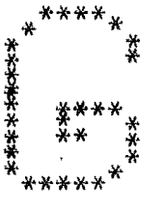
CHAPTER 

REVIEW, MAJOR FINDINGS AND SUGGESTIONS

' We must train our minds to think in a new way in this new age in which we live, the atomic age, the inter-planetary age... If we don't, then the alternative is utter, absolute destruction'.

- Jawaharlal Nehru

VI

REVIEW, MAJOR FINDINGS AND SUGGESTIONS

6.1 Review

Education is indispensible to any society. It is a criticism of society in action. It is also true that without education society does not fulfill its gracious promises. Education is a social economy too. But, as the determinants of education are integrated in the society and the forces that determine the activities in the field of education are ever-changing, education has also to be changed according to the tune of the time. Educational institutions and the persons working in these institutions have to be open-minded and to be ready to absorb the desirable changes. Education is a two-way traffic in the sense that changes in the society will bring changes in the educational activities and it can also be used to change society because for certain objectives it should not wait for the society to change ; it has to take the initiative. Let changes be inflicted in a programmed way as the human

nature always resists change first, on the other side it craves for the change. So let the changes be introduced gradually, carefully. Let the change be duly assimilated and acknowledged and accepted by all those who are concerned. For this purpose effective change agents are needed and from the researches it seems that in India adequate efforts have not been made to locate the change agents or to locate the persons prone to change and then to train them to absorb the future shocks themselves first and make society to do so in the follow-through. The present study, therefore, aims primarily at preparing 'innovative proneness scale for teachers' which intends to find out to what extent teachers show readiness to new ideas and changes, how they behave when the changes are to be assimilated in their institutions and where they stand on change related values scale. In its exploratory aspects it intends to find out the status of innovative proneness of teachers of secondary and higher secondary schools and its relationship with other professional variables, viz., teaching experience, professional training, academic qualifications, frequency of change from one school to another school, in-service education, and exposition to researches in field education. In the second chapter, the

available related researches and the literature is reviewed. The researches and other related publications that have been reviewed amounts to 115 approximately. The researches belong to other disciplines also. From the review, it is quite evident that the efforts of the most of the research workers in India and abroad are concentrated more on innovations as such rather than on innovators adopters or the practioners of innovations, to say in other way much work is done on organisation rather than on persons working in organisations. Some of the pertinent findings of these researches are summarised in the para given below.

The lead is taken by other disciplines viz., anthropology, sociology, medical-sociology and industry. In this area the research workers of U.S.A. hold the place of pride, in India the initiative is taken by the Centre of Advanced Study in Education, Faculty of Education and Psychology, The M.S.University of Baroda, Baroda. Researches in this area owe much to the reports of the committees and commissions appointed by the government from time to time. Most of the researches have identified the innovative ideas as such, researchers say that the seminars, workshops and in-service courses organised at various places in India, have

been the sources of innovative ideas. Organizationally, the organizational health, climate, morale and morale and leadership pattern of the leader have been found responsible for flourishing or crushing the innovative ideas. Most of the researches relate to organizations rather than the personnel that makes the organization. Most of the studies are done in school situation, studies are seldom done in the past on the teachers. The researche.: workers have used the ready made tools. So the main purpose of the present investigation is to construct and standardize the tool for measuring innovative proneness of teachers of secondary and higher secondary schools of Gujarat.

Chapter III deals with the plan and procedure of the present study. The procedure starts with reading the educational literature to map out the rational for the construction of Innovative Proneness Scale for Teachers of Secondary and Higher Secondary schools of Gujarat State. The scale is divided into three sections : (i) Inventory of Attitudes to Innovation which contains further seven sub-scales, (ii) Section II contains Situational characteristics, and the Innovation Characteristics Scale which have eight sub-scales; (iii) The Change-Related Values Questionnaire

containing further six sub-scales. The 'Scale' contains 150 items. After standardization, the copies of the 'Scale' were distributed to 100 schools of Gujarat State. In all 1000 teachers responded the I.P.S. Moreover, the personal information of the teachers necessary for the present investigation was gathered on the following counts : Age, Sex, Teaching Experience, Academic Qualifications, Professional Qualifications, Mobility, In-service Education, Reading Habits, and Professional Satisfaction. Moreover, the data collected from the teachers of Secondary and Higher Secondary school teachers were analysed according to the Districts of Gujarat, Sex type of schools, Streams of the schools and Categories of the schools, Rural-Urban areas of the schools. The statistical techniques employed were : Univariate Frequency Distribution of Variables involved in the study, Correlation Matrix, t-test, Percentile Ranks.

The problem for the investigation is : 'A Study of Innovative Proneness of Secondary and Higher Secondary School Teachers'. The purpose of the present study is to measure innovative proneness of teachers of Secondary and Higher Secondary school teachers of Gujarat. There is no tool available for measurement of innovative proneness of teachers. The investigator, therefore, decided to construct a tool

according to Indian environment. Thus, the main objectives of the present study were : (i) To design and validate the Innovative Proneness Scale for teachers that will measure the Innovative Proneness of the teachers of Secondary and Higher Secondary schools of Gujarat. (ii) To study the Innovative Proneness of teachers of Secondary Schools of Gujarat State. (iii) To study the factor analysis of the scale developed by the Investigator.

For developing the tool the various definitions of Innovative Proneness, as given by the experts, were studied. The different components of Innovative Proneness were studied and finally the investigator arrived at seven main components of Section I - The Inventory of Attitudes to Innovation, eight main components of Section II - The Situational and Innovation Characteristics Scale, and six main components of Section III - The Change-related Values Questionnaire for the construction of the items. The seven main components of Section I - I.A.I. are : Individualization, Curriculum Organization, Teaching-learning Process, Teaching Resources, Internal School Organization, Staff Development and School Community Relationship. The eight main components of Section II - the S. & I.C. Scale are : Administrative Support, Staff Norms, System Norms, Complexity, Compatibility, Riskness,

Localiteness and Cosmopoliteness. The six main components of Section III - The C-R Values Questionnaire are : Traditionalism, Progressivism, Dogmatism, Venturesomeness, Conservatism and Change Proneness.

Keeping in view all these total twentyone components of Section I, II and III, the Investigator prepared total 250 items - 50 items of Section I, 100 items in Section II and 100 items in Section III - showing various degree of agreement to disagreement. Out of total 250 items on innovative proneness for teachers, 25 items were rejected on the basis of ambiguity. The remaining total 225 items - 45 items in Section I, 90 items in Section II and 90 items in Section III on innovative proneness for teachers were given to fifteen judges. Out of fifteen judges, ten judges responded. The judges were Professors, Head Masters, Lecturers, Experienced Teachers and Educationists, etc. From the rating of the judges, 25 items were rejected and thereby the investigator prepared the pilot form of the inventory.

The pilot form consisted of 200 items, many of which were worded positively and some negatively, in order to avoid a possible constant biasing tendency in response, the items were randomized throughout the inventory. The inventory

of 200 items was given for pre-tryout to fifty teachers from Gujarat. One of the objectives of this pre-tryout was to study the items for analysis - for each item, the teacher was asked to respond along a six point scale : Strongly, Agree, Tendency to Agree, Tendency to Disagree, Disagree, and Strongly Disagree.The items from this administration were analysed with respect to level of favourable response and clarity of response. The analysis was done by phi-coefficient method. After the item analysis fifty items were rejected on the basis of low phi-coefficient values. To make the tool more efficient and valid, it was thought to administer the second tryout. This version contained 150 items. This form was then administered to fifty teachers from five secondary and higher secondary schools of Gujarat. The data obtained from the second administration was analysed and reliability was found out by test-retest method and split-half method. Validity was found out by (1) the content validity as all the items of the tool have relied principally on the definition of innovative proneness given by experts, (2) the rating of teachers were correlated with rating of the principals, and (3) item analysiw was done by phi-coefficient formula.

These proved that the inventory is valid. After the validity and reliability of the inventory, percentile norms were established. Then the inventory was ready for the administration. It is named as 'Innovative Proneness Scale' for Teachers' (I.P.S.) and consisted of 150 items. This process is given in Chapter IV.

One of the objectives of the present investigation is to study the internal structure of the inventory prepared by the investigator. All the 21 variables relating to innovative proneness, factor analysis technique has applied to identify various groups or clusters of items which correlate highly with items within that group. The principal component method was used for the analysis of the data. Intercorrelation matrix 21 X 21 was carried out. Five principal components were extracted out by the principal-axis method. Again, all the five factors were considered for Varimax rotation. These five factors were identified and named. The factors named were :(1) Teaching Resources, (2) System and Staff Norms, (3) Dogmatism, (3) Conservatism, (4) Riskness, (5) Curriculum Organization. It was found that 'System Norms' is the most dominating factor. This account

is given in Chapter IV.

After construction and standardization of the inventory, the tool was ready for administering the sample, as one of the objectives, was to measure the innovative proneness of the teachers of the secondary and higher secondary schools. The one hundred secondary and higher secondary schools of Gujarat State were selected as a sample for the present study. Ten teachers from each of the 100 selected schools were given Innovative Proneness Scale (I.P.S.). Thus, the data was collected from 1000 teachers of Secondary and Higher Secondary Schools of Gujarat State. The teachers were asked to indicate their responses to each of the 150 items on a six point scale : Strong Agree, Agree, Tend to Agree, Tend to Disagree, Disagree, Strongly Disagree - which were scored 5, 4, 3, 2, 1 and 0 respectively. If teachers Strongly Agree with the item, he has to put a circle around 'SA'. If the teacher only Agrees with the item, he has to put a circle around 'A'. If the teachers tends to agree with the item, he has to put a circle around 'TA'. If the teacher tends to disagree with the item, he has to put a circle around 'D'. If the teacher only disagrees with the item, he has to put

a circle around 'D'. If the teacher strongly disagrees with the item, he has to put a circle around 'SD'. Inversely keyed items were scored 0, 1, 2, 3, 4 and 5 respectively.

Items scores for each respondent were assumed to provide a global score ranging from 0 to 150 in Section I and from 0 to 300 in Section II and III respectively. The total score was taken to yield a global measure of disposition to adopt innovations. Thus, the responses were hand scored. Then the data was computerised to study (i) The mean scores of the innovative proneness and its twenty one components. (ii) The innovative proneness scores of teachers according to district, school, age, sex, teaching experience, academic qualifications, professional qualifications, mobility, in-service education, reading habits and professional satisfaction. (iii) Innovative proneness of teachers of Secondary and Higher Secondary schools of Gujarat (iv) The Factor Analysis of prepared scale. (v) The Mean, SD and 't' values of the collected data were found out.

Chapter V gives the analysis of the data collected from the teachers of Secondary and Higher Secondary schools of Gujarat State. With 'Innovative Proneness Scale' devised

and standardized by the investigator and the whole process for this has already been reviewed in the previous pages. Innovative proneness of teachers were studied in context of their (i) age, (ii) sex, (iii) teaching experience, (iv) academic qualifications, (v) professional qualifications, (vi) mobility, (vii) in-service education, (viii) habits of reading professional literature and (ix) job satisfaction. For studying this, the technique of 'Significance of difference between the means' was employed. In this chapter, the inter-correlations among the twentyone components of 'Innovative Proneness Scale' are given and interpreted with the help of intercorrelation matrix.

In this way, in this last chapter, the whole account of all the chapters is revised and the pages that follow give major findings and suggestions. The findings are summarized in the subsequent section and the general suggestions on the basis of this study and the suggestions for further study are also given in Section 6.3 and 6.4 respectively.

6.2 Major Findings

This section gives the summary of the major findings. The purpose of the present study was to measure innovative proneness of teachers of secondary and higher secondary schools of Gujarat. For that, the investigator constructed

and standardized the inventory to measure innovative proneness of teachers.

The following are the major findings of the Tool Construction :

(1) On the basis of review of relevant literature and discussion with the experts, twenty one components of innovative proneness have been located.

