CHAPTER I
INTRODUCTION

1.1 BACK GROUND

“The most exciting innovation in the educational technology is Computer-Assisted Instruction (CAI). Though it is still in the experimental stage, the day is not far off when it will revolutionize the whole process of Instruction”. ¹ (K. Sampath 1981, P. 307)

It is observed by all teachers that children learn a particular subject only because it is included in the syllabus. At the initial stage they do not have any kind of love and interest in studying a particular subject. If a teacher honestly wants to create a good learning atmosphere in the classroom, he has to use a variety of teaching methods, techniques and different teaching aids.

“The advent of the new technological era has redefined the very parameters of today’s work places and consequently of the school education process. The role of teacher has subtly shifted from being the ‘sole provider’ of knowledge to being a ‘facilitator’ as the student explores for himself the expansive world of knowledge” ² (www.c.t.com)

In other words we can say that in this technological era the teacher needs to change the role from ‘Dispenser of knowledge to that of an ‘Information Manager’. There is a need to implement an integrated approach to teaching and learning in which a variety of teaching and learning strategies are engineered and implemented with precision.
“Educators have to continue examining new communication and information technologies which can enhance and extend the instructional capacities of the teacher”.

Taking into consideration all these points the researcher has decided to do research in the field of teaching methodology, and to find out which will be the best suitable combination of methods for a teacher to make the instructional procedure more effective.

1.1.1 The Present teaching learning scenario:

If we look at the present scenario of Geography teaching, we can easily observe that some of the objectives of Geography teaching are not fulfilled. Most of the students are not able to grasp the basic principles and cannot apply them in their daily life, because teachers make maximum use of lecture method while teaching.

Students become passive listeners instead of active learners; often the doubts of the students remain unanswered. The creativity of students gets hampered because of over crowded classes. As a result many students develop an aversion to the subject. Today’s teaching is topic oriented. Teachers are in a hurry to complete the portion in limited time, before examinations. So teachers usually have to stick to subject matter, to text book content, no extra information is provided to the students.

If we observe today’s classrooms we came to know that these classrooms are not homogenous but they are heterogeneous. Students are from different socio-economic background, having difference in Intelligence, ability to learn something, creativity etc. In short there are individual differences among learners and the teacher must take into
consideration these individual differences while teaching a particular subject.

The planning of teaching should be based on this consideration of Individual difference. In this planning, the new sophisticated technique i.e. CAI is the most useful thing for the teachers and interesting for students also. The teachers and students look at the present curriculum as examination oriented. Student’s interest is to secure marks in the examination than to understand the subject matter in depth. The student teacher ratio is 60:1 which is inappropriate for good interactions.

Computer technology can serve as the key vehicle for stimulating learning as computers have several features that can help to reduce the shortcomings of regular teaching and make teaching more interesting and effective. It can act as a powerful teaching tool. Multimedia is one such tool that will help teachers to make lessons more effective because of large no. of features available in it.

Multimedia: – Multimedia can be defined as the technology engaging a variety of media, including text, audio, video, graphics and animation using computers to communicate ideas or disseminate information.

1.1.2 Multiple facets of Multimedia.

Anyone or more of the following media and a combination of these are generally engaged in multi media projects.

1. Audio : Audio elements like speeches, music and other types of sounds are generally used to enhance the content.
2. **Text:** Since computers display a variety of fonts in innumerable colours and combinations, the ultimate results appear for better than the printed text.

3. **Graphics:** Pictures, Photographic images, and Art work are called Graphics. These can add impact and clarify to any presentation.

4. **Animation:** The artificial movements of the text or objects, created in virtual environments are called animations. Animations are the most interesting part of multimedia.

5. **Clipart:** Clipart provides readymade professionally designed art work for use in presentations.

By using all these combinations the researcher is going to prepare a Power Point presentation.

