CHAPTER - III

PROBLEM AND PROCEDURE

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1. Introduction :

A study of history and development of mankind to the present position reveals that change is essential to his expansion and greater adaptation to life and his environment. The social as well as psychological process of assimilation of innovation and accommodation of change afford a slow and a natural means of absorbing educational change. Herbert Spencer believes that the steady progress towards improved schooling is inevitable whether there is conscious planning towards that end or not.

A careful observation shows that education as a social system has been the subject of constant innovation and change however slow the change process might be. It is only in the recent decades that the anatomy of the process has started to be studied in a systematic manner. Systematic studies could be conducted in more than one method. Studying individual systems and their modes of operation to locate their weak and strong points in the process of change could be one method.

2. Significance of the Study

2.1 The Problem :

One of the important stages of education is the secondary stage. Perhaps the most formative influences on learning process of the learner are made at this vital stage of education. To play this vital role in the educational career of the future potential sources of nation-building youngsters, the educational institutions especially at the secondary level should be oriented and set. Continuous measures of self-evaluation or subjecting the entire system to proper evaluation by an external agency with a view to improving the entire system in all the possible dimensions should be a part of the system's process only when, effective progress could be ensured. The implication here is, it is the duty of those concerned with a school system, not to allow the school become out-dated, instead make its progressive level and direction as upto-date and modern as possible. Thus the function of constant self-evaluation and constant self-renewal if maintained well in any system, that system tends to get designated as "Innovative".

To the question "which is a good school?" Carlson (1965) answers "A good school is one which meets its everchanging needs and demands of a complex society."

Mort. P. (1965) states "A healthy system would tend to invent new procedures, more towards new goals, produce new kinds of goal, diversity itself and become rather more than less differentiated overtime. In a sense such a system could be said to grow, develop

and change rather than remain routinised and standard ." In short these are definitions of an 'Innovative' school system. Any innovative institution tends to be called 'Innovative' if it has manifested tendencies for progressive change, since it tends to follow innovative ideas.

At an ideological level, every educational institution is 'Innovative'. But at a practical plane, only a very few select schools tend to be so; only some schools are known for their innovative proneness and practices while others are not. But who is competent to designate a school as innovative or non-innovative? Naturally it is the immediate beneficieries of that school viz: the 'society' to whom the school happens to serve. The pupils, the parents, the teachers and also the department of education constitute this 'Society'.

In the opinion of the members of any society, a few schools are clearly innovative, a few others are trying to be innovative and the other majority of the schools are distinctly non-innovative. This sort of classification of schools on the innovative-level scale, is done more as a matter of opinion by the members of a society. However, this 'assuption' of the society is the basis for the main problem of this study.

The overtly visible features of an acknowledged 'Innovative' school show demands and rush from the parents to admit their children in such a school even unmindful of the distance sometimes.

While the general conditions and factors governing all the schools remain almost the same, why is one school distinctly different

from the other? What are the types of differences? What are the factors contributing to these differences? Do the factors lie within the system itself?

Many such questions relating to the traits and characteristic features of an innovative institution could be answered only from an in-depth study or a case-study of such socially acknowledged institutions of education.

In consultation with the various social agencies which form part of both the social as well the educational system of an area, like the department of education, managing bodies of schools (private schools aided by Government), parents, experienced teachers and the headmasters themselves, that a few selectively acknowledged 'Innovative' and a very small number of acknowledged 'Non-innovative' schools have also been taken up for this study. The title of the study is 'Case-studies of innovative institutions at secondary level in Tamil Nadu'.

It is obvious from the wordings of the title of the study that it intends to make a thorough and detailed investigation into the factors contributing to the innovative structure of those schools. While selecting a few innovative schools, care was taken to select a few (smaller number) schools which are non-innovative also so that a comparative study of contradictory profiles of schools might be more informatory.

2.2 Rationale :

An innovative practice is adopted in a school for achieving a goal. Reaching the goal is bound to result in bringing about a desired change in that system. Thus a system changes from time to

time everytime it is able to successfully practise or adopt a new idea. Therefore it is by frequently changing or renewing the process that a school can be innovative. Therefore innovation results in a change. To study an innovative school would very much imply the study of the process of the innovation and change.

Rogers. E.M. has given a model to show the process of innovation diffusion which he calls S-M-C-R-E model in which the letters represent the elements involved in the process : viz: Source, Message, channel, Receiver and Effects. (SMCRE).

After Rogers model, many more models have been described like the Research and Development model, Social Interaction model and the Problem-solving model by Havelock.R.G. and others.

All these models denote the importance of the innovation-diffusion process of any innovative institution.

The rationale for this case-study approach, to analyse the process of innovation adoption and diffusion, could be to study in-depth every factor directly or indirectly affecting the said process of the select innovative schools in the background of information, reports and findings given by various authors and earlier investigators.

2.3 Relevance :

A case study as this has much relevance in the present context which is characterised by the competetive spirit among schools for realising better social status in terms of public regard for their being up-to-date in their practices and above average in their achievements both curricular and co-curricular. Many of the present

day schools aspire for acquiring the traits and characteristics of an innovative school. But there is an immense dearth of authentic and empirical data for their guidance for indicating the nature and area of improvement required. An in-depth study of this type has current contextual relevance because the results are expected to be the pointers for improvement in any school system only if interest is evinced by a system to go into the details of the findings.

This study is expected to present its findings in the form of qualitative descriptions of the various features of many innovative schools supported by quantitative information wherever possible as well as recorded diagrams of individual school-profiles showing inter-relationships among the variables at operation in innovative school systems. This description and data would serve as points of reference not only to the non-innovative schools for their improvement but also for the innovative schools to become more innovative to keep pace with the trend of the changing times.

3. Objective and Scope

Having gone through almost all the reported research studies on 'Innovation' in India, the investigator wanted to make this study an unique one in the mode and style of his presentation of the facts from the collected data so that even a lay headmaster who doesn't know anything about research can understand easily all the information presented here. The contribution of this study, to those for whom the findings are meant, should be of a highest order and at the same-time as simple as possible. The investigator learnt from his contacts

with various headmasters that many headmasters are in search of an authentic source of guidelines for making their schools innovative. It is with the objective of fulfilling their demands, that this study has been suitably presented.

An innovative school has to have many characteristics to remain innovative. The major objective would be to identify such characteristics, the roles and limitations of various contributing factors in maintaining the respective innovative standards and qualities of select innovative schools that are located (in a distributed manner) all over the state of Tamil Nadu in India. Preparation of case-studies of select innovative schools describing their functional systems, modes of operation and contributing factors of those innovative systems is aimed at.

(a) Major Objectives :

1. To prepare case-studies which could serve as a source of meaningful reference and a guideline to those headmasters of other secondary schools who really want to make their own schools innovative in terms of raising the operational efficiency of their functional system.
2. To prepare case-studies which can give a global picture of the process of innovation adoption in each of the 25 schools selected for this study.
3. To show the distinction between innovative and non-innovative schools.
4. To bring out the differences between schools which are innovative yet for different reasons.
5. To enable comparison and contrast between innovative schools which are innovative for different reasons.

6. To enable a study of factors contributing to the innovativeness and non-innovativeness of schools.

7. To attempt a diagramatic representation of a hypothetical inter-relationship of factors through "six-factor profile" for each school.

