CHAPTER II

REVIEW OF RELATED RESEARCHES

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2.1.0. INTRODUCTION:

Before launching on an investigation, it is most essential for a researcher to make a survey of the studies made earlier which are pertinent to the topic on hand. This would enable the investigator to have a better understanding of the topic of his own and the various factors connected with the study. In the light of the earlier researches the problem can be viewed in different perspectives (John W. Best 1977).

A knowledge of related researches enables the investigator to define the frontiers of his field. The study of related literature places the researcher in a better position to interpret the significance of his own results (Donald Ary, Lucy Jacobs and Asghar Razaveigh (1972).

In this chapter an attempt is made to highlight the procedure and findings of some of the researches conducted earlier that have a bearing on the present study. The purpose of this review is to appraise the contribution these studies have made to the fund of information currently available. The titles of the studies may be different, but those that have relevance to the present research have been included in the review.

This review primarily focuses on what earlier researchers have attempted to investigate and also on what lines further efforts should be geared to in making a descriptive study of Teacher Innovativeness in Tamil Nadu.

2.2.0. RESEARCHES CONDUCTED ABROAD

2.2.1. RESEARCHES ON GENERAL ASPECTS OF INNOVATIONS AND INNOVATIVENESS

Kroeber (1923) and Wissler (1923) two Anthropologists can be deemed to be pioneers in initiating

researches on innovations. Their books deal with the impact of innovativeness such as the nature and characteristics of innovations, the various categories of innovations and the diffusion and adoption process involved in innovativeness. These earlier studies in fact provided impetus to further researches on innovative behaviours exhibited by individuals in different walks of life.

Linton (1936) was the first to find out that the characteristics of an innovation do possess high correlation with its rate of adoption with which the innovation gets diffused. Hence, it is the characteristics of innovativeness that influence the adoption of innovation by other members who evince interest and get involved in the process. Further, it was found out that teachers and teacher educators are positively related to innovativeness.

Wilkening (1949) used socio-psychological approaches to find out the correlates of innovativeness. The study reveals rapid increase in the adoption of innovations not only in U.S.A. but also in other countries.

Rogers (1962) has listed out more than five hundred studies in innovativeness from all research traditions including education. However, according to him studies in the field of education do not make any

substantial contribution towards the understanding of innovativeness. Nevertheless, his exhaustive summarising of the various studies has proved to be highly useful in conducting research on innovativeness in the discipline of education.

Miles (1964) presents a highly acceptable rationale for innovativeness and has cited many examples of innovations in American Schools. The Centre for Advanced Study of Educational Administration, University of Oregon has done very valuable work in promoting innovativeness in educational institutuions.

Carlson (1965) studied the behaviour characteristics of School Superintendents in order to find out what caused them to adopt innovations. The study mainly deals with those characteristics of School Superintendents as the adopting units as well as decision makers in School Administration. Though teacher behaviour characteristics are also included in the investigation, the focus is on the Superintendents of Schools as innovators.

Walberg Welch (1967) found innovative physics teachers higher on theoretical and aesthetic values than other male High School teachers, but lower on economic, religious and political values. These innovative teachers scored much higher on a physics achievement test. Compared with other High School Science teachers they are less

autonomous. The study further reveals that teachers who have a firm grasp of their subject are not only more positive in their attitude towards teaching but also are more innovative and experimental in their performance.

Chester and Fox (1967) report that teachers need to feel involved and potent in their organizations in order to support educational innovations and that they must know that they have the backing of their fellow teachers and their administrators if they are willing to try new ideas. Since change may involve public attention and risk, teachers who feel that they do not have support are less likely to go in for innovations.

Bicket's (1968) study is on organizational values and characteristics of school systems. Classroom teachers of innovative schools showed a relatively high degree of satisfaction with instructional programme of their schools whereas teachers of non-innovative schools were relatively dissatisfied with many of the innovative aspects and instructional programme of their schools.

Johnson's (1969) study is about the 'islands of innovation expanding.' The purpose of the study was to bring about necessary changes in the functioning of community colleges. He believes that the 'Knowledge

industry' will be the hall mark of the last quarter of this century and the community colleges should rise to the occasion to innovate, to plan change and not 'to meander along the smooth plain which experience has shown to be reasonably safe.' The right to experiment, visits to centres of innovations (travelling seminars), educational conferences, interaction with agents of change who harbinge and instigate changes, budgeting for innovation, and co-operative work by groups of colleges are successful tactics practised by innovating institutions as against the changeless colleges and static schools.

Havelock (1973) in his book, 'Planning for Innovation,' describes that the change process consists of four very important elements - viz., (1) Resource System (2) Communication Channel (3) Innovation and (4) 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.

The first of the four elements is the Resource System. This comprises the sources of the innovative ideas and marks the beginning of an innovative process. The communication channel refers to the mode and media of communication of an innovative idea to the adopter systems from the source. The third element of

innovation refers to the new idea that is generated by the source and the last element being the adopter system which is the important and culminating point of the total system of Innovations. It is only for the adopters that the entire system of innovation operates. If all the above four elements are well described in relation to the factors and forces operating at each level of the innovation, probably the object of this study would have been achieved.

