CHAPTER - II

THE CONCEPTUAL FOUNDATIONS

2.0 Introduction:

Education is applied philosophy. Philosophy deals with the ends, education with the means and technique of achieving those ends. James Ross said "education is the dynamic side of philosophy". John Dewey endorsing the views of Ross believes that "philosophy is the theory of education in its most general phase". All educational programmes become consistent if their foundations are laid on sound philosophy. It gives unity of outlook. It helps reconstruction and readaptation of education to suit the needs of the contemporary society.

There is no aspect of education aims, curriculum, methods, text books, discipline, teacher etc. which is not influenced and determined by philosophy. Philosophy sets certain ultimate values on the basis of which aims of education are determined. The truths and principles established by philosophy are applied in the conduct of educative process. Aims of education depend on the philosophy that prevails at the time of determining the aims of education. That is why they have been changing with the changing philosophy of life. They have been varying in different countries in accordance with their respective philosophies.

The aims of education are generally derived from the metaphysics of the philosophy that a particular educational system believes in. Metaphysics deals with the concept of reality. The one major "invarient in our society today is the tendency towards growth, development process, change" (Bennis et al, 1976). The ultimate term in contemporary rhetoric, the good term, is progress or change. Change itself has become the metaphysics today.

2.1 Planned Change:

If change is inevitable, then how to cope up with this? If the phenomenon of change has been accepted beyond debating then how to process this change. Social scientists today are concerned with two ideal systems that are counterposed regarding the methods of change; the law of non-intervention and the law of radical intervention. The non-intervention ideology leaves things to natural-law, to an 'inviable hand' and the radical intervention ideology emphasises conflict between any inevitable class struggle. Both are extreme ideologies and both have not proved effective methods of change. In the economic sphere, Keyves has expected the weaknesses of the natural-equilibrium position on which the non-intervention ideology is based.

Marxian interventionistic approach has not also proved successfully.

The only feasible alternative to the methods of change is the planned change, that is, "a method which self-consciously and experimentally employs social knowledge to help to solve the problems of men and societies" (Bennis et al, 1976). Social structure is subject to incessant change growing, decaying, finding renewal accommodating and suffering vast modifications in the course of time. The change that society experiences shaking its very structure is the result of interaction of many factors, historical, economic, scientific, technological and ecological. But social solidarity is necessary for the perpetuation of the group. Of all the changes, those that effect the social structure are perhaps more rapid. It is because of the rapidity of social changes that the social scientist~~i~~s, unlike the physicists, are unable to predict exactly as to what would happen to society after a few years. Social scientists have, therefore, to be all the more concerned with planned change to bring in desirable changes in the social structure and social life. In an era of radical social change, new problem will arise; old values will have to be confronted and new values formulated. Some amount of social control is essential to check the too many and too rapid changes which may be disastrous.

2.2 Change and Education:

Education is expected to perform two functions. While education preserves, transmits and stimulates the wholesome culture, the society expects the school to review and plan its work according to the demands and aspirations of the changing society. The whole planning of the school including the curriculum should reflect the changes in the social values, norms and patterns. Education has to conserve as well as develop the social culture. Education has proved to be an efficient agent for change. It is also a condition for change to come to fruition.

2.3 The Dynamics of Change:

There is so much of literature on innovation analysing changes that have already occurred. Many of the changes are more unplanned ones. It is only from studies of such changes, models for change are abstracted.

The phases of change and its development are described differently by various researchers according to their foci of emphasis. Each model, as it views the change process differently, implies a different strategy for effecting more easily and more perfectly the contemplated changes.

The models on change are grouped under three broad categories, viz. R, D and D, SI and PS models.

(i) The R, D and D Model:

The R, D & D model assumes an orderly process of change starting from research and ending with adoption. Clark and Guba (1965) are the arch advocates of this group of strategies. They view the process as a rational sequence of phases, by which an innovation is invented or discovered, developed, produced and disseminated to the consumer. The innovation is not analysed from the view point of the consumer who is presumably passive, nor does research begin as a set of precise answers to specific human problems, but rather as a set of facts and theories which are then transformed into ideas for useful products and practices. for development. The knowledge is finally mass-produced tested and explored before final phase. The basic assumption of this model is that links exists between research and practice worlds. This is more applicable to the field of science and engineering.

(ii) Social Interaction Model(SI):

The second group consists of social interaction models with emphasis on the aspect of diffusion, the movement of ideas and messages from individual to individual and from system to system. This model underlines the importance of inter personal network of information of opinion-leadership, of personal contact and social integration. The general idea is that each member in the system will proceed through the awareness-adoption cycle by means of a process of social communication with his colleagues. Generally in the decentralised system this strategy takes the form of convincing a user of the usefulness of a new practice or device and then of facilitating the process thereby colleagues may come into contact with the new practioner while he is using the innovation. In India, the extension services departments of colleges of education started this kind of diffusion at refresher and inservice courses organised by them for teachers.

(iii)Problem - Solving Model(PS):

The third group models, the problem solving models, are built around the users of innovation on the assumption that the user has a definite need and that the need could be satisfied by that innovation. So the process is from a problem to the diagnosis of a need, then to trial and adoption. Very often an external change agent is required to connsel individuals upon possible solutions and the strategies for implementation. But the emphasis is upon client centered collaboration rather than upon manipulation from without. Though essentially scandinavian in origin, much of this type could be seen in vogue in India, the U.S.A. and the United Kingdom also.

