CHAPTER - III

A REVIEW OF PREVIOUS STUDIES

3.0 Introduction:

Education as a social system has been subjected to constant innovation and change. It is only within recent decades, however, that the anatomy of the process has been studied in anything like a systematic way. Usually the attempt has been made to reconstruct the nature of the process of change after the event, in order that we might avoid committing the same errors on the next occasion. It is only when the need for major reform in education has been fully recognised and accepted the elements which assist or hinder the enactment of change are more closely examined. The process then can be planned in such a way as to ensure that the changes made are more durable, measurable and similar to the original version of the innovation proposed.

Innovations are ultimately intended to benefit people, and since people are always organized into systems, innovations are also intended to benefit systems. The school system also gets the same benefits, but an innovation may not provide the benefit

directly, rather, it is supposed to be an 'improvement', a change in the way the system operates. Therefore, all the members of the system have an important stake in deciding upon the innovation and in determining what constitutes an 'improvement' for themselves. This will not always be an easy or obvious decision, since what may benefit one school may at the same time constitutes more work or less benefit for another. Hence the best innovation balances the benefits and costs throughout the system to achieve the optimum advantage. Hence, the members of the school system should be involved actively in the process of adoption or develop an innovation for better results.

Havelock(1975) in his book "Planning for Innovation", describes that the change process consists of four very important elements viz: (i) Resource system (ii) Communication (iii) Innovation and (iv) The adopter system. To describe any innovative institution in terms of its innovativeness, it is considered enough if all the above four elements are rightly described.

Frequently the process of assuming new roles and new competencies is misunderstood and seriously neglected by teachers. The teachers were eager for change, but in the process they encountered numerous barriers that hindered their ability to successfully adapt to new behavioural pattern. The problems gradually led to frustration and a lessened motivation to use the programme. The project sponsors did not provide feedback mechanisms to help them identify growing implementation problems and the teachers have insufficient means to express their concern. Teachers and administrators traditionally have ≠ little training

or experience in what is required to install and maintain school innovations.

In India, the development in the field of education are comparatively faster after independence. In 1955, the extension service movement was started and in 1961 when the National Council of Educational Research and Training (NCERT) was established, a number of other organisations and structural set-ups also came up in the country at the centre and state levels. A few such are the All India Council of Secondary Education (AICSE), Extension Centres and State Council of Educational Research and Training (SCERT), simultaneously, a large number of innovations were floated in the field of secondary education. Empirical researches also (Rao, 1967; Buch, 1972; Buch and Buch, 1973) proved the presence of an innovative trend in the schools.

Of the many innovations that have been implemented, some got rejected and distorted and many were discontinued. Why do innovations with so much promise fail? What are the factors that facilitate adoption and continuance of innovations? What are the constraints that these facilitating factors face inhibiting their operation as a result of which the innovations are discontinued? Are these promoting and preventing factors culture-bound? What are the fertile and barren fields for these factors? The available literature on innovations is nested searching for answers to these and similar questions and the relevant findings are summerised in this chapter.

3.1 Review of Doctoral Studies on Innovations in India:

Educational Innovation studies in Education are only a decade old. The NCERT organised the first seminar on educational innovations and their diffusion in 1967 at Hyderabad. When the Centre of Advanced Study in Education(CASE) embarked on innovation research studies in 1970, there were two studies on diffusion of innovations in Indian schools. Subba Rao(1967) enquired into "the factors that contribute to the promotion or inhibition of educational innovations". He found that the involvement of the staff in the stages of evaluation projects and the democratic approach contributes to the success in adoption of innovations. The major areas of educational innovation pertain to (a) class room instruction, (b) use of audio-visual aids (c) utilisation of learning experience (d) examination reform (e) school administration (f) others relating to pupil welfare in general.

The sources of new ideas are (a) extension services departments (b) headmasters (c) seminars (d) workshops (e) inspectorates (f) training college personnel (g) books, magazines and journals. Voluntary agencies and extension centres also are included in his list of sources of new ideas. The inhibiting factors identified from Subba Rao's studies were (a) State Department of Education (b) lack of leadership of the Headmasters and their inadequate professional experience to guide his teachers for innovation.

Bhogle(1969) investigated the influence of some social psychological and organisational factors on the readiness to accept

change in a group of secondary schools. The Headmaster's role is indicated as the most vital factor for the adoption of innovation. The type of headmaster and his characteristics which are found to positively influence are: (1) democratic approach (2) favourable attitude to teaching (3) higher salary (4) low role conflict (5) greater age and (6) long experience of teaching.

This kind of headmasters belonged mostly to large schools and to multi-purpose type of schools, and schools with cosmopolitan teachers. It was also found that innovative principals and innovative teachers do not always go together.

Characteristics of innovations like relative advantage, compatibility, complexity, divisibility and communicability effect educational innovation to a significant level.

Personality of the headmaster and the organisational climate characteristics of the school are found to play a major role in the acceptance and adoption, even more than the personality factors of the adopters themselves.

Bennet(1968) has reported a positive relationship between esprit of the teachers and the number of innovations adopted by the concerned school. But the findings of a later study by Buch(1972) contradict Bennet's findings. However, Buch and Bennet are found to agree in their findings that the quality of 'thrust' in the principal does not contribute to the innovation adoption triats of the teachers. There are contradictory findings reported about the relationship between the 'consideration' trait of the headmaster and the adaptability of the school, by earlier researches.

Bhogle(1969), Subba Rao(1967) and Buch(1972) concur in their findings that there exists no relationship between experience of teachers and their acceptance of innovative practices. On the relationship between the age of the headmaster and his innovativeness, studies by Radhukar(1951), Rogers(1961), Seger and Holdaway(1966) and Bhogle(1969) report the existence of a positive relationship while studies by Carlson(1965), Carnic(1966), Lawrence(1967),Hinman(1967), Anhel(1967) and Buch (1972)report the existence of negative relationship.