### 1.1.3 Uses of Multimedia Presentation in Education.

1. The presentation can be self paced and learner controlled.
2. They can include effective & educationally sound branching in their design so that individual learner can choose the content he needs to learn.
3. They can increase learning through practice.
4. They can maintain consistent content and quality of training as computers never get tired of working.
5. Multimedia presentations can be competency based. Post tests can be made available to enable students to evaluate themselves.
6. They can make studies enjoyable and meaningful as they contain graphics, video clips and pictures.

### 1.1.4 Skinner’s Programmed Instructions:

B.F. Skinner, the Harvard behavioral psychologist described the traditional classroom instruction as being too aversive, too large, too negative and improperly sequenced. His solution to these problems was linear programmed instruction.
Skinner described teaching as a situation in which we want the students to learn the things faster than they could usually do in the natural environment. Skinner designed the characteristics to overcome the classroom limitations. Specifically, users work one step at a time, from simple to hard, they work at their own pace and this method was a natural candidate for computer implementation, giving rise to CAI.

### 1.2 IMPORTANCE OF GEOGRAPHY

“The real value of Geography lies in the fact that it helps man to live. It helps man to place himself in the world to learn his true position and what are his duties. Geography offers a most hopeful line to work. For a better understanding between the people and the world. Geography is a science so far as it enables man to compare himself and his surroundings with other man and their surrounding. By a study of Geography we are enable to understand facts without a knowledge of which it is impossible to do our duties as citizens of this very confusing and contradictory world.” *(Fairgrive, 1937, P, 8)*

In Geography the focus is to study the relationship of man and his environment. Pure or basic sciences study the basic elements of the world of science and in Geography we study that how to use all these principles from basic sciences for the betterment of human being. The discipline of Geography is more concerned with studying the world & its inhabitants and their interrelations and interactions; hence for school purposes we shall define Geography as “The study of the people of the world.
1.2.1 Definitions of Geography

1. “Geography is the science of the surface of the earth and it’s inhabitants” (Dr. Ponkshe, 1978, P, 3)

2. “Geography comprise the study of the earth’s surface in it’s area differentiation as the home of the man” (Prof. Dr. Ponkshe, 1978, P, 3)

   Monkhouse

3. “Geography studies the interaction between man and his environment” (Prof., Dr. Ponkshe, 1978, P, 3)

   Makinder

These are some of the definitions of the subject Geography. If one just have a look on these definitions, then he will realize the importance of Geography. All the definitions gave stress on the man and environment relationship, which is the main issue of debate in the modern world. If we try to analyze the different definitions of Geography, we can easily say that Geography is a subject which not only studies the earth or the spheres of earth i.e. atmosphere, lithosphere etc. It also studies the life of people and their relation with the environment.

Geography is not a pure science. It is a physical & social science which studies the man & environment relation. It is a dynamic subject. As the man by using modern technique changes his lifestyle, he exploits the surroundings for the betterment of human being. Accordingly, the subject matter of Geography also changes.

On account of its dynamic & applied nature and its importance in the modern world, the study of Geography is necessary at school level. The nature of Geography requires modern strategies of teaching
& learning. CAI is one of the modern teaching strategies which can help in understanding the nature of Geography.

1.2.2 Importance of Geography in school curriculum

Although that has been discussed in the previous point that Geography is nothing but the science which studies the relationship between man and environment. It is essential for a child that he must learn Geography not only to understand the amazing world in which he live but also to become a good citizen for his own nation and a good human being for the betterment of mankind.

He must understand the complex relationship, the interaction and inter-dependence of man and his environment that is his surroundings. It should be the most important subject in the school curriculum but what is the position of this subject Geography in school curriculum?

1.2.3 The Place of Geography

The place of Geography if we compare with other subjects like science or mathematics or languages is very inferior. In the syllabus the subject has been included under the name as ‘social studies’ where the students have to learn this subject with that of History and civics. Weightage of marks is also very less if compared with other subjects. In school time table till VII Std., only two periods of 30 to 35 minutes are allotted to this subject and therefore we find a kind of negligence regarding the teaching and learning of Geography at school level.

