C H A P T E R III

PLAN AND THE PROCEDURE

"I've been trying educational innovation for years, and the more I do it the less I know about it. The only thing I'm sure of is that everyone is human. So the key to innovation is try something interesting. Experiment!"

- MATHEW B. MILES
Innovation in Education
Bureau of Publications
Teachers College, Columbia
University, New York, 1964,
p. 10.

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C H A P T E R III

PLAN AND THE PROCEDURE

3.1 THE PROBLEM, SCOPE AND DEFINITION OF THE TERMS

In the first chapter the nature of the problem, its significance and the theoretical frame of reference is depicted. The second chapter gave the review of the researches and related literature. Now this chapter describes the plan and the procedure of the investigation.

The problem under investigation runs as follows:

"A Study of Innovative Proneness of Teacher Educators of Secondary Teachers' Training Colleges of Gujarat State".

The various terms used in this statement of problem are very briefly and pinpointedly explained as under:

"Innovation": For the purpose of the present investigation an "innovation" is taken to mean a significant change in educational objectives, curriculum content, teaching method, pupil grouping, staff deployment, resource utilization and the organization of the activities of the institution.

3 "Innovativeness": For the present study, the definition of "innovativeness" given by Rogers (1962) which runs as "the degree to which an individual is relatively earlier in adopting new ideas than the other members of the social system" is accepted.

"Innovative Proneness": In the present study, it means the attitude towards new ideas and practices a particular focus of interest which is the attitude of teacher-educators towards innovation in education.

The study is related to teacher-educators of the Secondary Teachers' Training Colleges of Gujarat State which came to forty in all including Gujarat Vidyapeeth and Karvey B.Ed. Colleges. Training colleges have an ascribed role of change agents which would bring change into the schools and thereby in the pupils and community. Therefore, this study tries to find out the innovative proneness of teacher educators with the help of the 'Innovative Proneness' Scale'devised by the investigator for the purpose. Therefore, the study gives the tool which helps anyone to know the innovative proneness of persons working in a particular educational institution. This tool will help in recruitment, promotions, selection and in development of innovative proneness in teacher-educators.

3.2 THE OBJECTIVES OF THE STUDY

In this study, there is a multi-dimensional

4 approach to the study of innovative proneness.

The objectives of the study were as follows:

1. To develop the instrument seeking to identify and quantify four aspects of innovative proneness of teacher-educators: (i) teacher-educators expressed attitudes towards specific innovations and combinations of innovations having regard to the potential cumulative effect of attitudes arising from past experiences with innovations; (ii) teacher-educators' general attitudes to change or their change related values; (iii) teacher educators preferred behaviours in relation to their perception of attitudes of innovations; and (iv) teacher educators preferred behaviours in relation to their perception of the setting and circumstances in which innovations are introduced.

2. To design and validate "Innovative Proneness Scale" (I.P.S.) that will measure "Innovative Proneness" of teacher-educators of Secondary Teachers' Training Colleges of Gujarat.

3. To study the "Innovative Proneness" of the teacher-educators of Secondary Teachers' Training Colleges of Gujarat with respect to:

(i) age, (ii) teaching experience, (iii) sex, (iv) professional satisfaction; (v) mobility, (vi) participation in inservice education, (vii) habit of reading professional literature, (viii) professional training and (ix) academic qualifications.

4. To study the 'factor analysis' of the scale developed by the investigator.

5. To find out intercorrelations among the components of "Innovative Proneness Scale" devised by the investigator.

3.3 THE SAMPLE OF THE STUDY

The entire forty Secondary Teachers' Training Colleges of Gujarat were selected for the present investigation. In all 200 teacher-educators responded the I. P. Scale. There is no question of sampling as entire universe is taken for the study. The list of all the Secondary Teachers' Training Colleges of Gujarat is given below:

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TABLE 3.1

List of Secondary Teachers' Training Colleges of Gujarat State

Sr. No.	Name of the College
1	Secondary Teachers' Training College (Vasana), Ahmedabad.
2	M.B.Patel College of Education, Vallabh Vidyanagar (Dist. Kaira).
3	Shikshan Mahavidyalaya, Gujarat Vidyapeeth, Ahmedabad.
4	Faculty of Education and Psychology, Baroda.
5	V.T.Chokshi Sarvajanik College of Education,Surat.
6	Shri P.D. Malaviya Graduate Teachers' Training College, Rajkot.
7	Madhyamik Shikshan Mahavidyalaya, Bhavnagar.
8	Snatak Adhyapan Mandir, Wedchhi (Dist.Surat)
9	Smt. M.M.Shah College of Education, Vadhvan (Dist. Surendranagar).
10	Shri Rang Shikshan Mahavidyalaya, Billimora (Dist. Bulsar).
11	College of Education, Patan (Dist. Mehsana).
12	Shri D. D. Chokshi College of Education, Palanpur (Dist. Banaskantha).
13	S.R.G.T. College, Porbandar. (Dist.Junagadh)
14	Vivekanand College of Education, Ahmedabad.
15	Secondary Teachers' Training College, Visnagar (Dist. Mehsana)
16	Secondary Teachers' Training College, Kheda.
17	S.M.N.Dalal College of Education for Women, Ahmedabad.

7 TABLE 3.1 Contd.

Sr. No.	Name of the College
18	N. H. Patel College of Education, Anand (Dist. Kheda).
19	Shri Shardapeeth Arts & College of Education, Dwarka (Dist. Jamnagar).
20	Mahila Mahavidyalaya, Baroda.
21	A.G. Teachers' College, Ahmedabad.
22	Shri B.D.Shah, College of Education, Modasa (Dist. Sabarkantha).
23	Shrimati B.C.J. College of Education, Cambay (Dist. Kheda).
24	College of Education, Petlad (Dist. Kheda).
25	Prakash College of Education, Ahmedabad.
26	Vivekanand College of Education, Mehsana.
27	Vaidya Shri M.M. Patel College of Education, Ahmedabad.
28	Shri Darbar Gopaldas Shikshan Mahavidyalaya, Aliabada (Jamnagar).
29	Shri M. N. Shukal College of Education,Ahmedabad.
30	Sheth M.N.College of Education, Dabhoi, Dist. Baroda.
31	R. B. Sagar College of Education, Ahmedabad.
32	Shri Sarvajanik College of Education Godhra (Dist. Panchmahals).
33	Graduate Basic Training Centre, Mangrol, Dist. Junagadh.
34	Shri R.P.Anada College of Education, Borsad (Dist. Kheda).
35	H. M. Patel Institute of English, Vallabh Vidyanagar (Dist. Kheda).

8 TABLE 3.1 Contd.

Sr. No.	Name of the College
36	Sheth C. N. G. B. T. C., Ahmedabad.
37	College of Education, Daramali (Dist.Sabarkantha).
38	Graduate Basic Training College, Rajpipla (Dist. Broach).
39	College of Education, Mundra (Dist. Kutch).
40	Department of Education, Saurashtra University, Rajkot.

3.4 THE RESEARCH TOOLS

Innovative Proneness Scale (I.P.S.) was used for assessing innovative pronaness of teacher-educators of each Secondary Teachers' Training College under study. The tool is prepared by the investigator himself. 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 teacher-educators on innovative practices and related educational issues in the Secondary Teachers' Training Colleges of Gujarat State. The schematic presentation of the number of components and the number of items in each component of the Innovative Proneness Scale for teacher-educators is given below:

TABLE 3.2

A Schematic Presentation of the Number of Components and the Number of Items in Each Component of the Innovative Proneness Scale for Teacher-Educators

Section I			Section II						Section III		
The Inventory of Attitudes to Innovation			A - The Situational Characteristics Scale			B - The Innovation Characteristic Scale			The Change-Related Values Questionnaire		
No.	Components	Items	No.	Components	Items	No.	Components	Items	No.	Components	Items
1	Individualization	5	1	Administrative Support	12	1	Complexity	6	1	Traditionalism	10
2	Curriculum Organization	3	2	Staff Norms	8	2	Compatibility	6	2	Progressivism	10
3	Teaching-Learning Process	5	3	System Norms	6	3	Riskness	6	3	Dogmatism	10
4	Teaching Resources	4				4	Localiteness	8	4	Venturesomeness	10
5	Internal School Organization	5				5	Cosmopoliteness	8	5	Conservatism	10
6	Staff Development	5		Sub-Total	26		Sub-Total	34	6	Change Proneness	10
7	School Community Relationships	3									
	Total	30			26 + 34 = 60						60

Grand Total · Components = 21

Items = 150

From the schematic representation of the various components which comprise the three sections of Innovative Proneness Scale devised by the investigator, it seems that in all there are 21 components in this scale.