Pratibha(1969) studied innovation in relation to schools in Gujarat. She found that (i) some schools tried innovative practice more for prestige value than even for the quality and educational worth of the practice (ii) only in a few schools, innovations were institutionalisation. Her major findings include the following: The following factors were found to contribute favourably for innovation adoption: (a) Dynamic leadership qualities of the head (b) Progressive outlook of the managing committee of the school (c) Teachers' cohesiveness, team spirit and identification with school (d) The watchful student community alongwith an alert and co-operative local community (e) Extent of guidance from local extension services department. The detrimental or inhibiting factors for innovation in schools have been identified by her in her study: (i) A traditional and conservative principal (ii) Over cautiousness of the principal without liberal attitude (iii) Examination result oriented management (iv) teacher's lack of faith in innovation, (v) interference of local politics into school, (vi) controlled school climate leading to staff disengagement (vii) older age of faculty members

(viii) cost factor (ix) delay by the department of education to approve innovation due to non-conformity to departmental participation (x) heavy work load of teachers.

Griffin and Pareek(1970) arrived at certain generalisations regarding steps for activising the process of change. (1) Recognising the need for change would be the way of those who want to change (2) Persons willing to change should have exposures to innovations of others in favourable conditions. (3) Sustained use should be accepted as the law. (4) Staff involvement of adapters in creating developing and planning a change. (5) Building self concept in favour of one's own abilities in relation to perceived innovation. (6) Assurance from superiors for right incentives.

Rai(1972) studied about factors related to the process of innovation diffusion within a school system, the teacher characteristics associated with diffusion process are (1) the time of awareness of innovation, (2) the time of its adoption, (3) its internalisation (4) the process of self perceived change - orientation.

Rai's finding about the eight predictors of the diffusion process are as follows: (1) Teachers' perception of students' benefit from the innovation (2) perceived change orientation of the headmaster (3) ascribed opinion leadership (4) exposure to wider environment (5) socio-economic status (6) teachers' perception of students' attitude towards the innovation (7) experience and (8) general exposure to mass media.

Buch(1972) made an enquiry into the conditions promoting adaptability in secondary schools. The researcher aimed at two major outcomes from her study, viz: whether any relationship exists between a number of attitudes of the school principal and innovations of a school and if so, whether it is possible to identify some specific elements of the school adaptability and develop a mode of prediction for the same. Selecting forty-nine variables, the investigator attempted to find out whether significant relationship exists between each variable and school adaptability.

Buch's findings are summarised and presented below:

The variables that were found to bear significant relationship with the school adaptability are: (1) Principal's inservice training (2) his feelings about his job security (3) his perceived self rated administrative abilities (4) his perception of the staff ratings of his administrative abilities (5) his perceived level of relationship with the District Education Officer (6) his perceived support from the teachers' college personnel for his innovations (7) number of his membership contacts with organisations (8) Frequency of his attending the professional meetings (9) his internal school visitation (10) his perception of the expertise of the teachers' college personnel (11) his cosmopoliteness (12) community involvement in the school (13) Parent's involvement (14) interests of the management and the distance of the school from teacher's college.

Bhagia's(1973) study on "perception of characteristics of innovations as related to their defusion in schools of Gujarat" emerged with the findings given below:

(1) The success in the adoption and diffusion of an innovation is very much dependent on the perception and the favourable disposition of the headmaster in the matter. The non-acceptance of a number of a good innovations is mainly due to the inability of the agencies that are concerned with the implementation of change to create the right psychological orientation among the potential adopters.

Bhagia's study took into consideration the following fourteen innovations: (1) Instructional planning (2) Unit planning (3) Objective type tests (4) Educational and vocational guidance (5) Cumulative record, (6) Science club (7) Work experience (8) Co-operative store (9) Programmes for gifted children (10) Weightage to periodical tests in annual promotion (11) Hobby centre (12) Parent teacher association (13) Regular and periodical staff seminars and (14) Discussion on academic problems.

Principal's ratings on a five point scale on each of these innovations in respect of 20 characteristics were obtained. These twenty characteristics were: (1) academic effectiveness (2) adaptability (3) associability (4) burdensomeness (5) compatibility (6) simplicity (7) divisibility (8) efficiency (9) communicability (10) cost economy (11) independence (12) facilitation (13) flexibility or permissiveness (14) meaningfulness (15) pleasure (16) practicability (17) prestige (18) relative advantage (19) structuralisation and (20) time economy.

Ashma(1973) has identified factors related to innovations and change in secondary schools of Bulsar and Surat District in Gujarat. The highly innovative schools, according to Ashma, are found to possess the following characteristics: (1) clarity in perception of philosophy and goal (2) better physical amenities (building etc) (3) higher innovative proneness of principals (4) low number of non-innovative teachers (5) higher mean score of the upward category for the adopters (6) higher score on the involvement of teachers (7) lower score of downward shift for adopters (8) higher score on the total evaluation of the school.

It is found from Ashma's study that the factors causing change proneness are (a) dissatisfaction of the staff (b) head-master's key role in innovation (c) identification of a few innovators and leggards (d) mental calibre of the innovator (e) proper planning (f) appreciation (g) freedom (h) encouragement (i) involvement and cooperation (j) love and dedication for profession.

Mukhopadhyaya(1974) has studied the barriers to change in secondary schools of Gujarat and West Bengal, the two different progressive states of India. The study was done on a sample of 16 schools, 8 from each state. Out of the 8 in each district, four were innovative and other 4 non-innovative.

The findings show that (1) Gujarat innovative schools differ from the non-innovative schools in the following factors (a) Linkage with resource system (b) management characteristics (c) most of the principals' characteristics and (d) most of the

teacher-characteristics. In West Bengal, the innovative schools differ from the non-innovative schools on all those characteristics applicable to schools of Gujarat and in addition to them, there are two more factors that distinguish these two types of schools in West Bengal. They are (1) Change proneness of the staff which does not apply to Gujarat and (2) Organisational climate of the schools.

Other major barriers for innovation adoption are the following: (1) poor linkage with resources system (2) low teacher morale (3) closed organisational climate (4) principal's low initiative, low source credibility, poor leadership qualities with a low professional awareness level, and poor ability for communication (5) feelings of comptency, localite tendencies (6) lack of sense of professional security and a sense of high job security, low change proneness of teachers.

Purushothaman(1978) has case studied Innovative Institutions at secondary level in Tamil Nadu State.