1.3 METHODS OF TEACHING GEOGRAPHY:

Geography is a kind of subject which actually the student should learn in a natural environment and not in the four walls of a classroom. It is true that many concepts in Geography are abstract and
we cannot give direct experiences, but on the other hand it includes many other such concepts for which we are able to give direct learning experiences, e.g. landforms made by agents of denudation, terms like temperature, humidity or life of people in different countries or natural regions and topics from economic Geography.

By arranging excursions, fieldtrips, visits, the Geography teacher is able to give live experiences to the students. It is said that learning is the change in behavior that takes place only as a result of one’s own experience, so that teacher should be able to provide to the students proper and effective learning experiences both in the classroom and out side of the classroom.

It is true that in the busy schedule of school, organization of visits or fieldtrips is very difficult. It requires effective planning, time, money and efforts that is why normally it is not possible for the Geography teacher to arrange visits for each and every topic or concept included in the syllabus. In that case use of different methods of Geography can help the teacher in making the learning joyful and attractive activity.

There are different methods of teaching Geography: - those are as follows.
1. Regional method
2. Story Method
3. Descriptive Method
4. Text book method
5. Journey method
6. Excursion method
7. Project method
8. Laboratory method
9. Object method
Also, there are self learning techniques with which the student can learn the topic. Such as 1) Programmed learning, 2) Observation technique, 3) Comparative technique, 4) Statistical Approach.

All these methods and techniques can be used by the teacher to make the learning effective but these methods and techniques have its own advantages and limitations again. Such as they are time consuming and needs perfect planning, help of audio visual aids etc. While using the techniques such as programmed learning the teachers should be well trained. That is why teachers are not ready to use these methods and techniques and because of all these reasons the instructional activity or process becomes ineffective and bore. Then what will be the solution for these practical difficulties?

Today’s world is known as the world of science and technology. Computer is the keyword of this age of information technology. If we want to keep pace with the fast growing world we must try to change the old traditional methods of teaching. Another important point on which we must think seriously and that is whether we have achieved the objectives of teaching Geography in schools by applying the traditional or conventional methods of teaching Geography or not? And for that purpose we must know what are the different objectives of teaching Geography.

1.4 OBJECTIVES OF TEACHING GEOGRAPHY:

Objectives usually governed by the needs of young pupils and they are of two types, firstly which can be satisfied by acquisition of ideas and skills and are known as short term or subject matter objectives. The second type of objectives is those which are satisfied by matured thinking and acting; long term objectives.
The subject matter objectives control the framework of the syllabus, where as the long term objectives determined how the course material of the syllabus has been tackled.

1.4.1. **Objectives of Teaching Geography:** (Varma o.p. 1971 p.23)

1. To get acquainted with the basic knowledge of the subject Geography.
2. To develop his own observational skills.
3. To understand the interrelation of the different branches of Geography and the society.
4. To thoroughly understand its concepts and theories.
   - “The aim of teaching Geography is that it provides mental discipline which means that the subject trains the pupil’s whole mode of thought which in its turn influences his intellectual life and studies in the same field. Geography encourages independence in thought and action.
   - Geography develops a sympathetic attitude among pupils; a sense of international co-operation and understanding knowledge of Geography bridges the gap and helps in avoiding conflict by bringing about international understanding.
   - A student of Geography can appreciate the beauty of nature which might cultivate a sense of responsibility for its care and protection.
   - Geography has a cultural aim too. Culture is the sympathetic appreciation of the universal truth expressed in Art, Literature, Philosophy, Science and religion. Geography helps developing hobbies and for reading newspaper and literature on travel.
Geography helps in developing a constructive attitude towards all that concerns his country by studying the information about his country. (Good Citizenship)

The aim of Geography is to train the future citizens to imagine accurately the conditions of the great world stage and so help him think sanely about political and social problems in the world around him.”