Section I consists of seven components which refer to the attitudes towards innovation. These components are: Individualization, Curriculum, Organization, Teaching-Learning Process, Teaching Resources, Internal School Organization, Staff Development and School Community relationship. These components indicate the areas where the innovations are to be introduced. All these areas refer to the day-to-day classroom teaching. The school community relationships are to be strengthened so that the teaching-learning process in the classroom is strengthened. Development of the staff according to the needs of the school and the society is most desirable.

Section II is related to the process of change in education which further depends on two parts: (A) The situational characteristics, and (B) The characteristics of the innovation. This means 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 to it. The situational characteristics depend on administrative support, staff norms, and system norms. This means there are a number of facilitating and hindering forces

11 within the social structure of the school. Such forces as the nature of peer social relationships, teacher-principal relationships, norms and standards for professional behaviour and the organizational climate of the school system appear to be very relevant (Miller, 1967). 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, Cosmopoliteness. These terms need further explanation:

Complexity: Complexity is the degree to which an innovation is perceived as difficult to understand and use. Some innovations are readily understood by most members of a social system, others are not and will be adopted more slowly (Rogers and Shoemaker, 1971).

Compatibility: Compatibility is the degree to which an innovation is perceived as a consistent with the existing values, past experience, and needs of the receivers. An idea that is not compatible with the salient characteristics of a social system will not be adopted so rapidly as an idea that is compatible. Compatibility ensures greater security and less risk to the receiver and makes the new idea more meaningful to him. An innovation may be compatible: (1) with socio-cultural

12 values and beliefs, (2) with previously introduced ideas, or (3) with client needs of innovations (Rogers and Shoemaker, 1971).

Riskness: refers to the risk that the adopter has to undergo while adopting innovative practice. Adopter may be ready to adopt the innovation inspite of the risk involved or may not be ready to do so depending on his temperament or the personality traits. Everybody will look for his security and safety. This security and safety should not be jeopardized.

Localiteness is the extent to which the adopter of innovation sticks to his local system rather than looking beyond it. It is generalized that cosmopolite channels are relatively more important than localite channels for earlier adopters than for later adopters (Rogers and Shoemaker, 1971).

Cosmopoliteness is considered to be the degree to which an individual's orientation is external to a particular social system. Pedagogically innovative teacher turns out to have worked in several different school systems (Miles, 1964; Rogers and Shoemaker, 1971). It has been found repeatedly that greater personal innovativeness is associated with cosmopoliteness, which is the result of experience in more than one social system (Miles, 1962). Cosmopolites more than localites are the champions of

13 change.

Section III is the change-related values questionnaire which is constituted of six components namely, Traditionalism, Progressivism, Dogmatism, Venturesomeness, Conservatism, and Change Proneness.

Traditionalism of the system refers to the extent of having traditional norms and modern norms. A school social system with the modern norms ~~s~~ is more change oriented, technologically developed, scientific, rational, cosmopolite and emphatic. A traditional system embodies the opposite characteristics (Rogers and Shoemaker, 1971).

Progressivism is the characteristics of a person who always look for his progress. The progressive school always look for new ideas leading to further progress, to go ahead rather than retard or retreat. The progressive teachers always look for the personal professional progress and the progress of the school. For this desire to be fulfilled,they always try to adopt innovations. Progressivism is a value for them.

Dogmatism is a variable representing a relatively closed belief system, a set of beliefs that are strongly held. The highly dogmatic persons would not welcome new ideas; they prefer to hew to the past in a closed manner (Rogers and Shoemaker, 1971).

14 Venturesomeness is the characteristics of the person that leads him towards taking initiative in doing new things, always ready to carve new path. Persons with high venturesomeness are highly innovative. In other words venturesomeness and innovativeness go hand in hand.

Conservatism: Conservative people are not prone to change, they stick to already established norms. Conservatives are found to be passimist, while radicals are found to be optimist. High degree of conservatism create obstacles for innovativeness. Conservativeness and innovativeness seems to be inversely related.

Lastly, Change Proneness refers to the attitude of the person towards the change. It is generally found that the persons who are prone to change are prone to innovation also. Innovativeness and change proneness are closely related.