Purushothaman has selected twenty five schools for case study. Following are the most important findings from Part A of the case studies. Common functional traits of the innovative schools:

1. Source: Most of the schools function as self-generating systems as far as the innovative ideas are concerned.
2. Objectives of innovation: (a) In a majority of instances the headmasters have said "to meet their own need" as the objective. (b) the authority shows a pragmatic tendency

and the subordinate show an idealistic tendency in their perception of the objectives of innovation.

3. Preparation(a) The authority of the system prepares its members for innovation adoption in a cordial atmosphere. (b) Evaluation of innovative practice through mental trial always precedes the adoption stage.

4. System effect change: The following factors are found to create favourable system effect on the individual members of the system (a) dedicated head (b) close supervision of the system by the authority (c) clear goals of the institution and the innovative practices (d) long and favourable tradition (e) incentives for individual innovativeness (f) clients need oriented attitude and approach of the authority.

5. The process Model: Most of them are found to be proble-solving model and a few social-interaction model. This shows that the needs of the system are given top priority while deciding the innovative practices, in most of the schools. Most of the schools have the conducive model of linkage.

6. Evaluation of innovation: (a) Procedures for evaluation of innovation are stream-lined in the system (b) Results of the feed-back analysis are given weight for making necessary modification in the adoption process.

7. Resistance: The resistance does not thrive in these systems probably due to various built-in check mechanisms like power concentration in the authority, significant role for the adopters in the planning of the adoption process.

8. Barriers: (a) The barriers pointed by the adopters in these schools are more universal in nature viz: heavy syllabus, examination oriented system of education and want of time within the school hours (b) Barriers do not exist 'within' the system or in other words the barriers have an extraneous source.

9. The management: (a) There was an active managing committee which gives full support to the headmaster (b) The staff exhibited an idealistic attitude and tendencies in the pursuit of innovation (c) Staff have a better system affinity for their school (d) Most of the parents are educated and employed (e) Pupils have higher level of awareness (f) School enjoys the good faith of the society.

Findings from Part-B

Purushothaman has studied 25 schools out of which 20 are innovative schools, and 5 are non-innovative schools. The factorwise differences between innovative and non-innovative schools are summarised below:

(a) Innovative Index Score Level: The percentage level of the mean scores of the 'high', 'average' and 'low' innovative schools are above 58% and that of the non-innovative schools is below 40%.

(b) Academic Achievement Score Level: The percentage levels of the mean AA scores of the 'high', 'average' and 'low' innovative schools are above 83% and that of the non-innovative schools is just 70.2%.

(c) Leadership Behaviour Score Level: The LB scores of the 'high', 'average' innovative schools are distinctly higher than the 'low' and 'low' innovative schools.

(d) Organisational Climate Score Level: The percentage levels of the mean organisational climate scores of the 'high', and 'average' innovative schools are above 65%, while those of the 'low' and 'non-innovative' schools are below 27%.

(e) Change Proneness Score Level: The percentage levels of the mean scores of the 'high', 'average' and the 'low' innovative schools show a'60% and above' level while that of the non-innovative schools is below 53%.

(f) Teacher Morale Score Level: The percentage levels of the mean TM scores of the 'high', 'average' and the 'low' innovative schools are above 54% while that of the 'non-innovative' schools is below 33%.

Balasubramanian(1978) has critically studied the strategies adopted for the installation of innovations in high schools in Vellore(Tamil Nadu). This is a normative, status appraisal study and compares the status of the phenomena observed with expectancy of innovativeness and with theoritical strategy models conceptualised by Havelock. Balasubhamanian conducted an operational survey of the strategies adopted for the installation of innovation in high schools, and identified the effective tactics and evolved a strategy model suitable to the conditions obtained in the schools. The main findings of the study are summarised below:

(1) Curricular(2.53), student centred(2.57), evaluation(2.63) and improvised aids(3.18) innovations are more popular than the other types in the schools surveyed(Maximum score for each type .4).

(2) Two clusters, the student oriented and the teacher oriented of innovations identified through cluster analysis.

(3) The R, D and D(M = 18.148) and the social interaction (M = 17.230) strategies are significantly on a wider application than the problem-solver(M=16.040) and linkage (M = 16.34) strategies (Maximum strategy score = 30).

(4) The high innovative and the low innovative schools significantly differ in their adoption with regard to all the four strategies operate at a higher level ('t'' is significant at .05 level for R, D and D and at .01 level in other three cases).

(5) Differential treatments are given to twenty two tactics out of the twenty four listed out (six under each of the four strategies) by the high and low innovative schools at significant levels. Three tactics differ at 0.05 level and 19 at 0.01 level.

(6) All the four strategies correlate significantly with school innovativeness(R, D and D, .4340; Problem solving .4495; Social interaction, .6037; and Linkage, .7146).

(7) Social interaction and linkage strategies significantly correlate at a higher level than the other two strategies

as decided by the Hottelling-Cochron formula.

(8) Social interaction strategies work more successfully at significant levels with regards to administration, role and role perception, curriculum and methodology and evaluation innovation categories (correlation analysis and Hottelling formula).

(9) Problem solving strategy is associated with linkage category innovations ('r' and 't').

(10) Linkage strategy is significantly linked with role and role perception and curriculum category innovations (correlational analysis).

(11) The Wherry-Doolittle method selects the following seven tactics as predictors of school innovativeness.

a) Consultancy role of change agent.

b) Co-ordination of research, development and evaluation.

c) Evaluation at each step.

d) Informal leadership

e) Simulation of resource system process by the user.

f) Reciprocal feedback and

g) Collaborative relationship between diverse groups of resource systems.

3.2 Review of Researches Abroad on Innovation and Change:

Most of the researches have been undertaken by Michigan and Columbia universities. Paul Mort, Franics Cornell and Donald Ross have contributed more to this field of research. Only those which are found relevant to this study are quoted in the following pages.