1.4.2. Objectives of teaching Geography for 6th to 8th Std. formulated by Maharashtra State Council of Education Research, and Training – 1988, P, 263

1. To understand the effect of different factors of environment on human Life.

2. To know how man has tried to make maximum use of the natural things from the environment, to fulfill his basic needs.

3. To understand that how science and technology helps man to make a use of Natural Resources for the betterment of his own.

4. To know how different countries have made progress by using the natural resources available to them, so that student can understand we Indians can make progress by using natural resources wisely. Also with help of modern technology we can increase the percentage of natural resources in our country.

5. To understand the problem of environmental degradation or the problem of exploitation of environment by human beings. To make people aware about it and simultaneously to teach them how to use it wisely.

6. To understand the distribution (uneven) of natural resources and the major economic products in the world by using maps and information about different countries in the world.

7. To learn how to use the different Geographical Instruments such as Globe, Maps, Atlas, Photographs etc. effectively.
8. To have Direct Experience about the surrounding environment and some manmade things such as Agriculture, industries, communication etc.


10. To understand the effects of international cooperation on local, national and international level.

11. To know the different methods and materials which were used by our ancestors to get the geographical information.

These objectives were formulated by a committee appointed by S.C.E.R.T., Maharashtra, on the basis of guidelines framed by National Education Policy 1986. The curriculum of every subject was restructured by National Education Policy and the main objective behind restructuring the curriculum was to bring qualitative improvement in the field of school education with which the system of Indian Education can face the challenges of 21st century. The syllabus of Geography has also developed by S.C.E.R.T. which can help the teachers to inculcate values like international understanding, awareness about environment etc. The approach of framing the syllabus is concentric approach.

1.4.3. Concentric Approach of framing the syllabus of Geography.

Generally there are three approaches for structuring the syllabus of Geography:-

1. Regional Approach
2. Concentric Approach
3. Topical Approach

This diagram can easily explain what is the meaning of concentric approach? It means that as the student develops his mental
abilities, and he enters in the higher classes, the depth and scope of a particular topic also increases. For example a student learns the topic like ‘Hydrosphere’ in 5\textsuperscript{th}, 6\textsuperscript{th}, 7\textsuperscript{th}, Std, the topic ‘Natural Region’ is included in std 6\textsuperscript{th} and 9\textsuperscript{th}, but for all these standards the scope & depth is different. That is why one can easily find repetition of topics in the syllabus of Geography. In this situation if the teachers prepare CAI programme on such repeated topics with a reasonable depth, the students can get the information easily just by observing the slides again and again. For this purpose the students can use their leisure time. Ultimately it will save the time and energy of both the teachers and students.

1.5 NEED OF THE STUDY:

If we just try to think about the above mentioned objectives of teaching Geography. We will find that we are not that much successful in achieving the objectives. There are many other reasons for it but the most important reason is use of traditional methods in an inefficient way. If we just have a look over the use of audiovisual aids in the daily teaching of Geography such as maps, charts, pictures etc. is unsatisfactory. We will find that teachers are not that much enthusiastic or aware about the use of different new techniques in their classroom teaching.

On the contrary the students undergoing the present system of education are exposed to different sources of information, are very smart, enthusiastic and eager to learn the new coming technology. So now a day it becomes the duty of the teachers to use as much as modern technology in his daily teaching, which not only makes the teaching effective but also saves the time and energy of the teacher and student both.
As the researcher is working in the department of lesson planning in college of education, while executing the responsibilities of that department, the researcher had an informal conversation with the Geography teachers in different schools and became aware about the practical difficulties of the teachers. At the same time while observing the lessons of B. Ed. Students the researcher found that many times, the traditional methods become ineffective for attracting the attention of the students, especially the bright and intelligent students in the class.

