CHAPTER III

PLAN AND PROCEDURE

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Dissonance almost always exists after a decision has been made between two or more alternatives. The cognitive elements corresponding to positive characteristics of the rejected alternatives, and those corresponding to negative characteristics of the chosen alternative, are dissonant with the knowledge of the action that has been taken. If the overt behaviour is successfully elicited the person's private opinion is dissonant with his knowledge concerning his behaviour. Forced or accidental exposure to new information may create cognitive elements that are dissonant with existing cognition.

Pressure to change others means pressure to influence others. So they are identical with pleasures to communicate. Influence exerted on a person will be more effective in producing opinion change to extent that the indicated change of opinion reduces dissonance for that person. A person with a low tolerance for dissonance
would, perhaps be unable to maintain such dissonances and would struggle to eliminate them.

It is evident that once a change in behaviour has occurred, a change in belief is likely to follow. A healthy organisation is always innovative and its members are highly prone to change. While adopting innovations in an organisation dissonance will arise among the teachers. This existence of dissonance being psychologically uncomfortable will motivate the teachers to reduce the dissonance and achieve consonance.

3.11 THE NEED FOR THE STUDY:

Knowledge about an innovation does not necessarily mean adopting the new idea. Most of the Secondary School teachers know about many innovations but they have not introduced it in the class-room. The teachers attitude toward an innovation carry some degree of subjective risk to the individual. He is not sure of the idea's results and feels a need for reinforcement of his attitudes toward a new idea. Attitude toward the innovation is our main concern at the persuasion stage in the innovation decision process.

Festinger (1964) summarised the results of three field experiments in which a change in attitude toward an innovation occured for many respondents, but
this attitude change did not result in behavioural change. The attitude behaviour dissonance lie in the personality structure of the individual. The attitudes toward both the innovation and toward the situation in which the innovation is introduced need to be considered in order to predict behavioural outcomes.

Innovation Dissonance is a specific type of cognitive dissonance and we know from Festinger's (1957) theory that there is pressure in the direction of dissonance reduction. The Psychological state of dissonance is uncomfortable and therefore individuals seek to reduce this tension by bringing their attitudes and their action into line.

The teachers frequently try to avoid becoming dissonant by seeking only that information which they expect will support or confirm a decision already made. During the confirmation stage the individual wants supportive messages that will prevent dissonance from occurring.

When the teacher's attitudes are dissonant with an overt behaviour demanded by the organisation, he will attempt to reduce the dissonance by changing either his attitudes or his behaviour. The teacher will change his attitudes over a period of time to confirm his public behaviour but he may have little opportunity to change.
his organisation behaviour. On the other hand a teacher may find ways of circumventing the authority decision of the organisation and of resolving the dissonance by making his behaviour confirm with his private attitudes.

To make education learning oriented the teachers must change first.

3.12 THE PROBLEM, SCOPE, & DEFINITION OF THE TERMS

The explanation of the investigated problem is given below:

"A study of Innovation Dissonance and Its Correlates in Secondary Schools."

The various terms used in the statement of the problem are very briefly, pin-pointed and explained as under:

**Innovation**: means a significant change in educational objectives, curriculum content, teaching method, pupil grouping, staff development, resource utilisation and the organisation of the activities of the institution.

**Innovativeness**: According to Rogers (1962) "The degree to which an individual is relatively earlier in adopting new ideas than the other members of the social system."
Innovative Proneness: The positive attitude towards new ideas and practices. A particular focus of interest in the attitude of teachers towards innovation in Education.

Innovation Dissonance: Dissonance can be defined as a disharmony in the individual's state of mind which makes him change his behaviour so that his attitude and action are not in the state of equilibrium or harmony.

Human behaviour change is motivated in part by a state of internal disequilibrium or dissonance, an uncomfortable state of mind that the individual seeks to reduce or eliminate. When an individual feels dissonant he will ordinarily be motivated to reduce this condition by changing his knowledge, attitudes or actions.

Innovation dissonance in a formal organisation is the discrepancy between an individual's attitude towards an innovation and the overt behaviour (adoption or rejection) demanded by the decision unit. When an individual's attitudes are dissonant with the overt behaviour demanded by the organisation the individual will attempt to reduce the dissonance by changing either his attitude or his behaviour.

(a) Innovation Attitude Behaviour Dissonance:

According to Rogers (1963) when the individual
becomes aware of the felt need or problem and seeks information about some means such as an innovation to meet this need. Hence a receiver's knowledge of a need for innovation can motivate information seeking activity about the innovation.

Innovation Attitude–Behaviour Dissonance consists of changing behaviour so that the individual's attitudes and actions are not in line. The individual's position in the matter of attitude to innovation was not matching with his innovation–behaviour. Such instances were considered to be Innovation Attitude–Behaviour Dissonance.

(b) Innovation Behaviour–Confirmed Dissonance:

When an individual becomes aware of a new idea for which he has a favourable regard, the individual is motivated to adopt the innovation by the dissonance between what he believes and what he is doing.

During the confirmation stage, the individual wants supportive message that will prevent dissonance. Individual's position in the matter of innovation behaviour was not matching with confirmed innovation behaviour. Such instances were considered to be causes of dissonance.

(c) Innovation Attitude–Confirmation Dissonance:

The individual may secure further information
which persuades that he should not have adopted. If
he originally decided to reject the innovation, the
individual may become exposed to pro innovation mes­sages causing a state of dissonance which may be reduced
by adoption.

The confirmation stage continues after the
decision to adopt (or) reject the innovation. Individual's
attitude to innovation was not matching with confirmed
behaviour. Such instances were considered to be causes
of dissonance and it is designated as Innovation Attitude
Confirmation-Dissonance.

In the present study certain percentage of
the Secondary School teachers in their behaviour have a
consistant attitude towards innovation and certain percen­tage of teachers may not be consistant in their behaviour.
This attitude behaviour discrepancy may result in a form
of cognative dissonance which has been termed as "Innova­tion Dissonance".

Schools are divided into three broad categories,
namely Elementary, Secondary and Higher Secondary.
Secondary, schools include classes VIII to X (or) some
schools it is VI to X. As per the revised system of
education from June, 1978, some of the Secondary Schools
offered XI and XII Standards in their schools. However,
it may be noted that during the study of this problem
by the investigator, the 'Higher Secondary Education' was not prevalent, and hence class XI was not included in the Secondary School.

The Secondary Schools of Madras City were the subject of study on the dimensions of the "Innovation-Dissonance and its correlates".

The selection of the Secondary Schools of Madras city is made because of various reasons as follows:

(1) Madras city has a number of all types of schools (Private, Missionary, Corporation and Government) which are well representative of the schools of Madras.

(2) Innovative and Non-innovative schools are there in the city. Some of the schools are in the cosmopolite area and some from residential area. These informations were given by the Chief Educational Officer, Madras.

Delimitation of the Study:

As defined above, the problem for study is to locate the Innovation-Dissonance among Secondary School teachers of the city of Madras. The study becomes limited in the sense that it includes only high school teachers of the city of Madras and the respective Headmasters.
3.13 BACKGROUND OF THE STUDY AREA

Tamil Nadu is situated on the eastern side of the southern part of peninsular India. Madras had its origin as a settlement of the East India Company in 1639 and was soon the commercial as well as the administrative centre of almost the whole of South India. The capital of Tamil Nadu is Madras and is the largest city in south and also one of the 4 metropolitan areas in India. It is a major port town on the sea shore of Bay of Bengal and is most predominant for administrative, Industrial, educational and socio cultural activities. The Tamil name of this city is "CHENNAI".

**Physical Features**: Madras is situated between 12° N and 13° 15' N latitude and 79° 15' and 80° 20' longitude. This occupies more or less one tenth of the extent of the state. The total area of Tamil Nadu is 130,069 sq.km. and the city has a population of 41,199,168. It accounts for 20% of the total urban population of the state, 22.5% of total workers, 27% of all industrial workers and 30.4% of students pursuing higher education in the state.

The main factors considered in the determination of the area over which the city exercises its influences directly and which would constitute the metropolitan area were: (i) Physical factors (ii) Trends of urbanization
(iii) Movement of industrial workers (iv) Movement of students to higher educational institutions (v) Accessibility by mass transit.

Culturally also Madras has been the home of Carnatic music and Bharatha Natyam, the classical dance of the south.

GENERAL EDUCATION:

The schooling in the state is in a period of 12 years - 5 years at the primary school stage, 5 years secondary and 2 years as Higher Secondary. Education is free up to Higher Secondary stage and compulsory up to the primary school stage. 82% of the children in the age group 6 - 11, 51% in the age group 11 - 14 and 34% in the age group 14 - 17 are in schools. There are 305 primary schools, 265 middle schools and 101 high schools within the area of these 156 primary schools, 174 middle schools and 28 high schools are run by the local Government.

Again, as the study was conducted in Madras city and as the sampled population belongs to this district, the cultural influences of which cannot be ruled out, some of the findings may not be applicable to all section of teachers. However, the findings from the theoretical point of view, should be inductive of the general pattern of relationship among the variables under study.
According to the Secondary school leaving certificate Examination Board's list, there are 321 secondary schools in the city. From this, more than 100 schools are now having higher Secondary courses. Out of these 100 schools were selected from Missionary, Private Management, Corporation and Government Schools, for this study.

It is also limited in the sense that only English and Tamil Medium Schools were selected as a sample excluding Malayalam, Telugu and other medium schools. It is also limited in the sense that perception of teachers and principals alone are considered; and the perception of parents and students have not been considered.

3.14 THE OBJECTIVES OF THE STUDY:

In this study, there is a multi-dimensional approach to identify dissonance.

(1) To study the Innovation-Dissonance of the teachers of Secondary Schools in the city of Madras with respect to their (a) Age (b) Sex (c) Teaching experience (d) Professional qualifications (e) Mobility (f) Inservice education programme (g) Professional reading habits and (h) Professional satisfaction

(2) To study the Innovation Dissonance of the teachers of Secondary schools in the city of Madras with
respect to their personality variable like the Temperament of the teachers.

