

CHAPTER

\*\*\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*\*\*

THE PROBLEM

=====

'Innovation and Change are closely related to commitment to research and experimentation. For this reason, every school staff and school board should review periodically its financial commitment to research, experimentation, and innovation'.

- Miller Richard I,  
(Perspectives on Educational Change, New York:Appleton Century, Crofts, 1967, p.14.

=====

- 1.1 Introduction
  - 1.2 Social Change and Education
  - 1.3 The Role of Teachers
  - 1.4 The Present Study
  - 1.5 The Objectives
- References

\*\*\*\*\*  
\*  
\*  
\*

## I

## THE PROBLEM

-----

### 1.1 Introduction

During the last quarter of this century many countries have made unprecedented efforts to induce change in the society. In promoting development many nations of the world have united with international cooperation and collaboration. Increasing industrial potential, controlling population growth, increasing agricultural production, solving health problems, increasing the utilisation of resources, efficiently and effectively, and with the result of all these improving educational programmes have been the major concern in many countries. Development in all these spheres demands changes in people - changes in their values, attitudes, customs, traditions and practices, work habits and methods, food habits and way of thinking. Directly speaking the fruits of efforts to bring about economic and social

development with a view to eradicating the poverty from any country is dependent on a significant degree of change in outlook and behaviour among people at all levels of their society.

Naturally this state of affairs demands continuous change in education in our country or in any other developing country in order to be in tune with the time. As a dynamic science, ever-progressing and ever-progressive, education must undergo continuous change. Rosseau believed in the principle, 'Follow the nature' while educating the child. 'Emile' the imaginary child was to be educated or trained, according to this principle. Pestolozzie, the Swiss school-master placed the child in the forefront and made a beginning in the direction of Paido-centric education. Madam Montessori and Froebel followed the same course. Paido-centric education has almost become the watchword of the day. Slowly and gradually again, there is a movement towards subject centred education. Thus, the philosophy of education, the principles of education, the methods, the procedures, the techniques and tools change according to new needs and new demands. The curriculum construction is mainly based on the

demands of the individual development, demands of the community and the demands of the state or the existing government as the individual has to play three roles as an individual, as well as a member of the community and as a member of a nation. Further to say, he is not only a member of a nation, but also a member of the whole world community that shrinks day by day. A time will come when he will be called the citizen of the whole universe. As a citizen of the world he will have to integrate some universal values with his life and these values also change from time to time. He has to play all these roles effectively. For playing these various roles he will have to be open, change prone, adjustable so as to avoid the future shock, the product of accelerated rate of change in society which may baffle him. Education must shift into future tense. It is the teacher who will inculcate changed values in children, it is the teacher who will prepare the children for future. It is, therefore, quite obvious that teacher will have to be change prone to adjust according to change, or adjust the change with their set up.

It is in this sense that education has to change or modify because the determinants of education vary with

the tunes of the time. Only the, <sup>the</sup> education can play its proper role. Education has to build the society - the right type of society from the point of view of all types of changes taking place in the society in particular and the whole universe in general. But there are always obstacles impediments and stumbling blocks in the path of progress - way may call them <sup>a</sup> resistences. Just as the change is the law of nature, offering resistance and creating stumbling block is also a natural phenomenon. To illustrate the point, matter, by nature in any state, either as an animate being or an inanimate thing is inert. It continues in its state of motion or of rest unless some force works on it. Innumerable examples can be given. A chain, a Table, a carriage continues in its state of motion or of rest unless there is another force acting on it giving impact or resistance. Fractional force inhibits motion.

The term 'mental inertia or preservation' is well known in the realm of psychology. Continuation of the mental activity even after the need for the same is over, gives rise to so many psychological problems. Society which consists of several individuals

also resist change. The elderly persons never approve of the action and activities of the younger generation - visiting movies for recreation, inter-caste, or inter-provincial or international marriage, dispensing with the system of giving dowry, treating the daughter-in-law as a daughter, giving equal opportunities to both the sexes for growth and development. So, the elderly persons in the society as well as in the family are great opponents to change. Economic difficulties for bringing about changes are of no less importance. They create hurdles and obstacles in progress. But while making these statements, the other phase of the coin has also to be taken into account. Human nature resists change, but at the same time, craves for change. Let changes be introduced gradually, carefully. Let each change be duly assimilated and acknowledged and accepted by all those who are concerned.