(b) Specific Objectives : Preparation of case-studies consisting of

1. Qualitative description of the physical facilities, professional and academic structure of the staff, the teacher pupil-ratio and such other general features of innovative schools, wherever they are found relevant in terms of the innovativeness of those schools,

2. Description of the process of innovation-adoption in the system,

3. Listing of the barriers for innovation-adoption in each system,

4. Information on innovative practices in various areas showing the 'Innovative Index' of each school.

5. Percentage of passes in the secondary school-final-examination over a period of last five years showing the level of "Academic Achievement" of each school.

6. Measurement of the "Change-proneness" of the faculty members to show the level of change-proneness of the staff of each school.

7. Measurement of "Teacher-morale" indicating the prevalent level of morale of the teaching staff of each school.

8. Assessment of Leadership Behaviour of the head of each school taken from the staff ratings of the qualities of their head.

9. Measurement of the organisational climate of each school from the responses of the staff to the given statements.

(c) Scope :

This study is presented in the form of case-studies of innovative institutions. Various factors have been studied and all the collected information about those factors are presented about each innovative

institution. Normally every institution wants to become innovative while only a few are able to achieve their desired level. The phenomenon underlying the causes for such an unattainability have to be unvieled through guidance based on authentic studies. Therefore it is expected that these case-studies showing the inter-relationships of factors with respect to innovative and non-innovative schools would add more meaningful dimensions to drawing the right type of inferences for purposes of guidance.

It is known from earlier doctoral research studies that there are more specific factors that require a deeper study for bringing out the right profile of an innovative school. In this study six variables have been quantitatively studied along with their probable inter-relationships about each one of 25 schools in the Tamil Nadu State.

(d) The present Study (Special features) :

The present study is an improved one over the various researches conducted earlier because of the following reasons:

(1) More number of variables relating to the innovative structure of secondary schools have been studied at one time. In the earlier doctoral researches any two or three of the following six variables have been studied at one time without attempting to bring out their hypothetical inter-relationship viz: (1) Innovative Index (2) Academic Achievement (3) Organisational Climate (4) Teacher Morale (5) Change Proneness and (6) Leadership Behaviour Qualities.

2. More number of sources of information have been consulted in the case of each school for getting direct and reliable information on the factors affecting the innovative processes.

3. Authentic records of the schools have been verified or consulted for the same purpose.

4. Individual school-profiles are prepared and presented in the form of a circle-graph indicating the innovative structure of a school in relation to factors which are studied in earlier researches and found to affect the innovativeness of any system.

5. Jury opinion, from the well-informed and experienced people in the concerned areas, has been taken into consideration while making the selection of the sample as well as presentation of the data collected.

6. Along with many innovative institutions a few of the non-innovative institutions also have been studied.

7. Clear-cut suggestions are expected to emerge from the case-studies about the nature of changes required for improving the innovative structure of schools.

8. For the first time in a study on innovation, the students who are the ultimate beneficiaries of any innovative practice have also been reached for information.

9. The staff of the education department like the District Educational Officers have also been interviewed for their role-evaluation in the innovative process of schools.

10. In each school, a few parents have been interviewed and opinionnaires for parents were also circulated to them to findout their awareness and involvement in the innovativeness of the schools concerned.

4. Hypotheses

Hypotheses form part of only such studies where the size of the sample is fairly big, and that the sample is stratified and randomised.

It is beyond the purview of the case-study type of researches to draw generalisation because of the nature of the study which is an in-depth type and each case is a distinctly discrete and unique unit. However it is found that with careful s election of representative cases, the case-studies can also be used for purposes of drawing generalisations and theorising (CERI-1973). Mostly on the basis of the findings of the previous studies, the following hypotheses have been framed and presented:

1. Innovative schools have adequate physical facilities
2. Innovative schools have clear objectives and goals for their institution.
3. Innovative schools have better linkage with resource systems.
4. Innovative schools have a supporting management, democratic approach to planning an innovation and that the staff have a clear role in decision-making in innovative and other matters related to school.
5. The staff belong to a relatively younger age-group and also belong more to the early adopter or early majority categories than to the laggards in the system of adopters in an innovative school.
6. The head is rated fairly higher by his staff for his leadership qualities like initiating structure and consideration.
7. The staff are above agerage in their change-proneness characteristics like Mental Flexibility, Open-mindedness and Curiosity according to their own ratings, in an innovative school.
8. The faculty morale of innovatige schools is high.
9. The organisational climate of the innovative schools is always "open" and that of the non-innovative schools always "closed".
10. Roles of opinion-leaders are more predominent in creating favourable opinion towards innovation adoption among the staff in the innovative schools.
11. More change-agent contact is present in the staff of innovative schools.
12. Academic achievement of pupils is bound to be high in innovative schools.

5. The Procedure : (Methodology)

5.1 Selection of variables :

From the doctoral studies conducted earlier in India it is learnt that there are numerous variables which contribute to the innovative structure of an educational institution. Different variables have been studied in combination with each other in the earlier studies in which those variables were found to relate to the process of innovation-adoption, diffusion or barriers. Keeping in mind the above facts, the selection of variables has been done for this study as follows:

5.2 The major variables :

(1) Innovative Index - a phenomenon indicating the type of resulted change in relation to the number of innovative practices of a school (2) Academic achievement showing the pupil-achievement level in the final (public) examination over a consecutive period of last five years. (3) Organisational climate - indicating the climate of the school in terms of the staff-rated scores for eight dimensions (4) Teacher-morale - a measure of morale of the faculty members in general as rated by them, on 10 aspects (5) Change-proneness a measure of mental faculties suited for acceptance of change resulting from innovation and (6) Leadership behaviour of the head - the attitude of the head towards his subordinates.

5.3 Other variables :

Except the above major variables there are many more variables that are found to affect both directly and indirectly the innovative structure of schools viz: (1) Physical facilities of the school

(2) the additional qualifications of the teaching staff (educational and professional), (3) Teacher-pupil ratio, (4) The source of the innovative ideas, (5) opportunities for linkage with resource system, (6) Institutional goals, (7) Objectives of the innovation, (8) The method of planning the process innovation adoption, (9) The process models of change - (viz: R and D model, social interaction model and the problem solving model), (10) The categories of adopters, (11) Role-perception of the adopters, (12) Role of change-agents, (13) Opinion-leader-role, (14) Barriers, (15) Resistance, (16) Evaluation of innovation, (17) Mode of communication, (18) the pupils' role and goal awareness, (19) Role of parents and (20) Nature of Management.

In order to validate the selection of these variables, a number of research scholars and research guides working in allied areas were consulted and suitable modifications, additions and deletions were carried out. In addition to that, the opinion of experienced headmasters and teachers of secondary schools, senior members (DEO) of the Education Department was also sought in deciding the above criteria on the basis of consensus. There was more unanimity among the members of the above jury about the choice of the above variables for study perhaps because, all of them are found to affect the innovative structure. Because of the nature of their relationship either with the school system or with the process of adoption, the jurers' opinion was accepted as very valid in deciding the criteria.

6. Rationale for Case Study Method

Ronald G.Havelock (1975) in his book on Planning for Innovation has reported (p 1-16) on the total number of studies by the field of knowledge in which it is indicated that totally there are 674 research studies in Education which consititute only 17.1 percent of the total studies in the various fields. (Based on comparative Literature Survey (CLS)

He has also stated (p 1-17) "We are disappointed to find so few case studies. Of the thousands of dissemination and utilisation events that take place each year it is unsettling to find so few documented in such a way that others could learn from them."