(3) To study the Innovation Dissonance of the teachers of Secondary Schools in the city of Madras with respect to the institutional variables such as Leadership Behaviour patterns of principals, Organizational climate of the schools, the innovativeness of the schools and the types of Management of the schools.

(4) To study the Innovative Proneness of the teachers of Secondary Schools in the city of Madras with respect to their personal variables like (a) Age (b) Sex (c) Teaching experience (d) Professional qualifications (e) Mobility (f) Inservice education programme (g) Professional reading habits and (h) Professional satisfaction.

(5) To study the Innovative proneness of the teachers of Secondary schools in the city of Madras with respect to their personality variable like the Temperament of the teachers.

(6) To study the Innovative-Proneness of the teachers of Secondary schools in the city of Madras with respect to the institutional variables like Leadership Behaviour patterns of Principals, Temperament of principals, Organizational Climate of the schools.
Innovativeness of the schools and the types of Management of the schools.

(7) To find out the inter correlations among the components of Innovative Proneness Scale, LBDQ, OCDQ, and Thrustone Temperament Schedule.

THE PROCEDURE (METHODOLOGY):

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 which those variables were found to relate the process of innovation-adoption, innovative-proneness, diffusion or barriers and dissonance. Keeping in mind the above facts, the selection of variables both personal and institutional have been done for this study.

Major Variables:

1) Attitude to innovation—indicating the secondary school teachers attitude toward innovation.

2) Situational and Innovation characteristics – a measure of behaviour of teachers while adopting innovation.
(3) Change Related Values - a measure of mental faculties suited for adoption, (or) rejection of innovation.

(4) Leadership behaviour of the Principal - the attitude of the headmaster towards his subordinates and change.

(5) Organisational Climate - indicating the climate of the school in terms of the staff-rated scores for eight dimensions.

(6) Temperament of teachers and headmasters.

Other Variables:

Besides the above major variables there are many more variables that are found to affect both directly and indirectly the dissonance state of teachers of secondary schools viz. (1) Age (2) Sex (3) Teaching Experience (4) Professional qualification (5) Mobility (6) Inservice Education Programme (7) Professional Reading Habits (8) Professional satisfaction (9) Innovative characteristics of schools and (10) types of schools.

In order to validate the selection of these variables, a number of research scholars and experts working in allied areas were consulted and suitable modifications were carried out.
The Innovative Proneness scale having 150 items was given to a large group of judges. Twelve judges were selected for this purpose. The judges were instructed as follows:

"These Questionnaire contain 150 items regarding innovative proneness of teachers and correlates such as Leadership Behaviour, Organisational Climate and Throstone Temperament schedule. You are requested to go through each item carefully and give your opinion whether this tool can be utilised in Madras City to locate the Innovation Dissonance of Secondary School teachers".

Out of the 12 judges, 10 responded, and their names are given in Appendix III. The following table gives the composition of ten judges who responded.

<table>
<thead>
<tr>
<th>PROFESSION</th>
<th>No. OF JUDGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training College Principals</td>
<td>2</td>
</tr>
<tr>
<td>Professors</td>
<td>2</td>
</tr>
<tr>
<td>Readers</td>
<td>2</td>
</tr>
<tr>
<td>Headmasters</td>
<td>2</td>
</tr>
<tr>
<td>Educationist</td>
<td>2</td>
</tr>
</tbody>
</table>

Total : 10
From their responses it is found that they all uniformly agreed to use the tools to find the Innovation Dissonance among the teachers in Secondary Schools in the city of Madras.

3.20 INNOVATIVE PRONENESS SCALE:

Purpose:
Patel (1980) has developed an instrument known as Innovative proneness scale to measure the innovativeness of secondary and higher secondary school teachers. Panchal (1977) has developed a similar tool to measure the innovativeness of teacher educators. The adopted version of the same tool was used to locate the innovation dissonance of secondary school teachers in Madras City.

Description of the Innovative-Proneness Scale:

Attitude behaviour discrepancy may result in a form of cognitive dissonance which has been termed as "Innovation dissonance" - viewed in terms of dissonance theory (Festinger, 1957) or balance theory (Heider, 1958). It may be hypothesised that the resultant strains and tensions induced in the individual will be resolved by various dissonance-reducing mechanisms, depending upon the individual's latitude of tension tolerance. The consequence of undue stress and functional adoption require further exploration. Various modes or accommodation
are suggested in Kelman's (1960) compliance theory. In order to predict behavioural outcomes, the attitudes towards both the innovation and the situation need to be considered (Rokeach, 1967).

To explore the dimensionality of general change and innovation and specific attitudes and behaviours the tool has four instruments consisting of four main scales and three correlates. They are given below:

1. Section I - The Inventory of Attitudes to Innovation (I.A.I).
3. Section II B - The Innovation Characteristics Scales (I.C.S.)
4. Section III - The Change Related Values Questionnaire (C.G.Q.)
5. Section IV - Biographical Data.

(a) DESCRIPTION OF EACH SECTION SCALE:

1) The Inventory of Attitude to Innovation (I.A.I):
The I.A.I. is a closed form - Likert type summated rating scale designed to measure teachers' predisposition to adopt educational innovations.

2) Teachers' Perception of Situational & Innovational Characteristics:
Research on the determinants and correlates of teachers' 'Innovativeness' suggests that 'antecedents conditions' to use Roger's term (1963) for the successful
adoption of innovations include three major sets of variables.

i. Situational Variables

ii. Characteristics of the Innovations

iii. Personal Variables.

3) The Change Related Values Questionnaire:

The relationship between teacher innovativeness and their general change-related attitudes and values has been the subject of several studies.

SECTION IV BIOGRAPHICAL DATA:

On a separate Questionnaire respondents were requested to provide information on the variables like, Age, Sex, Teaching Experience, Professional Qualification, Mobility, Inservice Education, Professional Reading Habits and Professional Satisfaction.

I. The Inventory of Attitude to Innovation has the following seven main components i.e. types of Innovation hypothesised.

1) Innovations in 'Individualization'.

2) Innovations in 'Curriculum Organisation'.

3) Innovations in 'Teaching Learning Process'.

4) Innovations in 'Teaching Resources'.

5) Innovations in 'Internal School Organisation'.

6) Innovations oriented towards 'Staff Development'.

7) Innovations in 'School Community Relationship'.


SECTION II THE SITUATIONAL CHARACTERISTIC SCALES:

8) Teachers' Perception of the degree and kind of administrative support provided for innovation in the schools (Administrative support).

9) Teachers' perceptions of the change-related norms and values of their colleagues (Staff norms).

10) Teachers' perception of the change-related norms and values in the educational system (System-norms).

11) Teachers' perception of the complexity of the innovation (Complexity).

12) Teachers' perception of the compatibility of the innovations (Compatibility).

13) Teachers' perception of the degree of risk involve in adoption (Riskness).

14) Perceived 'local' orientation of the innovation (Localiteness).

15) Perceived cosmopolitanity of the innovation (Cosmopolitanity).

SECTION III THE CHANGE RELATED VALUES QUESTIONNAIRE:

16) Traditionalism.

17) Progressivism.

18) Dogmatism.

19) Venturesomeness.

20) Conservatism.

21) Change Proneness.
VALIDITY, RELIABILITY AND ESTABLISHING NORMS:

(A) Validity of the Innovative Proneness scale has been studied by the Investigator in the following ways.

1) Content Validity.
2) Rating of the teachers with the rating of the Principals or Heads.
3) Item analysis by Phi-coefficient formula.

1) CONTENT VALIDITY:

All questionnaire items have relied principally on the definitions of 'Innovative Proneness' given by experts. Again, the principals and teachers were interviewed and finally arrived at 21 components.

2) RATING OF THE TEACHERS WITH THE RATING OF THE PRINCIPALS OR HEADS:

For testing the Validity of the questionnaire the investigator selected six schools from Madras City. They discussed these tools with the principals of the selected schools and requested him to spare 6 teachers, two each with 1) high innovative proneness, 2) average proneness, and 3) low proneness. The questionnaire containing 150 items was distributed to those teachers for giving their responses in five point scale.

1. V.H. - Very High
2. H - High
3. A - Average
4. L - Low
5. V.L. - Very Low.
The investigator collected the responses from 16 teachers from 10 selected schools and requested the principals to give their opinion about each teacher relating to his innovative proneness with respect to the components. Studying the responses of the selected teachers the positive statements were assigned values as 5, 4, 3, 2, 1, and 0, and the negative statements the values assigned were 0, 1, 2, 3, 4, and 5. Thus the total value scores of each teacher were further subdivided into components. Correlations were determined between the principal score and the teachers' score. It was seen that the product movement coefficient correlation between the two sets of scores were .87, meaning a fairly good coefficient of correlation showing that Questionnaire agreed with principal's estimate.

3) **ITEM ANALYSIS**

Item validation was also done through Phi-coefficient formula. It showed the relation of items with each other. So there was no need for cross validation. These proved that the Questionnaire was valid.

(ii) **THE RELIABILITY OF THE PRESENT QUESTIONNAIRE**

The investigator decided to check the reliability of the present questionnaire by the following methods.