To summarise, of the three models, the second and third ones are more related to Indian situation. It could be seen that each of the three systems lay its stress on different aspects:

Model	Stress on
1. R, D and D	1.Developer
2. Social Interaction	2.Communicator
3. Problem solving	3.Role of receiver

2.4 Strategies of Change:

In operational terms, a strategy is a set of policies which underly specific tactics or actions that are considered useful in order to bring about the permanent installation of a particular innovation such a set of policies would have to take into account the innovation itself, the whole process of change, the characteristics of the target individuals and groups and the nature of the system which will adopt the operation of innovation.

Inspite of the fact that many strategies are available, experience shows that certain sequences and combinations are more effective than others and it is necessary to meet certain preconditions if any progress is to be made.

Watson(1967) argues in favour of structural approaches to achieve best results. In schools effective change sequences involve structures first, altered interaction processes second and attitudes last. He lists five 'preconditions' for any successful attempt at institutional change: (1) Participants must feel that the project is their own. (2) The project to be fully supported by the seminar officials of the system.(3) The project should be in accordance with the ideals and (support, trust, acceptance and confidence in their relation with each) values of the participants. (4) The participants should experience support, trust, acceptance and confidence in their relation with each other. (5) The participants must feel that their autonomy and security are not in any way threatened.

Guba's investigation(1973) provides the following "typology of strategies" which are dependent upon the nature of the adopter. Guba's list,in effect,is a collection of different types of motivation and intimidation.

Guba's typology of stragies:

1. Value stragtegy: Appeal to be made in terms of value priorities, for instance, on behalf of whatis best for children?

2. Rational strategy: On the basis of logic and feasibility.

3. Didactic strategy: Willingness even without training.

4. Psychological strategy: Need based.

5. Economy strategy : Resource incentives.

6. Authority strategy: Compulsion by orders from above.

Guba relates each of the above strategies to six diffusion techniques viz: (i) telling (ii) showing (iii) helping (iv) involving (v) training, and (vi) intervening.

Ivor(1966) depicts the link between the techniques of "intervention" and the various phases of "change process" as follows:

Relationship between Change Agent Activities and Adopter's Activities

Change Agent Activities	Adopter Activities
Promote	Awareness
Inform, Tell	Interest
Demonstrate, show	Information seeking
Train	Evaluation
Help	Trial, Test
Service	Installation
Nature	Adoption
	Institutionalisation
	Integration

Chin and Benne(1961) have recognised and regrouped these categories into basic types. These revised clustors correspond to the three process models already outlined. They can be referred more specifically to different kinds of ministerial policy making tradition:

1. Empirical - rationale approach: Appeal must be based on the logic and variable goodness in the innovation.
2. Normative-re-educative approach: Appeal to the active and willing adopter to improve his problem - solving potential to bring self-clarify leading to desirable change.
3. Power-coercive approach: Employing political and economical sanctions to enforce innovation and change, especially when legislation is involved.

In order that innovation may be adopted at personal level, fresh knowledge, new skills and attitudes, and very often new value orientation are required. At the social level there must be changes in norms and relationships.

2.5 Change Models - A Critique:

(i) Research Development and Diffusion:

In education the large number of models and strategies are based upon the transfer from theory to practice. Here the major emphasis is on the planning of the ~~changes~~ on a large scale. The process could be described in the following steps: (a)Rational sequences of activities leading to development from research leading to packaging for dissemination (research) (b) Planning on massive scale (development) (c) Division of labour with role allocation (Diffusion) (d) A specified passive consumer willing to accept the innovation with provision for scientific evaluation at every stage of development (Adoption).

This model however tends to underestimate the stages of diffusion through its assumption that enlightened self-interest of the practioner will lead to the eventual incorporation of the innovation.

Brickell states that there are three separate processes, (i) design, (ii) evaluation and (iii) dissemination which are distinct and irreconcilable. It is one thing to design a new method of teaching, another to discover how good it is and yet another to demonstrate its utility for purposes of adoption.

An almost similar but more sophisticated model "Research for Better Schools (RBS) shows the following direction:

Research ⟶ invention ⟶ design ⟶ dissemination ⟶ demonstration and trial.

(ii) Social Interaction Model:

In this second model the unit of analysis is the individual receiver and the focus is on the receiver's perception of and response to knowledge emanating from outside, followed by dissemination through interpersonal contacts. In this the distinct phases are those shown by Rogers(1962): (i) Awareness (ii) Interest (iii) Evaluation (iv) Trial and (v) Adoption.

At each stage in the process, the potential adopter will usually turn to different sources of information, through different media. The media tend to play a major role in the stage of awareness and interest while in the final stages of evaluation, trial and adoption, personal sources predominate friends, colleagues and professional sources were required to legitimate decisions of adoption or rejection.

Studies have also revealed that early adopters greatly influence the late adopters. The early adopters are cosmopolitec in nature, more read and well travelled with better change agent contacts.

In all cases the key feature is the relation of the leader to a group psychologists have demonstrated that identification in a group and with a leader plays an important part in the diffusion of new ideas. Any society or system which has large number of individuals who maintains diverse and overlapping group identifications will tend to be innovative.

(iii)Problem Solving Method:

Although a receiver may turn to external sources for guidance it is he who has to solve his problems. Either the change agent or the receiver may initiate the change process, but in either case the desire and the willing participation of the receiver is all important.

The basic properties of the problem solving could be stated in the following steps: (a) The user is the starting place (b) Diagnosis precedes the identification of solution (c) The outside helping role is non-directive (d) The importance of internal resources is recognised and (e) User initiation is the strongest.

Revealings:

(a) The R and D model reveals the fact that we lack institutional structures for the design and development of new ideas and material (b) The problem solving model demonstrates the paucity of processes for implementing changes once we have decided to undertake them (c) The social interaction model shows that we have few vehicles for the dissemination of innovation to the mass. Until now none of the models is fully developed in practice nor there is a success in combining all three approaches into a general paradigm.