Education is a dynamic force that will serve as an agent of change. Education, real education changes the outlook, the attitude of the people on a mass scale, so, education has a sacred duty to perform - a herculean task to perform. The pupils of today are the citizens of

tomorrow. Let them influence their parents and the leaders of the community through correct approaches and in the words of Robert Browning, 'all will be right with the world'. Education will serve as a master key that will apply to all locks and inter-locks leading to the successful solution of all the problems which puzzle even the great administrators or strategicians.

Again for sustenance and enhancement of change, it is necessary to find out and prepare change-agents in the form of material and men : The Chinese proverb says :

If you are planning for a year, plant plants.  
If you are planning for years plant trees.  
If you are planning for many years, plant men.

So, it is in the fitness of the things that we should plant men - the agents of change and carry out long-termed projects implementing changes in every sphere of life. In a nut-shell, innovators are to be planted for absorbing suitable changes in various walks of life.

Researches show that sufficient attempts have not been made in India to locate the change-agents. Usually, an institution has heterogeneous group of staff-members.

Some accept the change voluntarily, some under pressure, while some are completely rigid in accepting the changes. The persons of the first category not only accept the changes but also work as change-agents and even prepare change-agents. An institution with maximum change agents can be said to be quite progressive in contrast to the regressive or rigid ones. Here is an attempt to locate proneness to innovations in the case of staff members of the teachers of secondary and higher secondary schools of Gujarat in regard to matter and material to be given, methods, techniques and procedures to be followed.

### 1.2 Social Change and Education

Education has a double role to play in any society, particularly in a society intending development and change with rapid strides. Educators are concerned mainly with the contribution of education to development targets. This includes the study of the critical issues involved in the nature and direction of development. It implies the education and training of young people with the understanding attitudes, critical abilities and skills required to make the most appropriate contribution to the rapid development of the country. They must introduce the

kinds of innovations that will transform educational institutions into dynamic, creative, self-reforming organizations capable of responding to the development needs of the country and the best that is known about effective education. They must re-examine methods of planning, procedures for introducing reforms personnel policies, systems of reward and recognition, methods of decision making, the relationship of education with basic culture and the means for relating educational programmes to the changing goals.

The demands made on schools by rapidly changing society have radically altered the teacher's role and the conditions under which the role is to be played. The task has become more challenging due to knowledge explosion. In the realm of science and technology, knowledge doubles itself within seven to ten years. The rapidity with which the teacher's role is undergoing a change and the forces that are at work in reshaping the programmes and procedures in schools are matters of vital concern to the teachers of tomorrow. An innovative enterprising young teacher will have lots of opportunities to initiate and pioneer such new programmes. As teachers are ultimate users of innovation they have to act as an innovator, sharer and seeker of new practices.

The contemporary role of the teacher under the stress of change and in the context of knowledge explosion is perceived as a senior partner, with the student partaking of the joy of pursuit of learning and of the adventures ever-seeking new horizons in the realm of knowledge. Thus, a teacher must keep himself abreast of the latest developments in the field of his specialization, the latest developments in the field of methodology of teaching and in the social order as also in the aspirations, attitudes, and requirements of his pupils, in most of the schools the sources of innovations and change have been colleges of Education and Extension Centres, NCERT at the national level and lately the Board of Secondary and Higher Secondary Education in various states. Further to say teachers have to be innovative and prone to change in the field of education which percolates down from the society through varieties of ways.

