CHAPTER I

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CHAPTER I

INTRODUCTION

1.1 INTRODUCTION

Education, by its very nature, influences and gets influenced by the whole development process. The dynamics of education and its role in social transformation and national development makes it essential that the content and processes of education are continuously renewed in order to keep them in tune with the changing needs, aspirations and demands of the society.

The major purpose of teaching is to increase the capacity of the learners to learn and teach them how to learn. Consequently, the instructional strategies become discovery oriented and learner centred. The role of the teacher occupies a transition from the transmitter to the facilitator of knowledge. Instead of dispensing knowledge and information directly, the responsibility of the teacher in the changing situation is to teach the students how to obtain, process, encode, retain and transfer knowledge and information more effectively.

The extraordinary expansion of knowledge and human capacity to assimilate it will become a major issue before educationists. In the context of this tremendous expansion and explosion of information and in the modes of acquiring it with the widespread application and popularity of information technology and telecommunications, Piaget’s vision on future education needs special consideration. He asserts that “if we want to form individuals capable of inventive thought and of helping society tomorrow to achieve progress, then it is clear that an education
which is an active discovery of reality is superior to one that consists in merely providing the young with readymade wills to will with and readymade truths to know with" (Piaget, 1971). We move into the study of teaching as an inquiry by individuals, faculties and school districts. Perhaps the most important finding is that the purpose of teaching is to increase the capacity of the learners to learn and teach them how to learn (Joyce, and Weil, 1997).

The ideal teaching-learning situation demands to place the learner in the role of an original investigator. The spirit of inquiry needs to be stressed, right from the beginning of their study. Instead of making the learner a passive recipient of second hand information, their active thinking and reasoning power, critical thinking ability, problem solving skills and discovery learning should be stimulated.

Fundamentally, education means the drawing out of the best in the child and it leads to the all-round development of the child—the body, mind and spirit (Gandhi, 1951). For the all-round development of the child, the cognitive, affective and psychomotor behaviours must be developed in a balanced and integrated fashion (Bloom, 1964). Following a fixed way of teaching fails to achieve the all-round development of the child in cognitive, affective and psychomotor domains for which teaching is designed and performed. Pupils have multi-dimensional personalities having different learning styles. The common implication of both these facts is that the teachers should use different strategies of teaching to match the objectives of teaching and the different learning styles and personalities of students (Passi, Singh and Sansanwal, 1986).
Competence in teaching stems from the capacity to reach out to multi-faceted children and to create a rich and multi-dimensional environment for them. Models of teaching emerge out of the search to find out a variety of approaches or strategies of teaching to match the learning environment and learning styles of pupils (Ellis and Harper 1975).

The core of teaching process is the arrangement of environments within which the students can interact and study how to learn (Dewey, 1916). There are many powerful models of teaching designed to bring about particular kinds of learning and to help students become more effective learners. Models of teaching are really models of learning (Joyce and Weil, 1997).

Moreover a model of teaching is a plan or pattern that can be used to design face to face teaching in the classrooms to shape instructional materials, to shape curricula and to guide instruction in the classroom and other settings (Weil and Joyce, 1985).

Again, models are prescriptive teaching strategies designed to accomplish particular instructional goals (Eggen, Paul, et al 1979).

More details of the models of teaching is provided in chapter two of this report.

One of the most important dimensions of educational research is the attempt to learn how much difference it makes to personal, social and academic growth if one uses one strategy rather than another for a particular purpose. The present study is concerned with the Models of Teaching. The study primarily focuses upon the immediate and delayed impact on the achievement in Geography.
of the IXth standard students of the secondary schools of Kerala. The issue was selected keeping in mind the following:

1. The present status of Geography as a subject of learning in the school curriculum
2. Nature of Geography as a social science
3. Relevance of modern methods in the teaching of Geography