As might be expected, each national system has its own method of organising and harnessing the innovation process. Some operate with centralised research and diffusion bureau(e.g. France, Poland, and Norway) others rely on semiautonomous agencies (e.g. USA and UK).

However it is seen that in any strategy of change, provision should be made for (a) research and development (b) vehicles for introducing change within a single system and (c) mechanism for spreading innovations throughout the system. The particular technique, however, and their sequences of adoption will inevitably vary from one country to another. The important factor appears to be the creation of mechanisms beyond those required to operate the education system; there is the need for establishing new agents in the environment in order that they may accelerate and supervise the different phases of the process.

2.6 Evaluation of Innovation and Change:

Even now our school systems are rarely equipped or even motivated to attempt to evaluate the effects of their new practices. The precise manner of evaluating any innovation is by trying it out on an experimental basis and by comparing the results with the control groups results. This is perhaps not feasible mainly because of the finance and time involved in the evaluation mechanics. Neither can they afford the luxury of controlled situations and measurable procedures for long where school children are concerned. Teachers are often unwilling to risk failures in the eyes of external evaluators. There are many such limitations and shortcomings in the meeting of the needs of a good evaluation procedure. However a good evaluation programme should consist of certain characteristics as suggested by Hilda (1962). They are (1) consistency with objectives (2) comprehensiveness (3) sufficient diagnostic value (4) validity (5) unity of evaluative judgement and (6) continuity.

In the absence of scientific evidence as to whether the innovation will result in increased or more efficient learning it may be that most criteria for evaluating change are those related to the effect on schools' potential for change in future. It may seem some what paradoxical but the side effects of an innovation may count more than the direct effects. Miles (1964) bears this in mind to give his list of 'Innovative success criteria': (i) use of innovation to accomplish broader purposes than those originally envisaged (ii) existence of publications to draw the attention of a wider audience to innovation (iii) improved attitudes or skills of the innovators to favourably affect future innovations (iv) diffusion of innovation to other system (v) stimulation of innovation in similar areas (vi) advancement for innovation practioners.

Finally it is good that the eva~~u~~luation of school systems may be done in terms of the traits and functions of "Innovative Institutions". In this case, the assumption would be that school systems with goal focus, communication adequa~~n~~cy, optimal power equlisation cohesiveness, morale, innovativeness, autonomy, adaptation and problem solving adequacy would tend to make frequent and effective changes.

2.7 Models for Planned Change:

The process of educational innovation is rapidly becoming institutionalised. Innovation in education is not a temporary process, a rather tiresome interlude between long periods of peace and stability. The shift from coercive to deliberate, planned change is the need of the hour. Various models are suggested by theorists and empirical researchers to make this shift easy, economic and effective. All these models are based on generalisations varying in sizes and shapes and degrees of potency.

Table 2.1 : Table summarising the change Models of Different Authors

Sl. No.	Author	Year	Area	No.	Stages/Description
1	Lewin	1958	Sociology	3	Unfreezing, moving, freezing.
2	Gallsher	1964	Education	3	Innovation, dissemination, integration.
3	Brickell	1966	Education	3	Design, evaluation and dissemination.
4	Clark and Hopkins	1966	Education	3	Research, development diffusion.
5	Rubin		Education	3	Preliminary analysis, strategy selection, operationalisation.
6	Band Corporation	1975	Education	3	Initiation, implementation, incorporation.
7	Wilkening	1956	Agriculture	4	Awareness, obtaining information, trial, adoption.
8	Rahim	1961	Agriculture	4	Awareness, information, trial, adoption.
9	Miles	1964	Education	4	Design, awareness, evaluation, trial.
10	Zetman	1964	Education	4	Awareness, interest, desire, action.
11	Heathers	1966	Education	4	Task analysis, development, testing, dissemination.
12	Guba and Clark	1966	Education	4	Research, development, diffusion, adoption.
13	Havelock and Benne	1969	Industry	4	Basis research, applied research, engineering installation.
14	Rogers and Shoemaker	1971	Rural Sociology	4	Knowledge, persuation, decision, confirmation

Sl. No.	Author	Year	Area	No.	Stages/Description
15	Hoyle	1972	Education	4	Invention, development, diffusion, adoption
16	Husen	1974	Education	4	Problem analysis, innovative practices, diffusion, adoption.
17	Wong	1974	Education	4	Initiation, interpretation, implementation, correlation.
18	Goodlad	1975	Education	4	Dialogue, decision, action, evaluation.
19	Beal, Rogers et al.	1957	Agriculture	5	Awareness, information, application, trial, adoption.
20	Lionberger	1960	Agriculture	5	Awareness, interest, evaluation, trial, adoption.
21	Rogers	1962	Agriculture	5	Awareness, interest, evaluation, trial, adoption.
22	Wilkening	1962	Agriculture	5	Awareness, interest, decision making, trial, adoption.
23	Jocobe	1964	Education	5	Objectives, determination of programmes, establishing priorities, implementation, evaluation.
24	Coleman	1966	Medicine	5	Awareness, interest, evaluation, trial acceptance.
25	Jung and Lippitt	1967	Education	5	Identification, diagnosis, formulation of objectives, testing, adoption.
26	Unrus	1970	Education	5	Identification of needs, determination of possible new practices, evaluation, activation of the findings and adaptations, stimulation of the continuation of the process.