While there are various methods available for research studies, it is the nature of the study under consideration that decides the suitable method for the occasion. The present study involves a combination of different types of data collected from a variety of sources through various methods like questionnaires, opinionnaires, check-lists, scrutiny of records,direct interviews and non-participant observation, and the most suited method for such an indepth study could be only the case-study method. The authenticity of data is very much dependent on the inter-source reliability and the number of sources used for similar data. It is for facilitating cross-verification of the facts about the collected information on various factors affecting the innovative structure of an individual institution, a wide variety of sources were employed viz: Head, Teachers, Pupils, Correspondent and the Parents from each institution. To consolidate all the data for presentation in an objective but elaborate manner,

it is the case-study method that is the most suitable one.

A search in the literature for criticism of case-study as a research method helped the present investigation to have check systems to minimise subjectivity of the researcher while interpreting the data collected. The format of the case-study report was subjected to scrutiny by a panel of experts a few of whom are connected with writing research reports while others are associated with the innovative systems of the schools.

The most serious criticism against the case-study approach is that it does not have the potentiality to generalise due to limited size of the sample. Also each case represents a discrete and unique system or unit in itself and hence generalisation becomes difficult. But it is learnt that with a careful selection of representative cases, the case studies can also be used for purposes of generalisations and theorising (CERI-1973) and Jones(1969).

7. The Sample

The sample chosen for this study is a purposive sample and comprises twenty five secondary schools situated all over the Tamil Nadu State. Twenty of them are innovative and five non-innovative. The State of Tamil Nadu consists of many districts of which a few are well known as educational centres for innovativeness and good educational standards.

The map of the Tamil Nadu State showing the districts covered is shown on the opposite side. The list of schools chosen for study is shown below:

THE MAP OF THE STATE OF TAMILNADU SHOWING THE DISTRICTS

(The shaded area indicates the districts covered for this study)

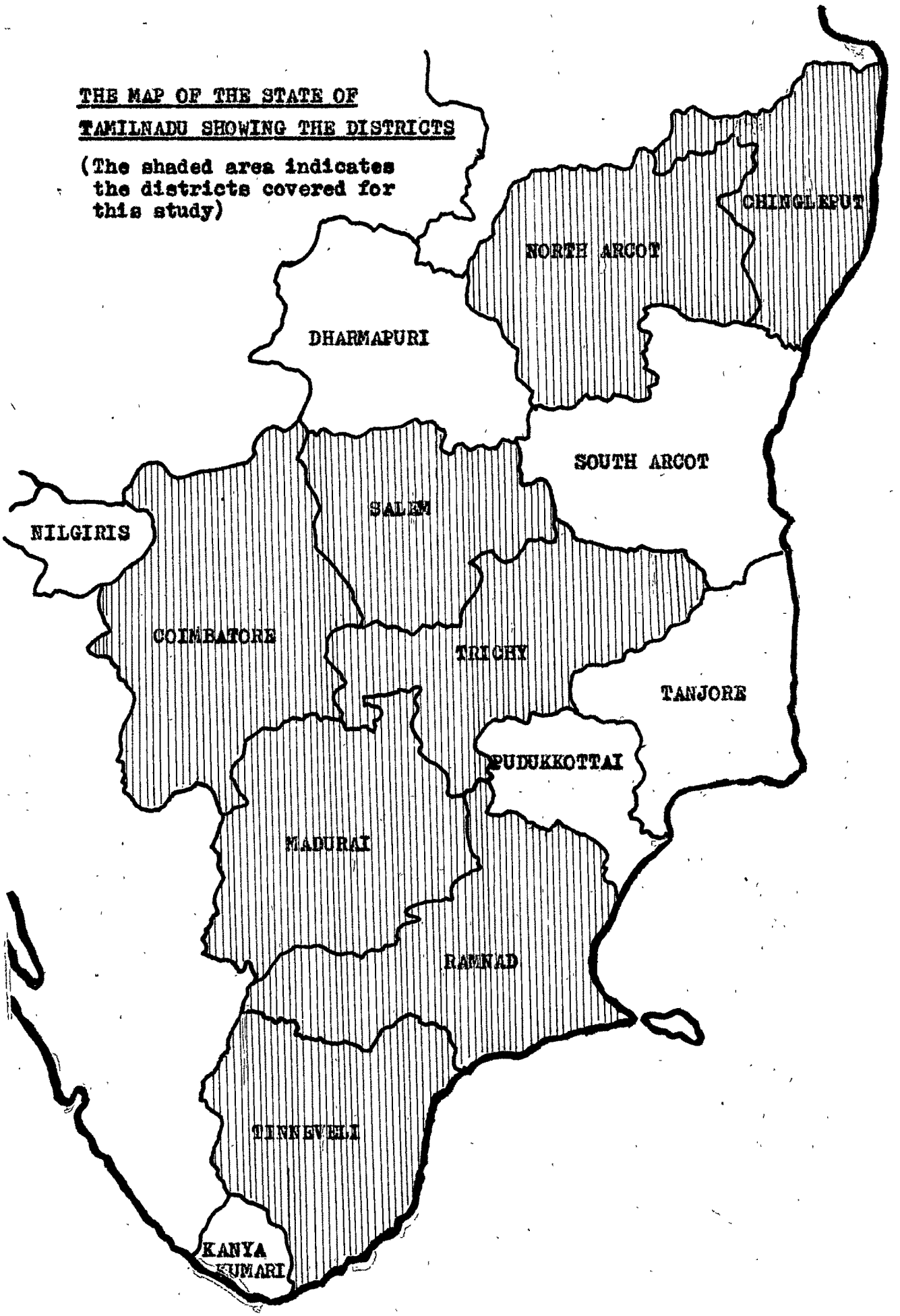


Table 2 : Table showing the Stratification of the sample

*Sl. No.	Name of School and Educational District	Level	Type of Management	Sex	Location
1.	Sri Ramakrishna Sarada HS, Salem	Sec.	Pvt.	Mixed	Urban
2.	Mani High School, Coimbatore	Sec.	Pvt.	Mixed	Urban
3.	Lakshmi Mills HS, Tirunelveli	Sec.	Pvt.	Mixed	Urban
4.	City Municipal HS, Coimbatore	Sec.	Mpl.	Boys	Urban
5.	E.R. High School, Trichy	Sec.	Pvt.	Boys	Urban
6.	Pioneer Mills HS, Coimbatore	Sec.	Pvt.	Mixed	Rural
7.	Kshatriya Girls HS, Ramnad	Sec.	Pvt.	Girls	Urban
8.	Sri Ramakrishna Mission Vidyalaya HS, Coimbatore	Sec.	HRM	Boys	Rural
9.	Government High School, North Arcot	Sec.	SG	Mixed	Rural
10.	T.A.Ramalingam Chettiar HS, Coimbatore	Sec.	Pvt.	Mixed	Urban
11.	Madras Christian College HS, Madras	Sec.	CM	Boys	Urban
12.	PSGG Kanyagurukulam, Coimbatore	Sec.	ET	Girls	Urban
13.	Holy Cross Girls HS, Trichy	Sec.	CM	Girls	Urban
14.	Presentation Convent HS, Coimbatore	Matri.	CM	Girls	Urban
15.	T.V.S. High School, Madurai	Sec.	Pvt.	Mixed	Urban
16.	Municipal Girls High School, Coimbatore	Sec.	Mpl.	Girls	Urban
17.	Bharathi Vidyalaya HS, Salem	Sec.	Pvt.	Boys	Urban
18.	Kendriya Vidyalaya, Coimbatore	Hr.Sec.	CG	Mixed	Urban
19.	C.S.I. High School, Coimbatore	Sec.	CM	Girls	Urban
20.	Lady MCTM Girls HS, Chingleput	Sec.	Pvt.	Girls	Urban
21.	Sri Avinashilingam Girls HS, Coimbatore	Sec.	PET	Girls	Urban
22.	Mathar Kalvi Nilayam, Coimbatore	Sec.	Pvt.	Girls	Urban
23.	Kalaimagal Kalvi Nilayam, Erode	Sec.	PET	Girls	Urban
24.	PSGR Krishammal Girls HS, Coimbatore	Sec.	PET	Girls	Rural
25.	Khatriya Vidyasala Boys HS, Ramnad	Sec.	Pvt.	Boys	Urban