Like society, in general, education is also undergoing an almost metamorphosis. The development and adoption of new technologies, the various mass media like radio, newspapers, T.V., Films, tape-recorder etc. used for dissemination of information are accelerating

the tempo of change. But the numerous audio-visual aids will fail to impregnate the atmosphere of the classrooms, unless the prime-mover—the teacher do not have an innovative mind and dynamic attitude. Further the change oriented teachers if employed in a school that deliberately shuns such programmes, his change orientation will virtually disappear gradually. In order to make new ideas and practices germinate and grow, not only the environment should be conducive to basic educational reforms, but also arrangement should exist for their careful handling, and correct evaluation. Over the past century many innovations in education have met with tragic fate though some should have an indefinable impression and have reappeared in modified forms.

A model teacher has to be forward looking and dynamic capable of critically comprehending shape of things to come and capable enough to adopt himself to the unforeseen developments. The present day schools need to produce teachers who draw sustenance from new ideas and changes. In the words of the Holy Mother of Shri Aurovindo Ashram, 'blessed are those who take a leap towards the future'.

The improved means of communication have revolutionized the way of life, the concept of distance has been almost annihilated and man's mobility has undergone phenomenal growth. The teachers who are inclined to visit places, either on business or holiday, who are interested in attending meeting a variety of people shall be change-prone. Teachers, especially, connected with science, mathematics and technical subjects must regularly undergo reorientation under the extension programmes to keep pace with the latest ideas in their fields.

In our country also, factors like growth of population, expansion of knowledge, improved means of communication, higher medical standards, etc. have acted as catalytic agents and spurred a process of change in educational institutions and the teachers. In the post-independence era, through planned economic development, the process of socio-economic re-generation has been set in. In order to bring about the reforms in our schools, many institutions have come into being e.g. National Council of Educational Research and Training, National Council of Teacher Education, Centre of Advanced Study in Education (CASE). Besides, several commissions and committees have been set up from time to time, e.g., University Education

Commission, 1949, Mudaliar Commission, 1952-53, Education Commission, 1964-66. They were appointed to critically examine the various facets of Education and to recommend improved practices and programmes. New training programmes tailored to the requirements of school teachers are organized by colleges of education through the Department of Extension Services for orientation of the teachers towards new ideas and practices.

Due to fast growth of population a teacher has to take a class of 50 to 60 pupils. Too much knowledge has to be given to too many people and the teacher will have to be in constant reach of new and innovative ideas and methods. Further to say, under such situation greater stress has to be laid on adopting effective methods of mass education at the same time ensuring equality of opportunities to the students and also take care of individual differences amongst the pupils. Only a teacher equipped to use new methods and innovations has a chance of succeeding today.

The schools are gradually becoming quite heterogeneous in character. To make the pattern of 7 + 5 + 3 a success, a teacher will have to be open and prone to the forth —

coming changes. To make any innovation a success a teacher must possess a sense of commitment and the spirit of taking risk and the ability to pursue the students to accept the new ideas. These qualities are not common among the teachers, hence more resistance from teachers is expected on account of their attitude or on account of the situation existing in the institution where they work. Some teachers may show positive attitude towards new ideas, but something in the institution or outside influences them not to put that new idea into actual practice. It also happens that the teacher does not like particularly idea due to any reason, still he has to put it into practice on account of some force working behind the machinery. Such discrepancies are also bound to occur. Therefore, need for support and guidance from the management and the officials of the Education Department is felt for enduring experimentation of new ideas in the schools. It will boost up the morale of the teachers which, in turn, will make them more change-oriented, open-minded and enable them to adopt new ideas and innovations.

Our educational planners are striving hard to find out factors that forestall the adoption of new educational practices in schools and other educational institutions.

Sometimes the teachers resist change over to new practices due to lack of proper communication and inadequate knowledge about the process of change as well as the benefits which could be reaped by adopting the new practices.

The need of the time expects the teacher to be completely dedicated to the intellect not in the sense of pedantary, but in the sense of a mind free but restless to comprehend the ultimate truth which is universal and beautiful, 'Satyam, Shivam Sundaram'.