1.1.1 The Present Status of Geography in the School Curriculum

In the post independence period in India, the subjects of social sciences such as History, Geography, Civics and Economics have been taught in different forms at school level. In some states they are being taught as discipline oriented and in some other states they are being labelled as social studies in the form of integration. In Kerala the curriculum and syllabus of the primary and secondary levels of education were modified in accordance with the guidelines laid down in the new Education Policy (NPE-1986). The syllabus followed in the State of Kerala to a great extent is different from that of the syllabus of Central Board of Secondary Education (CBSE). According to the syllabus of Kerala State Department of Education, up to standard VIII the syllabus of social studies is organised in the form of integration and in standard IX and X social studies syllabus is organised as discipline oriented. There is not much research support or empirical evidence in the selection of integration approach and discipline-oriented approach. They are governed by the consensual lore of experts (NCERT, Fifth Survey of Educational Research, 1997)
According to the Trend Report of the Fifth Survey of Educational Research, the number of researches conducted in the field of Social Science at the school level remained at a very low level priority for the educational research community in this country. The picture becomes clearer by a comparison of the number of studies included in the Fifth Survey of Educational Research. Amongst the various curricular areas such as in Mathematics Education 47 studies were conducted. In Science education 61 studies were reported and in language education alone 90 studies were come for review. But in the case of social sciences only nine studies were reported. The real crisis facing research in social science education seems to be the crisis of research leadership (Fifth Survey of Educational Research, 1997). Further, out of the nine studies reported in the field of Social Science Education, seven of them have been contributed by scholars from overseas who have studied problems in their own settings.

In addition to the crisis of research and research leadership there has been a widespread dissatisfaction in the teaching-learning process carried out in the classroom settings, especially in the teaching of Geography. Firstly, most of the curricular revision attempted so far has been of an ad-hoc character not generally based on adequate expertise and not followed by such necessary supporting measures.

In Kerala at the school level, Geography is studied as an art subject and taught by teachers having graduation in any social science subject. But at the level of university, Geography is treated as a science subject with separate laboratory facilities, practicals and experiments. As a corollary of this dual
approach in the teaching and learning of Geography, facilities for higher education are very scanty. Very few colleges in Kerala offer Geography as an optional subject at the graduate and post-graduate levels. The limited facilities for studying Geography at the level of college compel the teachers having graduation in other social science subjects to manage the teaching of Geography at high school classes. As such it is believed that teachers are not confident enough to handle the subject efficiently and effectively.

Further, the rigid nature of curriculum and method of evaluation put hazards in the way of invention and innovation in the teaching-learning process. In schools and colleges teaching and learning to a great extent is geared to the sole purpose of securing high marks or acquiring a degree. Memory is at a premium and intelligence at a discount. The system is designed to iron out independence of mind, originality and native curiosity. There is no provision for futurological outlook in the classroom teachings. The instructional procedure followed in the classroom is mainly teacher centred, text book based and content oriented. Majority of the village schools in Kerala lack worthwhile support system and instructional facilities especially in the teaching of Geography. These are a few of the criticisms levelled against the teaching of Geography in high school classes.

1.1.2 Nature of Geography as a Social Science

The term ‘Geography’ is derived from the combination of two Greek words ‘Geo’ and ‘Graphos’. ‘Geo’ means earth and ‘Graphos’ means writing, study and description. Geography of today is not merely a description or interpretation of the regions of the earth. It is an inquiry of causes, an attempt to find out the ‘how’
and 'why' of all the Geographical facts and factors which go to influence the life of man on earth.

It is in the works of Greek philosophers that we come across the use of the term 'Geography' for the first time. The growth of Geography as an academic discipline has to depend on scientific and technological advancements and development of cartographic techniques and scientific appraisal of data.

Geography is a broad discipline characterised by four concerns of nearly equal importance. The first one is the distribution over the surface of the earth of phenomena and processes which contribute to the unique character of places (Tarbuck and Frederick, 1993). The second is the examination of phenomena and processes in the exact context in which they occur (Strahler, 1989). The third is the way that phenomena and processes are the causes and consequence of human decision making (Artshorne, 1994). The fourth one is the transmission of information and ideas through the language of maps (Coffey 1981).

Geography is that discipline which seeks to describe and interpret the variable character from place to place of the earth as the world of man (Hartshorne 1994).

Geography is not only an academic discipline but also a point of view, a line of thought, and an interpretation which helps one to understand the world.

The basic function of Geography is the analysis and synthesis of the actual integration of phenomena in sections of space. Geography is the organized knowledge of the earth as the world of man. It deals with organic and inorganic
phenomena not for their own sake but as the factors that help us to understand the earth as the place where people live, work, meet and mingle, transforming its surface into their habitat (Broek and Web. 1978).

1.1.3 Sub-fields of Geography

Geography consists of a large number of sub-fields and fields of specialization. The content of geography is organised in the form of physical geography and human geography. Physical Geography is concerned with various aspects of our natural or bio-physical environment. Human Geography is concerned with the study of man, how he lives and how he makes a living.