The seven main components of innovative proneness of Section I - The Inventory of Attitudes to Innovation are Individualisation, Curriculum Organisation, Teaching-Learning Process, Teaching Resources, Internal School Organisation, Staff Development and School Community Relationships.

The eight main components of Section II - The Situational and Innovation Characteristics Scale are : Administrative Support, Staff Norms, System Norms, Complexity, Compatibility, Riskness, Localiteness and Cosmopoliteness.

The six main components of Section III - The Change Related Values Questionnaires are : Traditionalism, Progressivism, Dogmatism, Venturesomeness, Conservatism and Change Proneness.

(2) The validity of the inventory was found out by (i) the content validity as all the items of the inventory were based on the definition of innovative proneness and experts opinion, (ii) The ratings of the teachers, and (iii) item analysis (done by Phi-coefficient formula). The phi values of 200 items were ranging from .16 to .82.

(3) The reliability of the inventory of Section I - the I.A.I. was found to be .84 by Test-Retest Method, and .91 obtained by Split-Half Method. The reliability of the inventory of Section II - the S. and I.C. Scale was found .77 by Test-Retest method and .90 obtained by Split-Half method. The reliability of the inventory of Section III - The C.R.V.C. was found .85 by Test-Retest method and .67 obtained by Split-Half method.

As a whole .86 by Test-Retest method and .79 by Split-Half method.

(4) Norms in terms of percentiles have also been worked out with respect to each component of Section I - The I.A.I., Section II - The S. & I.C. Scale and Section III - The C.R. values questionnaire respectively. (a) In Section I - The I.A.I., the components - Individualisation, Teaching-Learning Process, Internal School Organisation and Staff Development

have the highest percentile (25.0) and the component - School Community Relationships and Curriculum Organization has the lowest percentile (8.0). (b) In section II - The S. & I.C. Scale, component - Staff Norms, has the highest percentile (52.0) and the components - System Norms, has the lowest percentile (7.0). (c) In Section III - The C - R values questionnaires - the component - Change Proneness has the highest percentile (50.0) and the component - Conservatism has the lowest percentile (19.0).

(5) The factor analysis was done by Principal component technique Five factors were extracted out. These factors were : (1) Teaching Resources, (2) System and Staff Norms, (3) Dogmatism - Conservatism, (4) Riskness, (5) Curriculum Organization.

(6) All the twentyone components of the 'Innovative Proneness Scale' devised and standardized by the investigator are mutually inclusive, cohesive and true to the purpose of the scale.

(7) The mean scores of teachers of Secondary and Higher Secondary Schools of Gujarat State for Section I - the I.A.I. is 117.359, for Section II - the S.& I.C. scale is

204.642 and for Section III - the C - R values questionnaires is 212.847.

On the basis of the self constructed tool administered by the investigator, the following major results were obtained in the matter of innovative proneness of teachers of Secondary and Higher Secondary schools of Gujarat State.

So far as the various districts of Gujarat is concerned, the mean of the innovative proneness as a whole is the highest in 'Banaskantha district' and the lowest in 'Dang'. So far as the sex type of the schools is concerned, the teachers working in the Girls' schools give the highest mean score, teachers working in the Boys' schools give the lowest mean score, and the teachers working in the mixed schools give the mean score on Innovative Proneness as a whole in-between means scores of the Girls' schools and Boys' schools. The teachers of the schools having Commerce stream give the highest mean score. The teachers working in the Urban schools give the higher mean score than that of given by the teachers working in the Rural areas. The majority of

teachers fall into 'Moderate' categories of teachers. Teachers above 35 years of age give higher score than those of the teachers under 35 years of age. Female teachers give the higher mean score than male teachers. Teachers having more than five years' teaching experience, manifest higher mean score than the teachers having less than 5 years' teaching experience.

The teachers possessing M.Com. degree give the highest mean score on innovative proneness while teachers possessing S.S.C. certificate give the lowest mean score. It is strange to find that the teachers having T.D. qualifications give the highest mean score and the teachers having B.T. qualifications give the lowest mean score on Innovative Proneness as a whole.

The teachers who have not changed the schools that is with no mobility give higher mean score on Innovative Proneness than the teachers who have changed the schools.

Teachers who have attended some In-service Education programmes give high mean scores as compared to the teachers who had not attended any In-service Education programmes.

Teachers having Professional Reading Habit, and the teachers having Professional Satisfaction give higher mean score than the teachers who are not in a habit of reading professional literature and the teachers having no professional satisfaction respectively.

Components of Innovative Proneness of Teachers according to their Personal Variables :

(1) 'Age' of the teacher is highly** (Significantly) correlated with Curriculum Organisation, Teaching-Learning Process, Teaching Resources, Internal School Organization, Staff Development, Attitudes of teachers towards Innovation taken as a whole, Administrative Support, Staff Norms, System Norms, Complexity, Compatibility, Riskness, Traditionalism, and Innovative Proneness as a whole. And significant* correlation with Individualization, 'Situational and Innovation Characteristics as a whole', Progressivism, and Change Related Values as a whole.

(2) 'Sex' of the teacher is highly (significantly) correlated with Individualization, Curriculum Organization, Teaching-Learning Process, Teaching Resources, Internal School Organization, Staff Development, Attitudes to innovation of teachers

** Highly correlated at .01 level of significance
* Significantly correlated at .05 level of significance

taken as a whole, Administrative Support, Staff Norms, System Norms, Complexity, Compatibility, Riskness, Localiteness, Cosmopoliteness, the Situational and Innovation Characteristic as a whole, Traditionalism, Conservatism, Change Proneness, The Change Related Values as a whole, and Innovative Proneness as a whole. Again Sex is significantly correlated with Progressivism at .05 level.

(3) 'Experience' of a teacher is highly (significantly) correlated with Individualisation, Curriculum Organization, Teaching-Learning Process, Teaching Resources, Internal School Organisation, Staff Development, Attitudes of Teacher towards Innovation as a whole, Administrative Support, Staff Norms, Traditionalism, Progressivism, Venturesomeness. And significant correlation with Complexity, Compatibility, Riskness, Localiteness, Cosmopoliteness, Conservatism, Change Proneness and Change Related Values as a whole.

(4) 'Academic Qualifications' of a teacher are highly (significantly) correlated with Individualisation, Curriculum Organisation, Teaching-Learning Process, Internal School Organisation, Staff Development, School Community Relationship, Administrative Support, Staff Norms, Venturesomeness, and highly and significantly

negatively correlated with System Norms, and significant relationship with 'Innovative Proneness as a Whole'.

(5) 'Professional Qualifications' of teachers are highly (significantly) correlated with Individualisation, Curriculum Organisation, Teaching-Learning Process, Internal School Organisation, Staff Development, School Community Relationship, Administrative Support, Staff Norms, ~~System Norms~~, Progressivism, Venturesomeness, Conservatism, and highly negatively correlated with 'System Norms'.

(6) 'Mobility' of a teacher is highly (significantly) correlated with Individualisation, Curriculum Organisation, Teaching-Learning Process, Teaching Resources, Internal School Organisation, Staff Development, Attitudes of teacher towards Innovation as a whole, Administrative Support, Staff Norms, Complexity, Localiteness, Traditionalism, Progressivism, Conservatism, and Change Proneness and significant relation with Compatibility and Cosmopoliteness.

(7) 'In-service Education' of a teacher is highly (significantly) correlated with Individualisation, Curriculum Organisation, Teaching-Learning Process, Teaching-Resources, Staff Development, Attitudes of teachers towards Innovation as a whole, Administrative Support, Staff Norms.

(8) 'Professional Reading Habit' of a teacher is highly (significantly) correlated with Curriculum Organisation, Teaching-Learning Process, Teaching Resources, Staff Development, Attitudes to Innovation as a whole, Administrative Support, Staff Norms, System Norms, Complexity, Traditionalism, Change Related values as a whole and negatively highly(significantly) correlated with 'School Community Relationship' and 'Dogmatism' and significant with Internal School Organisation, Riskness, Cosmopoliteness, Progressivism, Innovative Proneness as a whole and negative significant relation with 'Venturesomeness'.

(9) 'Professional Satisfaction' of a teacher is highly (significantly) correlated with 'Curriculum Organisation, Teaching-Learning Process, Teaching Resources, Internal School Organisation, Staff Development, Attitudes of Teachers towards Innovation as a whole, Administrative Support, Staff Norms, Complexity, Compatibility, Cosmopoliteness, The Situational and Innovation Characteristics as a whole. Traditionalism, Conservatism, Change Proneness, Change Related values as a whole and Innovative Proneness as a

whole. Again there is a significant correlation with System Norms, Localiteness. There is a negatively highly (significantly) correlationship with 'Venturesomeness'.

Components of Innovative Proneness of Teachers according to Continuous Variables

(1) 'Individualisation' is highly (significantly) correlated with Curriculum Organisation, Teaching Resources, Internal School Organisation, Staff Development, School Community Relationship, Administrative Support, Staff Norms, Progressivism, Venturesomeness and significantly correlated with Teaching-Learning Process, Attitude to Innovation as a whole, Dogmatism and negatively highly significantly correlated with Change Proneness, and negatively significantly correlated with Cosmopoliteness.

(2) 'Curriculum Organisation' is highly (significantly) correlated with Teaching-Learning Process, Teaching Resources, Internal School Organisation, Staff Development, School Community Relationship, Attitude to Innovation as a whole, Administrative Support, Staff Norms, Progressivism, Venturesomeness and significantly correlated with complexity and Conservatism.

(3) Teaching-Learning Process is highly (significantly) correlated with Teaching Resources, Internal School Organisation, Staff Development, School Community Relationship,

Attitude to Innovation as a whole, Administrative Support, Staff Norms, Conservatism, Change Proneness, Change Related values as a whole and Innovative Proneness as a whole. There is a significant correlation with System Norms, Complexity, Compatibility, Situational and Innovation Characteristics as a whole, Traditionalism, and Progressivism.

(4) Teaching Resources is highly (significantly) correlated with Internal School Organisation, Staff Development, School Community Relationship, Attitude to Innovation as a whole, Administrative Support, Staff Norms, System Norms, Complexity, Compatibility, Riskness, Localiteness, Cosmopoliteness, The Situational and Innovation Characteristics as a whole, Traditionalism, Progressivism, Conservatism, Change Proneness, Change Related values as a whole, Innovative Proneness as a whole.

(5) Internal School Organisation is highly (significantly) correlated with Staff Development, School Community Relationship, Attitudes to Innovation as a whole, Administrative Support, Staff Norms, System Norms, Compatibility, Cosmopoliteness, Traditionalism, Progressivism, Conservatism, Change Related Values as a whole, and significantly correlated with Complexity, Situational and Innovation Characteristics as a whole and Innovative Proneness as a whole.

(6) Staff Development is highly (significantly) correlated with School Community relationship, Attitude to Innovation as a whole, Administrative Support, Staff Norms, Change related values as a whole, Innovative Proneness as a whole and significantly correlated with compatibility.

(7) School Community Relationship is highly (significantly) correlated with Administrative Support, Staff Norms, Dogmatism, significantly related with Conservatism and negatively significantly correlated with System Norms.

(8) Attitude to Innovation as a whole is highly (significantly) correlated with Administrative Support, Staff Norms, System Norms, Complexity, Compatibility, Riskness, Localiteness, Cosmopoliteness, Situational and Innovation Characteristics as a whole, Traditionalism, Conservatism, Change Proneness, Change Related Values as a whole and Innovation Proneness as a whole and significantly correlated with Progressivism and negatively significantly correlated with Dogmatism.

(9) Administrative Support is highly (significantly) correlated with Staff Norms, System Norms, Complexity, Compatibility, Localiteness, Cosmopoliteness, Situational

and Innovation Characteristics as a Whole, Traditionalism, Progressivism, Conservatism, Change Related Values as a Whole, and Innovative Proneness as a Whole and significant relation with Change Proneness.

(10) Staff Norms is highly (significantly) correlated with System Norms, Complexity, Compatibility, Localiteness, Cosmopoliteness, Traditionalism, Progressivism, Conservatism, Change Proneness, Change Related Values as a Whole, Innovative Proneness as a Whole and significantly related with Riskness and Situational and Innovation Characteristics as a whole and Venturesomeness.