The components of the last section of the scale seem to be mutually inclusive; they are all mutually inclusive in innovativeness.

Administration of the Tool

The investigator administered the tool personally so asto get reliable data in time. The work of data collection was facilitated to a great extent by advanced intimation given to the colleges concerned. The test was

administered under natural condition. On the whole, data of 250 teacher-educators were collected from 40 Secondary Teachers' Training Colleges of Gujarat by personal visits.

Teacher-educators were asked to express their attitude towards the adoption of each innovation on a six point scale ranging from Strongly Agree, Agree, Tend to Agree, Tend to Disagree, Disagree, Strongly Disagree - which were scored 5, 4, 3, 2, 1, 0 respectively. Inversely keyed items were scored 0, 1, 2, 3, 4, 5. Item scores for each respondent were summed to provide a global score ranging from 0 to 150 in Section I, and from 0 to 300 in Sections II and III respectively. The total score was thus taken to yield a global measure of predisposition to adopt innovations.

3.5 UNDERLYING BASIC ASSUMPTIONS AND HYPOTHESES

In this section are given some assumptions and hypotheses which guided the organization of the analysis and interpretations of the data collected with the help of the research tool described in the previous section.

Every person is prone to change, same is the case with any type of organization. Organization has to change according to the change in the society. Education does not develop in isolation, it is a part and parcel of a particular social system, it is a subsystem. If the

16 system changes, subsystem has to change. If external forces exert pressure on the system of education or a school, the school has to change. The persons working in the institution have to change first who 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 norms and values exert a significant influence on the attitudes of the individual innovator. Innovations are not regarded as clearly defined or sharply demarcated objective realities. Specific innovations are phenomenologically constructed by individual's perceptions, competences, their interaction in the other individuals and reference groups and a host of enabling and inhibiting contextual factors.

Based on the above basic assumptions mentioned in the previous paragraph the null hypotheses are framed to gear the organization and interpretation of the data collected and analysed.

1. Professional teacher training, participation in inservice education, reading of professional research literature and professional job satisfaction are not positively and significantly related to innovative proneness.

2. Mobility of the teacher-educator is not significantly related to innovative proneness.

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3. Age, sex, and years of teaching experience are not significantly related to innovative proneness.

4. The whole scale of the staff of every college has no relation with innovative proneness as judged by the educators.

3.6 THE SCHEME OF ANALYSIS AND INTERPRETATION OF THE DATA

The following statistical techniques were employed to analyse the data collected:

1. Univariate Frequency Distribution of all the 32 variables - coded as well as continuous. These variables are as follows:

   (a) Coded Variables: Age, Sex, Teaching Experience, Academic Qualifications, Foreign Qualifications, Professional Qualification, Mobility, Inservice Education, Reading Habits and Professional Satisfaction.

   (b) Continuous Variables which are the components of the tool having three sections: Individualization, Curriculum Organization, Teaching-Learning Process, Teaching Resources, Internal School Organization,

18 Staff Development, School Community Relationships; Administrative Support, Staff Norms, System Norms, Complexity, Compatibility, Riskness, Localiteness, Cosmopoliteness, Traditionalism, Progressivism, Dogmatism, Venturesomeness, Conservatism and Change Proneness.

2. Intercorrelation matrix and means and standard deviations of all 21 continuous variables mentioned above 1 (b), in relation to 10 coded variables mentioned above 1 (a).

3. t-test - Significance of difference between the means of 21 continuous variables mentioned above 1 (b), while grouping is done based upon the 10 coded variables as mentioned above 1 (a).

4. Percentile Ranks (Norms) for the 21 continuous variables in 1 (b) for the subgroups formed on the basis of 10 coded variables in 1 (a).

5. Factor Analysis and Varimax Relation of 21 continuous variables in 1 (b).

3.7 THE ORGANIZATION OF THE STUDY

The report of the investigation is organized

19 into the following chapters:

Chapter I: The Problem.

Chapter II: Review of Related Literature.

Chapter III: Plan and the Procedure.

Chapter IV: Construction and Standardization of the Tool.

Chapter V: Factor Analysis.

Chapter VI: A Study of Innovative Proneness of Teacher-Educators of Secondary Teachers' Training Colleges of Gujarat.

Chapter VII: Review, Major Findings and Suggestions.

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