

CHAPTER I

THE PROBLEM

"Old order changeth,
Yielding place to new,
God fulfils Himself in many ways,
Lest one good custom should corrupt the world"

- TENNYSON.

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CHAPTER I

THE PROBLEM

1.1 INTRODUCTION

Life at present has become very cosy, comfortable and meaningful because of the progress of science. Such are the changes which have taken place in various areas of human life.

Naturally with these changes education has also to change or to modify. As a dynamic science, ever-progressing and ever-progressive, education must undergo change. Rousseau 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. Pestolozze, 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 present era. 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, 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. The citizen (individual) is supposed to play all these roles well - skilfully and successfully. He has to fulfil his responsibility as a citizen also.

It is in this sense that education has to change or modify because the determinants of education vary with the times. Then and then only, education can play its proper role. Education has to build the society - the right type of society from the points of view of all types of changes taking place in the society in particular and the world in general. But there are always obstacles and impediments in the path of progress - we may call them resistances. Just as the change is the law of nature, offering resistance 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. Frictional force inhibits motion.

The term 'mental inertia or preservation' is well known in the realm of psychology. Continuation of

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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 resists change. The elderly persons never approve of the action and activities of the younger generation - visiting movies for recreation; inter-caste, or inter-provisional or international marriages 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 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. The golden mean of two extremes is the only possible or plausible solution. Let changes be introduced gradually, carefully. Let each change be duly assimilated and acknowledged and accepted by all these 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

5 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 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 nutshell, innovators are to be planted for absorbing suitable changes in various walks of life.

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

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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 colleges of education in regard to matter and material to be given, methods, techniques and procedures to be followed.

1.2 SOCIAL CHANGE AND EDUCATION

The seeds of great discoveries grow in the minds well prepared to receive them.

The demands made 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 teacher and the teacher educators tomorrow. A innovative enterprising young teacher will have lots of opportunities to initiate and pioneer such new programmes. As the teachers are

ultimate users of innovations they have to act as innovator, sharer and seeker of new practices. So is the case with teacher-educator as well.

The contemporary role of the teacher under the stress of change and in the context of knowledge explosion is perceived as senior partner, with the student partaking of the joy of pursuit of learning and of the adventurer ever-seeking new horizons ~~■~~ in the realm of knowledge. Thus, a teacher and the teachers' 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 the latest changes occurring 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 teacher-educators 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 and the teacher-educator 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 and teacher-educator has to be forward looking and dynamic capable of critically comprehending shape of things to come and capable enough to adapt 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 Aurobindo 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 and the teacher-educators who

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are inclined to visit places, either on business or holiday, who are interested in attending meetings, seminars, or in 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 this regard, teacher-educators will have to be change-prone first to make the teachers follow the suit.

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 teacher 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, and colleges of education are also flooded. Maximum knowledge has to be given to maximum number of people and the teacher will have to be in constant search 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 this new pattern a success a teacher will have to be open and prone to the forthcoming 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. Therefore, need for support and guidance from the management and the officials of the Education Department is felt for enduring experimentation of new

11 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 communications 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 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 a 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 Teacher-Educators". It intends to find out, on the other hand, how far our teacher-educators are ready to accept new ideas and change. The acceptance of change or new idea 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 Teacher Educators of Secondary Teachers' Training Colleges of Gujarat State".

In any school system, the success of most of the innovations largely depend upon the teachers as they are the practitioners or users of innovations. Thus, teachers' characteristics are important determinants of diffusion and adoption of an idea. Innovative-proneness is an important teacher criterion in this regard. The psychological disposition of a teacher-educator towards innovations and change will determine a teacher's initiative

structure to no less extent than any other variable. 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 innovation-proneness of teacher-educators of Secondary Teachers' Training Colleges who are primarily teachers and teacher-educators thereafter, 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 educator.

Thus, the study is based on instrumentation and exploration with analytical and critical characters. In its exploratory aspects it intends to find out the status of innovative proneness of teacher-educators of Secondary Teachers' Training Colleges and its relationship with other professional variables viz., teaching experience, professional training, academic qualifications, frequency of change from one school to another, foreign visits, inservice training, and exposition to researches in the field of education.

1.3 TEACHERS AND TEACHER-EDUCATORS

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. What is true for the teacher is true also in the case of the teacher-educator as the later is basically a teacher who has also to know the content and pedagogy as well. They have to reconcile with the expectations 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 students' 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.