1) The Test-Retest Method.
2) The Split-Half Method.
1) **THE TEST-RETEST METHOD**

The Investigator employed the Test-Retest Method for determining the reliability of the present scale. In their work 100 teachers of Secondary Schools of Madras City were administered the Questionnaire on 15th March, 1979 and the same group of teachers were administered on 12th April, 1979. i.e. after 27 days of interval. The scores of the subjects at both the administrations were correlated. The correlation between the first and the second sets of scores gave an estimate of the reliability Coefficient. The mean score of the first administration was found to be high as compared to the mean score on the second administration. The correlation between the first and the second set of scores was found by the product-moment method.

\[ r = \frac{\sum x'y' - \frac{C_x C_y}{\sigma_x \sigma_y}}{\sqrt{\sum x^2 - \frac{C_x^2}{\sigma_x^2}} \times \sqrt{\sum y^2 - \frac{C_y^2}{\sigma_y^2}}} \]

The Test-Retest correlations for total scores and for factor scores are listed in Tables given below.
<table>
<thead>
<tr>
<th>No. of Section</th>
<th>No. of Items</th>
<th>Factor No.</th>
<th>Name of the Factor</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>5</td>
<td>1</td>
<td>Individualisation</td>
<td>.62</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>2</td>
<td>Curriculum Organisation</td>
<td>.63</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>3</td>
<td>Teaching-Learning Process</td>
<td>.67</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4</td>
<td>Teaching Resources</td>
<td>.89</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>Internal School Organisation</td>
<td>.67</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>6</td>
<td>Staff Development</td>
<td>.63</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>7</td>
<td>School Community Relationship</td>
<td>.64</td>
</tr>
<tr>
<td>TOTAL SCORE 30</td>
<td>7</td>
<td></td>
<td>The Inventory of attitudes to Innovation</td>
<td>.82</td>
</tr>
<tr>
<td>II</td>
<td>12</td>
<td>1</td>
<td>Administrative Support</td>
<td>.89</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>2</td>
<td>Staff Norms</td>
<td>.96</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>3</td>
<td>System Norms</td>
<td>.87</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>4</td>
<td>Complexity</td>
<td>.85</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>5</td>
<td>Compatibility</td>
<td>.77</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>6</td>
<td>Riskness</td>
<td>.91</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>7</td>
<td>Localiteness</td>
<td>.85</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>8</td>
<td>Cosmopolitaness</td>
<td>.80</td>
</tr>
<tr>
<td>TOTAL SCORE 60</td>
<td>8</td>
<td></td>
<td>The Situational and Innovation Characteristics Scale</td>
<td>.79</td>
</tr>
</tbody>
</table>
The reliability of the above questionnaire is nowhere less than 0.73 in Section II and III, and 0.60 in Section I. Therefore, it is concluded that the scale is sufficiently reliable.

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<table>
<thead>
<tr>
<th>No. of Section</th>
<th>No. of Items</th>
<th>Factor No.</th>
<th>Name of the Factor</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>10</td>
<td>1</td>
<td>Traditionalism</td>
<td>.91</td>
</tr>
<tr>
<td>10</td>
<td>2</td>
<td>Progressivism</td>
<td></td>
<td>.94</td>
</tr>
<tr>
<td>10</td>
<td>3</td>
<td>Dogmatism</td>
<td></td>
<td>.80</td>
</tr>
<tr>
<td>10</td>
<td>4</td>
<td>Venturesomeness</td>
<td></td>
<td>.84</td>
</tr>
<tr>
<td>10</td>
<td>5</td>
<td>Conservatism</td>
<td></td>
<td>.91</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>Change Proneness</td>
<td></td>
<td>.76</td>
</tr>
</tbody>
</table>

TOTAL SCORE 60 6 The Change Related Values Questionnaire .83

GRAND TOTAL 150 21 .85

TABLE : 3.0.4

RELIABILITY OF THE QUESTIONNAIRE BY THE SPLIT-HALF METHOD:

Reliability Coefficient of Each Section by Split-Half Method is given below:

<table>
<thead>
<tr>
<th>No. of Section</th>
<th>No. of Items</th>
<th>No. of Components</th>
<th>Reliability Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>30</td>
<td>7</td>
<td>0.91</td>
</tr>
<tr>
<td>II</td>
<td>60</td>
<td>8</td>
<td>0.90</td>
</tr>
<tr>
<td>III</td>
<td>60</td>
<td>6</td>
<td>0.67</td>
</tr>
</tbody>
</table>

TOTAL :: 150 21 0.79
The reliability was found out by split-half method and it was highly correlated 0.91, 0.90 and 0.67 respectively.

NORMS:

The investigator has given this questionnaire for measuring innovation dissonance of Secondary School teachers. The reliability and validity were also been worked out with respect to each component of the three section of the scale. The result in the form of percentile scores have been given in the tables 3.21 to 3.23 in the following pages.
### TABLE 3:0:5
PERCENTILE POINTS OF THE COMPONENTS OF SECTION-I: THE INVENTORY OF ATTITUDES TO INNOVATION

<table>
<thead>
<tr>
<th>Percentile Points</th>
<th>Individualisation</th>
<th>Curriculum Organisation</th>
<th>Teaching-Learning Process</th>
<th>Teaching Resources</th>
<th>Internal School Organisation</th>
<th>Staff Development</th>
<th>School Community Relationship</th>
<th>The Inventory of Attitudes to Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>90</td>
<td>24.0</td>
<td>15.0</td>
<td>24.0</td>
<td>20.0</td>
<td>25.0</td>
<td>25.0</td>
<td>25.0</td>
<td>158.0</td>
</tr>
<tr>
<td>80</td>
<td>24.0</td>
<td>14.0</td>
<td>24.0</td>
<td>19.0</td>
<td>24.0</td>
<td>24.0</td>
<td>23.0</td>
<td>152.0</td>
</tr>
<tr>
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<td>20.0</td>
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</tr>
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<td>18.0</td>
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<td>124.0</td>
</tr>
<tr>
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<td>19.0</td>
<td>12.0</td>
<td>18.0</td>
<td>14.0</td>
<td>18.0</td>
<td>16.0</td>
<td>17.0</td>
<td>114.0</td>
</tr>
<tr>
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<td>16.0</td>
<td>11.0</td>
<td>17.0</td>
<td>12.0</td>
<td>16.0</td>
<td>16.0</td>
<td>15.0</td>
<td>103.0</td>
</tr>
</tbody>
</table>

The Components of Internal School Organisation, Staff Development and School Community Relationship have the highest percentile (25.0), and Curriculum Organisation has the lowest percentile (11.0).
## Table 3:10:6

PERCENTILE POINTS OF THE COMPONENTS OF SECTION II. THE SITUATIONAL AND INNOVATION CHARACTERISTICS SCALE

<table>
<thead>
<tr>
<th>Percentile Points</th>
<th>Administrative Support</th>
<th>Staff Norms</th>
<th>System Norms</th>
<th>Section II Situational Characteristics Scale</th>
<th>Complexity</th>
<th>Compatibility</th>
<th>Riskiness</th>
<th>Localiteness</th>
<th>Cosmopoliteness</th>
<th>Section II Innovation Characteristics Scale</th>
<th>Section II Situational and Innovation Characteristics Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>90</td>
<td>38.0</td>
<td>56.0</td>
<td>30.0</td>
<td>124.0</td>
<td>28.0</td>
<td>29.0</td>
<td>40.0</td>
<td>40.0</td>
<td>30.0</td>
<td>167.0</td>
<td>291.0</td>
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<tr>
<td>80</td>
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<td>24.0</td>
<td>108.0</td>
<td>27.0</td>
<td>28.0</td>
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<td>40.0</td>
<td>28.0</td>
<td>162.0</td>
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<td>34.0</td>
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<td>139.0</td>
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<td>16.0</td>
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<td>56.0</td>
<td>19.0</td>
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<td>30.0</td>
<td>14.0</td>
<td>111.0</td>
<td>167.0</td>
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<td>14.0</td>
<td>12.0</td>
<td>46.0</td>
<td>18.0</td>
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<td>28.0</td>
<td>12.0</td>
<td>103.0</td>
<td>149.0</td>
</tr>
</tbody>
</table>

The Components: The Staff Norms has the highest percentile (56.0) and the System Norms and Cosmopoliteness have the lowest percentile (12.0).
<table>
<thead>
<tr>
<th>Percentile Points</th>
<th>Traditionalism</th>
<th>Progressiveism</th>
<th>Dogmatism</th>
<th>Venturesomeness</th>
<th>Conservatism</th>
<th>Change Proneness</th>
<th>Related Values Questionnaires</th>
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<tr>
<td>90</td>
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<td>48.0</td>
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<td>47.0</td>
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<td>38.0</td>
<td>36.0</td>
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<td>33.0</td>
<td>45.0</td>
<td>233.0</td>
</tr>
<tr>
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<td>40.0</td>
<td>33.0</td>
<td>31.0</td>
<td>32.0</td>
<td>43.0</td>
<td>218.0</td>
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<td>37.0</td>
<td>38.0</td>
<td>30.0</td>
<td>30.0</td>
<td>31.0</td>
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<td>36.0</td>
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<td>24.0</td>
<td>35.0</td>
<td>171.0</td>
</tr>
</tbody>
</table>

TABLE: 3:0:7

PERCENTILE POINTS OF THE COMPONENTS OF SECTION-III: THE CHANGE

RELATED VALUES QUESTIONNAIRES

Section III: The Change Related Values Questionnaire.
A SCHEMATIC PRESENTATION OF THE NUMBER OF COMPONENTS AND THE NUMBER OF ITEMS IN EACH COMPONENT OF THE INNOVATION SCALE FOR TEACHERS OF SECONDARY SCHOOL.