(11) System Norms is highly (significantly) correlated with Complexity, Compatibility, Riskness, Localiteness, Cosmopoliteness, Situational and Innovation Characteristics as a Whole, Traditionalism, Progressivism, Venturesomeness, Conservatism, Change Proneness, Change Related Values as a Whole, and Innovative Proneness as a Whole.

(12) Complexity is highly (significantly) correlated with Compatibility, Riskness, Localiteness, Cosmopoliteness, Situational and Innovation Characteristics as a Whole, Traditionalism, Progressivism, Conservatism, Change Proneness, Change Related Values as a Whole, Innovative Proneness as a Whole and significantly related with Venturesomeness.

(13) Compatibility is highly significantly correlated with Riskness, Localiteness, Cosmopoliteness, Situational and Innovation Characteristics as a whole, Traditionalism, Progressivism, Venturesomeness, Conservatism, Change Proneness, Change Related Values as a whole, and Innovative Proneness as a whole and significant correlation with Dogmatism.

(14) Riskness is highly significantly correlated with Localiteness, Cosmopoliteness, Situational and Innovation Characteristics Scale as a whole, Traditionalism, Progressivism, Dogmatism, Venturesomeness, Conservatism, Change Proneness, Change Related Values as a whole and Innovative Proneness.

(15) Localiteness is highly significantly correlated with Cosmopoliteness, Situational and Innovation Characteristics as a whole, Traditionalism, Progressivism, Dogmatism, Venturesomeness, Conservatism, Change Proneness, Change related values as a whole and Innovative Proneness as a whole.

(16) Cosmopoliteness is highly significantly correlated with Situational and Innovation Characteristics as a whole, Traditionalism, Progressivism, Dogmatism, Venturesomeness,

Conservatism, Change Proneness, Change Related values as a whole and Innovative Proneness as a whole.

(17) Situational and Innovation Characteristics as a whole is highly (significantly) correlated with Traditionalism, Progressivism, Conservatism, Change Proneness, Change Related Values as a whole, and Innovative Proneness as a whole and significantly correlated with Venturesomeness.

(18) Traditionalism is highly (significantly) correlated with Progressivism, Dogmatism, Venturesomeness, Conservatism, Change Proneness, Change related values as a whole, Innovative Proneness as a whole.

(19) Progressivism is highly (significantly) correlated with Dogmatism, Venturesomeness, Conservatism, Change Proneness, Change Related Values as a whole and Innovative Proneness as a whole.

(20) Dogmatism is highly (significantly) correlated with Venturesomeness, Conservatism, Change Proneness.

(21) Venturesomeness is highly (significantly) correlated with Conservatism, Change Proneness and significantly correlated with Change Related Values as a whole.

(22) Conservatism is highly (significantly) correlated with Change Proneness, Change Related Values as a whole and Innovative Proneness as a whole.

(23) Change Proneness is highly (significantly) correlated with Change Related Values as a whole and Innovative Proneness as a whole.

(24) Change Related Values as a whole is highly (significantly) correlated at .01 level with Innovative Proneness as a whole.

6.3 Suggestions Based on the Present Study

On the basis of the present study, it is in the fitness of the things to give some suggestions for boosting up the innovative proneness of teachers of the Secondary and Higher Secondary schools of Gujarat. The Tables 6.1, 6.2 and the ten profiles that follow throw ~~s~~ light on the overall picture of the teachers of Secondary and Higher Secondary Schools of Gujarat State in the context of 'Innovative Proneness' of the teachers of these schools.

Table :6.1: Mean Score of Teachers of each Sampled Secondary and Higher Secondary School

Sr.No. of School	Mean Score of Teachers of			Overall Mean
	Each School on Section I I.A.I.	Each School on Section II S.& I.C.Scale	Each School on Sec.III The C.R.V.Q.	
1	120.1	227.7	240.5	588.31
2	130.3	236.2	246.9	613.6
3	121.6	179.7	197.8	499.1
4	120.7	220.1	237.2	578.0
5	118.7	229.5	246.6	594.8
6	114.5	214.7	241.5	570.7
7	120.7	185.9	211.2	517.8
8	120.1	222.2	221.2	563.5
9	121.0	163.4	187.5	471.9
10	116.5	167.0	196.4	479.9
11	120.2	199.4	203.0	522.6
12	136.4	193.6	241.7	571.7
13	131.4	217.1	235.7	584.2
14	124.9	218.8	238.6	582.3
15	115.2	208.6	191.8	515.6

(Continued...)

(Table 6.1 continued)

Sr.No. of School	Mean Score of Teachers of			Total
	Each School on Section I I.A.I.	Each School on Section II S.& I.C. Scale	Each School on Section III The C.R.V.Q.	
16	122.2	223.1	227.5	572.8
17	110.7	200.9	218.5	530.1
18	118.2	208.9	209.8	536.9
19	116.1	218.2	220.5	554.8
20	102.2	203.2	226.0	531.4
21	108.9	177.0	218.1	504.0
22	123.2	186.5	222.8	532.5
23	88.3	197.0	220.6	505.9
24	113.0	232.8	246.6	592.4
25	110.4	197.8	229.0	537.2
26	91.8	194.8	172.5	459.1
27	137.2	203.4	247.8	588.4
28	99.5	186.4	188.8	474.7
29	107.5	216.2	202.7	526.4
30	112.8	193.6	211.2	517.6
31	98.0	202.2	209.9	510.1
32	99.5	186.4	188.8	474.7
33	114.8	195.0	210.9	520.7
34	116.8	209.9	188.8	515.5
35	91.8	194.8	172.5	459.1
36	110.4	197.8	229.0	537.2
37	137.2	203.4	247.8	588.4
38	105.4	190.6	216.8	512.8
39	120.6	205.9	213.7	540.2
40	106.7	212.1	236.1	544.9

(Continued...)

(Table 6.1 continued)

Sr.No. of School	Mean Score of Teachers of			
	Each School on Section I I.A.I.	Each School on Section II S.& I.C.Scale	Each School on Sec.III The C.R.V.Q.	Total
41	91.8	194.8	172.5	459.1
42	110.4	197.8	229.0	537.2
43	137.2	203.4	247.8	588.4
44	99.5	186.4	188.8	474.7
45	132.2	239.6	238.3	610.1
46	101.8	193.5	220.3	515.6
47	130.6	203.1	219.1	552.8
48	125.5	260.7	251.7	637.9
49	119.7	220.5	202.7	542.9
50	105.7	189.5	199.7	494.9
51	132.2	211.7	231.0	574.9
52	120.6	241.3	250.6	612.5
53	91.8	194.8	172.5	459.1
54	137.2	203.4	247.8	588.4
55	120.7	185.1	218.3	524.1
56	123.5	206.8	211.0	541.3
57	115.7	201.1	230.4	547.2
58	135.4	233.0	220.0	588.4
59	112.0	193.2	209.8	515.0
60	120.1	213.9	232.4	566.4
61	113.2	210.0	211.6	534.8
62	110.4	197.8	229.0	537.2
63	91.8	194.8	172.5	459.1
64	136.7	203.1	247.6	587.6
65	99.5	186.4	188.8	474.7

(Continued...)

(Table 6.1 continued)

Sr.No. of School	Mean Score of Teachers of			
	Each School on Section I I.A.I.	Each School on Section II S.& I.C.Scale	Each School on Sec.III The C.R.V.Q.	Total
66	116.8	190.2	197.0	504.0
67	124.4	185.1	197.3	506.8
68	128.5	231.2	239.0	598.7
69	129.5	233.7	208.4	571.6
70	112.8	155.6	183.2	451.6
71	128.7	227.4	245.8	601.9
72	118.0	198.8	214.3	531.1
73	120.4	197.8	229.0	537.2
74	91.8	194.8	172.5	459.1
75	127.6	206.5	216.6	550.7
76	137.2	203.4	247.6	588.4
77	99.5	186.4	188.8	474.7
78	116.8	190.2	197.0	504.0
79	127.7	221.2	201.3	550.2
80	121.1	195.9	226.2	543.2
81	115.1	212.5	213.0	540.6
82	110.4	197.4	209.2	517.0
83	136.3	202.8	247.8	586.9
84	116.8	200.2	197.0	514.0
85	132.8	230.7	227.0	590.5
86	127.7	221.2	201.3	550.2
87	121.1	195.9	226.2	543.2
88	122.4	186.6	204.7	513.7
89	114.2	237.8	225.4	577.4
90	114.6	192.8	213.7	521.1

(Continued...)

(Table 6.1 continued)

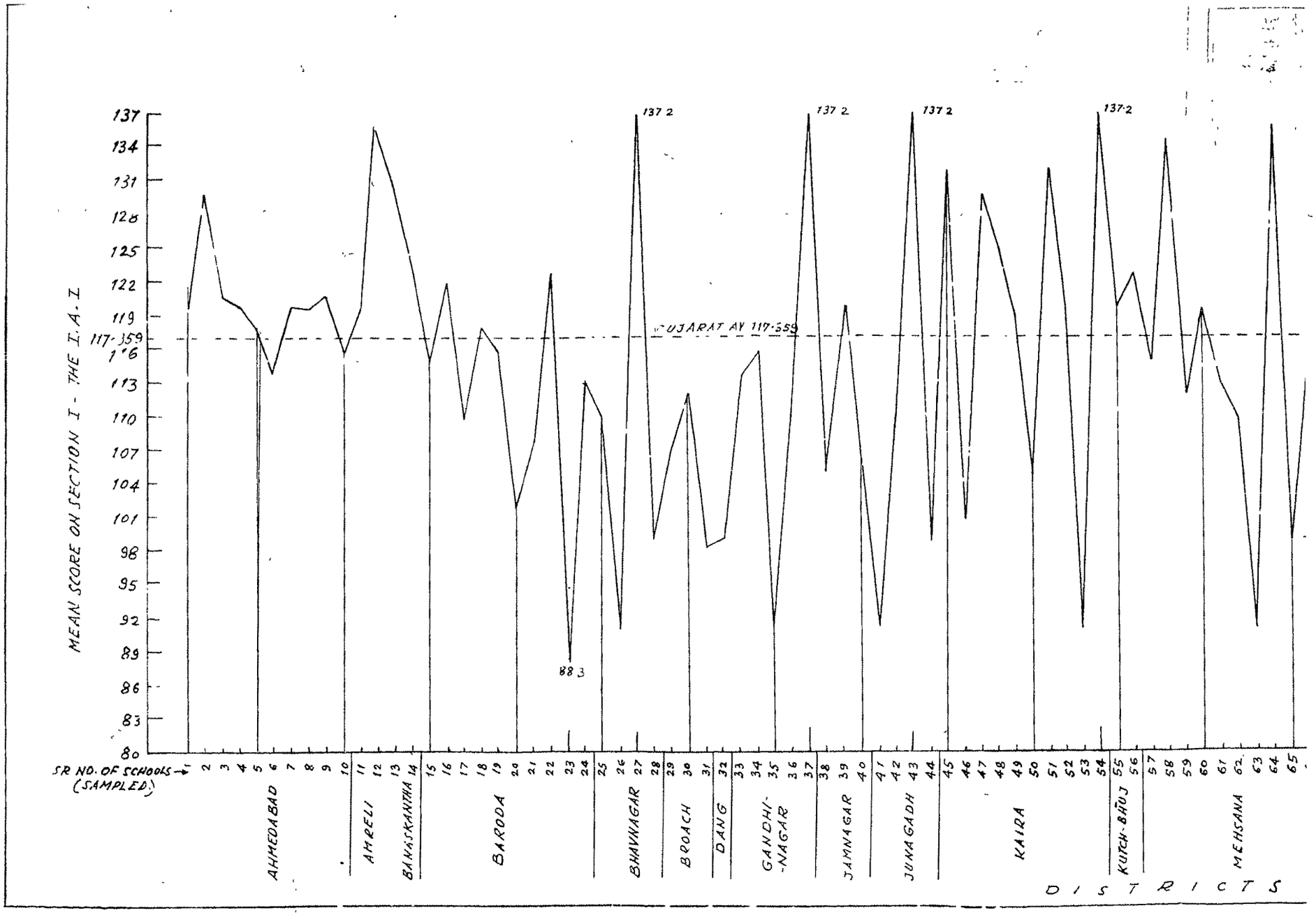
Sr.No. of School	Mean Score of Teachers of			
	Each School on Section I I.A.I.	Each School on Section II S.& I.C.Scale	Each School on Sec.III The C.R.V.Q.	Total
91	127.7	221.2	193.3	542.2
92	121.1	195.9	226.2	543.2
93	136.3	202.8	247.8	586.9
94	126.5	210.7	210.6	547.8
95	120.9	213.9	216.4	551.2
96	115.4	229.3	215.7	560.4
97	98.2	185.8	205.7	489.7
98	124.7	188.3	230.0	543.0
99	117.1	213.9	213.6	544.6
100	124.9	218.8	238.6	582.3
Average	117.359	204.642	212.847	534.848