HS : High School
Pvt. : Private
PET : Private Educational Trust
HRM : Hindu Religious Mission
ET : Educational Trust
CM : Christian Mission
Sec. : Secondary
Hr.Sec. : Higher Secondary
Mpl. : Municipality
SG : State Government
CG : Central Government
Matri. : Matriculate

* The serial numbers of schools do not correspond to the numbers assigned to the case-studies.

Someof the districts have been deliberately omitted because the jury felt that there are no innovative schools there.

7.1 Stratification :

(1) The innovative schools situated in the popular educational centres have been chosen. 13 out of 25 schools belong to the most progressive educational district namely Coimbatore. Out of the 13, five are non-innovative schools. All the five non-innovative schools chosen for this study are from the same most progressive educational centre viz: Coimbatore. These schools have been chosen from the same town because, many innovative schools also exist in this area. So, more meaningful information about non-innovativeness could be obtained if the non-innovative schools could be selected from an area where there are many innovative schools. First it was decided to select a few non-innovative schools from other districts which are not chosen for this study. But that idea was later given up because, all the schools in those districts have been adjudged as 'Non-innovative' by the jury and therefore there can't be any meaningful reasons about those schools for their being non-innovative except 'tradition' of that district as the reason.

(2) In the rest of the sample at the rate of two schools from almost each district of the State of Tamil Nadu, innovative schools have been chosen.

(3) Schools governed by various types of administratige bodies such as private and aided by Government, fully owned and run by the Government itself, and Municipality-managed ones are included.

(4) Urban and rural, single sex and mixed schools, residential and non-residential schools, missionary managed and non-missionary schools and higher secondary schools - all these types are represented in this investigation. Therefore the sample is a representative selection of the secondary schools of Tamil Nadu State.

7.2 Constituents :

The constituents of the sources of data collection from each school of the total sample could be classified into two categories viz: direct and indirect.

(a) Direct Source : The Headmaster, about 4 to 10 teachers (depending on the availability) and about 5 pupils from each school were contacted for collection of data. These are the people who are directly related to the system.

(b) Indirect Source : This was constituted by the persons who are indirectly connected to the school system from the point of view of the innovation adoption. They are the parents and the officers of the education department.

(c) Characteristics of the Direct Source : The trained graduate teachers with their teaching experiences ranging from 5 to 20 years were chosen for filling up the response sheets of each tool. Students also were selected for interview only if they were found to have stayed in the same school for more than 3 years.

(d) Limitation : (1) In some schools the number of entire staff was less than 10. (2) In some other schools a few did not return the response sheets - even in such conditions care was taken to see

that those who responded to the tool, were graduates, trained ones, and with atleast 5 years of service completed in the same school and that they are well-informed about the school in all aspects.

7.3 Criteria for the selection of the sample : (Jury Opinion)

The jury opinion was given weightage in the matter of the selection of sample. The jury consisted of (1) the district education officer (2) Ten Senior Headmasters each with more than 20 years of service (3) Ten Senior teachers with more than 10 years of service (4) Concurrence of the parents of those children who are studying in the concerned schools and (5) A few members of the society at random. The members of the jury belong to the various districts from where the respective schools have been chosen for study.

The investigator visited all the places (districts) in person to collect opinion from the above sources to decide up on the choice of the sample for the study. Based only on the consensus of such knowledgeable members of the jury about the acknowledged innovative structure of two most widely recognised schools in each district, the final selection of the sample for this study has been made. The objective of the study was explained to the jury with adequate clarity of the terms employed in the title of this investigation. Bearing in mind the expectations of the investigator, a discussion on the issue was arranged among the jury uniformly at every centre from where the schools have been selected, before the consensus could be arrived on the acknowledged innovativeness of such schools in terms of their processes and practices. At the end of the discussion, a proforma was circulated among the members of the jury for selecting

two innovative schools from their respective districts. "The proforma for Jury Opinion" is appended as I-A.& I-B.

8. The Tool

In the present study, the basic assumption is that the innovative structure of the school is basically linked to the factors like (i) organisational climate of the school (ii) the leadership behaviour of the head of the school (iii) change-proneness of the staff and (iv) the teacher-morale. Apart from the above factors there are factors like planning and adoption processes of an innovative practice which are also supposed to contribute to the success or failure of the maintenance of the innovative structure of schools. One of the popularly assumed characteristics of innovativeness is relatively better academic achievement or pupil-performance in the final examination, by pupils of those innovative schools.

To measure all the above aspects, many of the standardised tools that have been used in the earlier doctoral research studies were used. Most of them are in the form of questionnaires with Likert type items. A few opinionnaires also were prepared and used. Much of the data was collected through tape-recorded interviews also.

An account of the various tools used is given below: (1) There are totally two categories of tools viz:
Category (A) : Questionnaires, opinionnaires and checklists and
Category (B) : Interview Schedules and Interview guides. (2) Apart from the above, some important school records were also scrutinised (3) separate questionnaires and checklists exclusively for headmasters

and exclusively for teachers were administered, (4) the tools used to collect data which will be useful for qualitative description were in the form of interview schedules and guides for interviewing the pupils, parents and the District Education Officers (v) separate interviews for collecting extra information to supplement the case-study reports were also conducted and tape-recorded from each headmaster and one of the teachers from each school, (6) Non-participant observation method also was used.

The various tools used for this study are described in detail below:

8.1 Innovative Practices Checklist (IPCL) :

This is essentially a checklist containing a number of 87, innovative practices that are found currently in practice in most of the secondary schools of Tamil Nadu. Initially two hundred innovative practices checklist was circulated among 179 schools of one of the districts to find out those practices which are practised atleast in more than five schools. Only such practices were included in the final list. The total number came only to 87. There is space left for each school for indicating their special practices if any not mentioned in the checklist.

Prepared by the investigator himself, this checklist was circulated among all the schools. This tool is shown as an appendix. (Appendix 'A')

8.2 School Profile Data (SPD) :

This is essentially a questionnaire with 50 short questions to elicit factual data on the following about the school : (a) Academic achievement or pupil-performance in the final (external) examination showing the percentage of passes every year for the last five years (b) Physical facilities (c) Academic and professional qualification of staff (d) Teacher-pupil-ratio (e) Parental background of the pupils (f) Type of management and its representation in the school (g) Staff meeting pattern etc.