Husen (1974) employed a strategy to translate the change from the isolated university setting to the schools in the field. The study was conducted by the Institute for the Development of Educational Activities (IDEA) at the University of California. The strategy involved four steps of operation. (1) The problems are scientifically analysed whereby new knowledge is advanced: (2) The research findings are transformed into innovative practices including testing and evaluation in real school settings; (3) The tested and validated practices are diffused to a considerable number of schools or school systems; and (4) The schools adopt these innovations. The strategy stresses the need for positive reinforcement agents to reward the innovative behaviour of the teachers and the school systems.

IDEA Study throws light on the fact that often in education the innovative behaviour of teachers is

negatively reinforced. The innovative teachers are punished with an increased work load and disapproval on the part of their colleagues. The study further reveals that a rigid and powerful bureaucracy develops a climate that bars creative changes pertaining to learning. However, the bureaucracy proves successful in effecting substantial changes in the organisational framework of educational institutions.

Sikes (1974) reports about a team approach which was adopted in a project of the NTL Institute in which eight institutes of higher education participated, between 1970 and 1974. Subscribing strongly to the theory that innovation and change are generally generated by the interplay of research and action, the team used a collaborative action research strategy. The consultants and the researchers had a division of labour and the teams functioned as consultants. The project teams based their strategy on the theory of guidance and control processes. The study specifies seven A's for a successful change process. They are (1) Awareness (2) Attention (3) Apprehension (4) Acceptance (5) Adaptation (6) Assimilation and (7) Action.

Martorana and Kuhns (1975) studied how academic change is managed. They surveyed about twenty four colleges for the innovation adopted. The following strategies seem to instil innovativeness in colleges.

The low profile action stragety de-emphasises the importance of the change and emphasises instead its relation to traditional procedures. Maintaining a low profile posture, the change leader retains control over the nature and direction of the change desired. Systematic experimentation is the strategy of the seventies as against the sixties that helped random innovation. Participant involvement, creation of demand, development of legitimacy, creation of power blocks, control of internal organisation and control of communication are the other strategies that the colleges selected to introduce innovativeness in them. The interactive forces theory of innovativeness evolved as a result of this study. Three kinds of forces for change that are 'identifiable, seperable and describable' and whose impact on innovation is predictable in both strength and direction, interact; and change is energised by the result or effect of these forces. The personal forces include the decision makers, implementers, and consumers. The extra personal force envelopes the tangible (facilities, land, equipment etc.) and the intangible (policies, traditions, trends etc.) forces. The goal hiatus is the discrepancy between aspirations and achievement of goals. These forces interact in ways which tend to reinforce or channel their effect on the viability of the innovation. The

innovators follow an identifiable growth of maturation pattern--'a life cycle of developmental stages'--of explorations, formulation, trial, refinement, and institutionalisation.

Bushell (1975) conducted a study funded by the Kellog Foundation on 'Organising for Change' in community colleges in America. The findings of the study support a system-analysis approach to educational change and suggest a strategy involving six stages. (1) The problem is to be diagnosed first. (2) The objectives and criteria of effectiveness should be formulated (3) the constraints and the needed resources should be identified. (4) The selection of potential resources should be identified. (5) The selection of potential solution is the phase to succeed with evaluation. (6) Finally the selection alternative is then to be implemented.

2.2.2. RESEARCHES ON FAVOURABLE AND CONGENIAL FACTORS TO INNOVATIVENESS

Lionberger (1951) made a probing investigation into the different aspects of innovativeness such as sources of information, communication norms, traditionalism, modernism, social status, and opinion leadership with its relationship in the diffusion of innovations.

According to Killey (1960) 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 through maintaining status quo (4) Rejection through social moves (5) Rejection through inter-personal relationships (6) Rejection through logic and (7) Rejection through substitutes.

Binenstock (1965) studied resistance to educational innovation and found that the dimensions of the teacher's previous experience which are significantly related to a change in teachers' perception of a curriculum innovation include competency in Science and previous credit in Science subjects. The study reveals that a teacher education programme can be effective in bringing about change in perception of an innovation if a teacher has a number of years of teaching experience. It further shows that the competency of the teacher in Science effects change in the teacher's practice of curriculum innovation.

Glines (1966) found that the strategy for innovation is simple if the school administration encourages innovative teachers to innovate. Once this occurs good teachers find their motivation in personal

satisfaction derived from using more effective ways of innovative teaching.

Rogers (1966) states that an individual teacher influences the innovativeness of the school system and that teachers who attend out of town educational meetings, workshops, conferences, seminars etc., where they get exposed to new ideas, become more innovative in instructional practices. The study was conducted by Rogers and others in 1966 through the sponsorship of Michigan State University which served as a pilot study for the main study conducted in Thailand. Both the studies reveal that age, faculty cohesiveness, feeling of security, knowledge about the innovations, and more years of education are positively related to the adoption of innovations in schools.

Leverne (1968) studied the relationship between organizational climate, age of the staff, years of service in schools, and the number of professionally qualified staff of the most innovative and the least innovative schools. The study was based on the perceptions of teachers and administrators of these institutions.