SECTION I

THE INVENTORY OF ATTITUDES TO INNOVATION

<table>
<thead>
<tr>
<th>No.</th>
<th>Components</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Individualization</td>
<td>5</td>
</tr>
<tr>
<td>2.</td>
<td>Curriculum Organization</td>
<td>3</td>
</tr>
<tr>
<td>3.</td>
<td>Teaching-Learning Process.</td>
<td>5</td>
</tr>
<tr>
<td>4.</td>
<td>Teaching Resources</td>
<td>4</td>
</tr>
<tr>
<td>5.</td>
<td>Internal School Organisation</td>
<td>5</td>
</tr>
<tr>
<td>6.</td>
<td>Staff Development</td>
<td>5</td>
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<tr>
<td>7.</td>
<td>School Community Relationships</td>
<td>3</td>
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</table>

TOTAL : 30

SECTION II

A - THE SITUATIONAL CHARACTERISTIC SCALE

<table>
<thead>
<tr>
<th>No.</th>
<th>Components</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Administrative Support</td>
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</tr>
<tr>
<td>2.</td>
<td>Staff Norms</td>
<td>8</td>
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<tr>
<td>3.</td>
<td>System Norms</td>
<td>6</td>
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</table>

SUB TOTAL : 26

B - THE INNOVATION CHARACTERISTIC SCALE

<table>
<thead>
<tr>
<th>No.</th>
<th>Components</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Complexity</td>
<td>6</td>
</tr>
<tr>
<td>2.</td>
<td>Compatibility</td>
<td>6</td>
</tr>
<tr>
<td>3.</td>
<td>Riskness</td>
<td>6</td>
</tr>
<tr>
<td>4.</td>
<td>Localiteness</td>
<td>8</td>
</tr>
<tr>
<td>5.</td>
<td>Cosmopoliteneess</td>
<td>8</td>
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</tbody>
</table>

SUB TOTAL : 34
SECTION : III

THE CHANGE RELATED VALUES QUESTIONNAIRE

<table>
<thead>
<tr>
<th>No.</th>
<th>Components</th>
<th>Items</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Traditionalism</td>
<td>10</td>
</tr>
<tr>
<td>2.</td>
<td>Progressivism</td>
<td>10</td>
</tr>
<tr>
<td>3.</td>
<td>Dogmatism</td>
<td>10</td>
</tr>
<tr>
<td>4.</td>
<td>Venturesomeness</td>
<td>10</td>
</tr>
<tr>
<td>5.</td>
<td>Conservatism</td>
<td>10</td>
</tr>
<tr>
<td>6.</td>
<td>Change Proneness</td>
<td>10</td>
</tr>
</tbody>
</table>

TOTAL : 60

Innovative proneness scale (I.P.S.) was used for locating innovation dissonance of Secondary School teachers under study. In this tool there are 150 items - 30 items in Section I, 60 items in Section II, and 60 items in Section III covering the opinions and feelings of secondary school teachers on innovative practices and related educational issues in the secondary schools of Madras city. The schematic presentation of the number of components and the number of items in each component of the innovative proneness scale for teachers is given in the Table: 3.11.

There are 21 components in the Innovative proneness Scale. Section I consists of 7 components.
which refer to the attitudes towards innovation. These components are: Individualisation, Curriculum Organisation, Teaching-Learning Process, Teaching Resources, Internal School Organisation, Staff Development, and School Community Relationship. These components indicate the areas where the innovations are to be introduced.

These areas refer to the day to day classroom teaching. The school community relationship are to be strengthened so that the teaching learning process in the classroom is improved.

Section II is related to the process of change in education which is classified into two parts. (1) The situational characteristics and (2) the Innovation characteristic. The process of change depends on the nature of the structure and other characteristics of the school and the nature of the innovation to be introduced under circumstances favourable and unfavourable of it.
### TABLE 3:0:9

A SCHEMATIC PRESENTATION OF THE NUMBER OF COMPONENTS AND THE NUMBER OF ITEMS IN EACH COMPONENT OF THE CORRELATES USED TO MEASURE DISSONANCE STATE OF THE SECONDARY SCHOOL TEACHERS.

#### SECTION IV

**LEADERSHIP BEHAVIOUR DISCRIPTION QUESTIONNAIRE.**

<table>
<thead>
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<th>No.</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Initiating Structure</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>Consideration</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

#### SECTION V

**ORGANISATIONAL CLIMATE DISCRIPTION QUESTIONNAIRE**

<table>
<thead>
<tr>
<th>No.</th>
<th>Components</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Disengagement</td>
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</tr>
<tr>
<td>2.</td>
<td>Hindrance</td>
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</tr>
<tr>
<td>3.</td>
<td>Esprit</td>
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<tr>
<td>4.</td>
<td>Intimacy</td>
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</tr>
<tr>
<td>5.</td>
<td>Aloofness</td>
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</tr>
<tr>
<td>6.</td>
<td>Product(^{10})Emphasis</td>
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</tr>
<tr>
<td>7.</td>
<td>Thrust</td>
<td>8</td>
</tr>
<tr>
<td>8.</td>
<td>Consideration</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>64</strong></td>
</tr>
</tbody>
</table>
### SECTION VI

**THURSTONE TEMPERAMENT SCHEDULE**

<table>
<thead>
<tr>
<th>No.</th>
<th>Components</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Active Trait</td>
<td>20</td>
</tr>
<tr>
<td>2.</td>
<td>Vigorous Trait</td>
<td>20</td>
</tr>
<tr>
<td>3.</td>
<td>Impulsive Trait</td>
<td>20</td>
</tr>
<tr>
<td>4.</td>
<td>Dominant Trait</td>
<td>20</td>
</tr>
<tr>
<td>5.</td>
<td>Stable Trait</td>
<td>20</td>
</tr>
<tr>
<td>6.</td>
<td>Sociable Trait</td>
<td>20</td>
</tr>
<tr>
<td>7.</td>
<td>Reflective Trait</td>
<td>20</td>
</tr>
</tbody>
</table>

**TOTAL : 140**

**Grand Total :**
- Components - 17
- Items - 234

The situational characteristics depend on administrative support, staff Norms and System Norms.

In the present study, the assumption is that innovation dissonance is basically linked to factors like (1) The leadership behaviour (2) Organisational climate and (3) Temperament of teachers and principals. To measure all the above aspects, many of the standardized tools that have been used in earlier Doctoral Research studies were used. Most of them are in the form of Questionnaire with Likert type items.
3.21 LEADERSHIP BEHAVIOUR DESCRIPTION QUESTIONNAIRE:

The L.B.D.Q. was developed and standardised in 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 coefficient of the two major dimensions measured by the tool via initiating structure and consideration was found to be 0.93 and 0.86 respectively.

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

Indian researchers like Sharma (1973), Pandya (1974), Darji (1975), Shelat (1975), Mahendra Chokshi (1974), Tikmani (1976) and Gupta (1976) have used this tool in their Doctoral studies. And thus the validity and reliability have been well established.

3.22 ORGANISATIONAL CLIMATE DESCRIPTION QUESTIONNAIRE:

The tool was constructed by Andrew W. 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. Nelson (1960) has classified the organisational climate into four types viz. (1) the bureaucratic (2) the autocratic, (3) idiocratic
and (4) democratic. However, Halpin and Croft have identified six categories of climate, with 'openness' at one end of the continuum and 'the closedness' at the other end.

The organisation climate Description Questionnaire by Halpin and Croft (1963) was standardised on 71 elementary schools chosen from six different regions of United States taking 1151 teachers as the respondents. This tool has also been used by different researchers in India.

3.23 **THURSTONE TEMPERAMENT SCHEDULE**

**Purpose:**

Most tests describe a person in terms of psychologic of neurotic tendencies. Since for practical purposes most of us are reasonably well adjusted, these clinical stereotypes do not seem to provide the best method for describing personality traits. We need a schedule that emphasizes important stable traits which describes how normal, well adjusted people differ from each other.

The Thurstone Temperament Schedule (Appendix-R) was devised for this purpose. It is limited to a practical description of important aspects of temperament and makes no attempt to appraise the degree of conflict, insecurity, or maladjustment. It is designed to assess
those traits which are relatively permanent for each person, and excludes those which reflect recent social experience, social identifications, disturbing experiences, or exposure to propaganda. However, because of this limitation in depth the schedule has unusually broad coverage. Seven areas of temperament are appraised in a relatively short questionnaire.

Description of the Areas Covered by the Schedule:

The seven areas of temperament namely Active, Vigorous, Impulsive, Dominant, Stable, Sociable and Reflective are described in chapter on "Problem" under the heading "Description of Independent Variables - Personality Traits".

Format:

The 140 items covering the seven areas are printed in a six-page step down booklet. This booklet can be used with either a self-scoring carbon answer pad or a machine-scored answer sheet. Both of these have adult and boy and girl profiles, printed on them. The self-scoring answer pad has the unique feature of only indicating the correct answers.

Administration:

The Thrustone Temperament Schedule is self-administering. It may be given with or without supervision, in a group or individually.
The directions for taking the test are printed on the first page of the schedule. Subjects are instructed to read them carefully. The administrator also can read the directions aloud if he wishes. This is sometimes helpful in group situations. No comments should be made about the items in the schedule before or after the test has started. There is no time limit. Sufficient time must be allowed for everyone to complete all items. Twenty minutes time is usually adequate. As each individual finishes, his answerbook must be checked, if he has left any item, he is asked to complete it.

Response Mode:

Three alternate responses namely 'yes', 'no', and 'No' are provided against each of the items of the schedule. The subject is asked to give his response by placing a tick mark against any of the three alternatives which reveals his answer best.

Scoring:

Scoring of the items can be done manually as well as by machine. Only correct responses are scored. Every correct response is given a score of one. A total score for each subject on each trait is obtained.
Norms:

Norms of the schedule are based on four different groups.

The first group consists of 694 freshmen and 161 freshmen-women, attending the University of Illinois. The second group is made up of 419 boys and 504 girls drawn from five Chicago high schools. The third group comprises of 540 male and 496 female office workers, stenographers, typists, receptionists, file clerks, book-keepers, machine operators, coordinators, etc. The age range of this group is from 20 to 55, but the majority is from 25 to 45. The fourth and last group is composed of 1234 adult males and 657 adult females. Thus the schedule has four separate norms for male and female university students, high school boys and girls, male and female office workers, and male and female adults.

Reliability:

The reliability for the seven areas of the schedule have been computed by split-half method for the four groups viz. men, women, high school boys and high school girls. The odd-even correlations were computed and then reliabilities were estimated by the Spearman-Brown correction for double length. Reliabilities were also calculated for a fifty group consisting of men and women seeking counseling and employment through the
University of Chicago. These reliability coefficients are shown in table 3.0.