Mean Score of Teachers for the Gujarat State on			Total
Section I The I.A.I. (Out of 150)	Section II S.& I.C.Scale (Out of 300)	Section III The C.R.V.Q. (Out of 300)	
117.359	204.642	212.847	534.848

Table :6.2: Mean Score of Teachers in Various Districts of Gujarat

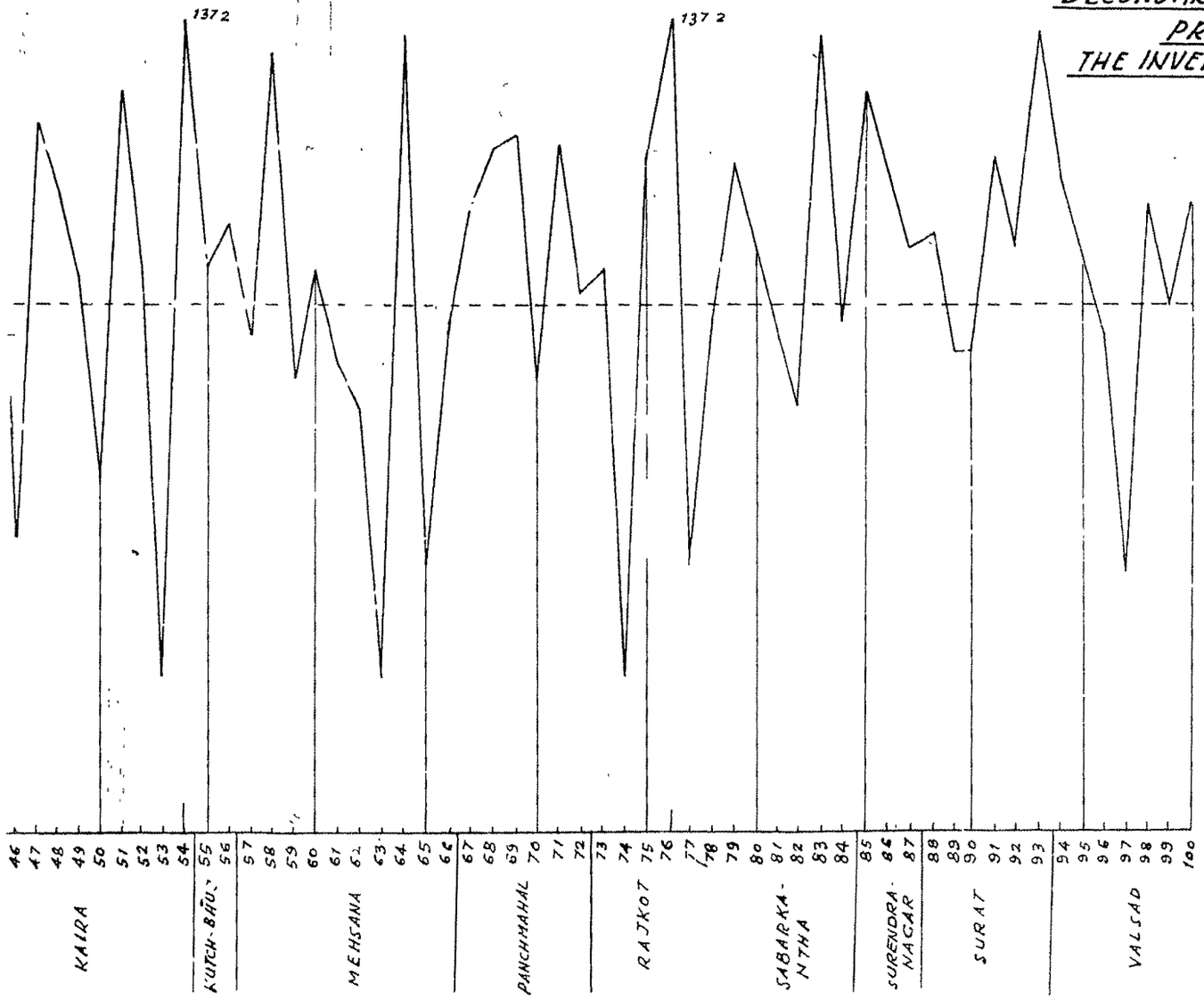
Sr.No.	Name of the District	Section I (I.A.I.)	Sec.II S.&I.C.S	Sec.III C.R.V.Q.	Total
1	Ahmedabad	120.44	204.64	222.68	547.76
2	Amreli	128.3	196.5	222.35	547.15
3	Banaskantha	128.15	217.95	237.15	583.25
4	Baroda	111.8	205.62	220.22	537.64
5	Bhavnagar	109.725	195.6	209.525	514.85
6	Broach	106.1	204.0	207.93	518.033
7	Dang	99.5	186.4	188.8	474.7
8	Gandhinagar	114.2	200.18	209.8	524.18
9	Jamnagar	110.9	266.4	222.2	532.63
10	Junagadh	109.725	195.6	209.525	514.85
11	Kaira	119.73	215.81	223.37	558.6
12	Kutch-Bhuj	122.1	195.85	214.65	532.7
13.	Mehsana	115.16	202.35	213.93	531.44
14.	Panchmahal	123.65	205.3	214.66	543.61
15.	Rajkot	115.55	196.516	208.583	519.016
16.	Sabarkantha	121.23	204.95	215.75	541.983
17.	Surendranagar	127.2	215.93	218.16	561.3
18.	Surat	122.716	206.183	218.583	547.527
19.	Valsad	118.24	208.67	218.66	545.7
Gujarat State		117.359	204.642	212.847	534.848
Maximum Possible Score		150	300	300	750

At the outset, from the Table 6.1, it can be immediately said that the mean scores on 'Attitudes to Innovation', 'The Situational and the Innovation Characteristics' and 'The Change Related Values' are 117.359, 204.642 and 212.847 respectively. These are the Gujarat Means on these three aspects. School Nos. 26, 35, 41, 53, 63, 74 are the lowest (91.8) and school Nos. 27, 37, 43, 76 are the highest (137.2) on the first aspect; School No. 9 is the lowest (163.4) and school No. 52 is the highest (241.2) on the second aspect and schools Nos. 26, 35, 41, 53, 63, 74 are the lowest (172.5) and school No. 48 is the highest (251.7) on the third aspect.


MEAN SCORE ON SECTION I - THE I.A.I
137
134
131
128
125
122
119
117·359
116
113
110
107
104
101
98
95
92
89
86
83
80
GUJARAT AV 117·559
137·2
137·2
137·2
137·2
88·3
SR NO. OF SCHOOLS (SAMPLED)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65
AHMEDABAD
AMRELI
BANASKANTHA
BARODA
BHAVNAGAR
BROACH
DANG
GANDHI-NAGAR
JAMNAGAR
JUNAGADH
KAIRA
KUTCH-BHUJ
MEHSANA
DISTRICTS

PROFILE-1

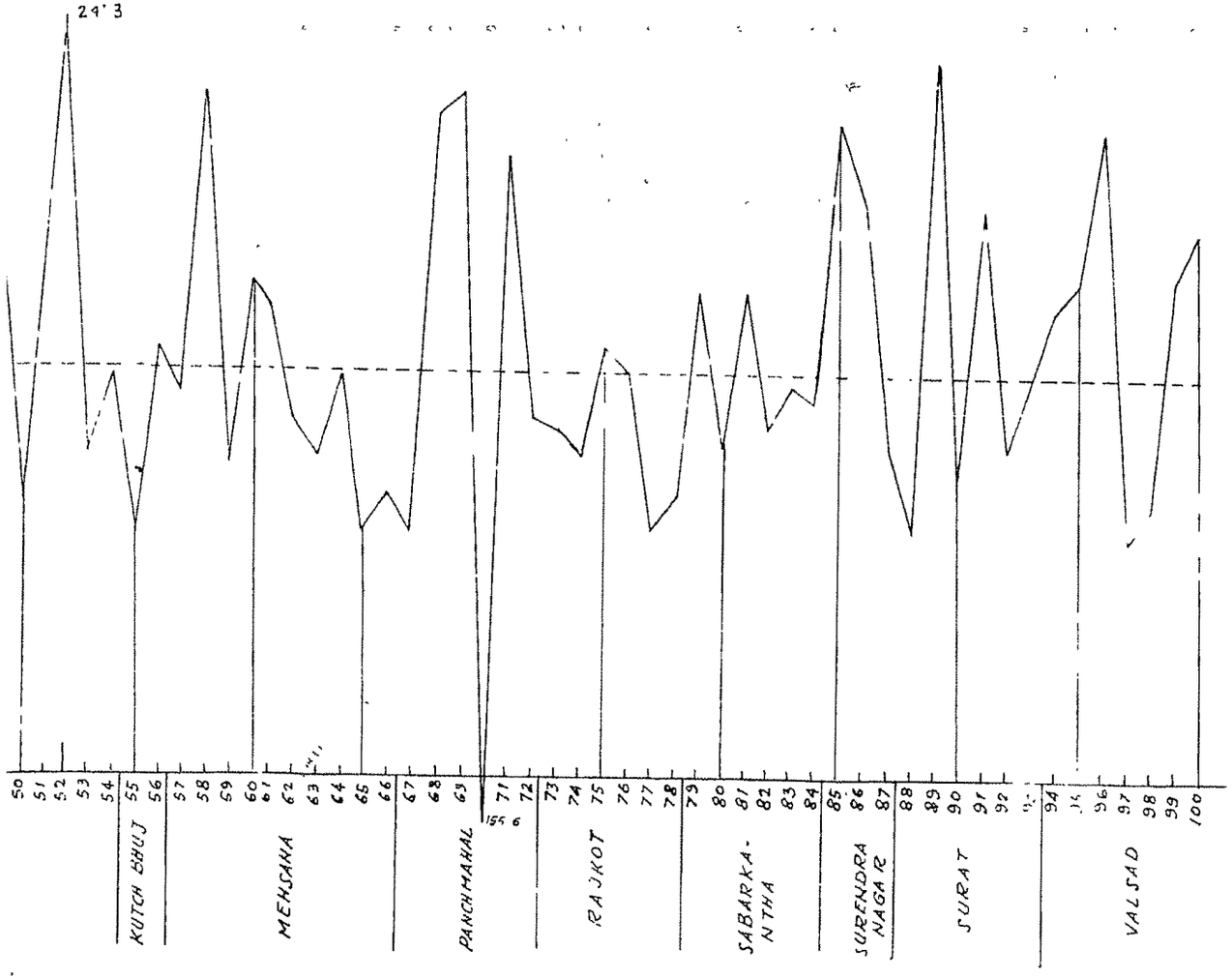
SECONDARY AND HIGHER SECONDARY SCHOOL PROFILE ON INNOVATIVE PRONENESS ON SECTION-I THE INVENTORY OF ATTITUDES TO INNOVATION (SCHOOLWISE)