Mann (1978) says that there are five strategies of change. They include (1) Forcing (2) Buying (3) Persuading (4) Manipulating and

(5) Reinforcing innovation. After pointing out the assets and liabilities of each, he recommends the strategies of buying change. It relies on the premise drawn from political science that self interest is a highly reliable motivator of change. His 'modest proposal' makes educators and schools strive for improvement in students' achievements above a predicted or targeted level. By nurturing changes in and by individuals through referant groups with which they identify, innovation and development occur in organizations and institutions. The resultant change processes encompass concepts, strategies and principles that contribute to and explain innovation phenomena.

Fullan, Miles and Tailor (1980) evolved a procedure to help organizations develop and change. They optimistically state that organizational development is a useful strategy for school improvement. They have proposed a research agenda for school improvement. (1) Collect more directly 'discriptive data' on Teachers' autonomy and their instructional strategies and educators' definitions of goals; (2) engage in more 'contingent analysis to determine when teacher involvement will pay off and what aspects of routinization are related to implementation of change; (3) employ 'comparative analysis' where variables are experimentally manipulated; (4) Treat 'innovativeness'

and 'effectiveness' as dependable variables.

2.2.3. RESEARCHES ON OBSTACLES AND BARRIERS TO INNOVATIVENESS

Miller (1965) has developed an inventory on Teacher innovativeness. According to him inadequate Teacher education programmes are great inhibiting factors in inculcating innovativeness in teachers. Teachers are not prepared for change. They are sometimes reluctant to accept any challenging endeavour. They do spend a lot of time and energy on their job, get frustrated by their images of unachieved potential and are searching for help in learning new approaches to their goals of educating the young. Miller has also found that inadequate knowledge about the process of change is a major obstacle to the adoption of innovations in education. He says that summer institutes and workshops are very helpful in imparting new and stimulating experiences to the teaching community. According to him the factors fostering change especially in the American Society have been (1) acceptance of democratic way (2) acceptance of the principle of equality of opportunity (3) belief in material progress and (4) belief in the importance of education. There are other factors also that promote educational change. Miller identifies these as (1) competition

(2) the growing demand for knowledge (3) pressure from agencies outside the realm of professional education and (4) advances in behavioural sciences. Miller further emphasises that to bring about desired changes in education, the teacher should be innovative.

Jennis and Smith (1965) reviewed the literature on change and came to a number of conclusions regarding overcoming resistance. Their argument which is based on the findings is that communication does affect, inspite of resistance, even when the audience remains highly suspicious of the source and is strongly motivated to resist. Communications sometimes prove to be surprisingly effective. If some degree of exposure can be achieved, as by use of provocative news releasing, even despised communicator may exert an influence in the limited sphere of inducing acceptance of allegedly factual statements. However, these strategies are improper practices for overcoming attitudinal resistance for any dissemination. They give hints at the ways of increasing the likelihood of adoption without the necessity for attempting major changes in people's attitudes.

Watson (1966) conducted a study on 'small scale administrative change.' The focus of the study is on resistance to High School Guidance Programme.

The study reveals that resistance on the part of the individual is likely to be strongest at the point where pressure for change is the greatest. It is at this point that the individual becomes most threatened and tends to regress. The emotional aspects of change are many. They include general wishes to change, resistance to change, acceptance, rejection of change efforts, identification with change, denial of change, as well as variety of ego and defensive responses to change. These aspects are based on the present and past experiences and phantasies and hence require careful and sensitive scanning, understanding and working on the part of strategists and receivers alike.

Gross et al (1971) made a case study for the failure of an innovation at 'Cambire.' They began their study by arguing that the major explanation for the failure of promising innovations is found to be inadequate. The major explanation offered in the literature is that innovations fail because of the initial resistance of the members of the innovating organization. Gross et al, claim that evaluations generally overlook the possibility that innovations have not actually been implemented in the way that was intended. It is equally important to study what happens during the implementation process in order to find out why a promising innovation fails. Cambire experiment failed inspite of (a) absence of

initial resistance (b) favourable external conditions and (c) high status and powerful external change agent. Their study has revealed that the causes for the failure of innovations are (1) the teachers did not have clear understanding of what was expected of them in their new role (2) they did not have the necessary skills to carry out their new role (3) they did not have the necessary materials and equipment (4) defective arrangements, for e.g., non-flexible time-table, incompatible with the innovation (5) there were no feed back procedures to correct the deficiencies (6) the unsatisfactory experiences led to the development of resistance and (7) the Director of the Project took a simplistic view of the implementation process and lacked an awareness of his obligation as a leader to his subordinates.

Gross et al therefore arrive at the following conclusions:-

(1) Since teachers' freedom to choose and adopt is limited, a school should be treated as a formal organization and organizational change should be defined as a behavioural change with respect to role performance of authority structures, as well as division of labour or organizational goals. (2) The decision of the head to adopt does not tell anything about implementation by

staff (3) Organizational characteristics prior to the introduction of innovation is important; therefore external pressure, internal tension, previous atmosphere of change, and outside expert with a positive image are all to be considered. (4) Initial resistance may not be the only inhibiting factor. The other factors are (a) members who are not resistant face obstacles in their efforts to implement (b) the required aid from formal leaders on whom they depend may not be forthcoming (c) members initially favourable may develop a negative attitude as a consequence of frustration they have encountered in attempting to carry it out.
(5) Most school authorities regard their task as having ended with the decision to initiate an innovation. The job of carrying it through is given to a subordinate.