In the words of Tagore, 'A teacher can never teach unless he still is learning himself. A lamp can never light another lamp unless it continues to burn its own flames. A teacher should continuously drink from the fresh stream of knowledge and not from the green mantle of a stagnant pool'. His fearless quest for new ideas should continue till the goal is achieved. He can discharge his functions effectively if he is sensitive to new ideas and new practices and quick to adopt other change proneness is an important attribute of an 'innovative teacher' the term inclusive of any type of teacher either a teacher of school or a college of education or of any other educational institution formal or informal.

The present study aims primarily at preparing 'innovative proneness scale for Teachers'. It intends to find out, on the other hand, how far our teachers are ready to accept new ideas and change. The acceptance of change of new ideas or readiness to act for the innovation being a psychological phenomena of an individual, is a composite process. It can be very well assumed that innovative proneness will be influenced and correlated to certain other characteristics. The study of these correlates being the incidental target, the study has been titled as : 'A Study of Innovative Proneness of Secondary and Higher Secondary School Teachers'.

In any school system, the success of most of the innovations largely depends upon the teachers as they are the practioners or users of innovations. Thus, teachers' characteristics are important determinants of diffusion and adoption of ideas. Innovative-proneness is an important teacher criterion in this regard. The psychological disposition of a teacher towards innovations and change will determine a teacher's initiative structure to no less extent than any other variables. <sup>do</sup> Again, innovative proneness as an environmental trait of a professional persons is accountable for its genesis and

growth to other socio-personal dimensions of an individual. Thus, not only a measure of innovative proneness but also a clear idea about other factors influencing it, is equally important. Hence, this study was planned to measure the innovative-proneness of teachers of secondary and higher secondary schools, and to find out its correlated factors - professional variables that might be functional in determining the degree of innovative proneness of an individual i.e. teacher.

Thus, the study is based on instrumentation to measure and exploration of innovativeness in the secondary and higher secondary school teachers. 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, inservice training and exposition to researches in the field of education.

### 1.3 The Role of Teachers

The teacher, like any other member of society, plays multiple social roles in consonance with the different

statuses he occupies both in his private and public life. But the nature of the teacher's occupation places him in the special position of having a complicated set of roles in connection with his occupation alone. They have to reconcile with the exceptions of the society. The teacher has on the one hand an academic role concerned with scholarship and on the other hand he is a character-trainer concerned with development of student's whole personality. The teacher's principal roles according to Ottaway (1968) are : (i) The teacher as an academic specialist, (ii) the teacher as a methodologist or pedagogist, (iii) the teacher as a character trainer ; (iv) the teacher as a member of a school staff; and (v) the teacher as a member of society.

The teacher plays a very significant role in the school. He is a representative of the society ; he is a judge who judges the achievements of the pupils; he is a resource of knowledge and skills ; he provides guidance for pupils' difficulties ; he also settles disputes among pupils ; he discovers rule breakers ; he is a person whose traits are initiated by the children ; he helps pupils to control their impulses ; he also helps pupils

to have confidence in themselves ; as a group leader he establishes climate of the school and the class ; he is parent's surrogate ; often he becomes the target of pupils' hostilities ; he is an object of affection and has to establish warm relationship with pupils. In all these dealings he has to be open, flexible and change prone according to the pulse of the moment. (Hoyle, 1969).

The teacher is expected to know his subject, and to be the acknowledged superior to his students in this respect. In the higher forms of school the importance of the teacher's expert knowledge becomes greater and a teacher should always spend some time in keeping upto date with the advances of knowledge in special subjects. Otherwise he may lose both social and intellectual prestige. The teacher is also expected to be an expert in the methods of teaching and learning. There are different social conditions for successful learning, according to the nature and stage of the learning process. There is a great explosion of knowledge on the one side that makes teacher know more and more on one side, and the research and experimentation in the field of pedagogy on the other side create pressing demand on the teachers to be upto date, innovative and open to receive new ideas.

