administration dimensions of school No. 4 also received the similar suggestions.

c) **Parents' perception** of schools No. 1 and 2 towards teacher-student relationships, administration, parent and community-school relationships, instructional management and student activities dimensions was better as compared to for other schools. Student academic orientation as perceived by parents of students studying in school No. 5 was not as satisfactory as that of schools No. 1, 2 and 3.

5) **Comparison between demonstration and non-demonstration schools on school climate characteristics** as perceived by students, teachers and parents.

a) **Students' perception** of both demonstration and non-demonstration schools was more or less similar towards teacher-student relationships (A), security and maintenance (B), student
behavioural values (E), guidance (F) and parent and community-school relationships (H). Marked differences between two types of schools have been observed in some characteristics. Non-demonstration schools are perceived as significantly more satisfactory by students on administration (C) and instructional management (I) dimensions than demonstration schools thereby suggesting the need of certain changes to be brought about in these areas.

b) The dimensions which teachers of both demonstration and non-demonstration schools perceived akin to one another were teacher-student relationships (A), security and maintenance (B) and instructional management (I). Significant differences (t-ratios) between the two mentioned schools, however, were found on administration (C) and parent and community-school relationships (H) wherein teachers of non-demonstration schools perceived these characteristics satisfactorily than those of demonstration schools.

c) Parents' perception was more or less similar for both demonstration and non-demonstration schools on student behavioural values (E), guidance (F), student-peer relationships (G), parent and community-school relationships (H) and
instructional management (I). Significant t-ratios were found for mean differences between two types of schools. Non-demonstration schools were thus perceived more satisfactorily by parents on teacher-student relationships (A) and security and maintenance (B), than demonstration schools.

6) On satisfaction variables, the identification of satisfaction variables and differences between demonstration and non-demonstration schools, on three separate measures for assessing satisfaction of students, teachers and parents, submitted a mixed picture of significant and not significant t-ratios. In brief results are as follows:

a) Demonstration schools' students, teachers and parents of students showed their neutrality towards student discipline sub-variable. On school buildings, supplies and maintenance and communication sub-variables, teachers and parents depicted their neutrally but the students were satisfied with these sub-variables. By contrast, on curriculum dimension, the teachers and the parents expressed their satisfaction but the students were neutral.
b) Even though the views of students and their parents towards teachers dimension were positive, their responses on some other dimensions were at variance. Parents expressed neutrality while students showed satisfaction on student activities and information services dimensions.

c) Although the perception of both teachers and parents of students of demonstration schools were neutral on administration sub-variable but on the sub-variable of parents and community involvement, both groups viewed slightly differently from each other. Teachers gave neutral response while parents perceived this dimensions as satisfactory.

d) Two of the eight student satisfaction variables namely, fellow students and decision-making opportunities were perceived differently by students of demonstration schools. On fellow students sub-variable, students preferred the category of satisfaction whereas on decision-making opportunities, they remained neutral.

e) On two of the nine teacher satisfaction variables namely, compensation and opportunities for advancement, the perception of teachers was neutral whereas on sub-variable of co-workers, they had satisfactory attitudes.
f) With regard to one of the ninth parent satisfaction variables, that is support services, parents of students in demonstration schools had neutral attitudes.

7) The outcomes of the satisfaction variables of non-demonstration schools perceived by students, teachers and parents can be shown as follows:

a) The results gained from all the three sub-samples indicated that all the three sub-samples that is students, teachers and parents of non-demonstration schools had satisfactory perception of curriculum, student discipline, buildings and supplies and communication sub-variables.

b) On parents and community involvement sub-variable, both teachers and parents were satisfied. With regard to administration sub-variable, teachers perceived it satisfactorily but parents' perception remained neutral.

c) On "teachers" sub-variable, both students and their parents illustrated their satisfactory attitudes while student activities sub-variable was perceived by students and their parents satisfactorily and neutrally respectively.

d) Students in non-demonstration schools perceived the fellow students sub-variable in the category of satisfaction but decision-making opportunities sub-variable was perceived neutrally.
e) On three of nine teachers satisfaction variables meant only for teachers, two sub-variables viz. advancement opportunities and co-workers were perceived satisfactorily by teachers but teachers felt uncertain on sub-variable of compensation. On support services, the parents of students of non-demonstration schools remained neutral.