Pell and Charters (1973) made a case study of the introduction of differentiated staffing. They found out that there existed a dichotomy between assumptions and realities that caused friction leading to dropping of innovation. First while extensive changes were anticipated in teacher behaviour and role complexity, the administration did not see a need to change its tradi tional staff structures for the support and management of the new project. Secondly, the project officer who initiated the innovation and located resources for its implementation had no direct control over the programme.

The assistant superintendent who was forced to assume responsibility for someone else's project was not enthusiastic about it. Thirdly, 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, a little hostility, goal displacement and high personnel turnover.

Boyd and Immegart (1979) studied the pressures put on educational settings, pre-school through university to adopt efficiency and evaluation techniques. In addition to difficulties arising from inappropriate models and inadequate theory to guide implementation of Innovation, all change projects were hindered by other problems. Some of these included: (1) Use of inadequate and inappropriate evaluative instruments by local educators and schools (2) Failure of communication and funding agency for most schools or districts concerning desired out-comes and preferred proceedures (3) Belief by funding agencies that agreement to take funds for innovative project meant that it would be implemented by the recepient school or district (4) Failure to obtain mutual adaptation or understanding

and accommodation to each other's plans, purposes and procedures (5) Non-use of recognised change agent strategies and skills that are essential in planning, initiating, implementing and evaluating change projects.

According to Mitzel (1982) Projects were rarely implemented, the few that were, did not continue innovation after funding ended. Innovation developments were not exported or disseminated to other schools or school district. It seemed reasonable to expect that there have been a considerable harvest of positive developments and outcomes. Such was not the case. Examples of these that produced that nominal expected results include the New York city schools. Experimental Elementary Programme and the Federal Programme supporting educational change had beginning in the late 1950s and blossoming through 1960s and 1970's upto 1980's.

2.3.0. STUDIES CONDUCTED IN INDIA

2.3.1. RESEARCHES ON GENERAL ASPECTS OF INNOVATIONS AND INNOVATIVENESS

In India the first research on Teacher innovativeness was conducted by Rao (1967). This is an enquiry into the factors that contribute to the promotion or inhibition of educational innovations.

It is an extensive survey of the innovations introduced and their sources although the focus of the study is to find out the factors contributing or inhibiting the innovation diffusion process.

The study reveals that the more innovative schools have better facilities, more audio-visual aids, special rooms (subject rooms rather than class rooms), books and magazines for students and teachers. It further discloses that the agencies or sources for innovation diffusion are departments of extension services of colleges of education, Headmasters, seminars, workshops, visits to other institutions and to other countries, experts, visitors, state department of education, state evaluation unit, SSC board, employment bureau, Research centres, universities, Scientists' forums, and Headmasters' Associations. Rao found out that single sex institutions are more innovative than co-educational schools. Again, schools with higher teacher pupil ratio, student strength between 500 and 750, and under the management of University, missionary, and industry are more innovative than others. Further, higher secondary and multipurpose schools are more innovative than ordinary schools. A noteworthy finding of the study is that the academic and professional qualifications of the heads of the institutions do influence the diffusion or adoption of innovations.

Joshi (1974) conducted a study of innovations in Teacher training institutions. The objectives of the study were to find out (1) innovations in teacher education and (2) the resisting factors to innovations. The method followed was the descriptive survey method. Questionnaire and Interview were the tools used. The findings of the investigation were (1) In the area of methods of teaching, popularly used methods were question-answer and objective based teaching (2) The use of micro-teaching, programmed learning, interaction analysis and self learning projects were negligible. (3) In Rajasthan, some innovations were reported. As for example, there were three institutions to organise regular programmes of in-service education which provided training on ungraded unit and also a new experiment on first introduction to teaching was undertaken by them; (4) The most significant factors of resistance to innovations as reported were lack of facilities, lack of funds, lack of time to pursue the new ideas, lack of professional guidance, lack of support from educational department and lack of professional involvement.

Panchal's (1977) study of innovative proneness of Teacher educators of Secondary Teachers' Training Colleges of Gujarat State had the following main objectives: (1) to construct and standardise a tool

for assessing innovative proneness of teacher educators; (2) to study the innovative proneness of the teacher educators and (3) to evolve the innovative proneness scale through factor analysis.