**TABLE 3.0**

**THE RELIABILITY COEFFICIENT OF THURSTONE TEMPERAMENT SCHEDULE.**

<table>
<thead>
<tr>
<th>Trait</th>
<th>Men</th>
<th>Women</th>
<th>Boys</th>
<th>Girls</th>
<th>Employment &amp; Guidance Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>.48</td>
<td>.46</td>
<td>.48</td>
<td>.50</td>
<td>.51</td>
</tr>
<tr>
<td>Vigorous</td>
<td>.61</td>
<td>.63</td>
<td>.59</td>
<td>.67</td>
<td>.68</td>
</tr>
<tr>
<td>Impulsive</td>
<td>.65</td>
<td>.65</td>
<td>.62</td>
<td>.70</td>
<td>.70</td>
</tr>
<tr>
<td>Dominant</td>
<td>.77</td>
<td>.77</td>
<td>.82</td>
<td>.83</td>
<td>.86</td>
</tr>
<tr>
<td>Stable</td>
<td>.63</td>
<td>.64</td>
<td>.59</td>
<td>.63</td>
<td>.55</td>
</tr>
<tr>
<td>Sociable</td>
<td>.68</td>
<td>.73</td>
<td>.69</td>
<td>.78</td>
<td>.76</td>
</tr>
<tr>
<td>Reflective</td>
<td>.73</td>
<td>.62</td>
<td>.60</td>
<td>.48</td>
<td>.45</td>
</tr>
</tbody>
</table>

N 200 157 236 277 106

**Validity:**

To determine the validity a study was conducted with ten group of sales employees of a national retail company. The supervisor of each group completed a forced choice rating scale for each of his employees. The scales included pairs of items describing the seven traits measured by the schedule. In each pair one item described behaviour typical of the high scoring individual and the
other typical of the low scoring individual. Supervisors selected the item of each pair that best described the employee.

Ratings were compared with the employees' actual test performance. Biaerial coefficients of correlation between the ratings and actual test performance were found to be very high. These coefficients, shown in table-4 indicate that, behaviour can be described accurately by the Temperament schedule.

<table>
<thead>
<tr>
<th>Active</th>
<th>Vigo-</th>
<th>Impul-</th>
<th>Domi-</th>
<th>Stable</th>
<th>Socia-</th>
<th>Reflec-</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>rous</td>
<td>sive</td>
<td>nant</td>
<td></td>
<td>tive</td>
<td></td>
</tr>
<tr>
<td>.95</td>
<td>.93</td>
<td>1.00</td>
<td>.92</td>
<td>.90</td>
<td>.98</td>
<td>.81</td>
</tr>
</tbody>
</table>

The validity of the Thurston Temperament schedule has also been studied by using effectiveness of job performance as a criterion. The subjects in various studies were teachers, office workers, retail store sales employees, sales supervisors, and managers of retail stores. The procedure in general was to compare schedule scores
of groups of employees rated "high" or "good" in performance with scores of employees rated "Low" or "poor" and to determine the significance of the difference of the two groups.

3.24 DESCRIPTION OF THE DIMENSIONS OF THE TOOLS:

The situational and Innovation characteristics consists of eight dimensions. The situational characteristics depend on (1) Administrative Support (2) Staff Norms and (3) System Norms.

This means there are a number of facilitating and hindering forces within the social structure of the school. According to Miller (1967) such forces as the nature of peer social relationships, teacher-principal relationships, norms and standards for professional behaviour and the organisational climate of the school system appear to be relevant. Initial force is the innovative practice itself and those characteristics of the practice that make it more or less attractive or adoptable by other teachers. These characteristics are complexity, compatibility, Riskness, Localiteness, and cosmopoliteness. These terms need further explanation.

Complexity:

The understanding of the innovation, innovative proneness, and innovative dissonance differ from individual to individual. Complexity is the degree to
which an innovation is perceived as difficult to understand and use.

Compatibility:

An innovation perceived as consistent with the existing values, past experience, and needs of the receiver is called compatibility. Compatible idea has its own weight because it can be adoptable by all. An idea that is not compatible cannot be adopted so rapidly as an idea that is compatible, because this idea is liked by all and incompatible idea is disliked by all.

According to Rogers and Shoemaker (1971) an innovation may be compatible with socio-cultural values and beliefs with previously introduced ideas or with client needs of innovations.

Riskness:

Even if an innovation is compatible, the adopter has to take a certain amount of risk. Those who are having innovation dissonance in their mind may have to take a heavy risk in adopting innovation. One may be a lover of adopting innovative practice, or a hater of adopting innovative practice, but whatever may be his attitude of mind, he has to undergo a little risk while adopting the innovative practice. Depending on one's temperament or personality traits one may adopt innovation in spite of the risk involved.
Localiteness:

According to Rogers and Shoemaker (1971) in adopting innovation a strong belief in one's local system rather than looking beyond it is called localiteness. Generally localite persons are concerned with what they think and imagine is right according to them. They never bother about the external world. Sometimes their views may be entirely different from the view of others.

Cosmopolitaness:

According to Miles, (1964) and Rogers and Shoemaker, (1971), Cosmopolitaness is considered to be the degree to which an individual's orientation is external to a particular social system. According to Miles (1961) it has been found repeatedly that greater personal innovativeness is associated with cosmopolitaness, which is the result of experience in more than one social system.

SECTION III

Section III is the values and opinions in Education which includes six components namely, Traditionalism, Progressivism, Dogmatism, Venturesomeness, Conservatism and change Proneness.

TRADITIONALISM:

Tradition means handing down from generation to generation of opinions, beliefs, customs etc.
in short, handing down the opinion or belief from the past. Now-a-days innovations are being introduced in all educational institutions. According to Rogers and Shoemaker (1971) a traditional system embodies, the opposite characteristics when it is compared with innovation adoption system.

**PROGRESSIVISM:**

One who is always concerned about his own development, is called a Progressive man. In other words, Progressivism is the characteristics of a person who always wants to progress. The progressive students always look for their own further progress. The progressive school always look for new ideas leading to further progress. The Progressive teachers always look for his personal professional progress and the progress of the school. In order to fulfil their ambition, the progressive man always tries to adopt innovations. Progressivism is of value to them.

**DOGMATISM:**

Dogma means a belief or a system of beliefs, put forward by some authority to be accepted as true without questions. Dogmatism means a set of strong beliefs. The highly dogmatic persons would not welcome new ideas.
VENTURESOMENESS:

Venture means an undertaking in which there is risk, or be brave enough to undertake something which involves risk. Venturesomeness means taking initiative steps to do new things, always ready to carve a new path. When we compare the characteristics of venturesomeness with that of innovativeness, we can very well say that they complement and supplement each other.

CONSERVATISM:

Conservativeness is opposed to great or sudden change. Conservatism means a tendency to maintain a state of affairs without great or sudden changes. Innovativeness means adoption of new changes or ideas. So, conservativeness is inversely related to innovativeness.

CHANGE PRONENESS:

The attitude of the person towards the change is called change proneness. It is the general conclusion that those who are interested in change are also prone to innovation. Innovativeness and change proneness are closely related.

The components of the leadership Behaviour Description Questionnaire are as follows:

Section IV - Leadership Behaviour covers
two parts (1) Initiating Structure and (2) Consideration.

The word lead means to go ahead, control, manage or direct. The word "leader" means one who can control or manage or direct and one who is always ahead of others. Here in this study "Leadership Behaviour" refers to the behaviour of Secondary School Headmasters or Head mistresses. As far as the present needs of the educational institutions are concerned, it is expected from the Principals or Headmasters or Head mistresses of the Secondary schools that they perform two basic functions and that is:

1. They must be 'task-oriented'.
2. They must be 'person-oriented'.

The principals must be task-oriented in that they must establish and seek to fulfil certain goals, and they must be person-oriented in that they must try to meet the personal needs of their staff members. In the terminology of Getzels and Guba (1957) they must try to maintain the balance between the idiographic and nonethetic dimensions of the schools. In the terminology of Hemphill and Coons (1957) they must strike a balance between dimensions of "Initiating Structure" and "Consideration".

According to Halpin (1966), "Initiating Structure" refers to the formal relationship which the headmaster has with his staff. The principal who receives high score
on this dimension makes his attitude clear to the staff criticises poor work, maintains definite standard of performance, persuades staff members to follow, standard rules and regulations. Again in the words of Halpin (1966), "Consideration" refers to the informal relationships which the principal (H.M.) has with his staff. The principal who scores high on this dimension does personal favours for his staff members, finds time to listen to them, puts their suggestions into operation, and get their approval on important matters before going ahead.

On the part of Principals (H.M.), four patterns of Leadership-Behaviour are seen. They are (1) H H Pattern, (2) L L Pattern (3) HL Pattern (4) LH Pattern.

(1) "H H Pattern denotes, high both on the "Initiating Structure" and "Consideration" dimensions of the Leadership-Behaviour.

(2) "LL" pattern denotes low both on the "Initiating Structure" and "consideration" dimensions of the Leadership Behaviour.

(3) "HL" pattern denotes high on the "Initiating Structure" dimension, low on the "consideration" dimension.

(4) "LH" pattern denotes low on the
"Initiating Structure" dimension, high on "Consideration" dimension.

In analysing the data given by the consideration dimension of the tool "LBDQ" the Quadrant scheme of Halpin (1966 p.99) is used. A Quadrant scheme for Describing principals Behaviour on Dimensions "Initiating Structure" and Consideration.

TABLE 311:1

HALPIN'S QUADRANT SCHEME FOR DESCRIBING PRINCIPAL'S BEHAVIOUR

<table>
<thead>
<tr>
<th>CONSIDERATION</th>
<th>BELOW MEAN</th>
<th>ABOVE MEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above Mean</td>
<td>H.I. (S)</td>
<td>H.I. (S)</td>
</tr>
<tr>
<td></td>
<td>L.C. (-C)</td>
<td>H.C. (C)</td>
</tr>
<tr>
<td>(N) Principals</td>
<td>4</td>
<td>1 (N) Principals</td>
</tr>
<tr>
<td>Below Mean</td>
<td>L.I. (-S)</td>
<td>L.I. (-S)</td>
</tr>
<tr>
<td></td>
<td>L.C. (-C)</td>
<td>H.C. (C)</td>
</tr>
<tr>
<td>(N) Principals</td>
<td></td>
<td>6 (N) Principals</td>
</tr>
</tbody>
</table>

According to Halpin (1966), the leaders described in Quadrant I are evaluated as highly effective.
The individuals described in Quadrant II are ineffective leaders.