In recent time a number of factors have completely changed the outlook on school curricula and created the need for a more fundamental curriculum revision. The growth of scientific knowledge at an increasingly rapid pace in mathematical, physical and biological sciences as well as in archaeology, anthropology, history, geography, psychology, and social sciences has created a tendency to include as much of it as possible in the school curriculum. This practical applications of science have not permeated all human life, and a new kind of education with a new kind of curriculum is, therefore, needed to prepare children for living in a technological age. This, of course, need new type of teachers. The growth of democracy has resulted in education coming to be regarded as a right, and a universal educational systems have been and are being established all over the world. The curriculum that was adequate for the few and the elite in the past appears very deficient to meet the varying need and aspiration of all children at school age in particular and at all stages of education in general. With the development of communication and the overcoming of distance, opportunities for friendly understanding and exchange among peoples

and cultures, on the one hand, and occasions for clashes of interests and view points, on the other, have increased. There is an acute need for a curriculum that promotes a greater measure of understanding among nations and cultures. The growth of nationalism, specially in countries which were formerly under foreign domination, has created the need to revise the curriculum. In the era of independence, there is now a call for the adoption of the curriculum to the national heritage and for it to reflect national aspiration and needs. The foregoing factors have created new sets of value which <sup>the school</sup> is expected to attain. They include higher health standards, greater proficiency in productivity skills, the encouragement of initiative and creativeness, and the development of a cooperative spirit and of a spirit of international understanding. The last requires the development of the total personality of the child and is directly linked with the development of his human qualities, intellectual, practical, social, emotional, spiritual and moral. The greater understanding and appreciation of child development of individual differences among children and adults, of the learning process and of the influence of satisfaction and dissatisfaction thereon,

of children's interests and capacities and, in general, of the motivation of child behaviour have their effect on conception and content of curriculum. Pedagogic research and experimentation is taking place on a large scale in schools and classrooms, and more is known of the effect on children of a particular educational content and particular methods of teaching. All these pressing demands of the time are on the role of the teacher. The teacher has to be open, innovative and prone to change. ( UNESCO, 1966 ).

*4/10/68*

More brave and innovative ventures in education have pondered on limitations of the mediocre teacher than on the limitation of average child. 'There is one thing that distinguishes teaching from all other professions, except perhaps the Church', says Beeby (1968), ' - no change in practice, no change in curriculum has any meaning unless the teacher understands it and accepts it'. This means no teacher can practice any innovation unless he understands it and accepts it - innovation without teacher is useless. This is simple but fundamental truth that every man of education can easily understand. If a young doctor gives injection under instruction, the efficiency

of the injection does not depend on his faith in the formula he has used. With teacher it does. If he does not understand the new method, or if he refuses to accept it superficially, <sup>e</sup> than instructions are of no avail. At the best he will go on doing in effect what he has always done, and at the worst he will produce some travesty of modern teaching. That is why the teacher cannot afford to lag behind, he has always to be in tune with the time. But all teachers are not innovative and with proneness to change for better. Innovative proneness in addition to the institutional factors, also depends on certain personal and professional variables with the teacher. Here in this study innovative proneness is related with certain professional and personal factors of the teachers.

#### 1.4 The Present Study

In the present study, a particular focus of interest is the attitudes of teachers of the secondary and higher secondary schools of Gujarat towards innovation. For the purpose of present investigation on innovation is taken to mean a significant change in educational objectives, curriculum content, teaching method, pupil grouping, staff development resource utilisation or

school organization. Here there is a multidimensional approach to the study of teachers' innovativeness. The instrumentation developed by the investigator seeks to identify and quantify four aspects of teacher's innovativeness :

- (i) Teachers' 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) Teachers' general attitudes to change or their change related values ;
- (iii) Teachers' preferred behaviours in relation to their perception of attributes of innovations ; and
- (iv) Teachers' preferred behaviours in relation to their perception of the setting and circumstances in which innovations are introduced.

On distinction between attitude towards innovation defined as relatively enduring organization of an individual's beliefs about and object or idea which predisposes him to action and his actual behaviour requires exploration. There is little evidence that expressed attitude and overt behaviour are necessarily consistent.