The findings were: (1) Individualization of teaching-learning process, inter-school organisation, and staff development had the highest percentile score (25.0) and school community relationship had the lowest percentile score (9.0). (2) Staff norms, had the highest percentile score (58.0) and system norms had the lowest percentile score (8.0). (3) Traditionalism, progressivism, and change proneness had the highest percentile score (50.0) and conservatism had the lowest percentile score (15.0). Teacher educators above thirtyfive years were more change prone than those below thirtyfive. (4) There was no significant difference in the attitude of teacher educators towards innovations. (5) Teacher educators with more experience perceived the importance of teacher resources in a better way. (6) Academic qualifications of the teacher educators bore no significant relationship with attitudes to innovation, on the whole. But the teacher educators with Master's degree showed significantly higher proneness. (7) Professional qualifications did not have significant relationship with teacher educator's attitude to innovation, but M.Ed., degree holders showed

significant concern for teaching-learning process. (8) Mobile teacher educators were more venturesome and more prone to change. (9) In-service education of teacher educators tended to be significantly related to attitudes of innovation, concern with teaching-learning process, teaching resources and school community relationship. (10) Reading habits of teacher educators did not make significant difference in their attitudes towards innovations. (11) Professional job satisfaction was not significantly related to attitudes towards innovations, situational and innovative characteristics and to any of their components; but was significantly highly related to traditionalism.

Patel's (1979) was a study of innovative proneness of secondary and higher secondary school teachers. Two of the objectives of the study were (1) to study the innovative proneness of teachers of Gujarat with reference to their personal and professional variables (2) to find out whether there are certain other characteristics of teachers which are related to their innovative proneness. The investigator constructed and standardised a tool for collecting data. The sample for the study comprised 1,000 teachers serving in 100 of the 600 secondary and higher secondary schools of Gujarat State. The major findings are: (1) 'Age' of the teacher is highly correlated with

'curriculum Organization', 'teaching learning process', 'teaching resources,' 'Staff development' etc., (2) 'Sex' of the teacher is highly (significantly) correlated with 'Individualization', 'curriculum organisation', 'Teaching learning process' etc., (3) 'Experience' of a teacher is highly (significantly) correlated with 'Individualization', 'curriculum organisation', 'teaching learning process', 'teaching resources' etc., (4) 'Academic qualifications', 'Professional qualifications', 'Mobility', 'Inservice Education', 'Professional reading habit' and 'Professional satisfaction' are all highly (significantly) correlated with many of the components of 'innovative proneness' of teachers. (5) There was highly significant correlation found among the various components of teacher innovativeness also.

Mohana Ramakrishnan (1983) conducted case studies of innovative institutions. The objectives of the study were: (1) To prepare case studies of innovative as well as non-innovative schools (2) to make comparison and contrast between innovative schools and non-innovative schools, and (3) to study factors contributing to the innovativeness and non-innovativeness of schools.

The tools used for the study were (1) innovative practice check list (IPCL): (2) School Profile Data (3) Questionnaire in adoption Process of Innovation

(4) Barrier's Check List (5) Interview Schedule; (6) Change Proneness Inventory (7) Leadership Behaviour Description Questionnaire and (8) OCDQ. The total number of schools selected for the study were eight innovative schools. The findings are: (1) The sources of innovativeness are the headmasters, the founder of the school, the teachers and pupils as well as their own need to solve the day to day problems (2) The objectives of the innovation are the teachers' desire to 'realise certain high educational ideas' and 'to enjoy the novelty of a new practice' (3) One of the favourable factors that create system effect on individual members is 'Incentives for individual innovations'.

Sunil Mohanty's (1984) study of student teaching programmes in Colleges of Education with special reference to innovation includes case studies of two innovations in student teaching programmes, namely (1) micro-teaching and (2) team supervision of criticism lessons. The findings are: (1) Micro-teaching and team supervision of criticism lessons are the only two innovations followed in Colleges of Education in Orissa. (2) The former is in practice in one government and in one private college while the latter is in practice in another government college. Thus there are two government colleges and one private college which

have one innovation in each of them and (3) The picture about innovations in Colleges of Education in Orissa is gloomy.

2.3.2. RESEARCHES ON FAVOURABLE AND CONGENIAL FACTORS TO INNOVATIVENESS

Bhogle's (1969) study is on the psychological and organizational correlates of acceptance of innovations by schools. The following are the findings. Headmasters having democratic and favourable attitude towards teching, more experienced, drawing higher salary, and having less conflicts are more innovative. Older the head of the institution, more adaptive he or she is. Cosmopolite and older teachers are prone to accept innovations. Large and multipurpose schools are more adaptive to innovations. Acceptance of an innovation is an institutional factor influenced more by the personality of the Headmasters and Principals than that of the teachers. Again, the Headmaster's leadership style is a deciding factor in the process of diffusion of innovations. In this study also a major finding is that the teacher's experience in the profession and his innovativeness have high positive correlation.

Zaveri (1969) conducted a study of the factors leading to innovations and change in some progressive secondary schools in Karia District of Gujarat. The study reveals that the resulting change brought about by

innovative practices is welcomed by the teachers, who unmindful of the various types of difficulties faced by them as change agents are willing to face resistance to innovations boldly, since the change finally develops team spirit, builds up school climate and creates convictions in the teachers. Further, it helps them develop new value systems besides providing opportunities and challenges to them. Another finding of the study is that innovative practices are adopted in the areas of teaching practice, examination, curricular activities, school management, headmaster's social relations, school building, teaching learning process and cocurricular activities.