These practical observations motivate the researcher to do some research work in the field of methodology of teaching Geography. Content and method are the two sides of one coin. They are not separate things. As time passes according to the needs of the young generation the teacher must use new techniques in his or her classroom teaching which can make the whole instruction process attractive and interesting.

1.5.1 **Rationale for selection of CAI programme** –

As all of us know that it is very difficult to give direct experiences to the students, though it is very essential for giving motivation to the students to learn more & more things in a subject. Some times it is dangerous too. e.g. taking young students on a sea shore or a beach or to experience the eruption of volcano on Andaman or Nicobar islands or Hawaiian islands. Taking into consideration, the time limit & money available to schools, especially the aided schools, it is not possible to arrange such types of direct experiences for the students. In such a case CAI is the best solution which can take place of the direct learning experiences. As it can act as a medium of simulation technique.
By preparing the CAI programme on different units in Geography, such as solar system, ways of communication, industries, folding & faulting, conservation of natural resources, information about rivers, forests, animals of India etc.; teacher is able to give simulated experiences to the students. The teacher can use as much as creativity & intelligence in preparing these programmes with the help of CAI technique.

1.5.2 Essentials of Computer Technology

In his book “Essentials of Educational Technology; Teaching learning” Prof. J.C. Agarwal says that computer may aid the learning process in the following ways;
1. By providing information and instruction.
2. By asking question.
3. By being tirelessly repetitive.
4. By stimulating process.
5. By selecting the right speed for providing information for individual learners.
6. By providing opportunities to try different things.
7. By displaying data dynamically.
8. By taking away tedious calculations.
9. By doing information from a large store.
10. By checking up how well a learner understands a topic through questions.”11 (Agarwal J.C.1995, P,352)

A) Need of computers in the field of education

“The age of computer is drawing in schools. It catches the world swiftly and surely. It is quiet a jump from traditional teaching reliance on textbooks - to the use of computers. The computer serves a dual purpose. The students are expose to
modern technology while inculcating them a new and scientific approach of learning” (Agarwal J. C. 1995 P. 352)

“It is said that the development in the field of computers have been so swift that yesterday’s miracle is today’s absolute Junk” with more powerful computer seamless software suits and advanced connectivity, conventional applications of computers in education are enhanced and new creative applications are discovered. “A decade ago computers in education are primarily meant the use of the computer to assist and to manage instructions, to conduct research and to administer the school. Today computer in education means much more than that” (Srinivasan P. 36, 37)

“Computers are:
1. Interactive story teller.
2. Excellent means to produce and present multimedia programmes.
3. Vehicles for interactive communication, among people.
4. Gateways to the world of information.
5. Electronic publishing medium.
8. Virtual Reality and
9. A Private multimedia Tutor” (Srinivasan P. 36, 37)

B) Why students like computers?

Findings from the researchers carried out in U.S.A. for school Improvement Research Series (SIRS) May 1991. Regional Educational Laboratory, CAI by Kathleen Cotton.
Students say that they like working with computers because computers are,

1. Infinitely patient
2. Never get tired
3. Never get frustrated or angry
4. Allow students to work privately.
5. Fun and entertaining.
7. Self paced.
8. Do not embarrass students who make mistakes.

All these above-mentioned statements are the important characteristic of the new modern technology i.e. ‘the computers’. Because of which it becomes essential to use computers for learning the subjects in the case of students and to use this teaching material for effective teaching for teachers.

1.5.3 Multi Media Computer Assisted Instruction Programme:

‘Sampath’ describes computer Assisted Instruction Programme as follows:-

“The most exciting innovation in the educational technology is the computer Assisted Instruction Programme (CAI). Though it is still in the experimental stage, the day is not far when it will bring revolution in the whole process of Instruction.”15 (Sampath K.,1981,p,306)

1.5.4 Advantages of Computer Assisted Instruction Programme

There are several teaching strategies used in conjunction with the use of computers in education such as Drill and practice, Tutorial,
Simulation, and Games. These strategies have been often called computer Assisted Instruction, i.e. CAI refers to any use of a computer to present instructional material, provide for active participation of the student and respond to student action usually in one CAI programme than one strategy is employed.