Donald Ross(1958) has reviewed about one hundred and fifty studies in the area of innovation and change. The summary of his findings reveals the following facts about the process of change. (1) There is always a time lag between the recognition of an educational need and the adoption of an innovation to meet the need. (2) The diffusion of educational innovations is also spread over decades and takes the form of a 'S' shaped curve. (3) There is not much difference in the rate of diffusion between the complex structure of innovations and the simpler ones. (4) It requires two conditions to be fulfilled to make a local school system to be innovative viz: (a) readiness to give more freedom for teachers and (b) to spend more for schools (5) The attitudes and expectations act as a pressure on schools to innovate or adopt to changing conditions.

Mort and Cornell(1938) found from their Pennysylvanian studies that it takes 100 years for the complete diffusion of an innovative practice after it's first recognition as a need to be satisfied, first 50 years to evolve a practice and the next 50 years for acceptance. The Metropolitan school study council used a measuring instrument of a process type to establish the correlation between adaptability criterion and a host of variables. The instrument is called the "Growing edge".

3.3 Review of Researches on the Process of Adoption:

Rogers(1962) defines adoption as "continued use of the innovation in the future". He points out that dividing the process into such phases is "---(1) consistent with the nature of the phenomena, (2) congruent with previous research findings, and (3) potentially useful for practical applications. He traces the

development of the concept of stages, citing in particular, the early work of Ryan and Gross(1943) and Wilkening(1953). Ryan and Gross distinguished between "awareness", "conviction" "acceptance"and "complete adoption" of hybrid seed corn. Wilkening, usually credited with the first use of the concept of stages in the process of adoption, described the process as one "composed of learning, deciding, and acting over a period of time. The adoption of a specific practice is not the result of a single decision to act but of a series of actions and thought decision". Rural sociologists, who have been responsible for most of the research and conceptualization on adoption phases, have more or less reached a concensus on a five-step process which includes(1) awareness, (2) interest (3) evaluation (4) trial, and (5) adoption.

Pioneer social psychologist, Kurt Lewin(1952) in his early studies of group decision and social change; described three major stages in the process of change: Unfreezing, moving and freezing. "Unfreezing" describes the necessary initial phase in which the need for change is realised, and a willingness to give up old ways of doing things is evidenced. "Moving" includes the activity involved in implementing change, and "Freezing" indicates the establishment and firm rooting of the new behaviour in the life of the group.

In the field of education, the concept of stages of change was implied, but not specified, in the early work of Mort and his colleagues(1957). According to Mort, the process of innovation in education follows a "predictable pattern", including insight

into need, the introduction of a way of meeting the need, diffusion, and adoption.

In recent years, educational research and theory have drawn from both the rural sociology and social psychology traditions; Miles(1964), for example, bases his discussion of stages on the work of Roger, Lippitt, Watson and Wrestery(1958) derive the stages they describe from the work of Lewin.

The research on the stages of change has involved many different types of innovations and a wide variety of adopting populations. It is not surprising therefore, that different authors propose conceptualizations of the change process which contain differing elements. Proposed classification vary greatly in complexity and range from the two-step "cognition-behaviour" models proposed by Mason(1962) and Pareek and Chattopadhyay(1966), to the elaborate ten stage model for social change described by Watson(1966). These discrepancies should not necessarily be regarded as disagreements, but as Havelock(1969) points out should be recognised as different types of change processes and deteration on different portions of the change processes.

Donald Ross(1952) gives an idea of the 'time-lag' that starts from the time when the need arises and ends with the time when the need is satisfied. Mort(1953) has expressed "the time lag for the diffusion of innovation in education is found such as would make us worry about". But diffusion of innovation in the field of agriculture and medical sociology is found more progressive in comparison with the innovation in the field of education.

Allens(1956) study supports this time-lag theory in relation to education. He observed that 168 schools in America took 60 years to adopt innovation, while the adoption of an innovation to train the driver of motor cars took only 18 years. Many such studies explain the causes for long time lag in education as (1) want of change agents (2) lack of scientific knowledge of innovations (3) need for economic motivating factor.

The study of Ebey points out that any new introduction into school system is only the beginning of a long period of diffusion. Cooking's (1956) findings reveal that when the innovation has a slow start, the early diffusion is not a 'true' diffusion.

From the studies by Mort, Cornell, Cocking, Berington, Lovos, Adler and Allen it is learnt that a few schools belong to 'innovator' category to adopt an innovation early enough while other schools wait and observe the extent of success before taking themselves on to that end thus tend to belong to 'late majority' category. This is what happens in any social system.

Some innovations are also rejected. Johnson and Band(1959) studied the theory of 'Rejection'. Allen(1956) also studied some discontinuances.

According to Kelley(1966) the grade taught and the years of teaching experience were found significant factors in either adoption or rejection of an innovation.

There are adequate supports in favour of (1) rejection through ignorance (2) rejection through default (3) rejection by maintaining statusquo (4) rejection through societal mores

(5) rejection through interpersonal relationship (6) rejection through logic (7) rejection through substitution (8) rejection through fulfilment and (9) rejection through experience.

Lackey's (1958) study indicates that all individuals involved in adoption do not remain in the same categories throughout more than 30% of them change from one category to the other. Roger's (1962) findingssupport this idea.

Greenberg(1964) and Glasser(1958) show in their studies that earlier knowers of innovation have higher social status. This generalisation is accepted by Rogers(1963).

Ryan and Gross(1950) and Beal and Rogers(1962) found that the'rate of awareness' of knowledge for an innovation is more rapid than its 'rate of adoption'. 'Earlier adopters' have a shorter'innovation decision' period, observe Ryan(1948) and Petrini(1957).

Ralph Haber's (1961) study of adoption of language laboratory among high schools in U.S.A. tells that earlier adopters try innovation on a smaller scale than the later adopters. Wilkening (1952) found the importance of relative advantage of an innovation in one of his studies.

Ross(1952) in his study emphasized the seriousness of the need for an innovation as an indication of its 'relative advantage'. The most closely related factor to innovation is the economic resource as it is reported by Ross from his review of a number of studies made in 1958.

3.4 Review of Researches on the Process of Discontinuance:

One striking similarity to be found in the case histories of many failed innovations is the absence of a comprehensive plan for implementation.

Discontinuance or subsequent rejection of an innovation after initial adoption, is reported by Rogers as a common phenomenon, varying with the nature of both the innovation and the adopter. Some of the factors he describes as related to discontinuance are the replacement of an innovation by a superior one and misunderstanding or misuse of the innovation.