Purushothaman (1978) conducted case studies of Innovative institutions at the secondary level in the State of Tamil Nadu. He selected 25 schools for case study, some of them innovative; some non-innovative. His findings are: (1) Most of the schools function as self generating systems as far as innovative ideas are concerned. (2) The objective of this innovation is to meet their new needs. (3) The authority assists the members of a system to adopt innovations. (4) The factors found favourable for effecting a system effect in the individual members are (a) dedicated leader (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) incentive for individual innovativeness (f) client need oriented approach of the authority. (4) The most common process models of change are the problem-solving models. (5) Procedure of evaluation of innovations are streamlined in the system. (6) Resistance does not thrive in a system with built-in-check mechanisms like power concentration in the authority, and significance of role for the adoption in planning and executing change. (7) The variables that promote innovativeness are (a) active managing committee (b) the support by the managing committee to the Headmaster (c) System affinity of the staff (d) education of parents (e) Student's level of awareness and (f) community's preception of the School.

Sathyavathi (1980) conducted a study of processes in adoption and discontinuance of innovation in schools. She adopted 30 schools in Gujarat State and conducted case studies of 30 adopted innovations and 15 discontinued innovations. Her findings are:- (1) Successfully adopted innovations have the following characteristics: (a) Most of the innovations are proven educational ideals (b) Most principals consider the innovation as experiment (c) Most innovations are suited to the existing social system (d) Resistance is shown by considerable number of teachers, (e) the principals get full support from the

management for adoption of innovations (f) Recognition is given for adoption of innovations (g) Adoption of innovations result in better pupil achievement, better school climate, increased parental interest in school and improve teacher punctuality (h) All innovations ordered by District Educational Officer are continued. (2) The discontinued innovations have the following distinctive characteristics: (a) The innovations do not conform to the social motives of the institution (b) They do not bring prestige to the institution. (c) They are not sponsored by the Education Department (d) Resistance is seen from the awareness stage itself (e) The time lag between decision making and introduction of innovation is long (f) Some of the factors that cause discontinuance are (i) dissatisfaction with its performance (ii) cliques among teachers (iii) lack of financial support. (iv) lack of community support (v) extra work load (vi) lack of interest and co-operation among teachers (vii) inadequate planning (viii) inadequate physical facilities. (ix) too many innovations practised at a time and (x) parental apathy.

2.3.3. RESEARCHES ON OBSTACLES AND BARRIERS TO INNOVATIVENESS

A few of the findings that have emerged from measurement of change - proneness exclusively are reported

below; The study was conducted by Mahopadhiyaya (1975). (1) Innovative authoritarian type of managers arbitrarily order changes and therefore teachers change - proneness has no place in an authoritarian set up except to carry out what is ordered. (2) Innovative schools are not distinctly characterised by high scores for the change-proneness of the staff (probably due to the structure of the school system or due to the nature of innovative implementation). (3) Teachers change-proneness is found to be a fairly less reliable predictor for innovativeness. (4) Organizational facility influences directly the change proneness coming into operation. (5) Change-proneness is identified as a barrier to change in a democratic set-up.

Singh (1977) investigated Adoption and Discontinuation of Innovations in the preparation of Secondary School Teachers in India. The objectives of the study were (1) to find out to what extent innovations recommended by different commissions and committees have been adopted by the Secondary School Teachers' Training Institutions in India (2) to find out how far these adopted innovations have been maintained or discontinued by these institutions (3) to find out whether these institutions and the universities differ with respect to the adoption and maintenance of innovations (4) to study how decisions for the adoption of

innovations are made in these training institutions and (5) to suggest measures so that training institutions may be made more prone to the adoption of innovations.

Descriptive survey method of research was employed for the study. A questionnaire developed for the purpose and interview were used as tools for the collection of data.

All the secondary teacher training institutions in India were approached for the data through the questionnaire for studying innovations adopted and discontinued by them. Out of them only 200 institutions responded. For studying decision making process for the adoption of innovations, 200 teacher educators from forty training institutions (ten per cent training institutions from each of the four educational regions) were interviewed.

A sample of 200 student teachers selected from the forty institutions were used for the fulfilment of objectives one and four. The syllabi prescribed for the Bachelor of Education and Bachelor of Teaching courses of fifty universities were analysed.

The following were some of the conclusions of the study: (1) Only a limited percentage of secondary teachers training institutions (from 6.6 per cent to

11.4 per cent) had adopted objective criteria and standardised procedures for admission. (2) About 85.6 per cent of Secondary teacher training institutions prescribed flexible methods of teaching for student teachers (3) About 56.9 per cent to 82.2 per cent of the institutions had adopted activity and group discussion methods of teaching. (4) About 85.1 per cent of the institutions gave weightage to internal assesment. (5) Institutions which had adopted innovations had been able to maintain them. (6) Frequently discontinued innovations were those that involved heavy expenditure for which training institutions had to depend on other financing agencies.