MEAN SCORE ON SECTION II - THE S AND I C SCALE.
SR NO OF SCHOOLS (SAMPLED)
GUJARAT AV 204.642
24·3
AHMEDABAD
AMRELI
BANASKANTHA
BARODA
BHAVNAGAR
BROACH
DANG
GANDHI-NAGAR
JAMNAGAR
JUNAGADH
KAIRA
KUTCH BHUJ
MEHSANA
PANCHMAHAL

PROFILE-2

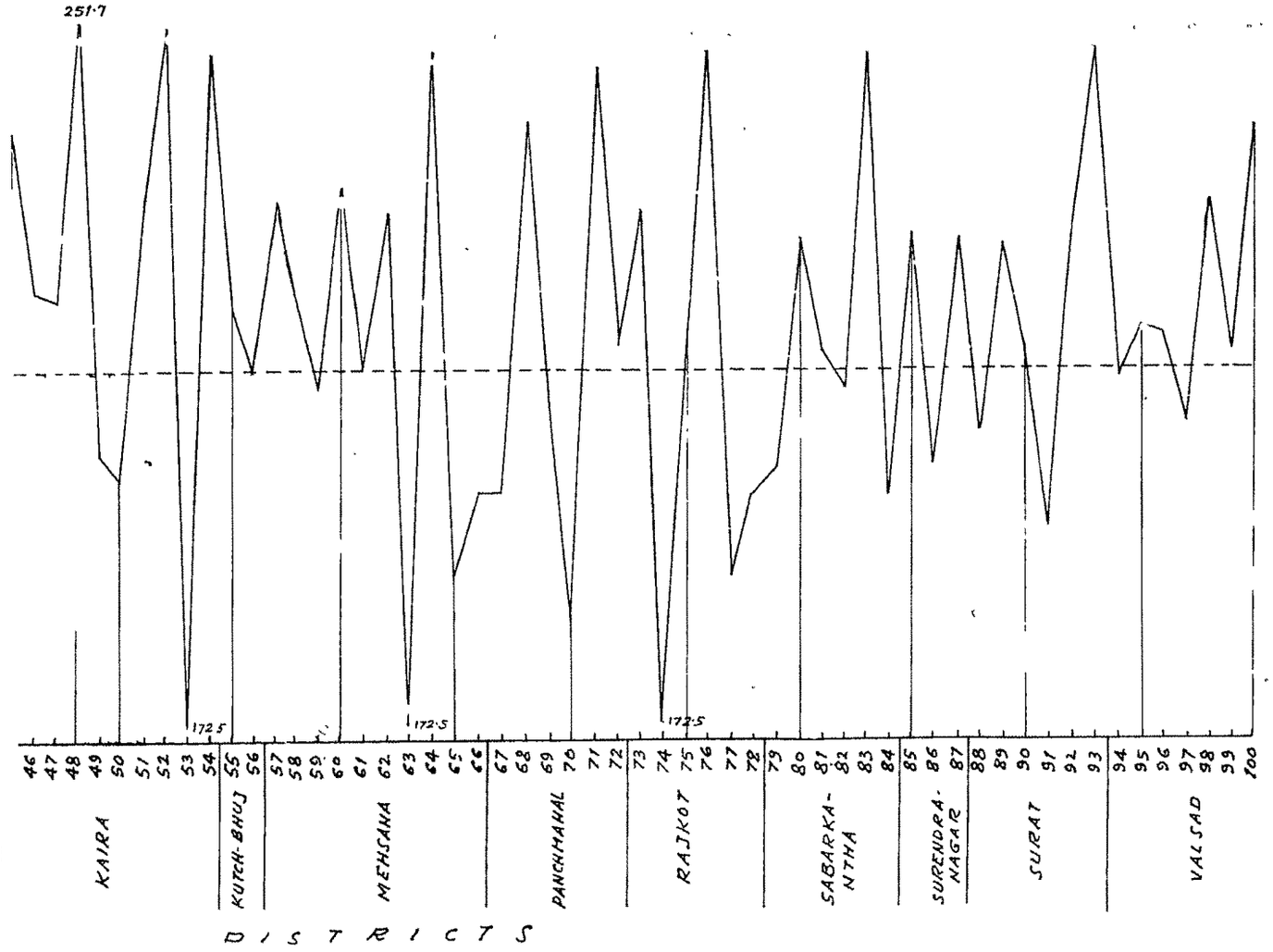
SECONDARY AND HIGHER SECONDARY SCHOOL PROFILE ON INNOVATIVE PRONENESS ON SECTION-II THE SITUATIONAL & INNOVATION CHARACTERISTIC SCALE (SCHOOL WISE)



MEAN SCORE ON SECTION III- THE C-RYO
260
255
250
245
240
235
230
225
220
215
212.847
200
205
200
195
190
185
180
175
170
SR NO. OF SCHOOLS (SAMPLED)
GUJARAT AV 212.84
251.7
172.5
172.5
172.5
172.5
172.5
DISTRICTS
AHMEDABAD
AMRELI
BANASKANTHA
BARODA
BHAVNAGAR
BROACH
DANG
GANDHI-NAGAR
JAMNAGAR
JUNAGADH
KAIRA
KUTCH-BHUJ
MEHSANA

PROFILE-3

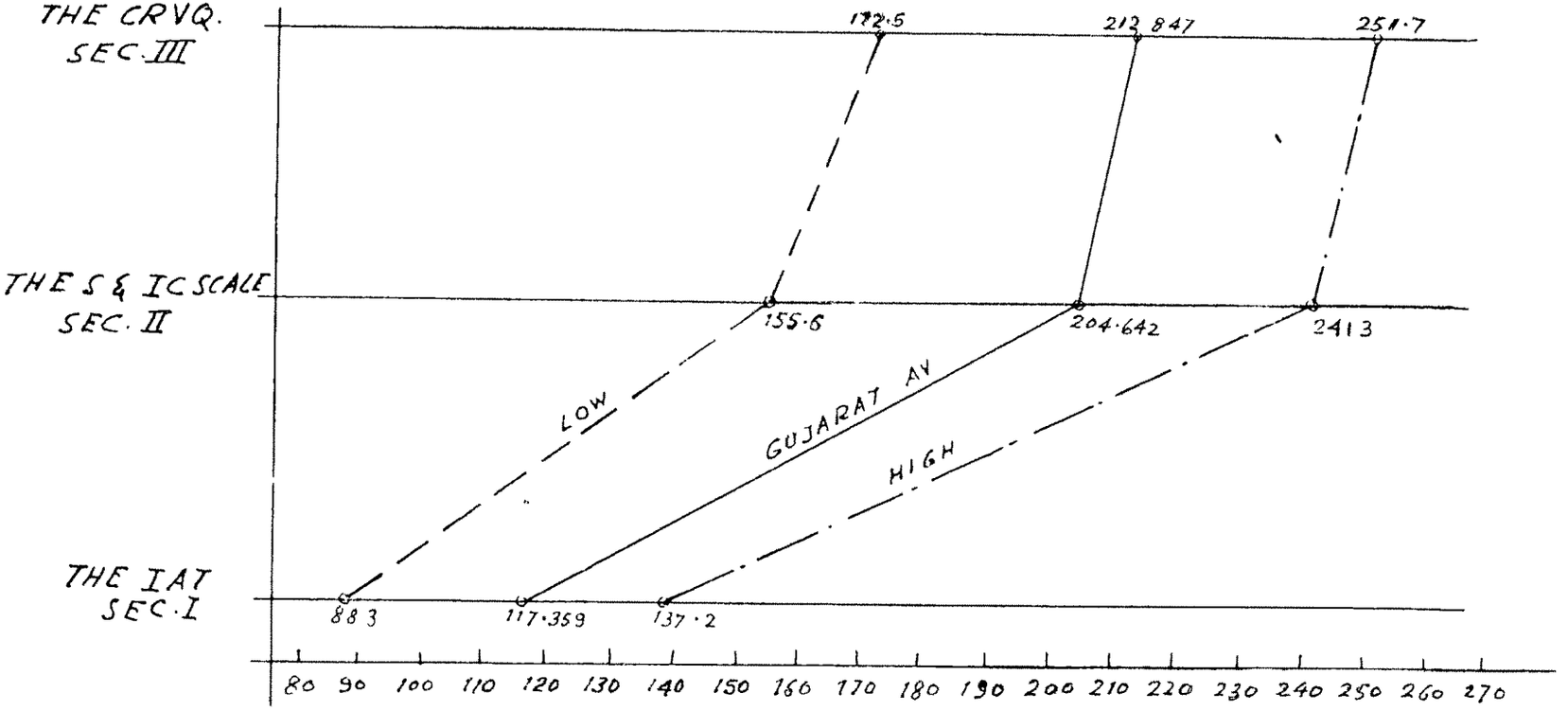
SECONDARY AND HIGHER SECONDARY SCHOOL PROFILE ON INNOVATIVE PRONENESS ON SECTION-III THE CHANGE-RELATED VALUES QUESTIONNAIRE (SCHOOLWISE)



PROFILE - 4

SECONDARY AND HIGHER SECONDARY SCHOOL ON INNOVATIVE PRONENESS ON SECTION I - II AND III

(SCHOOLWISE)



MEAN SCORES OF SECONDARY AND HIGHER SECONDARY SCHOOLS ON SECTION I - II AND III

SECTION I : THE INVENTORY OF ATTITUDES TO INNOVATION

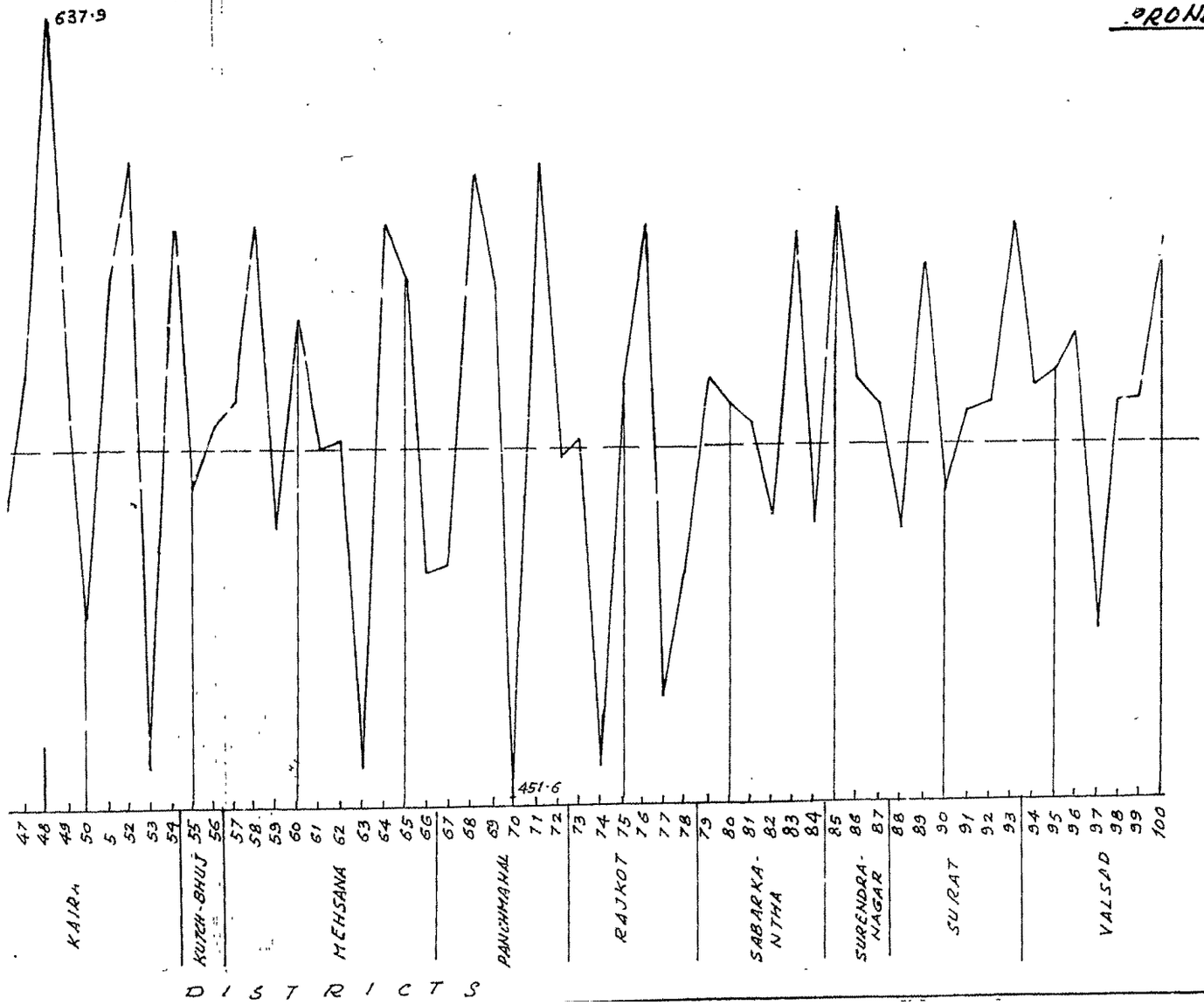
SECTION II : THE SITUATIONAL AND INNOVATION CHARACTERISTICS SCALE.