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Sl. No.	Author	Year	Area	No.	Stages/Description
27	Sharma	1967	Agriculture	5	Awareness, interest, evaluation, trial, adoption.
28	OECD	1969	Education	5	Planning, construction, experiment, evaluation, dissemination.
29	Hobbs	1973	Education	5	Development, diffusion, legitimation, adoption, and adaptation.
30	Martorans	1975	Education	5	Exploration, formulation, trial, refinement, institutionalisation
31	Adiseshaiah	1977	Education	5	Idea, design, construction, operation, evaluation
32	Myerson	1957	Fads	6	Discovery, promotion, labelling, dissemination, loss of uniqueness, death by ~~d~~isplacement.
33	Willson and Gallup	1958	Agriculture	6	Attention, interest, desire, conviction, action, satisfaction.
34	Bushnell and Rappaport	1961	Education	6	Diagnosis, objectives, identification of constraints, selection of solutions, evaluation, implementation.
35	Havelock and Benne	1967	Industry	6	Basis research, applied research, development and design, engineering for manufacturing, manufacturing, distribution and installation.
36	Thelan	1967	Education	6	Decision on variables, construction of force field analysis, decision on first action, explicit first action, consideration of conditions, revision of force field.

Sl. No.	Author	Year	Area	No.	Stages/Description
37	Griffith and Pareek	1970	Education	6	Awareness, interest, deliberation, trial, evaluation, adoption.
38	Triandis	1971	Agriculture	6	Selection of change agents, training change agents, selection of clients, training clients, selection of innovation, adoption
39	UNESCO	1972	Education	6	Invention, testing, evaluation, development, diffusion, adoption.
40	Bushnell	1973	Education	6	Diagnosis of the problem, formulating objectives, identifying constraints, selection of solutions, evaluation, implementation, implementation.
41	Shipman, Belam	1974	Education	6	Research, development, dissemination, demonstration, implementation, institutionalisation.
42	Farnsworth	1940	Education	7	Recognition of need, proposition of solution, interest, demonstration of usefulness, inviting group interest, official approval, removal of legal restrict- ~~nes~~ ions.
43	Lippitt and Watson	1958	Social change	7	Need, change, relationship, diagnosis of problems, examination of alternative solutions, transformation of intentions into change efforts, generalisation, termination of change relationship.
44	Holmberg	1960	Anthropology	7	Availability of information, awareness, interest, trial, evaluation, adoption, integration into routine.

Sl. No.	Author	Year	Area	No.	Stages/Description
45	Kann and Williams	1966	Industry	7	Equilibrium, preliminary planning, detailed preparation, installation and testing, conversion, stabilisation equilibrium.
46	MacKenzie	1964	Education	7	Criticism, proposals for change, development of proposals, evaluation, comparison of proposals, action on proposals, implementation.
47	Pareek and Singh	1968	Rural Sociology	7	Need, awareness, deliberation, trial, evaluation, adoption, integration.
48	Miller	1970	Industry		Identifying the need, creating idea, developing relationship, designing innovation, implementation concretization, termination of client agent relationship.
49	CERI	1973	Education	7	Identification of problem, innovation planning, experimentation, evaluation and revision, dissemination and production, implementation.
50	Novotney	1973	Education	7	Analysis of the problem, objective specification, inventory, organization, operation, evaluation, alternation.
51	Sikes et al	1974	Education	7	Awareness, attention, apprehension, accpetance, adapt~~i~~ation, action and assimilation.
52	Miles and Lake	1967	Education	10	Clarify expectation, collect information, formulate goals, problem sensing, carryout plans, institutionalisation, phaseout COPED, assess, feedback disseminate.

Sl. No.	Author	Year	Area	No.	Stages/Description
53	Watson	1967	Education	10	Sensing, screening, diagnosis, inventing weighing, deciding introduce, operate, evaluate, revise.
54	Watson	1966	Social change	11	Felt dissatisfaction, diagnosis, consider whole system creative design, force field analysis, reduce resistance, participation, temporary system, leaders and consultants, adaptation, spread of new ideas to others.
55	Leithwood et al	1974	Education	11	Diagnosing the context, developing seminar organisation, developing working organisation, defining general problem and goals, generating a strategy assessing specific needs, developing solutions, implementing solutions, evaluating solutions, revision, assessing the climate for change.

If planned change is a linkage between knowledge and action, then how this linkage is formulated, developed and implemented and how best could it be done, become the relevant issues. This linkage is best done when the variables from the basic disciplines that are strategic leverages for alternation are identified and converted into instrumentation and programmes for effective change. The procedures and techniques adopted for such conversion of ideas into actions come to be known as strategies. "The dynamics of planned change" has been the topical issue of the 'behavioural sciences' during the post-world war II period. Human interventions designed to shape and modify the institutionalised behaviours of men are now familiar features of our 'social landscape'. 'Helpig professions' have proliferated and this is most apparent in 'new' professions like psychiatry, counselling, management, social work and consultation. In disciplines like agriculture, medicine, and anthropology, changes and innovations have been consciously willed, planned, formulated, implemented and evaluated. Knowledge has been diffused, new practices have been initiated, installed and institutionalised. Change models are being developed based on empirical evidences. In education, as elsewhere, planned change has become a condition for survival. Educationists therefore have also to evolve change models for the school system to adopt or adapt to enhance the progress.

Conceptual schemes and models supported by empirical evidences that have relavance to the implementation of innovations in educational institutions have been formulated and recommended for adoption and adaptation. Some of this work dates back to the early fifties and a few even before (e.g. Paul Mort, 1936); but most have been expounded since the mid sixties. The studies, the abstracted generalisations and the organised models are really prolific.

The models are many; but as Mac Donald and Walker(1970) point out each is notable for its "reach rather than its grasp." The theorists have made a start; they have thrown up a range of ideas, parameters and insights. But, and it is a significant but, their theoritical yield is generally meagre so much so that one has to resort largely to "second order theorists", those who have drawn theory from summarisation of large number of studies conducted by others. Rogers and Shoemaker(1971) and Havelock (1969) are the well known second-order theorists of innovation diffusion.