Balasubramanian (1978) made a critical study of the strategies adopted for the installation of innovations in high schools in Vellore Educational District, Tamil Nadu. His findings are:- (1) The two innovations commonly found in schools are the School Complex and Supervised Study which are officially sponsored and descended from official hierarchy. (2) While in the least innovative schools, the idea is thrust on the teachers by the Headmasters, in the most innovative schools the programmes are discussed in staff meetings so that the change effects are pre perceived, as being self-motivated and voluntary as much as possible. (3) In the most innovative schools the adoption is

complete which in the least innovative schools is partial. (4) In the least innovative-schools, teachers have taken up innovations that could be done within school time while in the most innovative schools teachers are willing to work extra time, if necessary. (5) Physical proximity to resource centres like colleges of Education, Departmental Offices etc. has played no significant part in the adoption of innovations, while physical proximity to NCERT/SCERT even if schools are situated far from the resource centres has helped them to adopt innovations. (6) Objectives are clear and specific in most innovative schools while they are general and ambiguous in the least innovative schools. (7) Official recognition and public appreciation provide a positive reinforcement for adoption of innovations while cold response from inspecting officers hurts the teachers. (8) The widely adopted strategies are the research development and diffusion model and the social interaction model. The social interaction strategy is more successful with respect to innovation dealing with administration, role perception, curriculum. methodology and evaluation.

Mohan Rao (1980) conducted a critical study of the implementation of some innovations in higher education. Six universities in Andhra Pradesh were chosen for the study.

The objectives were (1) to study the innovations that are taken up by the Universities and to find out to what extent the innovations are successfully implemented (2) to study the factors which come in the way of successful implementation of the innovations and (3) to study the different agencies in the successful implementation of the innovations. The innovations of (A) Internal Assessment (B) Semester System (C) M. Phil. course and (D) Correspondence Course were studied in detail. The findings are (1) The innovation of internal assessment was practised by all the six Universities; but two Universities discontinued it after some time (2) Semester system was practised by four universities but Andhra University discontinued it after 10 years (3) M. Phil., Course is offered in five universities (4) Correspondence course is offered by only three universities (5) The factors that come in the way of successful implementation of innovations are (a) lack of inservice training programme (b) lack of specialisation facilities (c) lack of library facilities and (d) lack of equipment.

Vinaitheerthan (1981) conducted a study of innovation dissonance and its correlates in secondary schools. The objectives of the study were to study the innovation-dissonance of the teachers of secondary schools with respect to the personal variables such as

age, sex, experience etc., and with respect to personality variables as well as institutional variables. The tools used were the innovative proneness tools developed by Panchal and Patel, having four sections. The sample included 540 secondary school teachers and 100 headmasters of the city of Madras. The findings are: (1) Male teachers have a more dissonant state than female teachers (2) Teaching experience plays a prominent role with respect to the dissonant state (3) Dissonance is very high in trained teachers when compared to that of untrained teachers (4) Immobile teachers possess higher dissonance than the mobile teachers (5) In-service education has its impact on innovation dissonance (6) Teachers possessing social traits show more dissonance than those possessing other traits (7) Teachers in private management schools possess more of dissonance than their counterparts in other types of schools (8) Teachers working in schools of closed climate type exhibit higher dissonance than those in schools with other types of climate (9) Teachers of non-innovative schools are more dissonant than those of innovative institutions.

Radhakrishnamoorthy (1982) conducted a study of educational innovation introduced at secondary level in Andhra Pradesh. The tools used for collecting data for the study were (1) opinionnaire and (2) a structured

interview. The sample consisted of 309 headmasters and senior teachers.

The objectives were (1) to find out the philosophical point of view of the innovations introduced by the Andhra Pradesh Education Department. (2) to study the extent to which the introduction of educational innovations is achieved (3) to study the factors of innovations and (4) to suggest measures for the naturalisation or institutionalisation of these innovations. The findings are: (1) Neither the teachers nor the headmasters, nor the students nor the supervisors understood (in spite of many orientation courses) the full significance of the innovations introduced in the state as a step towards enabling the students to face the problems and challenges of the developing society (2) The innovation as introduced remained almost as it was; the feed back does not thus appear to have reached the top, to bring in any changes which are necessary (3) Lack of motivation, summative testing, defective administrative functioning are the factors responsible for the failure of innovations.

Mary Rodrigues (1982) made a critical study of the Jesus & Mary Schools in India with special reference to innovation and investment. A major objective of the study was to examine in greater detail the aspects of

innovation and investment in the schools. Case study method was followed. All the 25 Jesus and Mary Schools in India constituted the sample. A major finding of the study is that (1) innovations are not yet fully developed in these schools (2) In some they fade out before being institutionalised and (3) very few of the innovations really lead to renewal.

Rajagopalan (1983) made an enquiry into certain aspects of selected innovations in Education. The objectives of the study were: (1) to find out the factors facilitating institutionalisation of innovations (2) to examine the role performance of the change agents and opinion leaders in the implementation of innovations and(3) to identify the characteristics of the different categories of innovations.