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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 make teachers to 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 and teacher-educators to be upto date, innovative and open to receive new ideas.

In recent times, 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. The practical applications of Science have now 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 and teacher-educators. 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 on the few and the elite in the past appears very deficient to meet the varying needs and

aspirations of all children at school age in particular and at all stages of education in general. With the development of communications 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 aspirations and needs. The foregoing factors have created new sets of values which the school is expected to attain. They include higher health standards, greater proficiency in productive 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,

17 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).

More brave and innovative ventures in education have foundered on limitations of the mediocre teacher than on the limitations 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 practise 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 an injection under instruction, the efficiency of the injection does not depend on his faith in the formula he has used, with the teacher it does. If he does not understand the new method, or if he refuses to accept it other than superficially, 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 correlated with certain professional and personal factors of the teacher educators.

1.4 TEACHER EDUCATION IN GUJARAT

Here it is in the fitness of the things to have a glance at the teacher education in the country before looking into the researches on teacher education in Gujarat.

In the process of learning and teaching, the teacher is considered to be the most important factor (Adaval, 1968). As already discussed in the previous section, the teacher is now considered to be the main-spring for educational innovations in every country. In India, the teacher has always enjoyed the prominent place since early Aryan settlement, and his behaviour has been watched with a utmost care. Now, again, in young independent India the teacher and his education, and

training and preparation has received careful attention in the reports of the Commission that have been appointed. As education goes, so go the life and future of a nation (Broudy, Smith and Burnell, 1963); and as is our teacher so is our education. It is obvious that the future of a nation depends upon the quality of teachers a country has (Richey, 1968; Lulla and Singh, 1974). At a symposium on Teacher Education in India, Gowda (1964) stressed that at the heart and core of the educational process is the teacher, well designed curriculum, equipments and buildings are necessary, but without qualified and highly motivated teachers they are of limited and little avail. Any educational system is as good as the teachers in it and no better. While discussing the problems of educational reconstruction, Saiyidain (1962) also pointed out by saying that the quality of teacher in educational system is a more important factor than all other educational factors put together. Humayun Kabir (1956) corroborates that the efficiency of a system of education rests on the quality of education, and without good teachers even the best system is bound to fail.

Education is basic to the forward movement of a nation. At the center of this movement, stand the members of the teaching profession. With every move in the field of education they are being challenged to meet the increasing educational needs. Therefore, for planning

education in the real sensem it is essential that adequate attention be paid to the teachers, and therefore, more to the training of teachers.

In India, today, there are 450 secondary teachers training colleges turning out more than 50,000 trained graduate teachers every year. In the post-independence period, there has been a phenomenal increase on the number of secondary teachers' training colleges in the country. From 41 colleges in 1947 to 363 secondary teachers' training colleges show an eightfold increase which is a remarkable growth. In Gujarat itself, colleges of education have increased from in 1947 with 50 enrolment to 40 colleges with total 3894 enrolment in 1972-73.

But the most disheartening part of it is that there is little evidence of any sincere attempt being made to this quantitative growth. It is more by accident or vested interests than deliberating planning that the new training colleges have sprung up in the country as well as in Gujarat. However, a little thought was generated in spite of the numerous judicious suggestions and recommendations put forth by a number of Commissions and Committees at national level, beginning with University Education Commission (1949).

The first post-independence commission, the University Education Commission (1949) critically evaluated

21 the teacher training programme in the country and rendered some challenging recommendations with respect to theory courses, student teaching qualifications and experience of the teachers educators, etc. But the recommendations made to bring about an improvement in the teacher training colleges did not seem to make any significant and noteworthy difference in the theory and practice of teacher education even after twentyeight years.

Later the Secondary Education Commission (1952-53) although assigned with the responsibility of suggesting reforms in the sphere of secondary education could not resist offering observations about teacher education programme. The Report observed:

However, excellent the programme of teacher training may be, it does not by itself produce any excellent teacher. It can only engender the knowledge, skills and attitudes which will enable the teacher to begin his task with a reasonable degree of confidence and with a minimum amount of experience. Increased efficiency will come through experience critically analysed and through individual and group efforts at improvement.

The first conference of the principals of training colleges (1957) also made very valuable suggestions to bring about an improvement in the prevailing teacher education programme in the country by giving special emphasis to both practical work and theory courses.