Shartle (1956) and his colleagues who have been referred to earlier, conducted the leadership studies in Ohio, and pointed out the criteria of 'leadership behaviour', of which one is sometimes called the 'human relation' and the other described as the 'get out of the work dimension'. Hemphill, and Halpin who followed Hemphill, identified these two dimensions as 'Initiating Structure' and "consideration".

It is concluded that the higher the meeting point of these two dimensions, the better is the leadership behaviour. When a leader receives a score equally at a high plane, on both the dimensions, he is considered to be very much effective. As measured by the LBDQ developed by Halpin and Winer (1952) on the line of Hemphill (1950) if a leader shows high 'consideration' for his colleagues, if he exhibits a real interest in the personal needs of the members of the group even when he is taking initiative in getting the work done from them, he is considered to be an effective leader. High scores on the dimensions of 'initiating structure' manifest the behaviour of the leader who clarifies goals, and organizes for the completion of task. His leadership behaviour can be called to be more institution-oriented. A leader who receives high score on 'consideration'
and low score on 'Initiating Structure' is more person oriented and is less effective with this pattern of behaviour as well. Only those leaders prove to be effective when they show scores high enough on both the dimensions.

According to Goldman (1972) a lack of effective leadership on the part of principals of the school disintegrates the conditions for the development of a true school community. In the context of the schools, the notion of leadership is associated with the instructional leadership of the principal. This indicates that to be an effective leader of a school, a principal should be effective on his instructional side as well. Every principal is basically a teacher first and an administrator later.

Parallel to "initiating structure" and "consideration", many other researchers identified the dimensions of leadership behaviour as task dimension, and human dimension, the former one ensuring the satisfaction of social and psychological needs of the personnel of the organization. The research indicates that effective leadership is manifested when the designated leader acts in such a way as to ensure satisfaction of both. According to Tennenbaum (1961) this can be presented in a figure as shown in the chart III given on the next page.
A reciprocal relation exists between the task and human dimension. This implies that attention should also be devoted to the task dimension of leadership process. As described in the modified diagram given in the Chart-III, the task dimensions has two aspects: One is 'commitment aspect', and the other is 'specific aspect'. The first aspect refers to the efforts of the participant to the improvement of the total organization in addition to his own job that is assigned to him. The second aspect refers to the specific job he is expected to do. In the interest of the organisation the leader has to strike a balance sufficiently at a high level on both the dimensions and the workers have to strike a balance between the 'commitment aspect' and 'specific aspect'.

From the brief account of the attempts of various research workers to study leadership behaviour of various types of leaders in various institutions and organizations given above, it is very clear that they accept the two dimensions of leadership behaviour: viz. "Initiating Structure" and "consideration" depicted by Hemphill and Halpin. Everybody seems to agree on the point that effective and efficient leaders are those, who receive high scores on both the dimensions. Low score on one of the dimensions and low scores on both the dimensions are indicative of poor leadership behaviour.
Another point which is worth noting is that the IiBDQ developed by Halpin and Winer is a very useful instrument for appraising the two dimensions of leadership behaviour. Thirdly, Miles (1964) has added the additional criterion to the effectiveness of leader behaviour by saying that leadership is ineffective and deserves improvement when the group members do not learn to acquire skills and efficiency to get the work done and to achieve the goals of the institution. These "specific skills" of every worker and the "general efficiency" of the organization as a whole are supported also by Tannenbaum (1968).

Fourthly, effective leadership behaviour receiving high scores on both the dimensions will create inspiring and stimulating climate for the workers so that they can enjoy high level of morale and are motivated to receive new ideas and are always ready to venture new grounds. The behaviour of a leader is the inspiring force that begets healthy climate, high morale and motivation for the receptivity of new ideas for leading the organisation on higher and higher plane.

The organisational climate Description Questionnaire covers two major parts of which one is Teacher's Behaviour and the other is principal's behaviour. Again each of the above dimensions are divided into four minor parts. Under Teachers' Behaviour, are
noted (1) Disengagement (2) Hindrance (3) Esprit (4) Intimacy. Under Headmaster's/Principal's Behaviour (1) Aloofness (2) Production Emphasis (3) Thrust and (4) Consideration.

1. **DISENGAGEMENT**:

This is a negative behaviour on the part of school teachers. It indicates that the teachers do not work together. It reflects a characteristic widely found in teachers in India or elsewhere. It conceptuallyises a behaviour on the part of a school staff which denotes that teachers do not identify themselves with everything that goes on in their schools, either in curricular, co-curricular or even administrative areas. They pull in different directions with respect to their task, they gripe and dispute among themselves. Practically, no trace of integrity or cohesion is to be found in the staff.

2. **HINDRANCE**:

It denotes a feeling entertained by the teachers that they are blocked in their day-to-day work. Mostly the 'blocking' originates from the leader. Hindrance refers to the teachers' feeling that the principal burdens them with routine duties construed necessary busy-work. The teachers perceive that the principal is hindering rather than facilitating their
work. Teachers are left with little time to relax or have recreation during their free periods.

3. **ESPRIT**:

The dimension of Esprit is positive as well as constructive. It refers to morale of teachers. The teachers feel that their social needs are satisfied, and that they are at the same time, enjoying a sense of accomplishment in their job. Esprit denotes positive emotional adjustment, self concept and a positive attitude on the part of teachers towards their work in the school. They work as a team, and take the strengths and weaknesses of their colleagues in a normal way without making much ado about it. They enjoy their stay in the school and are happy with their work.

4. **INTIMACY**:

It refers to the teachers' enjoyment of friendly social relations with each other. Teachers feel at ease in the company of others and the school becomes a family group. This dimension describes a social need satisfaction which is not necessarily associated with task accomplishment.

5. **ALOOFNESS**:

It denotes negative behaviour. It refers to behaviour by the principal which is characterized as
formal and impersonal. The school principal keeps away or maintains a respectful distance from his subordinates. He "goes by the book" and prefers to be guided by rules and policies rather than to deal with the teachers in an informal, face to face situation. His behaviour, in brief is unrealistic rather than particularistic; monothetic rather than ideosyncratic. He talks less. He neither lends his ears to others or opens out his mind. He prefers to be reserved and isolated. He feels it is below his status and rank to move freely with others and isolates himself to show his unique position. His voice, mannerisms, behaviour - all tend to manifest his inner feeling of superiority.

6. **PRODUCTION EMPHASIS**

This also is a leader's behaviour and its focal points are negative. A principal who manifests this behaviour lays emphasis on production in an excessive measure. He seems to be both task oriented and result oriented. His communication tends to go in only one direction, and he is not sensitive to the feedback from the staff. He expects the teachers to spend all possible time in the school and work hard so that the school's output becomes outstanding. He carries a belief that a human mind works best under tension and pressure. He recognizes no friends. He does not bother with the conveniences and comforts of his
colleagues. He is least concerned with their psychological and social needs and satisfaction. He recognises merits in those who work hard the whole day which results in maximum output. He would be happy if teachers did extra coaching in the school so that school's results are outstanding. He would commend hard working teachers and may try to reward them in one way or the other. He distributes his patronage to such working, obedient teachers.

7. THRUST:

It means that a school principal who is high on this dimension is dynamic and moves his organisation into action. The school hums with activities. The principal himself is a hard worker. He sets an example of hard and conscientious work. He does not ask the teachers to give of themselves anything more than he willingly gives of himself; his behaviour though task oriented, is nonetheless looked upon favourably by the teachers. The principal is the first to come in the school and the last to go out. He motivates the teacher. Everybody realises his or her responsibility. Teachers feel free to talk to him and try out new ideas and experiment. The environment has neither stress nor thrust. Ethos is created automatically.

8. CONSIDERATION:

It constitutes another positive behaviour of a school principal. It refers to that behaviour by the principal which is characterised by an inclination
to treat the teachers 'humanly' and to try to do a little something extra for them in human terms. A leader who is considerate is easily accessible to his colleagues without any fuss or formality. He is patient, understanding sympathetic, helpful and accommodating in his relationship with his colleagues, irrespective of rank or status. He takes interest in their personal life. He listens to their worries, tries to understand their problems and does all that is possible to help them to tide over their difficult times. In school work, he endeavours to guide them, even if it means staying for longer hours in school. He hardly scolds a defaulter. He first tries to understand his difficulties and problems, and if he finds that the default was caused by circumstances beyond the control of such a teacher, he gives him his assured help and assistance so that the work left unaccomplished could be done. He scrupulously remains away from hurting the self-respect and the individuality of his colleagues. Giving him a memo is the last thing he would think of doing. On the contrary, he prefers to be by his side as a comrade and helper.

The Organisational Climate Description Questionnaire is the tool, prepared originally by Halpin and it is being used by many researchers in Indian settings. In Tamil Nadu, many verbal changes are made in this tool to suit the administrative set up and local school practices. The Organisational Climate Description
Questionnaire consists of 64 ideas or items. The 64 items is required to be filled up within 30 minutes by the teachers. These 64 items are needed to be responded on a four point scale:

(1) Rarely occurs;
(2) Sometimes occurs;
(3) Often occurs;
and (4) Very frequently occur.