The study of change has gradually emerged as a multi-disciplinary endeavour and education has 'to learn' from the experiences of other disciplines like agriculture, anthropology, management, medical science, political science, psychology and sociology. Thus an enormous body of literature one that grows at a staggering rate, is available on the adoption, implementation and support of innovation. If Rogers could review 500 articles in 1962, he alongwith Shoemaker could find 1500 articles in 1971. Havelock(1969) was able to lay hand on thousands of studies, articles, reviews and select as many as 3931 for "Planning for Innovation". Prodigious though they are the research studies on innovation have not produced practical assistance for that the effective implementation of innovation.

Innovation literature abounds in the study of adoption. Many an innovation is discontinued when once the initial enthusiasm is over even before the fulfilment of the objectives the innovation is expected to bring to fruition. A study, therefore, on the discontinuance of innovation also become imperative. Rogers(1962) was the first to think of studying discontinuance. Rogers and Shoemaker(1971) defined discontinuance as "a decision to cease use of an innovation after previously adopting it". If adoption of an innovation amounts to 'unfreezing' some old behaviour in order to adopt new idea, discontinuance happens when "freezing" of the new behaviour does occurs.

An innovation may be rejected at any stage in the adoption process. It is possible to reject an innovation at the awareness, interest, and evaluation or trial stage. Rejection of an idea may be temporary, just as adoption may be. A discontinuance, can occur only after the adoption process is completed. Often the discovery of discontinuances was "serendipitous". While Chapin(1928) did not utilixe the term, he found a number of U.S. cities "abandoned", the commission form of government and the city manager plan from 1912 to 1923. There were almost as many cities abandoning the innovations during certain years as they were adopting these ideas.

The following studies show the diversity of behaviour in which discontinuances of innovations have been found:

1. An investigation of North Carolina farmers found, over 20% had discontinued the use of hybrid corn (Wilkening, 1952, P.32).

2. Adler(1955) found discontinuances in the case of 16 of the 33 educational innovations he investigated among 170 public schools.

3. Eichholtz(1961) found that discontinuances were more common than other types of rejection in his study of rejected audio-visual innovations by 45 elementary teachers in five public schools.

Rogers(1962) has devised an "Innovation Tree" to illustrate the outcomes of the adoption process for several innovations. Several studies indicate a final complex process of integration into a system,(Gallher, 1964; Lippitt, Watson and Westley, 1958; Mann and Williams, 1957). For others the final stage is dissemination(Brickell, 1963); Jung and Lippitt 1966, Watson, 1966). In some studies, it is difficult to determine at which point in the sequence adoption actually did take place.

Sanders(1961) describes cases in which the issue of fluoridation of water was introduced into several communities. In these cases the "legitimating body" in each community evaluated the innovation and then reached a decision. The options available to them were described as adoption, rejection, postponement, or amendment.

Once the decision was made, however, it was necessarily permanent; the issue was likely to be reactivated. That is, the power to carry out the decision did not rest solely with those who made the decision. This case, is, then, is similar to a study described by Havelock et al(1969), in which adoption by a change agent was considered to be an intermediate, or in Lewin's terms, 'Moving', phase; the final phase is reached only with "full organisational acceptance".

Discontinuance has proved to be a major problem for those interested in bringing about change. Lewin(1952) describes the problem of discontinuance as follows:

"A change toward a higher level of group performance is frequently short-lived; after a shot in the arm, group life soon returns to the previous level. This indicates that it does not suffice to define the objective of planned change in group performance as the reaching of a different level. Permanency of the new level, or permanently for a desired period, should be included in the objective".

2.8 <u>The Discontinuance Process</u>:

Discontinuance may have a parallel sequence with adoption. Eicholtz and Rogers(1964) have formulated a paradigm for 'stages of rejection" that corresponds with the stages of adoption as shown below.