The Education Commission (1964-66) came out with searching and revolutionary observations and recommendations. Some of them are briefly summarized hereunder:

1. The professional preparation of teachers, being crucial for the qualitative improvement of education, should be treated as a key area in educational development and adequate financial provision should be made for it.
2. In order to make the professional preparation of teachers effective, teacher education must be brought into the mainstream of the academic life of the universities on the one hand and of school life and educational developments on the other.
3. The essence of a programme of teacher education is quality, and in its absence, teacher education becomes, not only a financial waste but a source of overall deterioration in educational standards. A programme of highest importance, therefore, is to improve the quality of teacher education.

The Indian Association of Teacher Educators, formerly known as "All India Association of Training Colleges", the only national organization of teachers of

training institutions in the country, has also pondered over the cause of teacher education and its problems. They have been organizing annual conferences quite frequently beginning with their first meeting at Baroda in 1950. So far they have had eighteen conferences in different parts of the country. All the conferences of teacher-educators have discussed and recommended and revitalization and improvement of the programme of teacher education prevalent in the nation's colleges of education dealing with different aspects and dimensions of teacher education programme.

The general feeling is that today the position of teachers' training colleges is no better as compared to the time and energy spent in evaluating and making the recommendations. What is wrong with the teacher-educators? The question is yet to be answered.

From the beginning, the training colleges in India have been the object of severe criticism. These criticisms have invariably been directed against the role and the superficial nature of the training programme (Lipkin, 1970). The process of brining about improvement in this vital programme has been annoyingly and alarmingly slow. A feeling is being generated that due to uncoordinated efforts, more harm than good is being done to teacher education (Buch, 1972). The training colleges have become so soft and have so much forgotten the fundamental values that one hesitates to call them the real training colleges

for teachers, much less the colleges of education, a name which has deeper importance and larger ramifications. Paradoxical, as it is, while the entire educational system in the country has been re-examined and re-constructed, the training colleges have remained hypothesized with the techniques and norms which are anything but progressive (Ehan, 1969). Not only that teachers' colleges are merely existing in a dream world. They dread any intellectual contact with other university disciplines. The sheer weight of deadwood and routine performances drain away all the energy of the staff and students in the teachers' training colleges (Chaurasia, 1967). Actually, the currently vogue teacher education (B.Ed.) programme in the country needs something like a surgical operation (Desai, 1971).

Moreover, the introduction of the New Pattern of Education (10 + 2 + 3) has created some more demand on the role of the training colleges and the teacher-educators. So many new areas are introduced at higher secondary level and the higher secondary is nothing but the upgradation of secondary with a view to improving the quality of education at all the levels of education. These expectations want the teacher-educators to be open minded and innovative, always ready to receive new ideas and prone to change to cope up with new roles and responsibilities. But all teachers are not the same. There are individual differences among them also. Some are more prone to change, some are less and the

research to this effect is the need of the time. Hence, the significance of the present investigation.

This type of investigations will help the administrators and teacher-educators to know the level of their proneness to innovations and will also help in locating the hazards, or the factors which lead them away from the path of innovation and the factors responsible for making them prone to change. The present investigation will provide a "Innovative Proneness Scale" to measure the attitude of teacher-educators towards innovations. No Indian tool to do so is available.

Research on teacher education in Gujarat has so far been mainly focussed on expansion programmes, administration, finance and such other aspects related to development and standards of teacher education. Of the two doctoral studies done on teacher education in Gujarat, the one by Sheth (1973) is focussed on the state, society as well as administration, financing and programmes of teacher education in colleges of education in Gujarat. The other by Desai (1973) presents a historical and developmental picture of colleges of education in Gujarat in post-independence period. The physical facilities in them, student population, instructional programme, system of examination and evaluation and inservice education programme. Some student have also been directed on teaching

behaviour at Baroda. Sheth has cursorily referred to organizational climate of teacher colleges in Gujarat. With a few doctoral studies done on organizational climate at high school level in Gujarat at Baroda, it is natural that the need for similar studies on climate, morale and leadership behaviour at the level of teacher education institutions be also felt by research workers. The third study (Franklin, 1975) is on the field of organizational climate and leadership behaviour in teacher education institutions. This type of research may result in identifying some so far unexplored dimensions and directions of improving the quality and effectiveness of the professional preparation of school teachers.