This was prepared by the investigator for collecting general data about the school. (Appendix 'B')

8.3 Questionnaire on Adoption Process of Innovation (QAPI) :

This is a questionnaire with provision for checking type of responses to a series of questions about (a) source (b) preparation (c) implementation (d) interest (e) evaluation of innovation and about (i) the categories of adopters (ii) rate of adoption (iii) intrinsic qualities of innovation all of which are concerned with the factors affecting innovation-adoption process.

This was prepared both for headmasters and teachers separately with slight modifications in the respective formats of questions in each. This item of the tool was prepared by the investigator himself. (Appendix 'C_1' : for Headmasters only, Appendix 'C_2' : for members of the staff only)

8.4 Barriers Check-List (BCL) :

This is a list of 50 possible barriers for innovation in schools. A check list for identifying the types of barriers in the

respective institution. Different types of barriers along with the possible sources and causes are included for response (checking) from the headmasters. (Appendix 'G')

8.5 Interview Schedule (IS) :

A series of pre-scheduled questions to the headmasters on the implementation of innovation, successful and unsuccessful innovations and the causes. (Appendix 'I')

8.6 Interview Guide (IG) :

This is a synopsis of points on which a detailed interview could be conducted with the headmasters on innovative procedures practised in the concerned institution. The advantage of this format in a tool is the potential it provides for making suitable modifications in the course of the interview depending on the variations of individual responses still without deviating from the main stream. (Appendix 'J')

8.7 Change Proneness Inventory (CPI) :

This is a tool with 12 short checking items on the three acknowledged major faculties of the mind to indicate the change proneness of an individual viz: (1) mental flexibility (2) open mindedness and (3) curiosity. The choice of the response could be expressed on a five point scale.

This is a tool prepared and used by Mukerjee for his doctoral research. This an adapted version of the Miller's CPI to suit, the Indian conditions. (Appendix 'D')

8.8 Purdue Teacher Opinionnaire (PTO) :

The PTO consists of 100 Likert type items assigned to Ten factors viz: (1) teacher-rapport with principal (2) satisfaction in teaching (3) rapport among teachers (4) teacher salary (5) teacher load (6) curricular issues (7) teacher-status (8) community support to education (9) school facilities and (10) services and community pressures.

The respondents are asked to indicate the extent to which each statement characterises his school situation by marking one of the categories given.

This tool is meant for identifying the "Teacher-morale" and assign weights for such a morale which is found to be one of the crucial factors influencing the innovative structure of schools.

This tool is a standardised one and is already used in India in a number of research studies. The authors of the tool are Bently and Rempel of Oregon state University, U.S.A. (Appendix 'E')

8.9 Leadership Behaviour Description Questionnaire (LBDQ) :

The LBDQ was developed and standardised in the U.S.A. Hemphil and Coons (1950) constructed the original form of this tool. But the credit for identifying the two dimensions viz: "Initiating structure" and "Consideration" goes to Andrew H. Halpin and B.James Winer. Since they adapted the tool in (1952), the two dimensions have come to be regarded as fundamental in leader-behaviour which in turn is a factor affecting the innovative structure.

Each of the two dimensions has 15 descriptive statements and thus the total number of items are 30. This tool has been used in a

number of earlier researches at doctoral level both abroad and in India. (Appendix 'F')

8.10 Organisational Climate Description Questionnaire (OCDQ) :

This tool was constructed by Andrew H.Halpin and Don B.Croft (1963). This is composed of 64 Likert type items and is administered to a group of teachers in each school to get a pooled opinion or description of the climate of their school. It consists of eight sub-tests of which four pertains to characteristic behaviour of teachers of the school in relation to the fact stated in the respective statements, and the other four pertains to the school principal or headmaster. The sub-tests describing the inter-personal behaviour of school faculty are : (1) Disengagement (2) Hindrance (3) Esprit and (4) Intimacy. The other set of four sub-tests describes the behaviour of school principal in relation to his colleagues in the faculty both individually and collectively. They are (i) Aloofness (ii) production emphasis (iii) Thrust and (iv) consideration.

Table showing the sub-test dimensions in relation to corresponding organisational climates is shown in Chapter-I on page 57. (Appendix 'H')

8.11 Opinionnaire for Parents (OP) :

A tool prepared by the investigator to get the opinion of the parents of children studying in the respective schools under investigation. It has 35 items, the response of the parents to which would indicate their reaction to the innovativeness of the school. (Appendix 'K')

8.12 Interview Guide for Managing Committee Members (IGM) :

A source of reference as a guide-line for interviewing the members of the managing committee of schools wherever there is such a provision. The responses are expected to give an account of the managing committee members' role consciousness, resourcefulness and attitude towards innovation in this schools. (Appendix 'L')

8.13 Interview Guide for Pupils (IGP) :

This again is a summary of points to serve as guidelines for the personal interview of a few pupils from each school about their awareness, role perception and role performance in the matters related to innovative practices in their schools. (Appendix 'M')

8.14 Other methods of data collection :

(a) Apart from all the above tools, the investigator collected data from the scrutiny of school-records which are more authentic sources of information on the various aspects of the functioning of the schools.

(b) Non-participant observation was yet another method employed by the investigator in many instances to collect first hand information about certain important activities, both innovative and routine, of the school to know more information about the system and its modes of operation.

<u>The Validity and Reliability of the Tool used in this study</u>

8.15 The Organisational Climate Description Questionnaire (OCDQ) :

Mehra (1968), Sharma. M. (1969), Buch. P. (1972), Rai.K. (1972) Kumar (1972), and Pillai (1973) have used the OCDQ for the various

States of India like Delhi, Rajasthan, Gujerat and Tamil Nadu and have reported the suitability of this instrument to secondary schools in Indian conditions.

Regarding the validity of the OCDQ, Smith (1967) found the concept of organisational climate as identified by the OCDQ to be empirically sound and viable.

Andrew (1965) found that the OCDQ is valid for other kinds of schools as elementary schools also. He concludes that the sub-tests of OCDQ provides reasonably valid measures of important aspects of the principal's leadership in the perspective of interaction with his staff.

Plaxton (1965) found a strong relationship between the test scores of the OCDQ and the external criteria as teacher-satisfaction, principals effectiveness and school effectiveness. So, this study confirmed Andrew's findings that sub-tests of OCDQ provides valid measures for measuring what they are purported to measure.

Sergent (1967) has supported the above findings.

About concurrent validity, i.e. how the OCDQ scores relate to other measures which address themselves to the same content area as Halpin and Crofts scale, the most convincing comparison comes from the study of Halpin and Croft with LBDQ. Halpin reports that Rayan's high and low teachers correspond fairly well with the behaviour of teachers in open and closed climates.

Andrew (1965) found very high correlation (0.84) between thrust and teacher-rated principal effectiveness and thus showing the inter changeability of the two measures.

Roosevere (1965) in his factor analysis of esprit-thrust interview schedule, confirmed the validity of the counterparts in the sub-tests of OCDQ.

Smith.D.C. (1967) related OCDQ to 23 external characteristics of elementary schools and found significant relationship of those variables with specific sub-tests and significant difference between the variables in different school climates.

8.16 The Purdue Teacher Opinionnaire (PTO) :

This instrument is valuable in that it gives an objective and practical index of 'Teacher Morale' by means of teacher-perception itself. The morale of the teachers is measured on a stanine scale with a range of scores (0 to 9) as suggested by those who prepared the tool viz: Bently and Rempel (1963).