The sub-fields of physical Geography are Geomorphology (rocks and relief features), Climatology (Weather and climate), Oceanography (waves, currents, and tides), Hydrology (sources of water and its role in sustaining different life forms) and Bio-Geography—the study of plants and animals.

The main branches of human geography are (a) economic geography, (b) social geography and (c) cultural geography. The field of specialization in economic geography is manufacturing and geography of transport and communications. The sub-fields of social geography are rural and urban settlements, medical geography, and political geography.

Cartography is also considered as a branch of Geography. The other fields of specialisation are historical geography, urban geography and land use. Geo-physics is devoted to the study of physical processes relating to the structure of the earth. Geography deals with the composition, structure and history of the earth. So habitat economy and society together make up the content of Geography.
For making description accurate and explanations exact the geographers have to draw relevant material from the corresponding natural sciences like geology, pedology, meteorology, botany and zoology. The borrowing is not just repeating or physically lifting the material from these sciences but transforming it to suit the nature of Geography.

The founders of modern Geography, Alexander Von Humboldt and Karl Ritter, advocated two approaches in the study of Geography. They are systematic study and regional study of Geography. Analysis of spatial distribution is an essential feature of Geographical study. Distribution of phenomena over the entire world is the theme of systematic Geography and the study of a limited area or phenomena within some limited part of the earth’s surface is called the regional study of Geography.

The three basic techniques adopted in the study of Geography are literacy, numeracy and graphicacy (Minshull, 1970). Thus Geography has a wide scope unparalleled by any other subject (Varma, 1991).
Fig. 1.1

Fields and Sub-fields of Specialisation

(Geography)

<table>
<thead>
<tr>
<th>CONTENT</th>
<th>METHODS</th>
<th>TECHNIQUES</th>
<th>VIEW POINTS</th>
</tr>
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<tbody>
<tr>
<td>General or Systematic Geography</td>
<td>Special or Regional Geography</td>
<td>a) Cartography b) Aerial Photography</td>
<td>a) Historical Geography b) Urban Geography c) Land-Use</td>
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<tr>
<td>(Nature) Physical Geography</td>
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<td>(Man) Human Geography</td>
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- (Land) Geomorphology
- (Air) Climatology
- (Water) Oceanography & Hydrology
- (Plants & Animals) Biogeography
- (Making a Living) Economic geography
- (Living) Social geography
- (Design For Living) Cultural geography
  - a) Languages
  - b) Religion
  - c) Tools & Skills
  - d) Social organisation etc.

- Geography of Resources
- Agricultural Geography
- Geography of Manufacturing
- Geography of Transport
- Rural Urban Settlements
- Medical Geography
- Population Geography
- Political Geography
1.1.4 Relevance of Modern Methods in the Teaching of Geography

Today the trend in teaching is fast moving from the 'product' to 'process' approach. The shift in emphasis from the content areas of geographical knowledge to the processes involved in acquiring information, has wide implication for all aspects of educational practice. One of the most interesting and important debates in the field of instruction today revolves around the relative efficiency of varying methods of teaching.

The conventional method of teaching has paved the way for passive knowledge recipients and not active participants in the process of acquiring information. Education thinkers and planners are trying to implement better methods and strategies in the field of learning and instruction.

The central idea behind the process approach is to help the students think about the nature of learning and to increase the capacity for learning. Knowledge of the learning process combined with analysis of the tasks for learning in accordance with instructional theory finds a direct application to the design of instruction. The information processing theories of learning can be used to guide learning activities and ways of enhancing the innate drive of human beings to make sense of the world, by acquiring and organising data, sensing problems and generating solutions to them.

The child's ability to deal with the broad concepts of space, time, matter and causality depends upon the type of learning and method of instruction. The Information Processing Model of learning and memory is of great significance for the planning and design of instruction in the teaching of Geography.
The external events called instructional strategy may support internal processes by evaluating the mental set-up that affects attention and selective perception. Naturally learners can influence the internal process by means of their own cognitive strategies.

There is a life after schooling and that learning to think or learning to learn is what school is all about. Process of learning and content are complementary rather than mutually exclusive in model approach (Joyce and Weil, 1992).