Gordon and Wilkerson(1966) reviewed over 300 compensatory education programmes adopted by school systems in the U.S. since 1960. Despite the vast expenditures of money, time, and energy to remedy the educational handicaps of children with poor socio-economic background, the study found that these programmes had little impact on upgrading academic achievement.

Joseph and Carol(1977) reviewed some research and reports of innovations' personal experiences with a view to developing strategies and guidelines for increasing the chances of success of innovations. The authors hold the view that in general, literature on the evaluation and assessment of school innovations suggests that fatal weakness occurs during the early stages of implementation. These weaknesses are often related to the effects of role changes on students, teachers, and administrators. Since innovations usually require unlearning of traditional roles and a

relearning of newones, uncertainty, concern, and even, fear can be part of an innovator's early feelings.

These concerns and anxieties arise from a need to fulfill new roles and the competencies associated with them, Joyce(1969) refers to this as "the need to feel competent". "Every innovation-every change, even slight on the surface - requires the members of an institution to adjust by learning new behaviours. To some extent, all adjustments that requires learning involves some risk of a feeling of incompetence. In teaching the risk can be considerable, particularly because the average school provides no place where the teacher can develop new competence in private".

Frequently,the process of assuming new roles and new competencies is misunderstood and seriously neglected.

Gross et al(1971) found that implementation problems are caused by more factors than the simple 'Resistance to change' explanation that is generally based to account for failure. They studied a programme conceived as a solution to the problem of motivating lower-class children and improving their academic achievement. The teachers were eager for change, but in the process they encountered numerous barriers that hindered their ability to successfully adapt to new behavioural pattern.

These problems gradually led to frustration and a lessened motivation to use the programme. The project sponsors did not provide feedback mechanisms to help them identify growing implementation problems and the teachers had insufficient means to

express their concern. Apparently, the administrators felt that if they could win teacher commitment initially and secure the funds to support the innovation, little else was needed for successful use of a new programme.

Smith and Keith(1971) conducted an intensive study of attempted educational reform at a new open space elementary school. Through emphasis on individualization personal goal setting, and independence pupils were to become more mature human beings. Instead, the researchers found frustrated students, teachers and administrators. Inability to workout the operational details of the programme goals, including problem of staff scheduling, co-ordinating teamteaching approaches and dealing with students who were not yet capable of assuming so much personal responsibility prevented the effective implementation of the new programme.

Pellegrin(1973) pointed out some basic assumptions on the part of administration and management that interfered with successful implementation of change in a school's instructional organisation. First, while extensive changes were anticipated in teacher behaviour and role complexity, the administration did not see a need to change its traditional staff structure for the support and management of the new project. Second, the project officer, who initiated the innovation and located resources for its had not direct control over the programme once it was innovated. The assistant superintendent, who was forced to assume responsibility for someone's else's project was not enthusiastic about its potential. Third, the administrative staff felt that professional

teachers should have sufficient skills and motivation to solve their own problems.

Since none of these assumptions was valid, the programme floundered. Decision making was blurred and indecisive. Teachers never received the help they needed and their enthusiasm waned. The result was confusion, some hostility, goal displacement and high personal turnover.

Pellegrin(1973) emphasized the need for specific planning and management of a novel programme.

Janes et al(1973) discussed additional implementation problems. Teachers in case study schools were led to expect a great deal of autonomy and personal control over imple-mentation of a new programme, but instead found arbitrary direction and external control. A large influx of visitors drained teacher energy and patience. Increasing problems with student disruptions deflected teacher energy from the hard work of implementation. Conflicts and role ambiguities between the principals and the instructional coordinators often left teachers without leadership or guidance. In short, multiple problems workedout against the successful implementation of the new programme.

The unfortunate result of so many failures is a general tendency to conclude that many current innovative ideas just donot 'work'. The authors conjecture that, more often than not, it is the installation process that fails and it is an illusion that the discarded programme was 'tried'. The reported state of an

innovation is often based more on fiction than on fact.

Gross et al(1971) found little correspondence between the description of what the programme should have been and how the teachers were actually implementing it.

Goodlad, Klein et al(1970) gathered information from schools throughout the United States to determine how effectively educational reform was being implemented. Their data suggested that the programmes were not implemented by the users as the developers intended.

"A very subjective but nonetheless general impression of these ℄ who gathered and those who studied the data was that some of the highly recommended and publisized innovations of the past decade or so were dimply conceived and, at best, partially implemented in the schools claiming them. They claimed individualization of instruction, use of a wide range of instruction materials, a sense of purpose, group processes, and inductive or discovery methods when our records showed little or no evidence of them".

3.5 Researches on Organisational Climate of Schools:

Conceptually, organisational climate is the state of the organisation which results from the interaction that takes place between organisation members as they fulfil their prescribed roles while satisfying their individual needs. Researches have indicated that the schools differ from one another in their 'feel' or 'personality' or the 'organisational climate'.

According to Halpin and Croft (1963), the organisational climate can be construed as the organisational "personality" of a school. Analogously, 'personality' is to the individual what 'organisational climate' is to the organisation.

Organisational climate can be operationalised to refer to the resulting condition within the school from the interaction between the teachers and the pupils. As such, organisational climate may be defined as patterns of social interaction that characterized an organization, which according to Halpin and Crofts(1966) runs from openness at oneend of the continuum to the closedness of the other.

Halpin and Croft(1963) identified six types of climates with openness at one end and the closedness at the other end of the continuum with four categories in the middle viz. open, autonomous, controlled, familiar, paternal and closed. They also assigned the characteristic behaviours of principals and teachers in a school community to eight types of components or subtests called by the originators as: Disengagement, Hindrance, Esprit, Intimacy, Aloofness, production - emphasis, thrust and consideration. This classification of climate types and dimensions resulted from a study of elementary schools of USA with the help of the tool called OCDQ, used in this study.

Pace and Stern(1958) conceptualised the climates of an educational or organisation as consisting of personality characteristics and values (needs) of its members and the organisational pressures on the students administration and faculty.