Festinger (1964) found that a change in attitude towards an innovation did not always lead to behavioural change. In the school context attitude-behaviour discrepancy could carry important implications. The overt behaviour of individual in a formal organization setting may be highly divergent from their attitude and centrally held values. 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 hypothesized that the resultant strains and tensions induced in the individual will be resolved by various dissonance reducing mechanism depending upon the individuals latitude of tension tolerance. The consequences of undue and dy-functional adaption require further exploration. Various modes of accommodation are suggested in Kelman's (1960) compliance theory. In order to predict behavioural outcomes attitudes towards both the innovation and the situation need to be considered.

To explore the dimensionality of general change related and innovation - specific attitudes

and behaviours, the investigator has constructed on the line of Panchal (1977) the scale containing three sections. Section I is the Inventory of Attitudes to Innovation. Section II contains the Situational and Innovation Characteristics Scale and Section III is the Change Related Values Questionnaire.

The components of 'The Inventory of Attitudes to Innovation' (Section I ) are : (1) Individualisation, (2) Curriculum Organization, (3) Teaching - Learning Process, (4) Teaching Resources, (5) Internal School Organisation, (6) Staff Development; (7) School Community Relationship; the component of 'The Situational and Innovation Characteristics Scale ( Section II ) are : (1) Administrative Support, (2) Staff Norms, (3) System Norms, (4) Complexity, (5) Compatibility, (6) Riskness, (7) Localiteness and (8) Cosmopoliteness, and the components of 'The Change-Related Values Questionnaire. (Section - III) are : (1) Traditionalism, (2) Progressivism, (3) Dogmatism, (4) Venturesomeness, (5) Conservatism, and (6) Change Proneness.

'The Inventory of Attitude to Innovation (I.A.I) is a closed - form Likert type summated rating scale designed to measure teachers' predisposition to adopt educational innovations. The selection of items for this inventory was based on a detailed survey of educational journals published in the various journals from 1963-1973. As a criterion for item selection innovations were categorized by type (e.g. innovations in content teaching method, school organization, pupil grouping ) and complexity (e.g. innovations ranging from the relatively simple adoption of teaching aids to innovation, requiring changes in teachers value orientations.) Within each category frequency of reference in the journals was taken as an indicator of current interest and relevance.

Research on the determinants and correlates of teacher 'innovativeness' suggests that 'antecedent conditions', to use Rogers terms (1962) for the successful adoption or innovations includes three major sets of variables : (i) Situational variables (ii) Characteristics of the innovation and (iii) Personal variables. To explore the hypothesis that teacher 'innovativeness' would be significantly influenced by these variables, the investigator has constructed 'The situational and the innovative characteristics scale, and for personal

variables the investigator has designed separate personal data sheet attached at the beginning of the questionnaire which includes professional training, participation in inservice education, reading of professional research literature and professional job satisfaction.

Several studies have investigated relationships between teacher innovativeness and situational variables such as 'Organizational Climate' (Halpin and Croft, 1962), 'Organizational character' (Miner, 1965). 'Organizational Health' (Miles, 1964), 'Group Conformity' (Warren, 1948, Blan and Scott, 1962; Pallegrin, 1966), 'Supportive Climate' (Fox and Lippitt, 1964. Watson, 1967; Sieber, 1968, Bholra, 1965); 'Peer community support' (Parker, 1970); 'Perception of Administrative support' (Gross, et. al., 1971). The importance of supportive climate for successful adoption is stressed in a study by Shipman (1972).

To provide a measure of the influence of situational variables three subscales are constructed : (i) T.N. Subscale Teachers' perceptions of change related norms and values of their colleagues in the institution ; (ii) S. Subscale - Teachers' perceptions of the degree and kind of administrative support provided for innovation in the school, and

(iii) S.N.Subscale - Teachers' perception of the change related norms and values of the educational system.

In a review of adoption studies in education, anthropology and sociology, Rogers (1962) identifies five characteristics of an innovation which may exert a significant influence on adoption - compatibility, complexity, relating advantage, communicability and divisibility. The importance of type and complexity of innovation is argued in a study by Macdonald and Rudduck (1971).