The responses by teachers should be from the school organisational climate. The scale or categories mentioned above can be scored for each item by simply assigning to the respective category any four successive integers, i.e. 1, 2, 3, 4, or 5, 6, 7, 8. The items to be scored negatively are to be scored as 4, 3, 2, 1. In order to calculate the raw score for each person, the scores of items for each sub-test have to be added and divided by the number of items in the corresponding sub-test. This scoring is to be applied to each sub-testwise and every statement is to be rated on a four-point scale. The first four sub-tests or dimensions refer to the behaviour of teachers in the school. As mentioned above under teachers and Headmasters' behaviour, there are eight dimensions or scales or categories, compilation of all these eight dimensions tables the type of the climate in the school. The compilation gives six climates in the schools.
In 1970, Owens prepared a table from which the above-mentioned climate types can be briefly explained. The scores of all the teacher-respondents under each subtest have to be added and to be averaged to construct the school profiles. These raw scores on the eight subtests of the Organisational Climate Description Questionnaire (OCDQ) are to be then converted into standardized scores. From this, we can get a profile of the climate of that particular school. For the standardization procedures, a standard score system based upon a mean of 50 and a standard deviation of 10 is to be used. The profile of each school will then emerge.

Halpin and Croft (1966 April 1978) calculated prototypic profiles. The above-mentioned schoolwise profile is now to be compared with the prototype profiles of Halpin and Croft. The similarity scores can be calculated by computing the absolute difference between each subtest scores in the first prototypic profile and then in the second one and so on. Thus the score of each school has to be compared with those of each of the six prototypic profiles. For every school, the sum of the absolute difference between the profile
scores has to be computed. A low sum indicates high similarity between the two profiles, whereas a large sum shows the dissimilarity between profiles. The climate type for each individual school is decided on the basis of the lowest difference score.

For ready reference, the prototypic profile computed by Halpin (1966) is given here, for the six Organisational Climates ranked in respect of openness to closedness.

<table>
<thead>
<tr>
<th>Climate</th>
<th>Disengagement</th>
<th>Hindrance</th>
<th>Espirit</th>
<th>Intimacy</th>
<th>Allofness</th>
<th>Produc</th>
<th>Thrust</th>
<th>Consideration</th>
<th>Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN</td>
<td>43</td>
<td>43</td>
<td>63</td>
<td>50</td>
<td>42</td>
<td>43</td>
<td>61</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>AUTONOMOUS</td>
<td>40</td>
<td>41</td>
<td>55</td>
<td>62</td>
<td>61</td>
<td>39</td>
<td>53</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>CONTROLLED</td>
<td>38</td>
<td>57</td>
<td>54</td>
<td>40</td>
<td>55</td>
<td>63</td>
<td>51</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>FAMILIAR</td>
<td>60</td>
<td>42</td>
<td>50</td>
<td>58</td>
<td>44</td>
<td>37</td>
<td>52</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>PATERNAL</td>
<td>65</td>
<td>46</td>
<td>45</td>
<td>46</td>
<td>38</td>
<td>55</td>
<td>51</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>CLOSED</td>
<td>52</td>
<td>53</td>
<td>38</td>
<td>54</td>
<td>55</td>
<td>54</td>
<td>51</td>
<td>44</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Andrew, H. Halpin (1966) Page-174
From these eight identified independent dimensions of organisational climate, Halpin and Croft specified a set of climates. They identified six organisational climates which can be arranged along a continuum defined at one end by an open climate, and at the other by a closed climate. The six identified climates are termed as the 'open', 'Autonomous', 'controlled', 'Familiar', 'Paternal' and the 'Closed'.

(a) **OPEN CLIMATE**

Open climate describes an energetic lively organisation which is moving toward its goals, and which provides satisfaction for the group members' social needs. Leadership acts emerge easily and appropriately from both the group and the leader. The members are pre-occupied disproportionately with neither task achievement nor social needs satisfaction; satisfaction on both, counts seems to be obtained easily and almost effortlessly. The main characteristic of this climate is the "authenticity" of the behaviour that occurs among all the members.

(b) **AUTONOMOUS CLIMATE**

Autonomous Climate is described as one in which leadership acts emerge primarily from the group. The leader exerts little control over the group members, high esprit results primarily from social needs satisfaction. Satisfaction from task achievement is also
present, but to a lesser degree.

(c) **CONTROLLED CLIMATE**

Controlled climate is characterized best as impersonal, and highly task-oriented. The group's behaviour is directed primarily toward task accomplishment, while relatively little attention is given to behaviour oriented to social need satisfaction. Esprit is fairly high, but it reflects achievement at some expense to social needs satisfaction. This climate lacks openness, or 'Authenticity' of behaviour, because the group is disproportionately pre-occupied with task achievement.

(d) **FAMILIAR CLIMATE**

Familiar climate is highly personal, but under-controlled. The members of this organization satisfy their social needs, but pay relatively little attention to social control in respect to task accomplishment. Accordingly, esprit is not extremely high simply because the group members secure little satisfaction from task achievement. Hence, much of the behaviour within this climate can be construed as 'In-authentic'.

(e) **PATERNAL CLIMATE**

Paternal Climate is characterized best as one in which the principal constrains the emergence of leadership acts from the group and attempts to initiate
most of these acts himself. The leadership skills within the group are not used to supplement the principal's own ability to initiate leadership acts. Accordingly, some leadership acts are not even attempted. In short, little satisfaction is obtained in respect to either achievement or social needs; hence, esprit among the members is low.

(f) CLOSED CLIMATE:

Closed Climate is characterized by a high degree of apathy on the part of all members of the organization. The organization is not 'moving', esprit is low because the group members secure neither social needs satisfaction nor the satisfaction that comes from task achievement. The members' behaviour can be construed as 'Inauthentic' indeed, the organisation seems to be stagnant.

TABLE 3:1:3

CHARACTERISTICS OF DIFFERENT TYPES OF ORGANISATIONAL CLIMATE

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Open</th>
<th>Autonomous</th>
<th>Control-led</th>
<th>Family-led</th>
<th>Pater-nal</th>
<th>Closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Disengagement</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>2. Hindrance</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>3. Intimacy</td>
<td>Average</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>Average</td>
</tr>
<tr>
<td>4. Esprit</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Average</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>5. Aloofness</td>
<td>Average</td>
<td>Low</td>
<td>Average</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>6. Thrust</td>
<td>Average</td>
<td>High</td>
<td>Average</td>
<td>Average</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>7. Consideration</td>
<td>High</td>
<td>Average</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>8. Production emphasis.</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
</tbody>
</table>
Key

Disengagement: teachers' tendency to be not with it or not in gear with the task.

Hindrance: burdening of teachers by such routine duties which hinder their instructional work.

Esprit: Teachers' morale.

Aloofness: Formal and impersonal behaviour of the principal who is guided by more 'rules' and 'policies' of the schools.

Thrust: Closed supervision by principal in order to get the school going faster.

Consideration: Principal's inclination to treat teacher 'humanly'.

Production Emphasis: Principal's class supervision of teacher his one way communication: Streams on output of work by teachers.

THURSTONE TEMPERAMENT

TOOL VI:

Most tests describe the personality traits of a person in terms of psychotic or neurotic tendencies. However, these climate stereotype tests are not good at
describing personality traits, since for all practical purposes most of us are reasonably well adjusted. We need a good schedule which describes how normal well adjusted people differ from each other. For this purpose the Thurstone Temperament Schedule was used. It is, however, limited to a practical description of only the important aspects of temperament and makes no attempt to appraise the degree of conflict, insecurity or maladjustment in temperament. It is designed to assess those traits which are relatively permanent for each person and encloses those which reflect recent social experience and social identification.

DESCRIPTION OF THE AREAS COVERED BY THE SCHEDULE:

The temperament described as active, vigorous, impulsive, dominant, stable, social and reflective traits are the seven areas described here. These seven temperaments which cover 140 items are printed in a six page step down booklet. The directions for taking the test are printed on the first page of the schedule. The administrator read the directions to the teachers. This is sometimes helpful in group situations. No comments are to be made about the items in the schedule before or after the test has started. There is no time limit. Sufficient time must be given to complete all items. Three alternative responses namely "YES" "?" and
"NO" are provided against each of the item of the schedule. The subject is asked to give his response by placing a tick mark against any one of the three alternatives which reveals his answer best. Scoring of the items can be done by hand as well as by machine. Only correct responses are recorded. Each correct response is given a score of one. A total score for each trait is obtained.

DESCRIPTION OF INDEPENDENT VARIABLES-
PERSONALITY TRAITS:

TRAITS:

A trait is the inherited tendency of an individual to react as he has reacted more or less successfully in the past in similar situations when similarly motivated. Psychology endeavours to explain recurrent responses and consistencies in behaviour. In terms of their definition, a trait is a function of heredity, having similar situation and similar motivation.

ACTIVE TRAIT:

A person scoring high in this area usually works rapidly and he is very mobile. He likes to be always "on the go" and tends to be always in a hurry. He usually speaks, walks, writes and drives rapidly even when these activities do not demand speed.

VIGOROUS TRAIT:

A person with high score in this area participates in physical sports. The use of tools and
out-door occupations are prepared by him. This area emphasises physical activity using a great deal of muscular activity and great expenditure of energy. This trait is often described as masculine, but many women and girls score high in this area.

**IMPULSIVE TRAIT:**

High score in this category indicates a 'happy-go-lucky' dare-devil, carefree and acting on the spur of the moment disposition. A person who is dogged by "a hangers on" when acting or thinking is typically low in this area.

**DOMINANT TRAIT:**

People who score high on this factor look upon themselves as leaders capable of taking initiative and responsibility. Inspite of their leadership ability they are dominating. They enjoy public speaking, organising social activities, promoting new projects and persuading others. In short this type of persons are probable to take charge of the situation in case of accidents.

**STABLE TRAIT:**

People scoring high on this factor are cheeffful. Noisy situation, crisis and distractions do not affect their attention while engaged in study. Even if they are interrupted when concentrating on a particular topic, they
are not irritated. Leaving a task unfinished does not annoy them.

**SOCIABLE TRAIT:**

People scoring high in this area enjoy the company of others, makes friends easily, sympathetic, co-operative and agreeable in their relations with other people. Strangers feel like telling them about their personal problems.

**REFLECTIVE TRAIT:**

People scoring high in this area are meditative, and they are characterised by reflective thinking. They enjoy dealing with theoretical rather than with practical problems. These people are usually quiet, work alone and enjoy work that requires accuracy and fine details. They would rather plan a job than carry it out.