8) With respect to the *intra-differences among demonstration schools* on satisfaction variables, students of school No. 1 were more satisfied on sub-variable of decision-making opportunities while their parents were also more satisfied on administration and 'parents and community' sub-variables in comparison to other schools. In addition, teachers of school No. 2 perceived more favourably the compensation sub-variable as compared to teachers of the remaining demonstration schools.

9) Regarding *intra-differences among non-demonstration schools on satisfaction variables*, both students and their parents viewed school No. 2 more favourably than other schools on student discipline and decision-making opportunities. In addition, parents had more positive attitudes towards schoolwork/curriculum, student activities and support services of school No. 2 than other schools, while teachers of school No. 3 gave a higher score on parents and
10) The comparison between demonstration and non-demonstration schools on satisfaction variables as perceived by students, teachers and parents shows the following results:

a) Students of both demonstration and non-demonstration schools had similar perception towards student discipline sub-variable. Furthermore, the non-demonstration schools' students perceived on the school buildings and supplies significantly better (t=4.883) as compared to demonstration schools' students.

b) The sub-variable on which teachers of both demonstration and non-demonstration schools had similar view were co-workers sub-variable. However, significant differences were perceived by teachers between these schools on administration (t=4.103), student responsibility and discipline (t=2.014), parents and community (t=3.515), school buildings, supplies and maintenance (t=4.850), and communication (t=3.621) sub-variables which were perceived satisfactorily by teachers of non-demonstration schools but less satisfactorily by teachers of demonstration schools indicating thereby the need to improve upon these sub-variables.
c) On the parents involvement sub-variable, parents of both demonstration and non-demonstration schools had similar views of positive and satisfactory perception. Significant differences between these schools resulted in support services (t=-3.378) and school buildings supplies and maintenances (t=-3.010) sub-variables which were viewed satisfactorily by parents of students in non-demonstration schools but not by parents of students studying in demonstration schools.

11) Results of correlations which were used to examine the nature and degree of relationship of school climate characteristics and satisfaction variables of demonstration and non-demonstration schools as perceived by students and their parents with the academic achievement of students, were as follows;

a) The school climate characteristics are non-significantly related to the academic achievement of students except the student-peer relationships (r = .1609) dimension in case of demonstration schools and guidance (r = -.2110, -.1920), instructional management (r = -.1462, -.1595) and student activities (r = -.1377, -.1455) dimensions of schools climate characteristics of non-demonstration schools which are significantly related to the academic achievement of students.
b) The values of correlations between student satisfaction variables and academic achievement of the students in demonstration schools and non-demonstration schools are not significant barring one dimension that is; fellow students of student satisfaction variables in which case the value of 'r' was found to be significant (r=.1976).

c) The relationship between perceived satisfaction variables of parents and academic achievement of the students is also not significant except student activities (r=.208) and school administrators (r=.226) sub-variables of parent satisfaction which are significantly related to the academic achievement of students.

It may, however, be pointed out here that in case of results involving correlations as above at serial No. 11, the sample of students had to be reduced to include only those students whose parents were involved in the study. Hence, these results should be used with caution for broader generalization keeping in view the purposive nature of the sample of students in this respect.
Overall Conclusions

On the basis of the discussion of results presented in chapter IV to chapter VIII and as directed to objectives and hypotheses of the study, following conclusions may be drawn:

1. **Identification of School Climate Characteristics**

   a) All the three sub-samples taken in the study (students, teachers and parents) show agreement in their perception of satisfaction of demonstration schools on four dimensions of school climate characteristics namely; student academic orientation (D), guidance (F), student-peer relationships (G) and student activities (J). Teachers and students of demonstration schools are found more agreeable in terms of satisfactory perception than the parents' on majority of its dimensions. Teacher gave satisfactory responses on eight out of ten characteristics namely; teacher-student relationships (A), security and maintenance (B), administration (C), student academic orientation (D), guidance (F), instructional management (I), and student activities (J) and students showed their satisfaction on seven out of ten satisfaction namely; [teacher-student relationships (A), security and maintenance (B), student academic orientation (D), guidance (F), student-peer relationships (G), parent and community-school relationships (H), and student activities (J)]. On the dimension of student behavioural values (E), all the three sub-samples...
fall in the category of neutrality.

b) In non-demonstration schools, all the three sub-samples are consistent in perceiving seven of the ten dimensions of school climate as satisfactory, namely; teacher-student relationships (A), security and maintenance (E), student academic orientation (D), guidance (F), student-peer relationships (G), parent and community-school relationship (H), and student activities (J). It is observed that parents remained neutral on dimensions of administration (C) and instructional management (I) while students and their teachers perceived their dimensions favourably. On the characteristic of student behavioural values (E) in the non-demonstration schools; all the three groups: students, teachers and parents, show neutrality.