SECTION III : THE CHANGE-RELATED VALUES QUESTIONNAIRE

MEAN SCORE
640
630
620
610
600
590
580
570
560
550
540
530
520
510
500
490
480
470
460
450
637.9
GUJARAT AV 534.848
SR NO. OF SCHOOLS → (SAMPLED)
1 2 3 4 5 6 7 8 9 10
AHMEDABAD
11 12
AMRELI
13 14
BANASKANTHA
15 16 17 18 19 20 21 22 23 24
BARODA
25 26 27 28
BHAVNAGAR
29 30 31
BROACH
32
DANG
33 34 35 36 37
GANDHI-NAGAR
38 39 40
JAMNAGAR
41 42 43 44
JUNAGADH
45 46 47 48 49 50 51 52 53 54
KAIRA
55 56
KUTCH-BHUJ
57 58 59 60 61 62 63 64 65 66 67
MEHSANA
DISTRICT

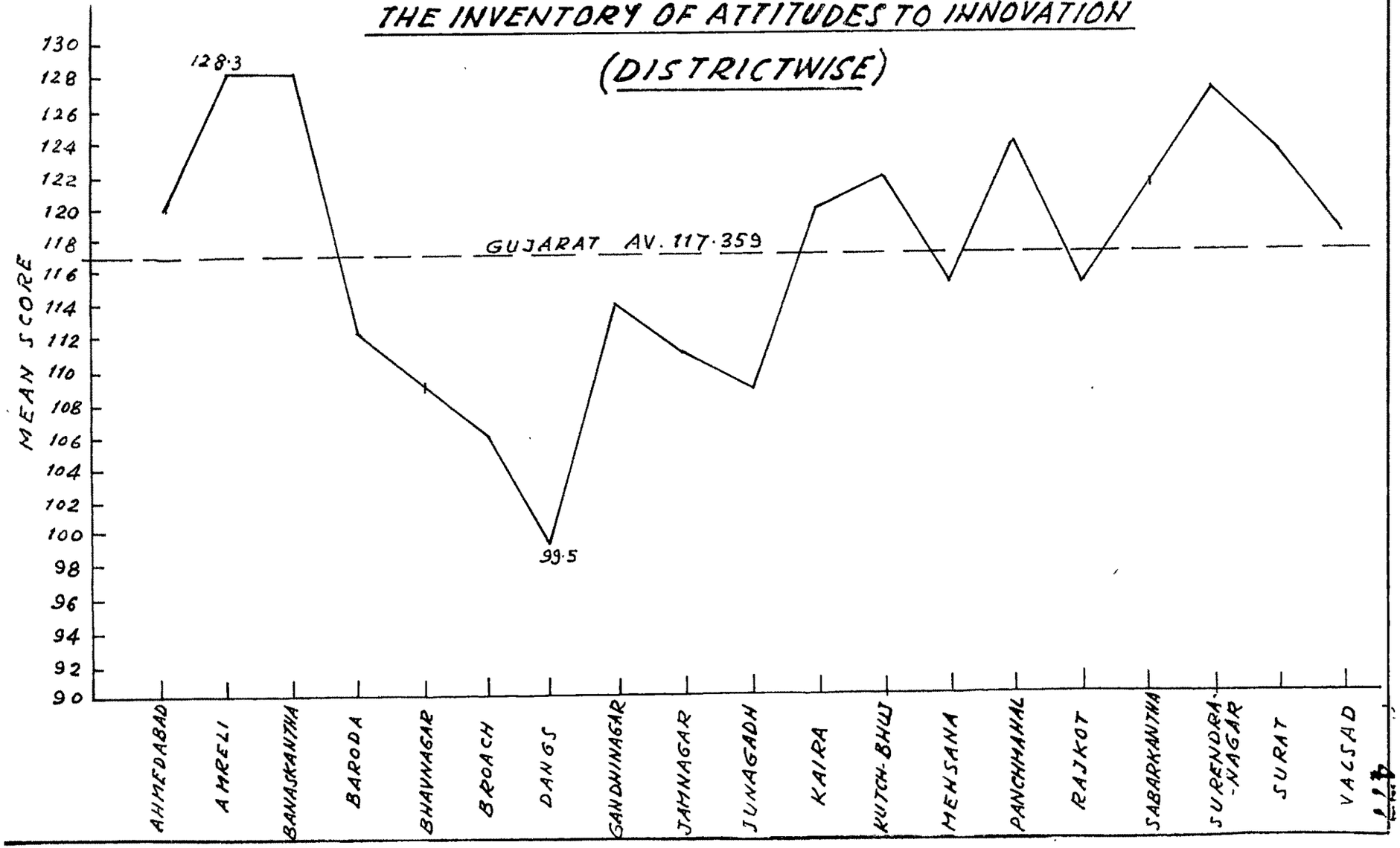
PROFILE-5

SECONDARY AND HIGHER SECONDARY SCHOOL PROFILE ON INNOVATIVE PRONENESS AS A WHOLE (SCHOOLWISE)



PROFILE - 6

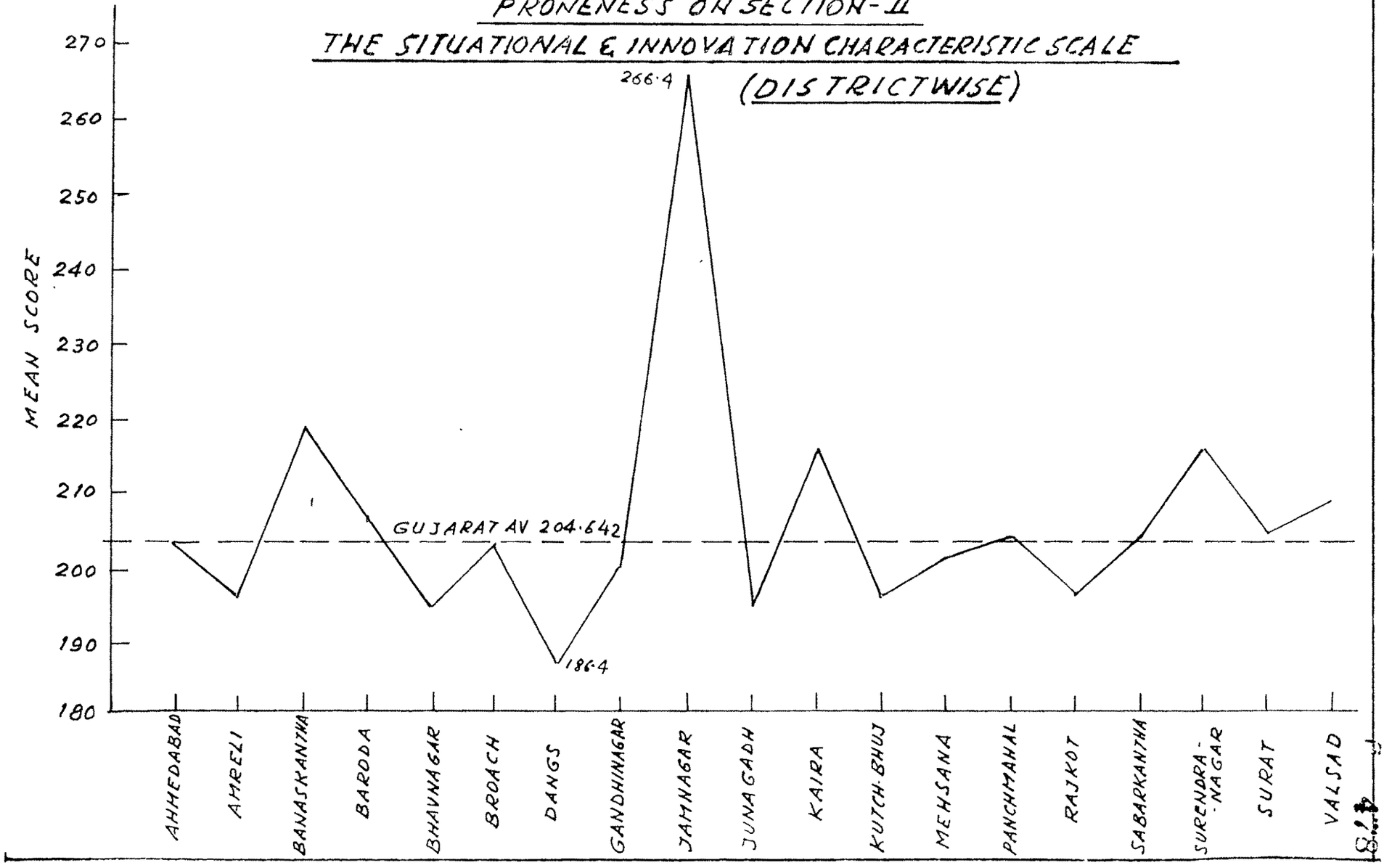
SECONDARY AND HIGHER SECONDARY SCHOOL ON INNOVATIVE PRONENESS ON SECTION - I THE INVENTORY OF ATTITUDES TO INNOVATION (DISTRICTWISE)