Lonsdale(1964) defined the organisational climate as "the global assessment of the interaction between the task - achievement dimension and the need satisfaction dimension within the organisation". According to this definition, climate is that state of organisation which results from the interaction which takes place between task achievement accomplished by the individual members and the need satisfaction derived by them while discharging their roles responsible for task achievement.

Nilson(1960) attempted to identify the climates of organisation and ended with four types.

Studies of Argyris(1958), Halpin and Croft(1963), Willover and James(1963), Feldvebel(1964), Brown(1965), Forehand and Glimmer(1969) have largely contributed to the definition and clarification of the concept of organisational climate and its relevance to the dimensions of the groups of behaviour in a school system. Ultimately the innovation in schools depend very much on this group behaviour.

Sharma(1968) found no significant difference in the climate between the government and private secondary schools of Rajasthan State.

Sharma, Buch and Rai(1973) found from their comparative study of organisational climates of secondary schools that there are significant differences on the sub-tests 'hindrances' and 'consideration'. Schools with open climate in Rajasthan differed from similar types of schools of Gujarat at 0.05 level on the

sub-tests 'hindrance and consideration. The closed climate in schools of both states showed significant difference in their mean scores on the sub-tests of 'intimacy' and 'production emphasis'. The 'familiar' climate showed differences in their mean scores on sub-tests of hindrance, intimacy and production emphasis. Gujarat schools were found to have higher score on 'Hindrance' than those of Rajasthan schools. The 'controlled' climate in schools of Rajasthan score better in 'production - emphasis.'

The most significant finding of this study was that the behaviour of leader in case of Rajasthan schools was highly task oriented but modestly considerate which made their faculties to feel both high social need satisfaction and job satisfaction which resulted in high morale of the faculties. In case of Gujarat, 'Disengagement' element was prevailing high and most probably this made the leader to behave impersonally.

Kumar's (1972) study indicated that different organisational climates in school have different effects on certain aspects of student behaviour. In the school with open climate, personal adjustments of pupils are distinctly superior. The other factors related to pupils that are found to be influenced by the differences in school climate: (1) value orientation (2) academic attitude, and (3) scholastic achievements.

Parik's study(1973) of schools of two districts in the State of Gujarat in respect of their organisational climate and teacher morale, gives the following findings (1) All six types

of climates found in the schools in these two districts. (2) The more frequent climates identified in about 70% of the schools are, paternal, autonomous and controlled types. (3) The teacher-morale scores differed in different types of school climates. (4) There was significant difference between the morale scores of teachers of open and paternal climate type of schools, at .05 level of closed type climate schools at 0.01 level, of autonomous and familiar climate type of schools at 0.05 level, of controlled and familiar climate type of schools and of controlled and paternal climate type of schools at 0.05 level.

Reddy's(1972) study on a bigger sized sample of schools using organisational climate index(OCI) adapted from Stern and Stanhoff(1969) resulted in forming a few generalisations viz.: (1) small sized schools show a greater impulse for control than the bigger ones(2) the bigger schools are low in standards of achievement (3) small schools are better organised (4) those schools with staff whose average age is high show less adaptability compared to those having staff of younger age.

Sharma(1973) studied the organisational climate of secondary schools of Rajasthan, and found out negative correlations between (1) Faculty age and esprit (2) faculty stay at the present school and aloofness (3) teacher-satisfaction and disengagement (4) teacher-satisfaction and (psycho-physical) hindrance (5) leadership behaviour of the principal and disengagement (6) leadership of head and hindrance (7) effectiveness of principal and hindrance (8) principal's effectiveness and disengagement (9) school climate and faculty age (10) school climate and faculty - experience.

The other major fidings include (1) there was no significant difference between the climate of (a) urban and rural schools (b) Government and private schools (c) Girls and Boys' schools (2) the school climate is independent of variables such as school size, staff experience or stability and the experience of the headmaster.

Pillai(1973) studied the organisational climate, teacher morale, and school quality of secondary schools.

The major findings are: (1) pupil-performance is significantly better in open and autonomous climate schools than in schools of other climates (2) Openness of climate facilitates school to adopt new practices in greater number in shorter time. (3) The innovative ability of the school is significantly influenced by the three climate dimensions viz: espirt, thrust and disagreement, the first two positively and the last negatively (4) Both climate and morale of staff are positively and strongly related to both innovative ability and pupil performance of schools and (5) there is high correlation between the climate and and morale indicating that they are highly dependent on each other.

Shelat(1974) studied the organisational climate, teacher morale and pupil motivation towards institution in secondary schools of Baroda District.

The major findings are (1) the morale is high in small schools, and average in large schools. (2) Only 30 percent of schools can be said to be with higher teachermorale. Teacher

morale is average in 52 percent of schools and it is particularly low in 1.80 percent of the schools (4) The schools of Baroda District show average morale and the average school effectiveness.

Darji(1975) studied the leadership behaviour and its correlates in the secondary schools of Panchamahals District.

The major findings are (1) the relation between teacher morale and the two dimensions of leadership behaviour, namely, 'initiating structure', and 'consideration'is significant. (2) As one moves from high morale schoolsto low morale schools, the percentage of principal manifesting the 'HH' leadership behaviour pattern goes on decreasing and the percentage of principals manifesting the 'LL' leadership behaviour pattern goes on increasing.

Franklin(1975) studied the organisational climate and Teacher morale in colleges of Education in Gujarat. Pandy's (1975), Pengnu's (1976) studies support the findings of Shelet in the matter of existence of significant positive relationship between and effective leadership.

Many of the findings of Choksi(1976) and Tikmani(1976) are in line with the findings of earlier studies mentioned above.

Purushothanan(1978) studied innovative institutions at secondary level in Tamil Nadu. The major findings (1) positive relationship between teacher morale and organisational climate of schools. Majority(65%) of the schools with high(above 60%)

teacher morale score have either 'open' organisational climate or a climate very near to 'open'. (2) Schools with higher score for leadership behaviour have correspondingly higher score for teacher-morale. There is a positive relationship between the leadership behaviour and teacher morale.

All the studies undertaken by those mentioned above were done on schools and colleges of education at secondary and primary levels.