The proponents of the process approach, however, hold that it enhances the thinking process and helps students to internalise information, assimilate and accommodate the key facts, central ideas and provide training to become more efficient in developing facts, concepts, principles, generalisations and inferences.

The processes used by students to generate different content forms are mainly observation and inference. The primary process skills involved in the information processing family are observation and inference. Facts are the end products of observation, while concepts and generalisations are arrived at by inferential process. Models of teaching are basically, approaches to meta-cognition, that is, learning to learn. Each model of the Information Processing Family can be characterised by the emphasis placed on the kind and sequencing of the process skills along with mastery of the content.

Problem solving skill is basic to the process approach. In inquiry training model the basic steps of problem solving method suggested by John Dewey positively leads to highlighting of the immense potentiality of the process approach.
Suchman (1960) provides an analysis of the characteristic steps of problem solving through process oriented inquiry model.

Basically, the information processing models are designed to improve the student's ability to handle information. This increased ability is acquired through the processing of information. The Information Processing Models refer to the information processing capability of the students and the way they can improve their ability to master information (Weil and Joyce, 1985).

The Inquiry Training Models belonging to the Information Processing family are mainly concerned with the ability of the learner to solve problems. The chief learning outcomes of inquiry training are the processes involved - observing, collecting and organising data, identifying and controlling variables, making and testing hypotheses, formulating explanations and drawing inferences. The inquiry training model splendidly integrates these several process skills into a single meaningful unit of experience.

Even though the emphasis of Inquiry training Model is mainly in process, it results in the learning of the content in any curriculum areas from which problems are selected. Suchman developed entire curricula in Economics and geology. It is also adaptable to all elementary and secondary school curriculum areas (Joyce and Weil, 1997).

Teaching is a process of building communities of learners who use their skills to educate themselves (Joyce and Weil, 1992). In teaching the raw materials gathered from the environment are processed or organised into more understandable form. The intellectual skills or capabilities required to analyse
information are process and the processing ability makes the learner go beyond the process which leads to the development of more abstract and useful forms of knowledge. The knowledge that results from the processing of information depends upon the type of processing which was used to form it (Eggen, Kauchak and Harder, 1979). Information processing focuses attention on the acquisition of knowledge through analysis of data from classrooms. When using these models students are taught process skills as well as the content. They will also become more proficient in verbal expression as well as listening to others and remembering what has been said. The information processing model promotes active and autonomous learning which helps students learn to construct knowledge – learning how to learn.

1.2 NEED AND SIGNIFICANCE OF THE STUDY

Secondary Education has a strategic position in the whole schema of education for several reasons. First, secondary education lays the foundation of all higher education. Secondly, it is the terminal stage for many students. In secondary education, pupils normally reach the threshold of formal operational stage as in Piaget's classification regarding cognitive development. The pupils at this stage can logically solve all types of problems, think systematically, solve complex verbal and hypothetical problems as their cognitive structure is mentioned (Wardsworth, 1989).

Further, there is much talk and discussion about academic excellence in teaching and learning process going on in Kerala. At the primary level a home grown innovative educational programme was formulated with the name District Primary Education Programme (DPEP) with three major goals namely, universal access, retention and achievement. Considering the educational background in
Kerala setting, the DPEP calls for a substantial improvement in quality education. Quality of education is ensured by giving due emphasis on three points: entry behaviour, instructional process and exit control - the efficiency of the assessment and evaluation system. Among the three point scale to ensure quality improvement, primary importance should be given to the instructional process. Mere upgrading or updating the content of a course will not help the Indian students to improve their quality. A curriculum with all transactions including teaching-learning strategies and evaluation technique is inevitable in lieu of a syllabus with a skeletal content of the subject. This will not only help the teachers to decide what to teach and how to teach, but also the administrators and the inspectors to keep a vigil over the progress.

There is an all round dissatisfaction with the type of teaching and learning going on in the classroom settings. There is a wide gap between theory and practice. The teacher seems to be an omniscient giver of truth and knowledge. The students become passive listeners in the teaching-learning process. To develop critical thinking power, reasoning ability, problem solving skill and inductive learning, many of the traditional educational practices must be seriously questioned and new approaches based on sound theories and principles must be implemented.