2. Comparison among Demonstration Schools on School Climate Characteristics (Intra - Differences)

2.1. a) Out of ten school climate characteristics as perceived by students, there are no significant intra-school differences on five dimensions; teacher-student relationships, student academic orientation, student behavioural values, student-peer relationships and parent and community-school relationships. School No. 1 (Chiengmai Demonstration School) obtains the highest points on the dimensions of administration (C) and student-peer relationships (G); school No. 1 and No. 2 (Prince Songkla Demonstration School) are perceived better than others on
two dimensions (instructional management and student activities) while school No. 3 (Phiboonbumphen Demonstration School) is found the lowest in security and maintenance dimension (B).

2.1b) In case of teachers' perception of demonstration schools, school No.1 has the most healthy school climate characteristics on four dimensions (namely; teacher-student relationships, student academic orientation, guidance and student-peer relationships) but is lower than others in respect of parent and community-school relationships dimension (H). School No. 4 (Mordindang Demonstration School) is the lowest of all demonstration schools on dimension of teacher-student relationships (A).

2.1c) Intra-differences among demonstration schools on six out of ten dimensions namely; teacher-student relationships, student academic orientation, student behavioural values, guidance, student-peer relationships and student activities are found to be non-significant as perceived by parents. Moreover, parents of students studying in school No. 3 (Phiboonbumphen Demonstration School) and school No.5 (Chulalongkorn Demonstration School), also show non-significant difference on all the ten dimensions used in the present study while parents of student studying in school No. 2 are found to be satisfied on student academic orientation (D). On security and maintenance (B) and instructional management (I), parents of students in school
No. 3 and school No. 5 have shown neutrality respectively.

As far as non-demonstration schools are concerned, all three groups of sample felt satisfied with seven of the ten dimensions of school climate characteristics that are teacher-student relationships, security and maintenance, student academic orientation, guidance, student-peer relationships, parent and community school relationships and student activities. The remaining three subscales yielded results as follows: students and teachers had perceived favourably on administration (C) and instructional management (I) while parents felt uncertain on these two dimensions; all groups of sample were neutral on student behavioural values (E).

2.2 Comparison Among Non-Demonstration Schools on School Climate Characteristics

2.2.a) With regard to intra-differences among non-demonstration schools, on school climate characteristics as perceived by students of school No. 1 (Yoppharaj Vidhayalai) perceived parent and community - school relationships (H) and student activities (J) significantly better than others whereas students of school No. 3 (Chonkanyanukul School) perceived instructional management (I) significantly lower than the others.

2.2.b) Concerning teachers' perception, school No. 3 was more appreciable and satisfying on four dimensions of school climate characteristics (security and maintenance, student behavioural values, guidance and parent and
community-school relationships) than the others. Besides, guidance (F) and student-pupil relationships (G), were perceived by teachers of school NO.5 (Sattreevidhaya II) as more favourably than other schools. On student academic orientation (D) and student-peer relationships (G) of school No.2 (Benjamaramachuthid School) and administration (C) dimension of school No.4 (Kaennakorn Vidhayalai), a need for further improvement was indicated by teachers.

2.2.c) For School No.1 (Yoppharaj Vidhayalai) and No.2 (Benjamaramachuthid School), parents' perception of teacher-student relationships, administration, parent and community-school relationships, instructional management and student activities dimensions were higher as compared to their perception on these dimensions for other schools whereas on student academic orientation (D) dimension, their perception of school No.5 (Sattreevidhaya II) was lower in comparison to other schools (schools No.1, 2 and 3).