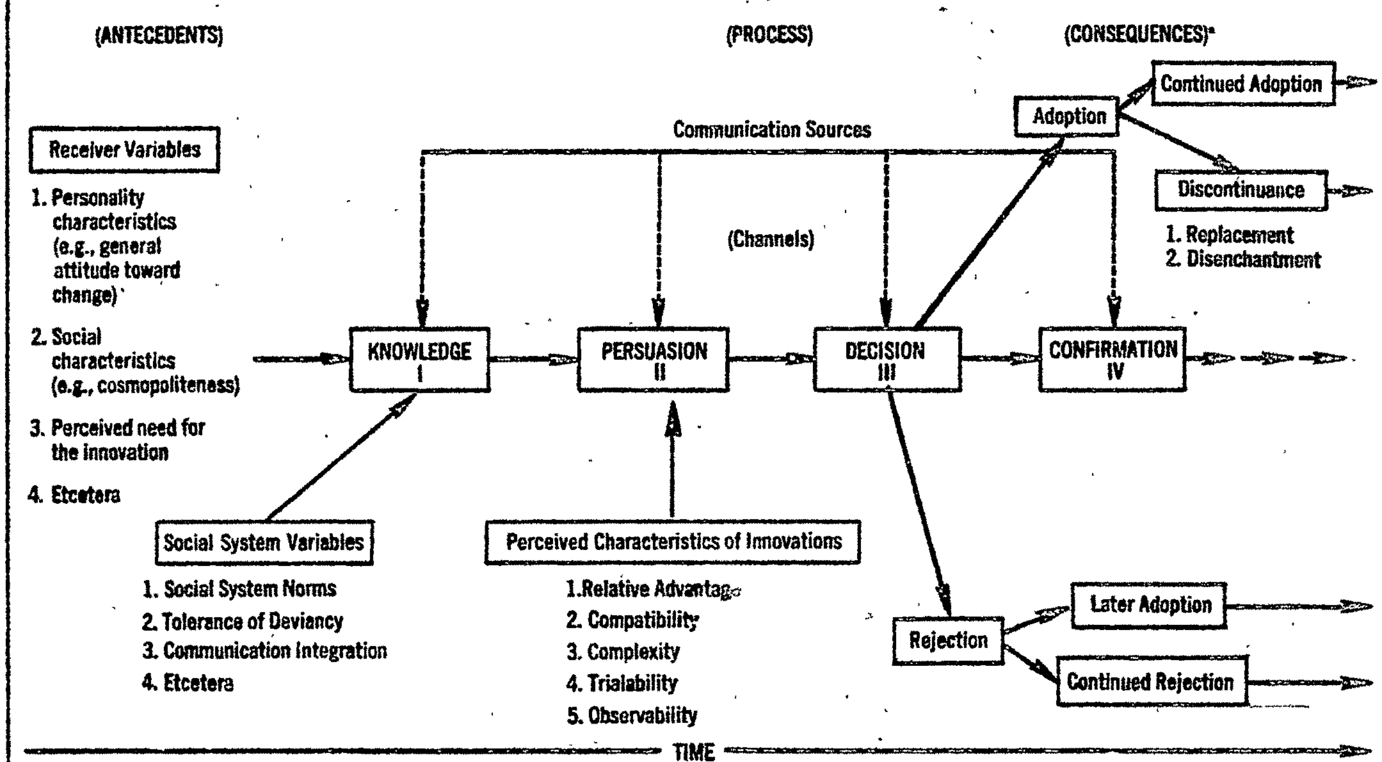
Adoption → Awareness → Interest → Evaluation-Trial → Adoption

Rejection → Awareness ————————→ Rejection

→ Denial → ....

Table 2.2 :

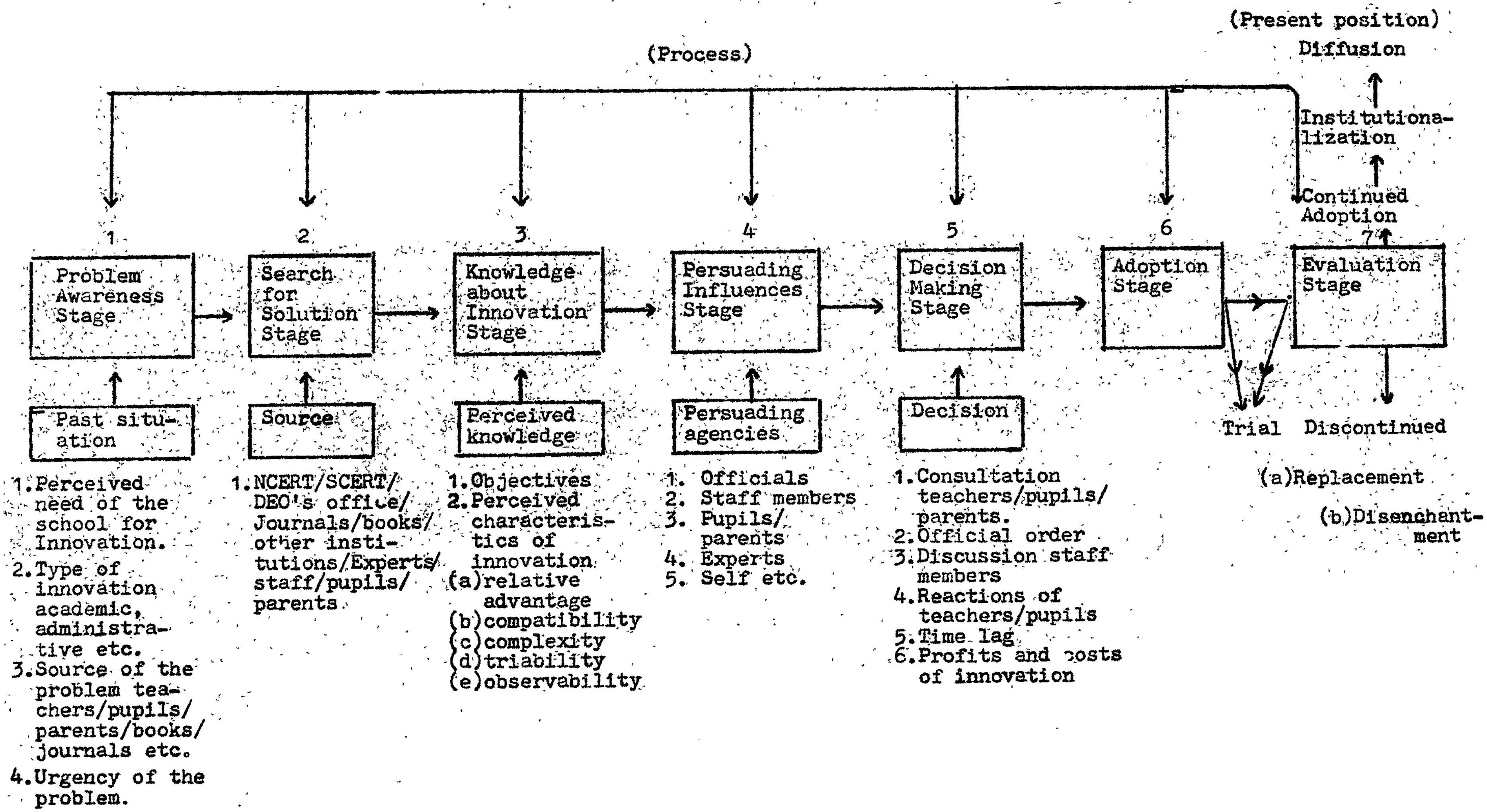
Figure 3-1
Paradigm of the innovation-decision process.