For a long time teachers have been using fixed ways of teaching certain subjects mainly arts subjects. There is not much research support or empirical evidence or research base in social science subjects. In science subjects, Mathematics, Education and Language studies, research into the use of process skills, inquiry approach, discovery and other discipline centred approaches have been widely explored and studied in detail. But little work has been conducted on
the relevance of modern instructional strategies, process of problem solving and discovery approaches in Social Sciences. Explosion of knowledge has made it practically difficult for the teacher to impart the ever-expanding study material within the constraints of time and syllabus. In order to overcome these impasses students must be trained to become original investigators and discoverers. Consequently the instructional strategies become discovery oriented and learner centred. Here the role of the teacher changes from the transmitter to the facilitator of knowledge.

So the investigator felt that it is a vital need of the time to make humble attempt to think positively and act creatively in this direction. There is a range of strategies for instruction which deviate themselves from the usual conventional classroom teaching dominated by teacher. Joyce and Weil (1972) published a book 'Models of Teaching' which consists of Information Processing family, Personal Family, Social Family and Behaviour Systems Family. The investigator selected three models belonging to the Information Processing Family for the present study as an instructional strategy which deviated from the conventional teaching-learning approach and tested its effectiveness using appropriate statistical techniques. Application of these models may help to change the teaching learning process of Geography. It is with this hope that present investigation is attempted.
1.3 STATEMENT OF THE PROBLEM

The study is entitled THE EFFECT OF INFORMATION PROCESSING MODELS IN THE TEACHING OF GEOGRAPHY IN THE SECONDARY SCHOOLS OF KERALA.

1.4 OPERATIONAL DEFINITION OF KEY TERMS

The operational definitions of key terms considered in the study are presented below.

**Effect**: The result or product of some efficient cause or agency, a consequence, an outcome (Good 1973). In the present study the effect is the change that a particular model of teaching makes in the performance of the pupils.

**Model**: Model is a symbolic system with structural relationships which leads to the prediction of exact consequences, explicit correspondences and many interpretations (Torsten and Neville, 1994).

**Information Processing**: The term refers to the ways people handle stimuli from the environment, organise data, senses problems, generate concepts and solutions to problems, and employ verbal and non-verbal symbols.

**Information Processing Models**: Members of the first large family of models of teaching share an orientation toward the information processing capability of students and the ways they can improve their ability to master information (Joyce & Weil, 1985).

**Achievement in Geography**: Achievement in Geography is operationally defined as the scores obtained in the immediate and delayed posttests over the content material taught in the unit ‘Water in the Atmosphere’ for students of standard IX.
Secondary Schools: All the high schools having classes for VIII, IX and X standards and prepare students for Secondary School Leaving Certificate examination conducted by Kerala State Board of Secondary Education.

Retention and Transfer: Achievement in Geography can be measured using two types of tests-retention tests and transfer tests.

Retention tests: Retention Tests are those tests that measure the degree to which a student remembers and comprehends the material where the content of the material of the test is more or less exactly the same as taught in the unit 'Water in the Atmosphere'. Retention thus becomes equivalent to knowledge and understanding.

Transfer Tests: Transfer tests are those that measure the degree to which a student can apply what was presented to a new situation where the items of the test are more advanced than those with which students are familiar. 'Transfer' can thus in this context be considered as equivalent to application.

Intelligence: It is operationally defined as the scores obtained on the Kerala Non-Verbal group Test of Intelligence.

Attitude towards Geography Learning Scale: The scores obtained on the attitude test prepared by the investigator to quantify the tendency to react towards a designated stimulus. In the present study the stimulus is learning Geography.

Learning Environment: It refers to the total environment available to the student in school, classroom, home, neighbourhood and community that help the student to learn geography more effectively.
Socio-Economic Status: It is a blended complex of three statuses which are measured in terms of occupation of the father, education of the parents and the income of the parents.

Rural/Urban Settlements

Urban Settlement: Urban settlement comprises all those places which have either a municipality, corporation or a cantonment board.

Rural Settlement: Rural settlement comprises all those places that do not come under the urban settlement.

1.5 HYPOTHESES OF THE STUDY

The present study is aimed at finding out the effectiveness of Information Processing Models over the Conventional Method in the teaching of Geography in Standard IX. It is assumed that students' achievement in learning Geography depends upon the method of teaching adopted. On the basis of this assumption, the following hypotheses were formulated:

Hypothesis I

The effectiveness of Information Processing Models of teaching strategy is significantly higher than that of Conventional Method of teaching geography in Secondary Schools.