PROFILE-7

SECONDARY AND HIGHER SECONDARY SCHOOL ON INNOVATIVE PRONENESS ON SECTION-II

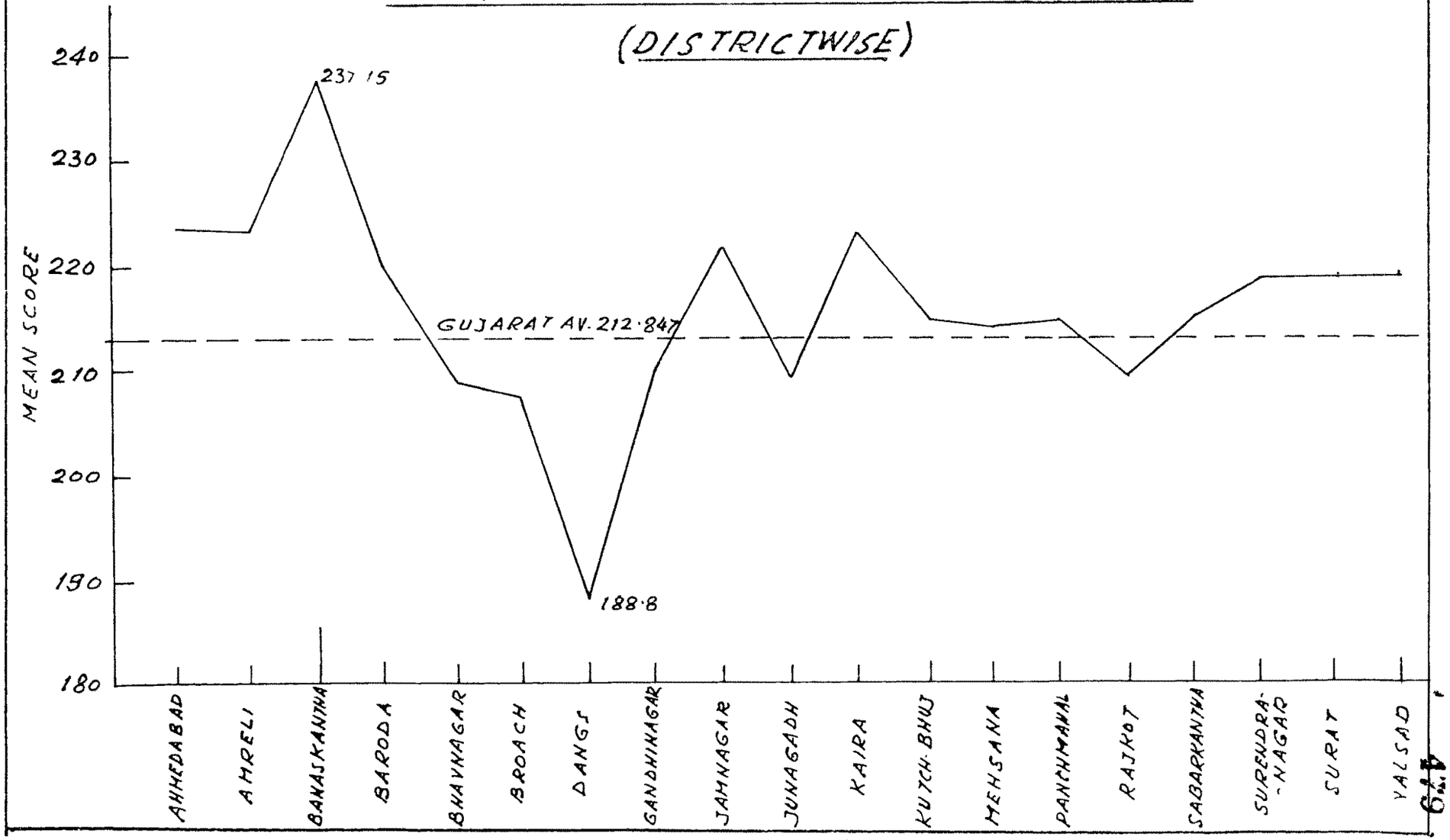
THE SITUATIONAL & INNOVATION CHARACTERISTIC SCALE (DISTRICTWISE)



PROFILE- 8

SECONDARY AND HIGHER SECONDARY SCHOOL ON INNOVATIVE PRONENESS ON SECTION-III THE CHANGE-RELATED VALUES QUESTIONNAIRE

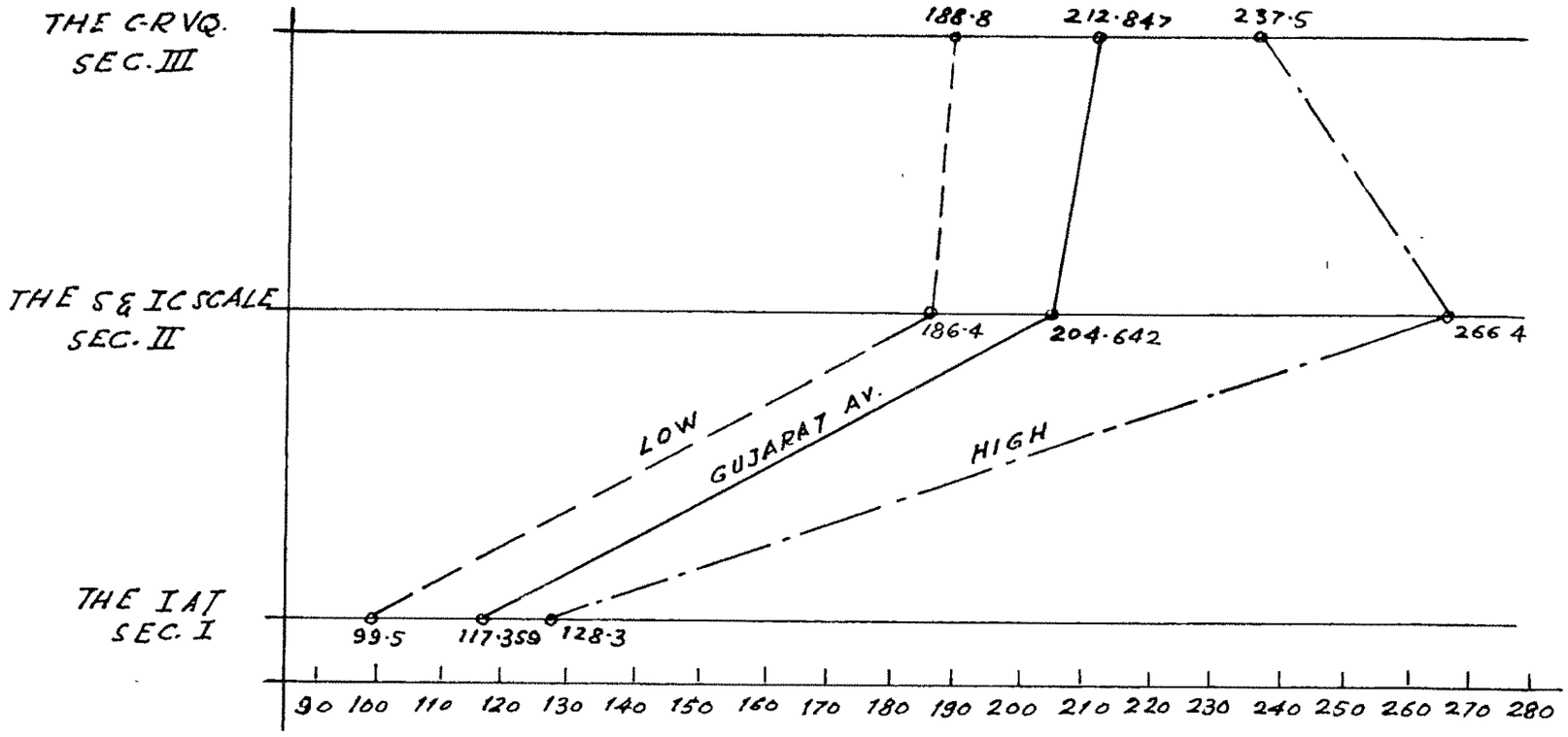
(DISTRICTWISE)



PROFILE-9

SECONDARY AND HIGHER SECONDARY SCHOOL ON INNOVATIVE PRONENESS ON SECTION I-II AND III

(DISTRICTWISE)



MEAN SCORES OF DISTRICTS ON SECTION I-II AND III

SECTION I : THE INVENTORY OF ATTITUDES TO INNOVATION.

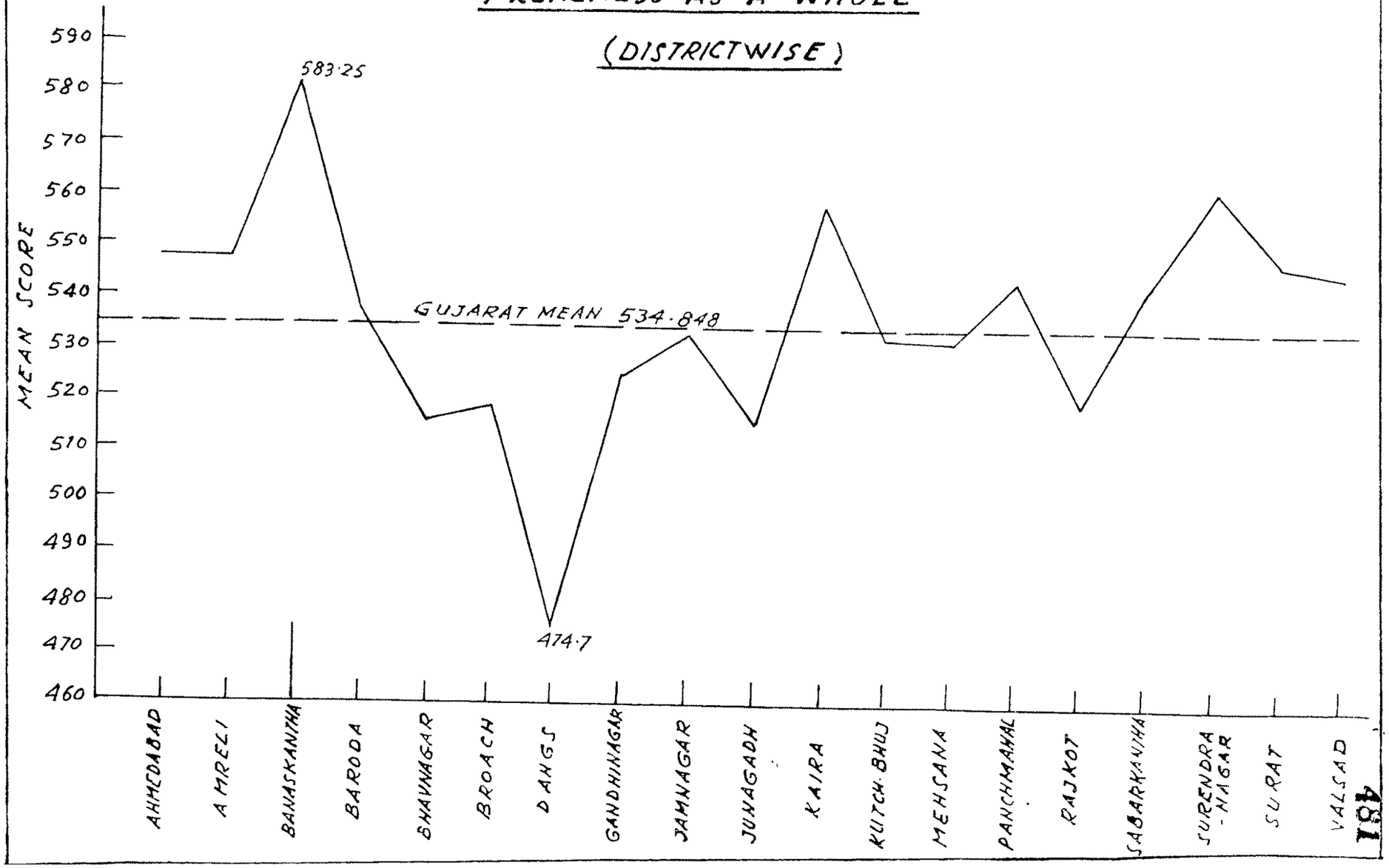
SECTION II : THE SITUATIONAL AND INNOVATION CHARACTERISTICS SCALE.

SECTION III: THE CHANGE-RELATED VALUES QUESTIONNAIRE

PROFILE-10

SECONDARY AND HIGHER SECONDARY SCHOOL PROFILE ON INNOVATIVE PRONENESS AS A WHOLE

(DISTRICTWISE)



Profile No.1 says that 53 schools are above the mean on I.A.I. Scale which measures Attitudes of teachers to Innovation and 47 schools are below the mean ; Profile No.2 says that 41 schools are above and 59 schools are below and the mean on Situational and Innovation Characteristics; and Profile No. 3 gives 59 schools above the mean and 41 schools below the mean score on Change Related Values.

Profile No. 4 gives the comparison of lower and higher means with those of the 'Gujarat Means' on all the three aspects respectively.

Profile No. 5 gives the comparison of the scores of hundred schools with overall mean of Gujarat State on 'Innovative Proneness' as a whole.

Profile No. 6 says that 10 districts are above the mean on I.A.I. which measures attitude of teachers to Innovation in these districts and 9 districts are below mean ; Profile No. 7 says that 9 districts are above the mean and 10 districts below the mean on Situational and Innovation Characteristics; and Profile No. 8 says that 13 districts are above and the mean and 6 districts are below the mean on Change Related Values.

Profile No. 9 gives the 'Comparison of lower and higher means of districts with the Gujarat means on all the three aspects respectively.

Profile No. 10 gives the comparison of the mean scores of 19 districts with overall mean of Gujarat State on Innovative Proneness as a whole.