3. **Comparison of Demonstration and Non-Demonstration Schools on School Climate Characteristics**

3.a) In the light of the results of comparative analysis of school climate characteristics of demonstration and non-demonstration schools as perceived by students, it was discovered that students satisfaction on majority of the dimensions of school climate characteristics with non-demonstration schools is significantly higher than those in the demonstration schools. The t-ratios indicate that the
extent of differences between means of demonstration and non-demonstration schools on two dimensions i.e. administration (C) and instructional management (I) was significant at .01 level in favour of non-demonstration schools.

3.b) With regard to perception of teachers, the differences between means of demonstration and non-demonstration schools regarding their perception differed significantly on two dimension i.e., administration (C) and parent and community-school relationships (H) (Vide table 6.2).

3.c) The perception of parents on five dimensions of school climate characteristics (student behavioural values, guidance, student-peer relationships, parent and community-school relationships and instructional management dimensions) has been found more or less similars whereas parents of student perceived significant differences between demonstration and non-demonstration schools on two dimensions i.e. teacher-student relationships (A) and security and maintenance (B). (Vide table 6.3).

In the light of these results, the hypothesis No. 1 that is significant differences exist between demonstration and non-demonstration schools on school climate variables stands only partially accepted.
IV. Identification and Comparison on Satisfaction Variables between Demonstration and Non-Demonstration Schools

The third objective of the study is to study satisfaction variables as assessed by satisfaction of students, teachers and parents separately by using separate tools and further compare both type of schools.

4.a) Obtained results lead to the conclusion that all the three sub-samples, namely students, teachers and parents of demonstration schools show their neutrality towards student discipline sub-variable whereas in non-demonstration schools, all sub samples (student, teacher and parent) perceived four sub-variables as satisfactory (curriculum, student discipline, buildings and supplies, and communication sub-variables).

4.b) It was discovered that perception of students on the majority of student satisfaction variables of non-demonstration schools has been significantly higher than those in the demonstration schools. Furthermore, the two types of schools differ significantly on school buildings and supplies ($Q_b$) as perceived by students in favour of non-demonstration schools.

4.c) Perception of the teachers of both demonstration and non-demonstration schools was more or less similar on co-workers ($P_t$), but on five out of nine teacher satisfaction sub-variables. The perception of non-
demonstration school teachers was significantly better than those of the demonstration schools. These variables are administration (Kₜ), student responsibility and discipline (Nₜ), parents and community (Qₜ), school buildings, supplies and maintenance (Rₜ) and communication (Sₜ).

4.d) As far as parents of students studying in both demonstration and non-demonstration schools are concerned, they did not differ significantly on parent involvement (Kₚ) sub-variable, but non-demonstration schools were perceived significantly more satisfactory on support services (Oₚ) as also on school buildings, supplies and maintenance (Pₚ), by parents as compared to demonstration schools.

These results lead to the partial acceptance of the hypothesis No. 2 that 'there are significant differences in the satisfaction of students of demonstration schools as compared to students' satisfactions of non-demonstration schools' only in respect of school buildings and supplies sub-variable.

Hypothesis No. 3 that is perception of teachers' satisfaction of demonstration schools is significantly different from those of non-demonstration schools' is also partially accepted in respect of administration, student responsibility and discipline, parents and community, school buildings, supplies, upkeep and communication sub-variable.

Likewise, results of the study lead to acceptance of hypothesis No. 4 that is "significant differences exist between the demonstration and non-demonstration schools in
the perception of satisfaction of parents" only in respect of support services, school buildings, supplies and upkeep sub-variable.

5. **Relationship of School Climate and Satisfaction Variables with the Academic Achievement of Students**

5 a) Examination of the relationship of school climate characteristics of demonstration and non-demonstration schools as perceived by students with their academic achievement reveals that the relationship is not significant except on student - peer relationships dimension of school climate characteristics for demonstration schools. Results of correlation of demonstration schools are somewhat similar to those of non-demonstration schools in showing non-significant correlation between most of the school climate characteristics on the one hand and the academic achievement of students on the other. Significant negative correlation of academic achievement has been found with three dimensions namely; guidance, instructional management and student activities, which is rather surprising and may be used with caution for generalization.

5 b) Examination of the relationship of satisfaction variables as perceived by students of demonstration and non-demonstration schools with their academic achievement, is also not significant except the dimension of fellow students of student satisfaction variables in demonstration schools.
5 c) Relationship of satisfaction variables as perceived by parents of demonstration and non-demonstration schools with students' academic achievement, is too not significant except the dimensions of student activities and school administrators with students' academic achievement in which case significant relationships have been found.