*For the sake of simplicity we have not shown the consequences of the innovation in this paradigm but only the consequences of the process.

Figure redrawn from Rogers and Shoemaker(1971)

Table 2.3 : Paradigm of the Processes of Adoption and Discontinuance



In support of this statement, Zaltman and Duncan(1977) stated that "the components of rejection are the same as those of adoption and achieve similar intensity".

Therefore, the investigator had formulated a paradigm (opposit page) for the stages of adoption and discontinuances indicating that the process is more or less same. Upto adoption stage from problem awareness, the sequential arrangement is same. Of course, after studying each stage, its effect which lead to the further stage, its intensity, rate may differ. But after a decision is taken to adopt a particular innovation, schools go for trial run. If the results are satisfactory, the adoption would be continued. If the results are not satisfactory, it would be discontinued.

2.9 Process Models for Adoptions and Discontinuance:

The process model for the adoption and discontinuance of innovation as developed for the present consists of seven stages; Problem awareness, Search for solution, Knowledge about Innovation, Persuading influences, Decision making, Adoption and Evaluation and continued adoption or discontinuance. The stages are explained herebelow:

(i) Problem awareness stage:

The initial stage is problem awareness. When the system faces a problem or a need, may be academic, administrative or any other issue of school, teachers, students, parents or any other set of people interested in the education of the students may become aware of the problem. The urgency of seeking a solution depends upon the degree of seriousness of the problem. The primary function of the problem awareness stage is to initiate the sequence of later stages that lead to eventual continued innovation or discontinuance.

Rogers and Shoemaker(1971) conceived of the innovation decision process as beginning with the knowledge function, which commences when the individual is exposed to the innovation's existence and gains some understanding of how it found.

Zaltman, Duncan and Holbek(1973) hold the view that the awareness of an innovation that would markedly improve the organization's functioning, either internally or in its relationship with the outside environment, may alter the frame of reference held by decision makers.

(ii) Search for solution:

During this second stage, the behaviour of the school system is characterized by active information seeking about the innovation. The predisposition of adopters influence in their behaviour toward communication messages and the effects which such messages are likely to have. Hassinger(1959) argues that individuals would seldom expose themselves to massages about an innovation unless they first feel a need for the innovation and that even if such individuals are exposed to such innovation messages, there will be little effect of such exposure unless the individual perceives the innovation as relevant to his needs and as consistent with his existing attitudes and beliefs.

The adopters try to establish linkage with resource centres like NCERT, SCERT, SIE, extension departments, they consult experts in the field and they visit other institutions for help. They may communicate to the resource centres about their problem and may approach for the required innovation which is supposed to solve th/eir problem. Here the time lag between their problem awareness and knowledge about the new idea also matters. If the adopters are alert enough with regard to their problem and in pursuit of the suitable solution, perhaps the time lag may be less.

Zaltman and Brooker,(1971), Rogers and Shoemaker(1971) had perceived that once search has taken place and there is some motivation to change, the attitudes organizational members have toward an innovation,are important.

(iii)Knowledge about innovation:

The adopters get the information about the innovations from various sources and gains some understanding of how it functions. They study the proposed innovation in detail and understand its characteristics, the presence or absence of the attitudes of a successful innovation extracted by Rogers and Shoemaker(1971) namely the compatibility, the complexity, the trialability, the observability and the relative advantage. Compatability is consistency with the existing values, past experiences and needs of the receivers. Complexity is the relative difficulty to understand and use. Trialability is the ease with which the innovation can be experimented on a limited basis. Observability is the visibility of the outcomes to others.

Relative advantage is advantage over other possible solution - innovations.

The adopters would study the fitness of the innovation in the existing social conditions. They would take care of the prestige of their institution also before accepting the innovation. The adopters become more psychologically involved with the innovation.

(iv) Persuading influences:

At this fourth stage, the adopters would be persuaded to try, to adopt the innovation. Selective perception is important in determining the receiver's communication behaviour at the attitude formation stage. For it is in the persuasion stage that a general perception of the innovation is developed. Along with the degree of problem awareness information obtained, knowledge interpretation, the adopters would also get the support of the system. This will strengthen the adopters' decision process. Some times, on the contrary, a negative experience from an innovation that is perceived as a failure leads to resistance to future new ideas.

Officials may ask the adopters to introduce the idea imposed by them. It does not matter whether there is a need for implementation of an innovation. Hence stages like problem awareness, search for solution, may be skipped automatically. As it is being ready made, relevant literature and instructions would be provided by the authority itself. The adopters have to introduce and experiment it.

The 'persuasion' in Rogers and Shoemakers paradigm is not the same as the persuading influences of the present paradigm. For Rogers and Shoemaker persuasion implies the perception of the characteristics of the innovation. This is knowledge about innovation and comes under the third phase in the present paradigm. Persuading influences are the persons, change agents, opinion leaders, co-workers or some significant others. The cognitive conviction that the user develops from the knowledge about the innovation and from the vicarious experiences that he has by contact with others, the attitudinal positivism that grows with the development of conviction and the mental trial weighing the pros and cons about the adoption of the innovation are also the persuading factors taking the user towards final decision making about the adoption of the innovation.