It can be observed from Table No. 6.1 that 58 percent schools are above the Gujarat Mean on all the three aspects measured by all the three scales. This means 42 percent schools are below the overall mean. Considering the districts 10 districts are above and 9 districts are below the overall mean below the overall mean of Gujarat State.

The schools below the mean school/should make some efforts to raise up on all the three aspects. This is possible when the Innovative Proneness of the staff members themselves is raised up. From the findings of this study, it can be suggested that teacher should be kept continuously in touch with the recent trends in their professional world and the world out/side through organisation of In-service Education programmes for them.

Many times, it happens that the teachers show favourable attitude towards innovation, but at the time of the implementation of innovation they manifest behaviour which shows that they move away from innovation. This type of attitude behaviour discrepancy should be done away with. Here,

the health of organization should be maintained by the management and the administrators and also by the teachers. In healthy organization, members are reasonably clear about goals and their acceptability. The members of the school should have the information they need and they have got it without exerting undue efforts.

There should be distortion-free communication vertically, hofizontally and across the boundary of the system too from the surrounding environment. The communication between the teachers and administrators, and between the teachers and children should be distoration-free. In the school there should be optimum power utilization. Every part of the school works upto its optimum. Again a healthy organization like a healthy individual, work to its potential, teachers are neither over-loaded nor idling; there is close correspondance between their personal characteristics and the demands of the system. The teachers - the members of the organization feel attracted to membership. They take pride in being the members of their organization. Prevalence of cohesiveness among the members leads the organization on the path of progress. Schools with qualities of trust and openness - as measured by inter-personal relations and norms perceived to exist in the system by the

school personnel tend to create a psychological climate favouring change in innovation. A healthy system would tend to invent new procedures, move towards new goals, produce new kinds of products. Such system could be said to grow, develop and change, rather than remain routinized, traditional and stagnant. School as healthy organization is independent from the environment in the sense that it does not respond passively to demands from without, not destructively or reballiously to perceived demands.A healthy school system is autonomous. The ability of the healthy school to bring about corrective change should be faster than the change cycle in the community. In healthy organizations the problems stay solved. In healthy school systems problem solving mechanisms is not simply maintained only, but it is also strengthened.

The things treated in the above paragraphs will make the educational organizations more and more innovative which, in turn, will increase the innovativeness of the personnel working in them. The management and the administrator should be watchful in maintaining the health of the school to make it innovative and progressive.

Professional training helps much in making the teachers change prone. In consonance with this finding, it is desirable that every staff member is professionally trained which includes pre-service education and In-service education.

6.4 Suggestions for Further Studies

The present investigation has extended the horizon for further studies.

The similar study could be extended to the primary and pre-primary school personnel and to the personnel of higher education organizations.

A correlation study of leadership behaviour of the principal of the school and the innovative proneness of the teachers could be done. Similarly, a correlational study of organizational climate of the school and innovative proneness of the teachers is also worth having.

A healthy organization is always innovative and their members are highly prone to change. So the various components of the health of the schools could be defined and a tool should be constructed to know the health of the school and then correlational study of the health of the school and innovative proneness would be of immense utility for all concerned with education.

As mentioned earlier the causes of 'Attitude-behaviour' discrepancy prevailing among the school teachers in the context of innovations should be located and efforts should

be made in the schools to wipe out these causes. In the professional literature this discrepancy is known as 'innovation-dissonance' and the individual and organizational factors responsible for this 'innovation-dissonance' should be located and studied. Unless these factors are not done away with the members of a particular organization, will not be able to make it innovative. In main, studies of 'innovation-dissonance' and its correlates in various educational institutions are very much desirable. This aspect has caught the attention of Vinaiteerthan (1977).

The very first process of the diffusion of innovation process is communication. Communication is the process by which two or more people exchange ideas, facts, feelings or impressions in ways that each gives an understanding of the other's meaning. As far as the problems of communication of educational innovation is concerned it has been marginally studied in our country. Other than the studies carried out by Mukhopadhyay (1974) and Sharma (1974), there has been no study in this field. However, Pathak (1974) and Yupa (1975) are marching in this field with rapid strides. Investigations should be taken up on the informal and formal communication existing between educational resource system

and the school system, and school system as communication network.

Teacher Education has received special attention from educational planners as well as from educational researchers. The teacher is now considered as the main spring for educational innovations. The present teacher education practices are now challenged and the role of the teacher in a changing society is reassessed from a scientific point of view. Teacher effectiveness and teacher behaviour are the new targets towards which the educational researches are concentrating with the help of the scientific and tools of measurement. Resource institutions are experimenting with various dimensions of teacher education. Panchal (1977) has tried to measure innovative proneness of teacher educators of the Secondary Teachers' Training Colleges of Gujarat. The same type of study should be extended to the Primary Teachers Training Colleges in Gujarat and Secondary Teachers' Training Colleges of the country. The present study is an attempt to measure innovative proneness of Secondary and Higher Secondary School teachers of Gujarat and Trivedi (1977) is trying to do the same in Saurashtra. This type of study should be extended to the primary school teachers and to the University

teachers and the teachers in the affiliated colleges. Sunder Raj (1978) is doing this type of study in Madras.

Areas like teacher as Change Agent (Main theme of Purani, 1979), teacher education and social change, community expectations and teacher education, school education in rural perspective, change related values of Adivasi people in the context of education, innovations in school teaching have caught little attention of researchers.

Havelock and Huberman's (1977) study is a reflective outcome of work on educational change in developing countries. In the report of this work among other aspects they have incorporated (i) social system and innovation system : a unified framework for understanding the process of deliberate changes, (ii) origins of innovations in developing countries, (iii) planned and unplanned outcomes, (v) resource acquisition and utilization : What and how, (v) participation : how knowledge and action are organized, orchastreated and communicated within the system, (vi) barriers to innovation, (vii) strategies of innovation, and (viii) outcomes and evaluation procedures. Each of these titles covered up by Havelock and Huberman (1977) suggest the areas of research in Indian conditions. Specially no work has been found to have

been done in the areas of 'barriers to innovations', 'strategies of innovation' and the 'evaluation of the outcomes of innovation' in our country. These areas need priority in our research work.

In our country it is generally observed that the B.Ed. trainees who are given the knowledge and practice of new methods and techniques of teaching do not continue in the schools in day-to-day teaching work. What are the dominant factors responsible for this ? These factors should be located by 'Varimax factor analysis techniques' and the efforts should be made to dilute the impact of these factors so that the implementation of innovative practices takes place in the schools who are in this context the consumers of innovations, According to Havelock and Huberman (1977) the main barrier factors in order of loading from the highest to the lowest are : (i) the innovation as a new system : underestimating the process, which includes lack of coordination among system workers, insufficiently clear structure for decision-making, lack of common understanding of innovation - project objectives, lack of good communication in the system, too much centralization of decision-making, too many rules and regulations to be followed,

delay of approval from the formal authority, inadequate consideration of innovation implementation, leading personnel of the system fail to understand realities, pressures from the leaders to produce results in too short a period etc., (ii) personalities and personal motivation which covers personality conflicts among various members of the innovation-project team, lack of understanding and appreciation of each others feelings among the system members, persons in key roles not devoting enough energy and enthusiasm to the innovative-project, rigidity and narrow-mindedness on the part of key persons of the system, persons in key roles not open to change their attitudes or behaviour, insufficient rewards for those who would be implementers; (iii) inadequate resources and capacities in the system leading to failure to provide adequate facilities to implementers; (iv) financial problems which includes inadequacy of level of financial support contributed by the country, the economic condition of the country as a whole, natural economic priorities being on other areas than education; (v) opposition from key groups in society including the conflict of ideologies about change and objections to innovation-project by special interest groups; and (vi) poor interpersonal relations which encompass problems in social relations among system members,

inadequate social harmony and good relations among innovation project team members and poor climate for sharing ideas openly. All these barrier factors are mutually inclusive and correlated. This type of factor analysis study is necessary in our country also. Many innovations in the field of education of our country have experienced pre-matured death and lot of wastage has taken place. This type of studies will lead us pretty far in this direction.

The success of innovation depends on the various strategies of innovation. Which type of strategies are worth having for our situation is also worth studying through, again with Varimax factor analysis technique.

It is also necessary to have longitudinal studies of certain innovations in the field of education of our country.

6.5 Conclusion

The researches on 'Innovation and change in education' in our country are of recent origin. It is only two decades ago we thought about innovation and change in education in our country. Whatever little research work has been done in this area in our country, the contribution of the Centre of Advanced Study in Education, M.S. University of Baroda, followed

by Sardar Patel University, Vallabh Vidyanagar, is invaluable. In the CASE, in this area, about ten studies are completed and about twenty studies are in progress. In view of the gaps and priorities given in two previous sections of this concluding chapter, we have many miles to go. In all the studies that have been reviewed and referred here in this present work the ultimate and the resultant components of the whole system of education namely 'the child' is not paid sufficient attention. Whatever innovative ideas are to be practised they are to be practised for the improvement of the achievement of the child. Hence the studies on the perceptions of the children about innovations are worth undertaking. Studies regarding parent's attitudes towards innovations are also worth undertaking.

CHAPTER VI

REFERENCES

Carver, Fred D., and Sergiovanni, (1969) (Eds.), Organization and Human Behaviour : Focus on Schools, McGraw-Hill Book Co., New York.

Darji, D.R. (1975), 'A Study of Leadership Behaviour and Its Correlates in the Secondary Schools of Panchmahal District'., Ph.D. Thesis, M.S.University of Baroda, Baroda.

Griffin, W.H. and Pareek, Udai, (1970), The Process of Planned Change in Education, Somaiya Publications Pvt. Ltd., Bombay.

Havelock, R.G., (1975), Planning for Change : Through Dissemination and Utilization of Knowledge, GRUSK, The University of Michigan, Ann Arbor, Michigan.

Havelock, R.G. and Huberman, A.M. (1977), Solving Educational Problems : The Theory and Reality of Innovation in Developing Countries, UNESCO, Paris.

Huberman, A.M. (1973), Understanding Change in Education : An Introduction, UNESCO, Paris.

Miller, R.I., (1967), (Ed.), Perspectives on Educational Change, Appleton-Century-Crofts, New York.

Mukhopadhyay, M. (1974), 'Resistance to Educational Change in West Bengal', Institutional Project of CASE, M.S. University, Baroda.

Panchal, B.R. (1977),'A Study of Innovative Proneness of Teacher Educators of Secondary Teachers' Training Colleges of Gujarat', Ph.D. Thesis, M.S.University, Baroda.

Pathak, U.B. (1974), 'A Study of Communication System of Educational Innovations by Resources Agencies in Gujarat,' Ph.D. Thesis in Progress, M.S.University of Baroda.

Purani, C.J.(1979), 'Indian Teacher as a Change Agent,' Ph.D. Thesis, M.S.University of Baroda, Baroda.

Rogers, E.M. and Shoemaker, F.F., (1971), Communication of Innovations : A Cross-Cultural Approach, The Free Press, New York, Collier-Macmillan Ltd., London.

Sharma, M.M. (1974), 'A Survey of Educational Innovations in Rajasthan and Their Impact on Teachers' Professional Growth and Pupils' Achievement', Ph.D. Thesis in Progress, M.S.University of Baroda, Baroda.

Sundarraj, S.M. (1978), 'A Study of Teacher Innovativeness in Tamil Nadu,' Ph.D. Thesis in Progress, M.S.University, Baroda.

Trivedi, A.H. (1977), 'A Study of Leadership Behaviour and Innovation Proneness in the Higher Secondary Schools of Saurashtra,' Ph.D. Thesis in Progress, M.S.University, Baroda.

Vanaiteerthan, V. (1977), 'A Study of Innovation Dissonance and Its Correlates in the Secondary Schools', Ph.D. Thesis in Progress, M.S.University of Baroda, Baroda.

Yupa, W. (1975), 'A Study of Innovation and Change in Secondary Schools in North-East of Thailand (With regard to innovation process and its communications of resource agencies', Ph.D. Thesis in Progress, M.S. University of Baroda, Baroda.