In his study on teacher education for high school teachers in Gujarat, Sheth (1973) found that colleges are ill-equipped, the programme is more theoretical, remotely geared to the needs of the school, the teacher-educators having inadequate background, skills and vision and those who enter the portals of the colleges are interested largely in obtaining the B.Ed. degree rather than developing professional competence to be effective in school teachers. Desai's confusion in his study (1973) on development of teacher education in Gujarat is that the programme needs to be reviewed to the light of the changing objectives of education and the changing secondary schools in the state. It needs to be restructured and reshaped. "Every two or

three years, the programme should be given a rigorous search and it should be re-innovated so as to keep its potentiality and quality high."

Thus, teacher education programmes in the country as well as in Gujarat need a modern outlook and fresh current thinking in view of the implementation of the New Pattern of Education (10 + 2 + 3). In Gujarat also new horizons are to be reached in the area of teacher education which provide the finished product to the secondary and higher secondary schools. To appreciate this modern outlook the personnel of the colleges of education of Gujarat has to be modern first. From them the ideas and innovations will percolate down in the schools.

1.5 THE PRESENT STUDY

In the present study, a particular focus of interest is the attitudes of teacher educators of the Secondary Teachers' Training Colleges of Gujarat towards 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 or school organization. Here there is a multi-dimensional approach to the study of teacher-educator innovativeness. The instrumentation developed by the investigator seek to identify and quantify four aspects of teacher-educators' innovativeness: (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) teachers' general attitudes to change or their change related values; (iii) teacher-educators' preferred behaviours in relation to their perception of attributes of innovations; and (iv) teacher-educators preferred behaviours in relation to their perception of the setting and circumstances in which innovations are introduced.

The distinction between attitude towards innovation defined as relatively enduring organization of an individual's beliefs about an 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 individuals in a formal organizational setting may be highly divergent from their attitudes 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 mechanisms, depending upon the individual's latitude of tension tolerance. The consequences of undue and dysfunctional adaptation 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 the scale containing three sections. Section I is the Inventory of Attitudes to innovation, Section II contains the Situational Characteristics Scale and the 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) Individualization, (2) Curriculum organization, (3) Teaching-Learning process, (4) Teaching Resources, (5) Internal School organization, (6) Staff Development; the components ^{of} 'The Situational Characteristics Scale' (Section II A) are: (1) Administrative Support, Staff Norms, System Norms; the components of 'The Innovation Characteristics Scale' (Section II B) are : (1) Complexity, (2) Compatibility, (3) Riskness, (4) Localiteness and (5) Cosmopolitaness; and the components

'The Change-Related Values Questionnaire (Section III) contains: (1) Traditionalism, (2) progressivism, (3) Dogmatism, (4) Venture - Someness, (5) Conservatism, and (6) Change Proneness.

'The Inventory of Attitudes 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 1963-1975. 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 innovations 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 of 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 two scales: (i) The Situational Characteristics Scale (S.C.S.) and (ii) The Innovation Characteristics Scale (I.C.S.) 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; Pallegirin, 1966); 'Supportive Climate' (Fox and Lippitt, 1964; Watson, 1967; Sieber, 1968; Bholia, 1965); 'Peer Community Support' (Parker, 1970); 'Perception of Administrative Support' (Gross, et al., 1971). The importance of supportive climate for successful adeption 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 training college; and (iii) S. N. Subscale - Teachers' perceptions 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, relative 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 'cosmopolitans' and 'locals' as determinants of organizational behaviour. Eicholtz and Rogers (1969) suggest that innovation varies directly with cosmopolitanness. 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:

- (1) Compatibility Subscale (CP) - Teachers' perception of the innovations;

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- (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 attitudes 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 modifications in scoring mode and in 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

venturesomeness 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.

1.6 THE OBJECTIVES

The objectives of the present study are as follows:

1. To design and validate "Innovative Proneness" Scale for Teacher-Educators.
2. To study the 'innovative proneness' ^{one} ^{of} ~~and~~ teacher-educators of the Secondary Teachers' Training Colleges of Gujarat with reference to their personal and professional variables.
3. To find out whether there are certain other characteristics of teacher educators which are related to their innovative proneness.

4. To study the 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.

In this chapter, the nature of the problem is discussed. The next chapter deals with the review of researches and related literature.

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