Conclusion under 5 a) leads to the acceptance of hypothesis No. 5 that school climate is significantly related to the academic achievement of students only for dimension of student-peer relationships of demonstration schools, and negative relationship for dimensions of guidance, instructional management and student activities of school climate characteristics of non-demonstration schools.

Conclusions under 5 b) and 5 c) lead to acceptance of hypothesis No. 6 that significant relationship exists between the perceived satisfaction of students and parents on the one hand and the academic achievement of students on the other only for dimension of fellow students of student satisfaction variables in demonstration schools and dimensions of student activities and school administrators of parent satisfaction variables in non-demonstration schools.
6 Strengths and Weaknesses of Demonstration and Non-Demonstration Schools and Suggestions Thereupon

6 (a) None of the school climate characteristics has been identified as unsatisfactory (as weakness) by students, teachers and parents of demonstration and non-demonstration schools. It may, thus be said that while none of these three samples involved in the present study that is teachers, students and their parents have expressed dissatisfaction for the school climate of demonstration schools, and non-demonstration schools a mixed picture of satisfaction or neutrality has been obtained. Hence characteristics which have been perceived as satisfactory need to be strengthening so as not to become a weakness of two types of school system. Putting this in a slightly different way, it can be stated that for the four characteristics that is (i) student academic orientation (ii) guidance (iii) student-peer relationships (iv) and student activities which are perceived satisfactorily by all the three categories of respondents (that is students, teachers, and parents) the demonstration schools need to be constantly vigilant in maintaining the quality of operations of these characteristics. As far as the characteristics which evoked the response of neutrality are concerned, the demonstration school should try to attend to these characteristics in such a manner that a participative team work of teachers, students and their parents is ensured in the functioning so
that none of the samples remains neutral. That is parents who remain neutral in their perception on the characteristics of teacher - student relationships and security and maintenance are likely to feel satisfied if demonstration schools try to involve parents in order to plan activities and encourage participative democratic outlook for promoting still better and healthier relationships between teachers and students and for taking care of school maintenance.

Similarly teachers by remaining "neutral" on parent and community school relationships have indicated that schools should endeavour to arrange meaningful activities which correspond to interest and needs of parents and community in order to develop a better understanding between school and parents - community. And it goes without saying that demonstration schools may better attempt to inculcate values such as sense of accountability, punctuality, respectability etc. in students so as to bring student behavioural values to the level of satisfactory perception.

It may thus be said that while none of the school climate characteristics is identified as unsatisfactory and hence 'as a weakness' of non-demonstration schools by students, teachers and parents, these schools however, should try to strengthen administration and instructional management (perceived as 'neutral' by parents) as also student behavioural values (as per perception of students, teachers and parents) so as to bring it to the level of
being perceived as satisfactory. It can thus be said that non-demonstration schools particularly need to ensure that their administration, instructional management and student behavioural values are also perceived in the category of "agree" by developing and strengthening the democratic atmosphere through greater participation of working groups concerned, that is teachers, students and parents in matters of administration; by providing financial support, educational materials, and better teacher training programmes for instructional management; and by instilling various values such as sense of responsibility, punctuality, respectability etc. among its functionaries and students to ensure improved student behavioural values.

6 b) None of the subscales of satisfaction has been perceived as dissatisfactory (a weakness) by students, teachers and parents of both demonstration and non-demonstration schools. The results indicate that while no glaring weaknesses have emerged in respect of satisfaction variables in demonstration schools yet they need to strengthen their student discipline, infrastructure, communication, administration; on compensation and advancement opportunities for teachers; schoolwork and decision-making processes for students (which have been perceived as neutral) so as to bring these dimensions to the level of satisfaction of teachers, parents and students.
With regard to non-demonstration schools, it may be noticed from the results that students, teachers and parents are either satisfied or neutral but do not express dissatisfaction on any of the satisfaction variables. It thus implies that none of the satisfaction variables as perceived by students, teachers and parents can be identified as weak. However, there is a scope for improvement as far as decision-making opportunities, administration, student activities and compensation dimensions (which are perceived as neutral by either students or teachers or parents) of satisfaction are concerned. By strengthening these dimensions, non-demonstration schools can be perceived as satisfactory on these dimensions.