Hypothesis II

The effectiveness of the three separate models belonging to the Information Processing Models of Teaching is significantly higher than that of Conventional Method of teaching in geography.
Hypothesis III

There is significant difference between immediate and delayed achievement scores of the experimental and control groups.

Hypothesis IV

The main and interaction effects of each independent variable on the dependent variable are significantly higher in the experimental groups than in the control group.

1.6 OBJECTIVES OF THE STUDY

1. To find out the effectiveness of Information Processing Models of teaching.

2. To compare the effectiveness of Information Processing Models of teaching and that of the conventional teaching learning method on the achievement of pupils in Geography.

3. To find out if there is any significant difference in the immediate and delayed achievement of the pupils in Geography when they are taught in the Information Processing Models.

4. To compare the effectiveness of three separate model categories belonging to the Information Processing Family and that of the conventional teaching learning method on the achievement in Geography.

5. To estimate the main and interaction effect of each independent variable on the dependent variable.

6. To estimate the main and interaction effect of the independent variable with special reference to the extraneous variables and basal variables such as
intelligence, attitude, learning environment, socio-economic status, gender, locality and type of management of schools on the dependent variable.

1.7 METHODOLOGY IN BRIEF

The method selected for the study is an experimental one which makes use of the non-equivalent pretest-posttest design. The investigator will prepare lesson transcripts in three separate model categories belonging to the Information Processing Models (IPM) family and the conventional method. To determine the effectiveness of the model, paired 't' test and ANCOVA will be used. Model wide analysis of achievement will also be made. Main and interaction effect (one-way, two-way and three-way) of the independent variable on the dependent variable by taking the extraneous variables as covariates will also be compared in order to find out if there exists any significant relation between the achievement of the experimental and control groups. The important findings will be reported and based on the findings the tenability of the hypothesis will be tested. On the basis of the important findings, necessary suggestions for the improvement of teaching Geography will be given.

1.8 LIMITATIONS OF THE STUDY

There are at least four types of restrictions. They are limitations with respect to the selection of sample, content material chosen for experimental teaching, time allotted for teaching the prescribed topic, and the medium of instruction used.

First, the study was limited to one educational district of Kerala and was confined, only to the IXth standard Malayalam medium students. It could have
been conducted by selecting more students belonging to different standards, different schools from different districts. The study could be extended to the English medium schools as well. Certain personality variables which influence the achievement of the students like motivation, interest, anxiety, fatigue etc would have been taken into consideration. The components of the dependent variables such as immediate retention and immediate transfer are taken as immediate achievement and delayed retention and delayed transfer as delayed achievement. Instead of taking the total scores of the various components of the dependent variables, it would have been taken separately for studying their effects.

With respect to the content material, the study was further restricted to one selected unit from the IXth standard Geography textbook. Much more time could have been spent for teaching and evaluating the models of teaching along with the instructional and nurturant effects. In the Information Processing Models (IPM) family there are actually seven separate models. But the investigator selected only three models from the IPM family for testing the effectiveness of Information Processing Models of Teaching compared to that of conventional method of teaching.

In spite of the above limitations with respect to the selection of sample population, content material, allotment of time for teaching the prescribed content material, the investigator hopes that the findings and the lesson transcripts prepared by following the strict norms of IPM will be of use for the teachers, students and the educationalists interested in the application of modern methods and instructional strategies.
1.9 ORGANIZATION OF THE RESEARCH REPORT

The report is presented in six chapters, the details being as follows:

Chapter I includes a brief introduction, the present status of Geography as a subject of learning in the school curriculum, nature of Geography as a social science, relevance of modern methods in the teaching of Geography, discussion of the need and significance of the study, statement of the problem, definition of key terms, hypotheses, objectives and limitations of the study.

Chapter II is devoted to the presentation of the theoretical background of Models of Teaching with special reference to the Information Processing Models.

Chapter III presents the review of related literature and studies pertaining to the area under investigation. An earnest attempt is made to review all the available studies in the concerned area.

Chapter IV gives a description of the method of the study, the sampling procedure attempted, the tools with which the data were collected, the procedure employed to collect data and the statistical technique used in the analysis of data collected.

Chapter V is concerned with the analysis of data followed by its interpretations.

Chapter VI summarises the study in retrospect. The major conclusions and findings emerged from the results of the analysis are included. The implications of the study are discussed and suggestions for further research are also given.