The studies on climate of schools have contributed to the development of a viable organisational climate in educational institutions. The threats posed by existence of such dimensions in the staff characteristics as disengagement, aloofness, hindrance and too much of production-emphasis are found to have been realised by the concerned people who are at the top of administrative affairs of institutions.

Some of the recent studies done in foreign countries by Faber, Roosa and Watkins(1969) and Espordite(1971) have contributed some significant findings such as: (1) negative correlation between the age of the school principal with certain components of organisational climate of schools (2) the components that showed such a negative correlation are consideration, production emphasis and hindrance (3) one of the studies that of Espordite, did not find the principal's age as an effective factor in shaping the organisational climate (4) no significant relationship has been found between the experience of the principal and climate in a few studies while a few other studies have found significant relationship between them.

Ramoji Rao(1978) studied the organisational behaviour in schools. He concluded in his study that the authencity of organisational behaviour of the members of the school would lead to their job satisfaction and excellent academic performance of pupils. Such behaviour of the members of the school enabled them to enjoy high job satisfaction and as a result they could move towards the goals of the schools.

3.6 Researches on the "Leadership Behaviour" of the Principals:

In influencing the learning climate of the school, no other individual is potentially as powerful as the school administrator. Because administrators have a pervasive influence throughout their organisations, it is important that they relate to others effectively.

Newell(1978) holds the view that if the administrators are to function responsibly in providing educational programs which are effective in relation to needs, if they are to help appreciably in strengthening the staff, if they are to exercise strong leadership for the community and its representatives on the board of education, they need to develop an understanding of human behaviour together with the requisite competence in interpersonal relationships.

An effective leader needs to understand both dimensions (task dimension and human dimension) and develop the necessary competence in both(1978).

Newell(1978) emphasises a scientific basis which is necessary for competent administrative bheaviour. The attention of researchers has been drawn to the study of the factors or conditions which determine the effectiveness of leadership of the headmasters in the field of innovation. Functioning of the principal in this regard has been studied.

Johnson(1961) concludes from his studies that the role and the status of the teacher-leader is a thing to be earned than assigned. He has said that the right balance between the'effectiveness and efficiency' marks a leader.

Maniel and Lucio(1969) ascribe the ability enabling individuals to perceive his own goals and their own roles to the effective leader.

Mahajam (1970) Has reported the following findings to point out that many leaders (headmasters or principals of schools) have failed in their academic leadership and as a consequence in their administrative leadership traits also.

Darji(1975) studied the leadership behaviour of secondary school principals. His studies revealed the following: The heads evince inadequacy with regard to their'initiating structure' due to want of required professional training. 'Consideration' qualities of the head differ according to the nature of self perceived roles in relation to the organisational set-up of the schools.

Desai(1976) concluded that the headmaster's leadership qualities are very much conditioned by the socio-cultural background

and either previous or current political affiliations of the head and teachers govern the leadership qualities like human relationships and consideration.

Most of Indian studies have laid stress on the democratic approach of the leader with qualities of consideration, recognising the abilities and needs of the individual teachers and a policy of mutual respect for successful operation.

Lewin and his coresearchers(1952) have found that in the culture which emphasises democratic leaderships, authoritarianism failed. They have also pointed out that laissez-faire leadership is more often an instance of failure.

Brookover(1955) in a review researches on teachers' administrative function, concludes that the headmaster's self-perception of his own role is very much influenced by the experiences and provision available in the school system.

Liphan's(1960) study of individual and personal quality variables of a headmaster as related to effective leadership in schools shows the following as favourably contributing factors: (a) inter-personal relationship (b) intelligent operation (c) emotinal stability (d) adequancy in communication.

Liphan's(1960) study of individual and personal quality varibles of a headmaster as related to effective leadership in schools shows the following qualities as necessary: (a) purpose-fulness in selecting every activity (b) concern for achieving higher status (c) effective communicability (d) feelings of security.

Ineffective principal qualities: (a) more pre-occupation with speculations (b) complacency (c) more dependent (d) highly emotional.

Castettar(1971) comes to the decision about the effects of the leader-behaviour on his subordinates as follows: (1) subordinates are quick to detect the feeling of the head about the organisational intent and (2) his commitment to goal achievement.

Michigan studies identified two concepts which they called "Employee Orientation" and "Production-orientation". An employee oriented leader feels that every employee is important. Production oriented leader lays stress on production and technical aspects of a task, taking the view of the employees as tools to accomplish goals.

The personnel research board of Ohio State University from their studies through the LBDQ found that thev'Initiating structure' and the 'consideration' are two distinctly different dimensions or qualities of the headmaster as a leader.

Newell(1978) descfibes the best style of leadership although the importance of both the 'Initiating structure' and the 'consideration' dimensions might seem to imply that transactional leadership is always best, this view has not been substantiated by research findings. Instead it appears that the type of leadership needed varies in accordance with the particular situation.

Research findings seem to indicate clearly that to be effective, leadership style must be appropriate in relation to the situation.

Rennis Likert(1941) found out that employee centred supervisors are higher producers than job-oriented supervisors.

Fielder(1957) developed a leadership contingency model with 3 major situational variables which seem to determine whether a given situation is favourable or unfavourable to a leader. viz.: (a) Leader-member relationship (b) The degree of structure in the task that the group is assigned and (c) the power and authority in the position of the leader.

Fielder(1957) defines the favourableness of a situation as 'the degree to which the situation enables the leader to exert his influence over his group.

3.7 Research Studies on Teacher Morale:

During the last thirty years, significant changes have been taken place in the education literature and the most noteworthy amongst these changes, is a rapid proliferation of articles dealing with teacher morale. The term teacher morale was virtually little known prior to world war II and it had received scant attention from the educationrs until the advent of world War II.

In the educational field, on the various aspects of the morale, many researches have been conducted abroad. However,in

our country only limited researches are available and that too almost in CASE, Baroda.

The morale of the teacher as individuals and as a group is a significant factor that has much to do with the successful and effective functioning of any institution in general, more so with an educational institution. This is because every scheme, both educational as well as administrative has to be implemented only by the members of the faculties. There are many evidences shown by researchers about the importance of the Teacher Morale.