**ATTITUDE:**

The term has been defined variously by different scientists. Baldwin (1962) defines attitude as readiness for attention or action. Remmers and Associates (1964) define it as a feeling for or against something. According to Thurstone (1953) an attitude is a degree of positive or negative affect associated with some psychological object. By psychological object he means any issue under study such as school, church, educational system etc.
RELIABILITIES:

The reliabilities for the seven areas of the schedule have been computed by split-half method for the groups (men, women). The odd even correlations were computed and then reliabilities were estimated by the spearman-Brown correction for double length. Reliabilities were also women seeking counselling and employment through the University of Chicago.

3.25 UNDERLYING BASIC ASSUMPTIONS AND HYPOTHESIS:

The present study makes an attempt to locate the dissonance state among the secondary school teachers with their personal variables and institutional variables. The study also makes an attempt to locate the innovative proneness of the teachers with the above variables. This investigation is basically a descriptive survey conducted on the basis of known procedures and techniques. The persons working in the institution have to change first to bring the institution on the path of change. The persons, who are subjected to change, are influenced by personal as well as social system variables. System values and norms exert a significant influence on the attitudes of the individual innovator.

New events may happen or new information may become known to a person creating at least a momentary
dissonance with existing knowledge, opinion or cognition concerning behaviour. Since a person does not have complete and perfect control over the information that reaches him and over events that can happen in his environment such dissonance may easily arise. Even in the absence of new, unforeseen events or information, the existence of dissonance is undoubtedly an everyday condition.

Based on the above basic assumptions, the following null hypotheses are framed to gear the organisation and interpretation of the data collected and analysed.

(1) Age, sex and teaching experience are not positively and significantly related to the dissonant state of the teachers.

(2) Professional reading habits, mobility of teachers and job satisfaction are not positively and significantly related to the dissonant state of the teachers.

(3) Professional teacher training and Inservice education are not positively related to the dissonant state of the teachers.

(4) The temperament of teachers has nothing to do with the dissonant state of the teachers.
(5) The organisational climate and the leadership behaviour of the principal are not positively and significantly related to the dissonant state of the teachers.

(6) Age, sex and teaching experience are not significantly related to innovative proneness.

(7) In-service education, reading habits and job satisfaction are not significantly related to innovative proneness.

(8) Mobility of teachers and temperament of teachers are not positively related to innovative proneness.

(9) The Organisational Climate of the school and the leadership behaviour are not significantly related to innovative proneness.

3.25 ADMINISTRATION OF THE TOOL:

In order to get reliable data in time at each stage the tool was administered by the investigator. The collection of data was facilitated by advanced initiation given to the schools concerned. Wherever possible the natural situation was used to administer the test. Finally data pertaining to 540 teachers were collected from 100 schools in the city of Madras.
The tools were classified under six sections. First three sections consist of
1) The Inventory of Attitudes to Innovation
2) Situational and Innovation characteristics
3) Change Related Values.

For these three sections the teachers were requested to express their attitude towards their adoption in a six point scale ranging from strongly agree, Agree, Tend to agree, Tend to Disagree, disagree and these six point scale is scored 5, 4, 3, 2, 1, 0 respectively. Inversely keyed items were scored 0, 1, 2, 3, 4, 5. Item scores from each respondent were summed up to provide a global score ranging from 0 to 150 in section one and from 0 to 300 in section II and III respectively.

The fourth tool comprises of leadership Behaviour, Description, questionnaire (L.B.D.Q.). In this section the teachers expressed their attitude towards the adoption in a five point scale, ranging from always occurs, often occurs, and never occurs, and this five point scale was scored 4, 3, 2, 1, 0 respectively. Inversely keyed items scored 0, 1, 2, 3, 4. In this section I, item scores for each respondent were summed up to provide a global score ranging from 0 to 120.
The fifth tool is organisational climate Description Questionnaire (CCDQ). The Fifth section contains 64 items and within 30 minutes the teachers or principals were requested to complete it. This 64 type items were to be responded on a four point scale. The pattern of responses is as follow: Rarely occurs, sometime occurs, often occurs, very frequently occurs. The CCDQ is composed of eight sub-tests. The first four of those dimensions dealt with the teachers behaviour and the last four dealt with the principals behaviour. As mentioned above it was to be responded in a four point scale and were scored 1, 2, 3, 4, respectively. Inversely keyed items were scored 4, 3, 2, 1. In this section item scores were summed up to provide a global score ranging from 0 to 256.

The sixth tool is Thurstone TEMPERAMENT SCHEDULE. In this section the teachers expressed their attitude towards the three point scale. Three alternate responses namely "Yes", "?", and "No" were provided against each of the items of the schedule. The teachers or principals were asked to give their responses by placing a tick mark against any one of the three alternatives which revealed their answers best. In this section Item scores for each respondent were summed up to provide a global score ranging from 0 to 140.
3.27 **THE SAMPLE FOR THE STUDY**

The sample chosen for this study is a random sample and comprises 100 Secondary Schools in the city of Madras. Nearly 50% of them are innovative and other schools are non-innovative. The map of the city of Madras state showing the location of the schools is given in the Table No. 3:0:1. The list of the schools selected for the study is given in the Appendix II. Schools governed by various types of administrative bodies such as Private, Missionary, Corporation, and Government are included in this study. Single sex and mixed schools, residential and non-residential schools all these types are represented in this investigation. The headmaster and 5 to 10 teachers in a school were contacted for collection of data. These are the people who are directly related to the system. The Chief Educational Officer of the city of Madras and the District Educational Officers, gave useful information about the types of schools and the Innovativeness of the school.

The trained graduate teachers with the teaching experience of both the groups - 5 and below 5 years, 5 and above 5 years are also taken into account. The investigator visited all the schools in person to collect the data.

As shown earlier the total number of Secondary Schools in the city of Madras is 329. The investigator has
Selected 100 schools share 33% of the total Secondary schools in the district. These schools are selected on the basis of randomly stratified sampling catering to random distribution of the school such as sex, management, and innovativeness of the school.

It will be seen that there are only 9 government schools in the city of Madras and all are included in the sample. Majority of the schools are private schools. From the total private schools 30% of schools are included in the sample. Most of the schools in the city are co-educations and only a very few schools are meant for girls. The chief education officer of the city of Madras and the District Education Officers gave the above statistics. They classified the sampled schools into Innovative and Non-innovative schools.

The investigation is based on the responses of 540 secondary school teachers and 100 Head Masters in the city of Madras. Thus it will be seen that the sample selected for the study is fairly representative of the total population or universe of secondary schools in the city of Madras.

3.28 THE SCHEME OF ANALYSIS AND INTERPRETATION OF THE DATA:

For the analysis of the Data collected the following statistical technique was employed.
1) Univariate Frequency distribution of all the 58 variables coded as well as continuous. The variables were as follows:

1 (a) **PERSONAL VARIABLES, TEACHERWISE:**
- Age, sex, teaching experience, professional Training, Academic Qualification, Mobility, Inservice Education, Professional reading habits and job satisfaction.

(b) **INSTITUTIONAL VARIABLES SCHOOLWISE:**
- Types of school climate, leadership behaviour, Temperament of Principal, temperament of teachers and Innovativeness.

(c) **DIMENSIONAL VARIABLES:**
- Individualization, Curriculum Organization, teaching learning process, Teaching resources, Internal relationship, Administrative support, Staff Norms, Complexity Riskness, Localitiness, Cosmopoliteness, Traditionalism, Progressivism, Dogmatism, Venture-someness, Consideration, Disengagement, Hindrance, Intimacy, Aloofness, Production Emphasis, Thrust, Consideration, Vigorous Trait, Impulsive-trait, Dominant Trait, Stable trait, Social Trait and Reflective Trait.

2) Inter correlation matrix and mean and standard deviation of all 42 variables mentioned in I.C. in relation to the personal and institutional variables mentioned above I(a) and I (b).
3) t-Test significance of difference between the means of 42 variables mentioned above in I (c) while grouping is done on the basis of the personal variables mentioned above in I(a) and in I(b).

The data was analysed in the physical research laboratory at Ahmedabad.

3.29 THE SCHEME OF CHAPTERIZATION

The scheme of chapterization is as follows:

CHAPTER : I THE PROBLEM THEORETICAL FRAMEWORK.
CHAPTER : II REVIEW OF THE RELATED LITERATURE AND RESEARCHES.
CHAPTER : III PLAN AND PROCEDURE OF THE STUDY (METHODOLOGY).
CHAPTER : IV ANALYSIS AND INTERPRETATION OF THE DATA.
CHAPTER : V SUMMARY OF THE RESULTS AND SUGGESTIONS FOR FURTHER STUDY.

3.30 CONCLUSION :

In this Chapter the details of procedure, instrumentation, hypothesis and scoring are explained. Taking guidance from the findings of earlier researches in the area of innovation, the factors to be studied with regard to the location of innovation dissonance state of secondary school teachers were decided. After deciding upon the variables that affect the innovation dissonance state,
the tool for the investigation was decided with the consultation of the judges. The variable selected for the study, the tool selected for the study, the hypothesis and the objectives have been reported in this chapter. The investigator has used a large variety of tools and techniques to collect data on as many factors as possible.

The method of using the tool for data collection, and procedure of scoring have been explained in this Chapter. The next chapter deals with the analysis and interpretation of data.
CHAPTER III
REFERENCE

FESTINGER, Leen (1957), A Theory of Cognitive Dissonance.
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Recent pedagogical experiments suggest that, before this is done, it is as well to motivate him by doing the opposite, that is presenting the new material in such a way that it challenges the child's existing beliefs and expectations and makes him sensible of the gaps and inadequacies in his present knowledge structures. The contrast between the very atmosphere of a class room in which this is done and that of the more traditional class room, in which information is meekly imbibed, lends further credibility to the postulated drive-inducing power of conceptual conflict.

BERLYNE, D.D.

"Structure and Direction in Thinking"