Gouldner (1957) hypothesises a distinction between the latent organizational identities of 'cosmopolitanism' and 'locals' as determinants of organizational behaviour. Bicholtz and Rogers (1969) suggest that innovation varies directly with cosmopolitanism. They also argue that the degree of risk involved in adopting an innovation may significantly influence teachers' innovativeness.

To test a number of hypothesis suggested by these studies, the investigator has constructed five subscales to measure what appeared to be five separate but related dimensions of teachers' perception of the characteristics of innovations :

- (i) Compatibility subscale (CP) - Teachers' perception of the innovations ;
- (ii) Complexity subscale (CM) - Teachers' perception of the complexity of innovation ;
- (iii) Cosmopolite subscale (C) - Perceived 'Cosmopolitaness' of the innovation ;
- (iv) Localite subscale (L) - Perceived 'Local' orientation of the innovation ; and
- (v) Risk-taking subscale (R) - Teachers' perception of degree of risk involved in adoption.

The relationship between teacher innovativeness and their general change-related attitude and values has been the subject of several studies. Three established scales were employed to explore some of these relationships : (i) The Traditionalism scale (T) and (ii) Progressivism scale (P) - developed by Kalinger and Kaya (1959) were administered with some modification in scoring mode and wording, (iii) Dogmatism - A shortened version of the Rokeach Dogmatism scale (1960) was devised by drawing a random sample ten items from the forty items of the form 'E' scale.

Three new scales are developed by the investigator to elicit attitudes towards statements more overtly relating to innovation in education.

(iv) Venture-someness studies by Evans (1968) and Galler (1971), Eicholtz and Rogers (1964) found significant relationship between venture-someness and innovativeness. Ten items are devised for this purpose. (v) Conservatism and change proneness (CP) - studies by Childs (1965), Galler (1971), Hilfiker (1968), Miller (1968), and Forman (1971) suggest the potential utility of measured conservatism and change proneness in predicting innovativeness. The investigator has made proper provision to assess some of the relationships (established) hypothesised in these studies.

It can be said that teacher 'innovativeness' is a multi-dimensional phenomenon. The continued use of single, global, putatively unidimensional measure of the construct is likely to obscure many of the subtly and complexly related elements which constitute innovativeness.

### 1.5 The Objectives

The objectives of the present study are as follows :

- (1) To design and validate 'Innovative proneness' scale for Teachers.
- (2) To study the 'innovative proneness' of teachers - of the secondary and higher secondary schools of Gujarat with reference to their personal and professional variables.

- (3) To find out whether there are certain other characteristics of teachers which are related to their innovative proneness.
- (4) To study factor analysis of the 'Scale' developed by the investigator.
- (5) To find out interrelationships among components of 'innovative proneness scale' constructed and standardized by the investigator.

The terms 'Secondary' and 'Higher Secondary' need clarification at this initial stage. The New Pattern of Education ( 10 + 2 + 3 ) is now old and still newer pattern of 7 + 5 + 3 is to be substituted for it in our State. The Classes from VIII to XII are now to be treated as Secondary School classes followed by three-year degree course. But when the problem was taken up, 10 + 2 + 3 pattern was in vogue and the data were collected from the teachers teaching various subjects in classes VIII to XII and they are designated as 'Secondary and Higher Secondary Teachers' in the title of this investigation.

In this Chapter, the importance of the study and the nature of the problems are discussed. The next chapter deals with the review of researches and related literature.