5 Decision making:

At the decision making stage, the adopters engage in activities which leads to adoption or rejection of an innovation as formulated by Rogers and Shoemaker(1971). If the decision making is 'participative', then the innovation would be discussed at length with others in detail who are involved in its adoption. This decision involves an immediate consideration of whether or not to adopt or to reject a new idea. Most of the institutions will go for a trial run to determine its utility in their own situation. This is part of the decision making to adopt and is important as a means to decrease the perceived risk of the innovation for the adopter. But in the case of authority decisions, this stage is generally absent. On the contrary, suppose the innovation introduced by the principal or by a senior teacher or group of teachers, generally this decision making stage produces a stormy weather which would be talked by the concerned members through persuasion. Otherwise it will leadto rejection.

Decision by authority is usually regarded as efficient because it can be made within a relatively short period. Many authors emphasize this point, especially for authority decisions without member participation. For instance, Rogers and Shoemaker (1971) hypothesize that the rate of adoption (upto and including the implementation decision) is "----- faster by the authoritative approach than by the participative approach". However, this hypothesis should not be considered in isolation. As they further emphasize "changes brought about by the authoritative approach are more like to be discontinued than those brought about by the participative approach".

The underlying assumption is that when members become more involved in decision making, they will be more eager to implement the changes those decision involve and thus potentially reduce resistance to change (Coch and French, 1948; Marrow, Bowers, and Seashore, 1967; Watson, 1971).

Hence it is important to note that the decision making stage can just as logically lead to a rejection decision as to adoption.

(vi) Adoption:

After confirming the decision to adopt an innovation, adopters go for a trial run on a small scale or they may introduce the innovation directly into the system.

The adoption continues, if the results of the trial run are satisfactory. The stage of adoption represents a level of commitment by the individual with repeated or continued usage. This is also a stage with cognitive, affective, and behavioral components. The cognitive component at the adoption stage contains beliefs based on personal experience from the trial stage. These beliefs are more basic and strongly held than the beliefs of the attitude stage (Rokeach, 1968). The stronger the adoption commitment that is made, the more central will be the value state achieved. An innovation that would enable the individual to achieve some deeply held goal would indeed be difficult to replace.

(vii)Evaluation:

A thorough evaluation would be conducted as the innovation is being practised in terms of the set objectives. It is important at this stage to note that the evaluation process can just as logically lead to a continued practice of adoption or to discontinuance of the practice. If the results are favourable, and satisfactory, the system, decides to continue and the innovation may arrange for wider application, if it was originally tried on a small scale. After practising for some more time, the system would be in a position to diffuse its experiences with the new practice to other institutions and finally it would be institutionalised.

In case, the results are not upto the expectation of the adopters, and the performance of the innovation is not satisfactory it would be discontinued. There have been relatively few researches designed to investigate the nature of discontinuance and as a result, relatively less is known about this important aspect of discontinuance behavior.

Leuthold(1960) concluded that the rate of discontinuance was just as important as the rate of adoption in determining the level of adoption of an innovation at any particular stage.

According to Rogers and Shoemaker(1971) there are at least two types of discontinuances - replacement and disenchantment. A replacement discontinuance is a decision to cease using an idea in order to adopt a better idea which supercedes it. In a rapidly changing society there are constant waves of innovations. And each new idea replaces an existing practice which in its day was an innovation too. A disenchantment discontinuance is a decision to cease using an idea as a result of dissatisfaction with its performance.

Rogers and Shoemaker(1971) expressed their concern over the methodological problems in studying the stages and suggested further researches should be made on the exact nature of behavior at the confirmation function. Only a few researches other than those by Mason(1962,b,1963,1964,1966,b) have conceptualized a confirmation stage in their models.

But several recent studies using less structured methods of data gathering provide evidence that stages exist. For instance, Copp and others(1958) asked their interviewers to describe the sequence of how they adopted certain innovations.

A somewhat similar method was used by Singh and Pareek(1968) to determine the presence of stages in the innovation decision process among Indian farmers. They used depth interviews, found general support for the notion of stages in the process, but there were many exceptions. The same number of stages did not occur for all respondents nor for all innovations. There was some skipping of stages and the sequence was not always the same. In a few cases the whole process was capsuled into a unit act, an impulse decision. But nevertheless, most of the Indian villages described different stages in the process.

Rogers and Shoemaker(1971) reviewed three studies, one of physicians (Coleman and others, 1966), and two of school personnel (LaMar, 1966; Kohl, 1966). Their results generally support the validity of stages in the innovation-decision process. For instance, Coleman and others(1966) found that most physicians reported different communication channels about a drug innovation at the knowledge function distinct from that of the persuasion function. LaMar(1966) studied the innovation decision process amoung 262 teachers in twenty California schools. He found that the teachers went through the stages in the process much as had been found in the studies of farmers.

Kohl(1966) found that all fifty-eight Oregon school superintendents in his sample reported, they passed through all the stages for such innovations as team teaching, language laboratories, instructional television, and flexible scheduling.

2.10 Conclusions:

Various stages exist in the process of adoption and discontinuance of innovation in schools. A conceptual Model of Process of Adoption and Discontinuance is evolved by the investigator. It consists of seven sequential stages: (i)Problem awareness - the adopters experienced a problem in the school situation. (ii) Search for solution - the adopters are in search of a solution, establishes linkage between resource centres and institution. (iii) Knowledge about innovation - the adopters gather the knowledge and gain some understanding of the innovation and interpret the quality of the innovation. (iv) Persuading influences - adopters would be persuaded by the authority, staff, pupils, and parents to adopt the innovation. (v) Decision making - the adopters engages in activities which lead to a choice to adopt or reject the innovation. (vi) Adoption - the adopters seek reinforcement for the innovation adoption they have made, and (vii) Evaluation - the adopters evaluate the tried innovation or the innovation introduced directly into the system. Based upon the results the innovation continued or discontinued.

This conceptual model forms the basic frame of reference for studying the adoption - discontinuance processes of innovations in schools.