(a) Reliability of the tool PTO : The reliability of this tool by test-retest technique measured on a sample of 3023 high school teachers of Indiana and Oregon was found that there was very little difference between the means and Standard Deviations for both total and factors scores for the test-retest administration of the opinionnaire.

Inter-factor correlations computed from the sample of 3023 teachers ranged from 0.18 to 0.61 with a median correlation of 0.38. These correlations were sufficiently low to make factor scores meaningful in assessing the status of morale for an individual or for a group.

It was also found on examining the magnitude of the correlation between items and the factors to which they belong, that, in most

instances, they contribute significantly to that factor.

Thus on all these four grounds namely correlation of factor scores and total scores, means and standard deviations of test and retest scores, inter-factor and inter-item correlations, the instrument was found reliable.

(b) Validity : In the same study in Indiana and Oregon, the Principals of schools were asked to react to the opinionnaire items as they believed the faculty would react. Differences between the median scores for teachers and the median scores for principals were not significant, thus proving its validity.

In various studies of Bently and Rempel (1963), Time to teach report (1966) and Marie Brinkman (1966) in which the PTO has been used, it has been found to sharply discriminate among different schools and among individual teachers in the same school. Also, conditions known to exist in a school-situation often have been reflected in the teacher and principal responses to the opinionnaire. When morale scores were low in a particular school, teacher turnover was frequently high the 'following year.

All these sufficiently confirm that the instrument does measure what it is meant to measure.

8.17 The L.B.D.Q. :

Like the OCDQ, the LBDQ was developed and standardised in the U.S.A. Hemphil and Coons (1950) developed this for the personal research board of Ohio State University to measure the leadership behaviour of a group leader.

The reliability co-efficients of the two major dimensions measured by the tool viz: initiating structure and consideration, was found to be 0.93 and 0.86 respectively.

This tool has been used in the Ohio State leadership-assessment studies by Halpin and Winer (1952). Also used for Aircrew studies, by Halpin (1954-56) and several others in the U.S.A.

Indian researchers like Panda (1974), Sharma (1973), Neela Shelat (1975) Dalsukh Pandya (1975), Darji (1975), Mahendra Choksi (1975), Tikmani (1976), and Sat Pal Gupta (1976) have used this tool in their doctoral studies and the validity and reliability have been well established.

8.18 Change Proneness Inventory (CPI) :

This adapted version of the Miller's CPI was constructed by Mukhopadyaya (1975) for his doctoral study, drawing upon Barnett (1953) Miller (1967) and Rogers (1962) for the conceptual aspects.

This inventory was administered on 60 secondary school teachers. The split-half reliability using Spearman - Brown's prophecy formula was found to be 0.82 significant at 0.01 level.

Thorndike and Hagens (1961) maintain that a test may be said to have validity when the tasks that it presents to the respondents correspond to its contents. In the absence of any external criteria the content validity of the tool was established by developing the items on a particular content (components). However the item validity was not calculated.

8.19 Innovative Practices Check-list (IPCL) :

This is the tool prepared by the investigator himself to prepare the innovative index scores for each school under study. The list of innovative practices were carefully finalised after refering to the Government's circulars to schools for introduction of new practices and also referring to panel of stalwarts in school service.

A pilot study was conducted on eight schools, four of them innovative and the other four non-innovative as per consensus of the experts in school service. The t-test showed high and significant difference between the two types of schools helping to establish the validity of the tool.

8.20 Interview Schedules and Guides (ISG) :

In this study interview has been used as the important mode for collecting data for measuring all the related dimensions and factors of innovativeness, cross-validating and supplementing the already collected data through the other tools.

Interviews were conducted on the basis of the schedules and guides prepared exclusively for this purpose comprising "a list of points or topics which must be covered during interview" (Goode and Hatt - 1952).

In pre-structured tools which have more reliability, the depth is sacrificed to gain standardisation (i.e. reliability) say Goode and Hatt (1952). The interview guides and schedules helped the researcher to phrase, rephrase and reword questions according to the situational need and response from the respondents, especially

when "Respondent Mask" is strong enough to be cracked and "sublimal cues" are very delicate to be usable by the researcher directly.

All the above described tools are attached in the Appendix.

8.21 Scheme of data collection :

The investigator travelled thrice all over the State of Tamil Nadu and met many personalities associated with the schools of each district for selection of innovative schools for investigation. Having fixed the schools, he personally visited each school not less than twice sometimes spending more than two full days in each school for collection of data.

In each school the tool was administered to Ten teachers. Only in schools where the total faculty strength was less than ten, the entire members were requested to fill-in the tool meant for them.

Parents were also contacted in person in as many instances as possible. A few parents had to be approached through their children for getting the opinionnaire filled up due to their non-availability when the investigator visited the school.

All the tools were collected back in person by the investigator to find out whether there were any omission of items.

In almost all the schools the investigator was given access to the various school-records and also permitted to have non-participant observation of the school-activities. A lot of supplementary data was collected in this method.

8.22 Scoring :

This part explains the mode of allotting weightage to the items of the various tools used in this research and also the method of computing the total score for each tool.

(a) Innovative Index Score (II) : The tool viz: Innovative Practices Check-list (IPCL) was used to compute the "II" score. The innovative index was calculated from the total of the individual itemwise raw scores of the check-list.

There are four categories of choices for responses for each item. The item responses were given weightage as follows:

Sl. No.	Nature of response for each item	Weightage in Scores
1.	The Innovative practice that resulted in desired change.	6
2.	The innovative practice that resulted in a non-desired or unexpected change.	4
3.	The innovative practice under trial.	3
4.	The Innovative practice discontinued.	1

The total of the raw weighted scores divided by the number of items were treated as the II score of the concerned school.

The formula :

$$II = \frac{\Sigma X}{N}$$

Where X : Item weight

N : Number of items

The maximum score is 6. The total number of innovative practices also were noted down separately.

(b) Academic Achievement Score (AA) : This is a measure of the pupil-performance in the final (Public) external examination at

the end of the school career. The average of the percentage of passes in the final examination over the last consecutive five years constituted the academic achievement score. In this instance, the raw data is converted as such into raw scores. The maximum score is 100.

(c) Organisational Climate Score (OC) : This is a standardised score. There are sixty four statements altogether in the OCDQ. The statements were classified into eight sub-tests or factors to indicate the following factors: viz: (1) Disengagement (2) hindrance (3) esprit (4) intimacy constituting inter-personal behaviour of school faculty and all the other four factors are viz: (5) aloofness (6) production emphasis (7) Thrust and (8) consideration constituting headmaster's behaviour traits. The number of statements pertaining to each one of the sub-tests or factors are 10, 6, 10, 7, 9, 7, 9 and 6 respectively.

(i) Scoring : These statements were rated on a four point scale viz: Rarely, sometimes, often and frequently. The weightage given for each of the above category of responses was 6, 7, 8 and 9 respectively except in the case of a few negative statements where the order of weightage was reversed. The factor-wise raw scores for all the individual respondents (teachers) in all the schools were tabulated - school-wise. Then the school-wise factor raw-scores mean and standard deviation were calculated.

(ii) School-climate score : The scores were first normatively standardised and ipsatively standardised with an assumed mean of 50, and Standard Deviation of 10. The ipsatively standardised scores were compared with the proto-typic profile-scores given by the

authors of the tool (the proto-typic profile is shown below) to findout the difference in each of the scores. These scores showing the difference between the double standardised scores and the proto-typic profile scores are called as the similarity scores. The organisational climate score for each school was calculated by adding the similarity scores row-wise. There are six rows for the six climate-categories starting with "closed" followed by paternal, familiar, controlled autonomous and ending with "open" climate. The row-wise total of the similarity scores showing the minimum difference between the double standardised scores of the school and the proto-typic profile scores is taken to be the indicator of the 'climate' of the school.