In the area of morale, CASE, Baroda has given significant contributions. In 1965, Quraishi was the first one to take up a study in this area at master's degree level. He constructed a tool 'Employee Morale Scale' for measuring the employee morale prevailing in the industry. So far as the area of teacher morale is concerned, Parikh(1972) contributed at M.Ed. level. But at Ph.D level Pillai(1973) was the first one to contribute. Pillai found that performance of pupils in high faculty morale schools is superior to that of schools with average morale, which in turn is better than low-morale schools.

Shukla(1973) used the Purdues teacher opinionnaire to study the teacher morale. He found six schools with high, nine average and four low morale out of the 19 studied. More girls' schools showed better teacher morale than boys' schools.

Shelat's(1974) study reveals that the staff morale and academic motivation show a very queer relationship. It shows that,

average morale goes well with high academic motivation.

Mukhopadhyay(1975) studied barriers to change in secondary schools. He adopted Purdue Teacher Opinionnaire by Benley and Remphel.

It was found, out of 16 schools, three innovative schools have staff morale above average, two non-innovative schools have average, two innovative and two non-innovative schools little below average, and three innovative and three non-innovative schools are at the below average level and one non-innovative at low morale level.

Darji(1975) Pandya(1975) Franklin(1975) Pengnu(1976) Choksi(1976) and Tikanani(1976) also studied above teacher morale. Those studies support the findings of Shalat in the matter of existence significance positive relationship between morale and effective leadership.

Dekhtawala(1976) studied teacher morale in secondary schools of Gujarat.

She constructed and standardised a tool to measure the morale of teachers. It was found that the teacher morale in the boys', girls' and mixed schools does not significantly differ.

Purushothaman(1978) found that the higher the morale of the teachers of a system better is its operational efficiency in terms of innovative standards.

The studies carried out in foreign countries on Teacher Morale are numerous.

Chase(1951) studied teacher morale on 1800 teachers in more than 200 schools in 43 States. He found that the teachers rated the job satisfaction and freedom to plan one's own work very high. The next higher rating was awarded to professional status.

Bidwell(1956) found in his study that teachers who perceived administrative behaviour as being consistent with their expectations tend to be satisfied with their job situation. This implies that mere democratic style of administration would not do to satisfy the expectations of teachers.

Lickert(1941) found operational efficiency significantly related to staff morale.

Synder(1945) assigned weightage to the personal relationship between administrators and teachers as a factor affecting morale.

Suchr's(1962) interesting study reveals that higher the teacher intelligence the 'greater' is the probability for his 'low' morale.

An N.E.A. Survey(1968) revealed the relationship of morale with (a) linking for professions (b) linking the age-group of pupils to whom teaching was done.

Coverdale(1973) conducted, in Australia, a pilot study of a random sample of 165 primary and secondary schools to investigate the problems of teacher morale at school stage. It was found

that, of the 38 problems repeatedly raised by teachers as affecting their morale, salary came twentieth in the ranking, though teachers are by no means over-paid by Australian standards. The factors that lower the morale of teachers were clerical duties, lack of co-operation from higher authorities, excessive teaching load, less salary, poor discipline of students and lack of proper teaching aids and equipments.

3.8 Researches on Barriers to Change:

The studies on innovating organisations are very few. The universities have been recognised as the main resource centres for expert knowledge. But proper utilisation of the university expertise is yet to be realised (Havelock 1963). This is mainly due to 'weaknesses' of university administration and dominance of decentralised norms of faculty self-governance.

Singh and Jha(1971) observed that "it may be concluded that lack of communication of the adopter system with external agencies hinders change".

Mukhopadhyaya(1975) found that the status gap between the communicator and the communicatees also impedes change process.

Havelock(1973) points out that while the barriers to the flow of information within a group may be extremely permeable, there is a danger that increasing "intra-group cohesiveness" will adversely affect "inter-group permeability".

Eichotz and Rogers(1964) have also inter-personal relationship as one of the factors for rejection of an innovation.

Chesler and Fox(1967) have concluded from a review of a series of studies "teachers are unlikely to begin or support innovation leading to classroom change if they feel that they are have little to say on school policy".

Lystad(1960) found that the vested interest of small groups showed that members of a system with high social status showed less involvement in planning.

Havelock and Huberman(1977) hold the view that personality conflicts among various members, lack of understanding and appreciation of the feelings of others, too much regidity and narrow mindedness also act as barriers to innovation.

Purushothaman(1978) found the following barriers that exist in the school systems be studied (1) want of time, (2) heavy syllabus, (3) the examination oriented system of education, (4) non-availability of adequate resource systems.

3.9 Implications of the Research Review for the Present Study:

As there are innumerable dimensions related to the phenomenon of innovation and change, all the connected researches both empirical and theoretical have been reported in this chapter touching only upon the relevant findings. These findings have been very useful to form the basis conceptual frame-work for this investigation.

Sharma(1979) studied the characteristics of the resource system and the process of developing and communicating innovation

the failure of the innovation leading to discontinuance. Innovation studies have reached the second generation and the phenomenon has lost its "innovativeness", the novelty, the charm of its nascent beauty. The process, the how of it, has become the central concern so that innovation can be planned and installed with high probability of success. Process studies, however, are rare, particularly in the Indian context.

The Rogerian studies simply identified the stages of adoption and donot develop into the dynamics of these stages. The Havelockian strategies are only second line theories and donot describe the strategies and tactics as studied empirically. The Bennis tradition is also conceptual rather than concrete. Operational strategy studies at empirical level are scarce and the one in the Indian context is also global in its approach.

Discontinuance of innovations is largely a disregarded area of the innovation researches. The innovation trees simply count the innovation discarded. As with continuance, with discontinuance also, the studies done so far concern themselves with description or delineation of associated factors.

Process studies alone will help us plan better for changes. Studies on the dynamics of change naturally lead to the manipulative studies of the strategies and tactics through which the strategies suitable to varying situations (with high probability of success) can be determined. The present study is an attempt to investigate the process of adoption and discontinuance. This

may be likened to the observance of the 'working' of a clock kept inside a glass box. But this observation will give us hunches for manipulating with the working of the clock to set it right. It is hoped that the present study would also give us clues to manipulate the tactics and strategies to make adoption successful and discontinuance 'disappear' from the school domain.