---

## CHAPTER I

REFERENCES

- Adaval, S.B., (1968), The Third Indian Year Book of Education, Educational Research, NCERT, New Delhi.
- Bhola, H.S., (1965), Innovation, Research and Theory, Ohio State University, Columbus, Ohio.
- Beefy, C.E. (1968), 'Curriculum Planning, in Report of the Fourth Commonwealth Education Conference, Lagos, Nigeria.
- Blau, P.M. and Scott, R.W., (1962), Formal Organizations. A Comparative Approach, Candler, San Francisco.
- Broady, H.S., Smith, B.O., and Barnett, J.R., (1963), Democracy and Excellence in American Secondary Education, Rand McNolly and Company, Chicago.
- Buch, P.M. (1972), 'An Inquiry into Condition Promoting Adaptability in Indian Schools', Unpublished Ph.D. Thesis, University of Baroda, Baroda.
- Childs, J.W., (1965), 'A Study of the Belief-Systems of Administrators and Teachers in Innovative and Non-Innovative School Districts', Ph.D. Thesis, Michigan State University, East Lansing.
- Desai, D.M., (1971), New Direction in the Education of Indian Teacher, M.S.Univ., Press, Baroda.
- Evans, R.I., (1968), Resistance to Innovation in Higher Education, Jossey Bass, San Francisco.
- Festinger, Leon (1957), A Theory of Cognitive Dissonance, Evanston, III, Row Peterson.
- Festinger, Leon, (1964), 'Behavioural Support for Opinion Change, Pub.Opinion, Qty., 28, 404-418.

- Fox, R.S. and Lippitt, R. (1964), 'The Innovation of Classroom Mental Health Practices', In Methew B. Miles (Eds.), Innovation in Education, Bureau of Publications, Teachers' College, Columbia University, New York.
- Halpin, A.W. and Croft, D.B. (1962), Organizational Climate of Schools, Midwest Administration Centre, University of Chicago.
- Hoyle Eric, (1969), Role of the Teacher, RKP, London.
- Humayun Kabir, (1956), Education of Tomorrow, Calcutta Firrma, K.L.Mukhopadhyay.
- Kelman, H.C. (1960), 'Process' of Opinion Change', Public Opinion Quarterly 25, 57-79.
- Lulla, B.P. and Singh, L.P. (1974), 'Teacher Education, A Trend Report, in Buch, M.B., A Survey of Research in Education, Centre of Advanced Study in Education, M.S. University of Baroda.
- Miles, M.B., (Ed.) (1964), Innovation in Education, Bureau of Publication, Teachers' College, Columbia University, New York.
- Miner, J.B., (1965), The School Administration and Organizational Characters, Centre of Advanced Study of Educational Administration, Eugene, Oregon.
- Miller, R.I., (1968), Perspectives on Educational Change. Appleton Century-Crofts, New York.
- Ottaway, A.K.C., Education and Society, Routledge and Kegan Paul, London, 1968.
- Pallegrin, R.J., (1966), An Analysis of Sources and Process of Innovation in Education, Centre of Advanced Study of Educational Administration, Eugene, Oregon.
- Panchal, B.R., (1977). 'A Study of Innovative Proneness of Teacher Educators of Secondary Teachers' Training Colleges of Gujarat State,' A Doctoral Thesis, M.S. University of Baroda, Baroda.

- Richey, R.W., (1968), An Introduction to Education, New York, McGraw-Hill Book Company.
- Rogers, E.M., (1962), Diffusion of Innovation. The Free Press, New York.
- Rogers, E.M., (1964), 'What are Innovators Like ?' In Richard O. Carlson and others (Eds.), Change Processes in the Public Schools, Centre of Advanced Study in Educational Administration, Eugene, Oregon.
- Rogers, E.M., (1969), Managing Change, Burmingham, Cal., Operation PEP, Nimeo.
- Rokeach, Milton, (1908), Open and Closed Mind, Basic Books, New York.
- Saiyaidain, K.G., (1962), Education, Culture and Social Order, Asia Publishing House, Bombay.
- Sieber, S.D. (1968), 'Organizational Influence on Innovative Robles', In Terry L. Edill and Foanne M. Aitchell, (Eds.) Knowledge Production and Utilisation of Educational Administration, University of Oregon, Centre for Advanced Study in Educational Administration, Eugene.
- UNESCO, (1960), Curriculum-Methods of Teaching Evaluation and Text-Books in Primary Schools, Asia. UNESCO. Regional Office for Education in Asia, Bangkok.
- Watson, J.E. (1967) , Community Leadership in Rural Trade Centred, Community and Comparison of Methods of Identifying Leaders, Columbia.
-