The maximum score is 6 (for open climate) and the minimum is 1 (closed climate).

Table 3 : Proto-Typic Profiles* for six organizational climates ranked in respect to openness Vs. closedness

Climates	Group's Characteristics				Leader's Characteristics			
	Disengagement	Hindrance	Esprit	Intimacy	Aloofness	Production Emphasis	Thrust	Consideration
Open	43**	43	63	50	42	43	61	55
Autonomous	40	41	55	62	61	39	53	50
Controlled	38	57	54	40	55	63	51	45
Familiar	60	42	50	58	44	37	52	59
Paternal	65	46	45	46	38	55	51	55
Closed	62	53	38	54	55	54	41	44

* These profiles are based solely on those schools in the sample which secured a high loading on only one profile-factor.

** The numbers represent double-standardized scores (both normatively and ipsatively), with a mean of 50 and a standard deviation of 10.

(d) Teacher Morale Score (TM) : There are 100 statements in the Purdue Teacher Opinionnaire of Bently and Rempel. These items were classified into 10 categories each relating to one factor of the 'Teacher Morale'. (These 10 categories are already discussed in the 'Tool' section of this chapter). A four-point scale was used to score the responses for each item allotting 1, 2, 3 and 4 respectively, for all the 100 statements. The morale score was computed by calculating the factor-scores from the summing up of all the item-weights under each factor and adding them all. The total morale-score is the sum of the ten factor-scores.

Conversion to Stanine scores : The raw factor-mean scores for all the schools were tabulated. Then those scores were standardised into stanine scores by using an assumed mean of 5 and a standard deviation of 2. The mean of the stanine scores for the school was calculated to indicate the Teacher-morale score for each school. The maximum score is 9.

Table 4 : Category levels of the stanine Score

Stanine Score	Range	Abbre-viation	Category Level
9	9.0	VH	Very High
8	7.9 to 8.9	H	High
7	6.9 to 7.8	AA	Above Average
6	5.9 to 6.8	LAA	Little Above Average
5	4.9 to 5.8	A	Average
4	3.9 to 4.8	LBA	Little Below Average
3	2.9 to 3.8	BA	Below Average
2	1.9 to 2.8	L	Low
1	1.0 & below	VL	Very Low

(e) Change Proneness Score (CP) : There are 30 statements in the change-proneness inventory which is an adopted version of Miller's change proneness inventory. These 30 items are classified into three categories to represent (i) mental flexibility (ii) open-mindedness and (iii) curiosity of the teachers. All the three together constitutes, change proneness.

A four-point scale for scoring was used in the order of 4, 3, 2 and 1 for each of the responses to the statements. The raw score totals for each category was worked out which are the CP scores. The mean of the raw scores (total scores of each category divided by the number of statements under that category) for each of the three above mentioned factors was calculated; The mean school-score is the mean of all the factors scores which is the indicator of the level of change-proneness of the respective school. The maximum CP score is 4.

(f) Leadership Behaviour Score (LB) : There are 30 statements in the tool classified into two categories namely the "Initiating structure" and "consideration" of the leader with 15 statements assigned to each category.

The category of responses were on a two point scale either favourable or unfavourable (Yes or No). The favourable checkings were given a weightage of 1 and the unfavourable responses were given zero. The total of the raw scores under each category was calculated and the mean of the total raw scores is the LB score and the maximum score is 30.

(g) The Qualitative Data : The method of scoring for the six different types of tools is described above. All the rest of the data collected with the aid of the other tools except those described above, were used for the qualitative description in the case-study report of each school.

8.23 A six-factor profile for individual schools : (School Profile)

Six factors have been studied about each innovative institution at secondary level. These variables, from the findings of earlier studies, are known to influence the innovative structure of schools: (1) Innovative Index (2) Academic Achievement (3) Organisational Climate (4) Teacher morale (5) Change-proneness of the faculty members and (6) Leadership behaviour of the headmaster.

It has been attempted to give a diagramatic representation for the levels of achievement in all these six factors that have been studied about each school. Though these factors have been studied about their independt levels of existence, it is attempted to present a collective representation of them in the form of a 'six-factor' profile for each school.

School Profile : This six-factor profile is a diagramatic representation to show the levels of these factors about each school under study. It is the cumulative effect of all these factors that might contribute to the innovative level of a system (school). Therefore it has been attempted to show the possible inter-relationship among them by interconnecting the plottings of the six factor scores in a single diagram.

A school profile is in the form of a circle graph. There is a circle which has six radii. Each radius represents one of the six factors. The total length of each radius represents the total score for each factor. This total length of each radius is divided into six equal parts and the corresponding level of scores are marked against those six divisions. The mean school scores for each one of the factors were calculated by adding the scores of all the schools for one factor and dividing them by the total number of schools. These schools' mean scores for all the factors have been plotted separately on all the six radii. These points were connected by lines and as a resultapolygonal area stands out inside a circle. If the outer circle could be assumed to represent an area to indicate the cent-percent scores for all the six factors, then this polygonal area could be taken to represent an area to indicate the schools' mean scores for the same six factors.

Having these two areas as the base, the individual school scores for each one of the six factors are plotted on the respective radii. When these points are inter-connected, this again shows an area to indicate the individual school scores for all the six factors.

In each 'school - profile' there are three distinct areas shown to represent :