**EDUCATIONAL IMPLICATIONS**

Results of the present study have implication for teacher-student relationship indicating that teachers and students be involved in the selection of the instructional materials thus wherever necessary training programmes be organized for the teachers in order to orient them to evoke greater participation of learners in the use of learning materials. Further, in order to make the activities meaningful, it is necessary for the teachers or administrators to discover the interests and needs of the groups, as interested students usually try to get meaning from what they do through listening, reading, exploring, and
practising. Students should be encouraged to participate in such activities whereas a limit on the number of activities and time spent on them is necessary for many students.

Parents' perception of school climate and satisfaction variable imply that school climate characteristics which promotes willingness of teachers to serve their students leads to healthy school environment as also better performance and development of the learners. Inculcating such a climate requires that teachers should have a clear understanding of the psychological as well as the material or physical needs of the students and try to meet them accordingly.

Results of the present study can be utilized to evolve an educational systems in which community shows an increasing awareness of and interest in various activities of schools. That the citizen participation regarding many problems related to public education is highly desirable has been suggested by the results of the study. Schools where community interest has been remarkable are outstanding in their educational climate characteristics. The challenge that teachers and administrators get from the community involvement in the running of schools helps to translate educational policies in practice. Community involvement needs to be limited to constructive participation by people who are interested and committed to the basic purposes and
principles of education. It is also suggested that in order to benefit from community relationships, school administration should encourage meetings of parents-teacher association as frequently as possible. Arranging a parents' day when the parents specifically articulate their views is one such occasion for modifying the existing relationship. It is also implied by results that parents and community members be invited to attend various school functions so that they would be in a better position to appreciate the progress of the students thereby leading to greater satisfaction of all the three groups namely students, teachers and parents.

Results of the present study can be utilized to strengthen both the demonstration and non-demonstration schools in their areas of deficits. In other words, there is a need to strengthen the demonstration school in the areas of teacher-student relationships, security and maintenance, administration, instructional management, parent and community-school relationships, student behavioural values for bringing improvement in their school climate; and likewise the areas of student behavioural values and instructional management in non-demonstration schools need improvement.

It is generally assumed that students' academic achievement is influenced by various variables such as those concerning the teaching and learning process, students' home situation, the contents of the subjects offered in schools,
etc. However, in the case of demonstration schools, it is interesting to note that students' academic achievement is mainly influenced by their interaction with peers. For this reason, the outcomes obtained from the present study may be useful in developing healthy student-peer relationships in order to affect their academic achievement.

The negative correlation of student activities, guidance, instructional management with the students' academic achievement worth consideration in highlighting the fact that the nature of activities undertaken in these three crucial areas needs review and modification to yield satisfactory academic results. It is believed that to provide students with various activities other than the teaching and learning process will develop their academic and other potentialities. The results gained from the present study, seem to point out that the effect of these activities may not be positive as per as school marks are concerned. It, therefore, can be said that a) the number of activities and the time available should be brought into serious consideration before making up the crucial decision for setting up each activities and that b) their purpose is served more for developing areas of non-cognitive outputs in the learners than the school marks as for direct influence of activities is concerned.

Results of the study amply demonstrate that all the three units that is students, teachers and parents of
students, are partners in inculcating a healthy school climate by way of their feedback on various variables of educational environment. Hence attempts should be made to encourage greater interaction among the three both in demonstration and non-demonstration schools.

As an innovative measure, demonstration schools seem to be doing as good as non-demonstration schools in certain school climate characteristics (student academic orientation and instructional management dimensions) and satisfaction variables (teachers, fellow students, schoolwork, student activities, decision-making opportunities and communications of student satisfaction variables; compensation, opportunities for advancement and curriculum and job tasks of teacher satisfaction variables; and curriculum, student activities, teachers, students discipline, school administrators and school information services of parent satisfaction variables). However, they need improvement in certain areas such as administration and instructional management on students' perception; parent and community - school relationships on teachers' perception; and teacher - student relationships and security and maintenance on parents' perception of school climate characteristics so that the results of the innovative approaches envisaged in the visualization of demonstration schools reach the learners in terms of learning outputs thereby generating a healthy institutional climate and satisfaction of students, teachers as also students' parents.