The tools used were (a) Questionnaire (b) Interview Schedule and (c) School profile. The sample comprised 139 schools from Tamil Nadu. The major findings of the investigation are: (1) Some of the innovations were at micro-level, being adopted in a few schools while others were at a macro-level encompassing all or a large number of schools in the State of Tamil Nadu (2) In most of the innovations there was lack of conviction in the innovation on the part of most of the practitioners (3) Most innovations were authority decisions and the aurhority strategy was

mostly used to introduce the innovations. There was no consultation with the actual practitioners. The passivity of the teachers was taken advantage of by the authority to implement new ideas. (4) The lack of conviction in the innovations and the lack of involvement of teachers in making decisions were two main factors for resistance to innovativeness. (5) While teachers generally did not oppose an innovation openly, they adopted a strategy of uninterested participation in change. The innovation was taken lightly and implemented in a slip-shod manner. (6) Another common defect in the change process was the absence of monitoring system.

2.4.0. GENERALIZATIONS:

The researches reviewed reveal that in all these studies the approach in investigating innovativeness is with regard to the institution as the unit or the system for this characteristic feature. But during recent years a shift in this trend has been observed. Researchers are also trying to concentrate on the study of teacher characteristics as the major contributing factor for the innovativeness of institutions since it is the teachers who initiate innovativeness and are also the ultimate users of innovations.

Another noteworthy feature of these researches, especially those conducted in foreign countries, is that researchers have conducted their studies with clear assumptions of proper approach, and its useful methods in the area of innovativeness. They were fully aware of the fact that teachers, principals, superintendents or other administrators do not work in isolation, but in collaboration in an organization -- the school, a system in a social millieu. Hence the researches reveal the overall impact of all these on innovativeness.

Almost all the studies have focussed on the nature of organisational systems of schools, most of which were found to possess innovativeness to some degree or other. Many of the studies were based on the organisational strength of the institution which could bring about changes in their structure and functions.

As far as the pioneer studies on innovativeness are concerned, the renowned researchers are Rogers, Miles and Miller. They have done commendable work in this area.

From the review it is evident that many studies were concerned with the successful or unsuccessful implementation of innovations in educational settings. The type of innovation or the nature of innovative institutions, and other ramifications of

innovative behaviour either on the part of an individual or an institution, however important they may be, are meaningful so long as they get tailored to the innovative character of the adopter system in education.

The purpose of any innovation is valid and up-held only when it is properly implemented. Hence the implementation part of any innovation is more important than any other aspect. Such an approach known as clientele or consumer oriented approach gets emphasis when one has to view a problem from a pragmatic perspective.

Innovations may be many, but their utilisation is important. The adopter system is the target organisational or functional aspect of change processes. All the other processes of installation, implementation as well as institutionalisation occur in this system. As the adopter system is the most important unit to receive the innovation and implement it, the focus must be more in the adopter of innovation than on any other aspect. Hence it is apparent that it is the teacher who adopts the innovation should possess the characteristics or traits necessary for successful implementation of innovations in our educational institutions. With this background in mind, this study has been conceptualized and planned.

In India, research on innovativeness is of recent origin. In fact, the idea reached our country through the researchers, educators and scholars who visited foreign countries. The period can be traced back to 1950s. But considerable amount of work commenced only in the early 1970s when C A S E -- Centre for Advanced Studies in Education, Baroda - took the initiative in conducting research on innovativeness. During the period spanning nearly the last two decades a good number of researches have been conducted by different scholars at various centres of the country.

2.5.0. THE RELEVANCE OF THESE RESEARCHES TO THE PRESENT STUDY

The review of the literature is an exacting task, calling for a deep insight and clear perspective of the overall field. It is a crucial step which invariably minimizes the risk of dead ends and rejected topics. It promotes a greater understanding of the problem and its crucial aspects and ensures the avoidance of unnecessary duplication. It also provides comparative data on the basis of which to evaluate and interpret the significance of one's findings. In addition, it contributes to the scholarship of the investigator (George J. Mouly 1964).

Review of the related researches conducted earlier has full relevance to any subsequent research. This research on Teacher Innovativeness in Tamil Nadu could be planned well in the light of the review of the related researches conducted earlier.

The earlier researches have shed much light on the various aspects of Teacher innovativeness. Though many studies were on innovative schools, there have been a good number of researches on the behavioural characteristics of innovativeness possessed by teachers. These have helped this investigator to have a better conceptualization of a proper research design and procedure for this investigation.

In the light of the review a proper perspective could be evolved with regard to the variables to be used for the analysis and interpretation of the data collected for the study.

Again, the review helped much in planning the analysis of the data applying suitable statistical measures. Thus the twenty one characteristic behaviours which constitute teacher innovativeness could be subjected to a descriptive analysis. Hence, the findings and conclusions that could be arrived at by means of this study of Teacher Innovativeness in Tamil Nadu were in a way or other the outcome or after effect of a

detailed review of the related researches conducted earlier and the literature available in the area of Teacher innovativeness.

2.6.0. CONCLUSION

The chapter, a resume of the earlier researches that have relevance to the present study, contains references to various studies conducted in other countries and in India. This could sensitize this investigator to the dimensions of the problem chosen for the study, as a result of which a clear insight into the methodology that would enable a systematic study of Teacher Innovativeness in Tamil Nadu could be had in the light of the review of related literature.

Two roads diverged in the woods

I, and I, took the one less travelled by

That, and that, made all the difference.

ROBERT FROST