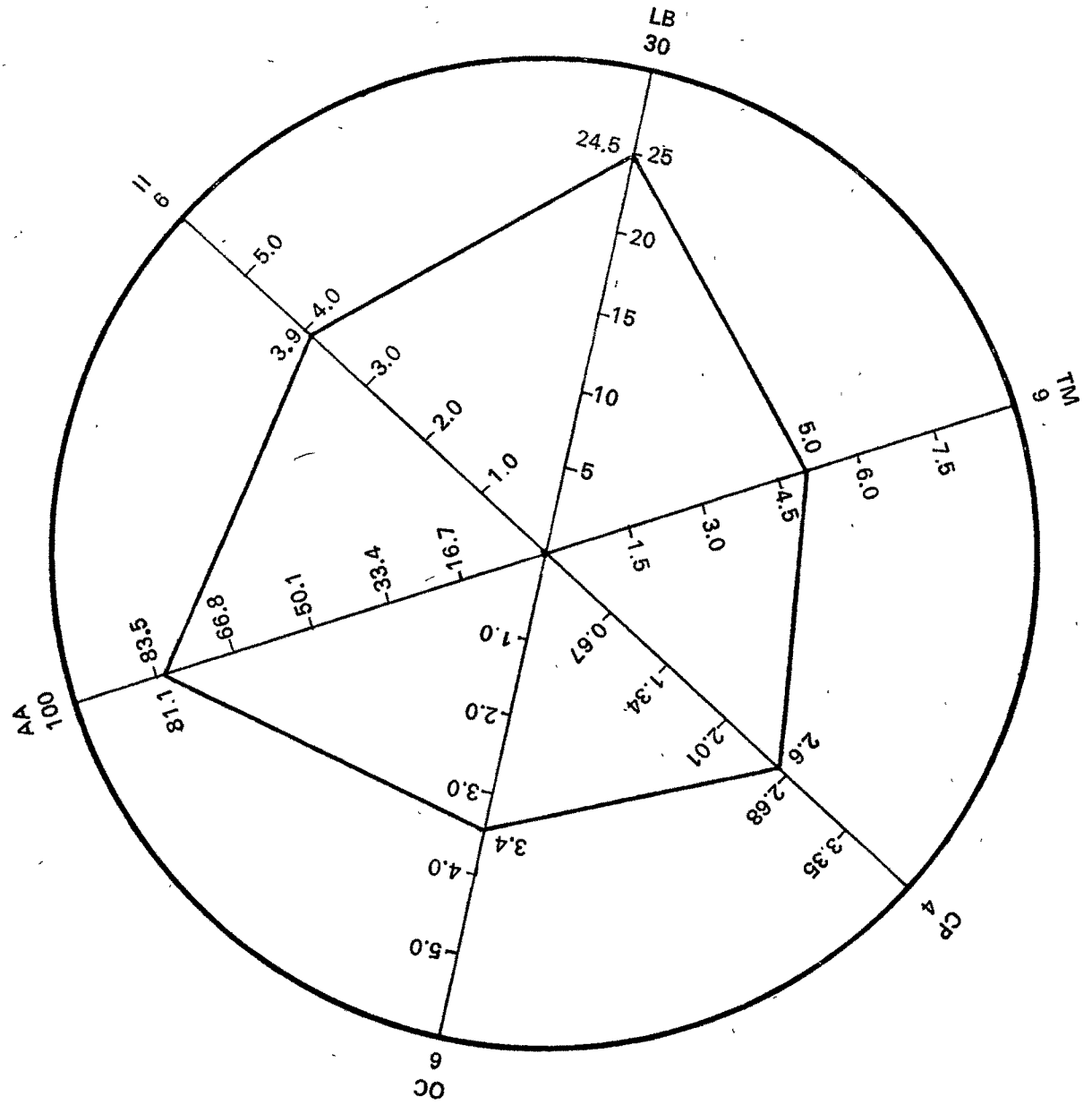
1. the cent-percent level of achievement in scores for all the six factors, by the outer circle.
2. the schools'-mean level of achievement in scores for all the six factors by the polygon shown in black lines.
3. the individual school level of achievement in scores for all the six factors by the polygon shown in coloured lines (shaded inside).

SCHOOL PROFILE

School No. :

Type :

Level :



Factors:	*Level*		*Level*
II : Innovative Index	.....	OC : Organisational Climate	.....
AA : Academic Achievement	.....	CP : Change Proneness	.....
LB : Leadership Behaviour	.....	TM : Teacher Morale	.....

The plotted point on each radius show the individual school-score for each factor. At the sametime the shaded polygonal area born out of the inter-connected points also can be taken as an index of the (cumulative) level of innovativeness. This cumulative effect is the result of the inter-play of all the six factor variables in operation in a system affecting its innovative level.

From a school profile, the innovative level of an individual school could be studied in relation to the mean innovative level of all the schools chosen for investigation.

The basic frame of reference is the mean innovative level of schools (shown in the form of a black lined polygon) against the ideal innovative level (shown in the form of the outer circle) representing cent-percent scores for all the factors. Against this frame of reference individual school profile is marked to make it more meaningful. This basic frame of reference is shown in the opposite page.

Each school profile enables any one to perceive the innovative level of an individual school against (i) the mean innovative level of the innovative schools and (ii) an ideal innovative level of an innovative school. It could be observed that an increased area (shaded polygonal area) indicates an increased innovative level of a school and vice versa.

Limitation : The concept of area to represent the innovative level of a school is more hypothetical than real. However, it could be seen that better are the scores of a school in each of the six factors more is the area covered by the polygon.

It could be observed that a few highly innovative schools (e.g.: Case No.1) have their polygonal area (shaded) extending beyond the limits of the mean-school polygon (black lined), and a few lowly innovative schools (e.g: Case No.2) having their polygon quite confined within the limits of the mean-school polygon.

A school profile is thus an indicator of the innovative level of an individual school in terms of the six-factors selected for study in the form of an increased or decreased (shaded) polygonal area.

8.24 Categorisation of factors :

The schools have been clasified into three categories as (1) High (2) Average and (3) Low. The basis of the classification is the scores obtained for each factor by the respective schools. A table showing the category level of each school in each of the six factors is appended. (Appendix 'N')

The categorisation of factor scores is shown below:

1.	Innovative Index Scores :	5.1 to 6.0	High
		3.1 to 5.0	Average
		1.0 to 3.0	Low
2.	Academic Achievement Scores :	91 to 100	High
		81 to 90	Average
		71 to 80	Low
3.	Leadership Behaviour Scores :	Above 26	High
		24 to 26	Average
		Below 24	Low
4.	Organisational Climate Category Scores :	5 and 6	High
		3 and 4	Average
		1 and 2	Low
5.	Change-proneness Scores :	Above 3.0	High
		2.1 to 3.0	Average
		Below 2.0	Low
6.	Teacher-Morale Scores :	Above 7.0	High
		5.0 to 7.0	Average
		Below 5.0	Low

8.25 School Profile and Innovative level of schools :

The schools have been categorised on their innovative levels. The innovative level of each school has been categorised on the basis of the scores achieved by the concerned school in the six factors that are shown in the 'School Profile'. If a school is found to have scored higher than the mean score of all the 25 schools in five or more than five factors, it's innovative level is indicated as 'High' if found to be higher in three or four factors only its level is indicated as 'Average' and if found higher in two or one factor only, its level is indicated as 'Low'. In each school-profile the "Innovative level" also is indicated.

School Innovative level : "High" if a school has scored higher in 5 or more factors than the mean score of all the 25 schools. "Average" found higher in 3 or 4 factors only. "L0w" if found higher in 1 or 2 factors only.

8.26 Conclusion :

In this chapter the details of the procedure, instrumentation, hypothesis and scoring are explained. The major objective of the study is to study the innovative structure of select schools with a view to explaining the factors promoting and affecting the innovative structure of the school system. There is a lot to be studied in terms of factors like the nature of innovative practices, the type of staff, their inter-relationship, the process and planning of innovation adoption etc.

Taking guidance from the findings of earlier researches in the area of innovation, the factors to be studied with regard to an

innovative institution at secondary level, to understand the innovative structure of the respective schools, the schools for investigation, were decided. After deciding upon the factors or variables that effect and affect innovation in schools, the tool for investigation was decided. The variables selected for study, the tools selected for study of such variables, the hypotheses formed on the basis of the earlier findings have been reported in this chapter.

The one important deviation of this study is its attempt to prepare individual school profiles for each school to show the level of existence of the different variables and the predictable inter-relationship among them that could be presumed to exist due to their co-existence in the system contributing to the innovativeness of the same.

This investigation has attempted to study the "Innovative Schools" and present the findings in the form of case studies. To make the case studies of "innovative schools" more meaningful, a few "non-innovative" schools also have been included in the sample and case-studies of the non-innovative schools also are reported in the following chapter. The case study is an in-depth study method to analyse the all possible dimensions contributing to a system. Therefore, unlike other researches, this study has used a large variety of tools and techniques to collect data on as many factors as possible.

Data in quantity and quality have been collected to prepare the case study reports of innovative schools. The method of using the tool for data collection and procedure of scoring and coding also have been explained in this chapter.

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