- Because of the use of CAI the instructional process depends on the interaction between the computer and the learner.
- In this technique computer gives the instruction to the learner and helps him to reach a certain level of learning.
- The student learns the subject matter with his own speed and ability.
- It helps in self learning.
- There can be a dialogue between the computer and the learner.
- Facilities such as Drilling, Practice, Inquiry Problem solving and Tutorial help are available in this Instructional Programme.
- The learner has a feedback from the computer about his achievement in learning immediately.
- The role of the student is active.
- The facility of beautiful pictures and diagrams is available, so it is easy for the student to understand the abstract concepts.
- It is easy to do mathematical calculations and it saves time and energy of the student.
- The computer is able to do the analysis of any kind of information accurately and in a short period of time.
- Computer with printer is useful for the student to take notes of the subject.
- It is a very novel technique which is used for learning as well as Teaching.

All these are salient features of CAI program. The teachers & the students are the beneficiaries of this program, if they start using computers for the classroom teaching & learning. The efficiency of
learning process will increase to a great level. Students will not remain ‘passive recipient’ of learning material. It will also create a good learning environment which will lead the students to the mastery of the learning task.
1.6 STATEMENT OF PROBLEM:

"A study of the Effectiveness of Computer Assisted Instruction Programme for Teaching Geography to VII Standard Students from Marathi Medium Schools in Pune city."

1.7 OPERATIONAL DEFINITIONS OF THE TERMS USED

1. **Effectiveness** - For this research the researcher is going to test the effectiveness of CAI programme on the basis of marks obtained in the post test which is prepared on the units selected for the research and is checked by teacher – educators and the teachers teaching Geography specially to Std. VII. Results of which will be analyzed by using F ratio test.

2. **Computer Assisted Instruction Programme (CAI):** The Computer Assisted Instruction Programme will comprise of a "PowerPoint Presentation" that is a slide show presentation on the computer interspersed with interactive sessions. Extra information is provided along with recapitulation questions.

Computer Assisted Instruction (CAI) programme involves the use of computers to mediate the flow of information in the learning process.

“When a computer is used to present programmed or other kind of instructional material, the process is called CAI” (Hergenhann 1976 pg. 443)

Creating a child centered classroom CAI fulfills Piaget’s concept that the child should be the chief agent in his own education. According to Howard E. Blake, CAI help to create a child centered classroom as is expected to in the following way.
2. Active participation by children
3. Encourage independence in learning
4. Reduce discipline problem
5. Suitable to present world condition
6. To improve the quality of education

"Computer Assisted Instruction" covers in detail, the theory, design, development, Implementation, and evaluation of computer Assisted Instruction Materials".\(^{17}\)(C.H. Giridhar1997)

"Use of computer to assist in the presentation of instructional material to a student to monitor learning progress or to select additional instructional material in accordance with the needs of individual learner".\(^{18}\)(S.K. Singh 1997).

All the definitions about Computer Assisted Instruction Programme were carefully analyzed by the researcher. This information gave an idea about how to develop a programme for the purpose of the experiment of the research. With the help of all these definitions the researcher has developed “A Computer Assisted Instruction Programme “for the research.

**Special Features of the CAI Programme for this Research:**

1. The Computer Assisted Instruction Programme includes audio, text, graphics, colour backgrounds and last but not the least Animation. The CAI program provides extra information about content of the selected topic i.e. Brazil and Hydrosphere, by using beautiful pictures from the internet source.
2. Use of different types of maps is the next interesting feature of this programme, which is not possible for a teacher to show various maps during the classroom teaching.

3. Animation which is the most important feature of this programme especially used to show the movements of ocean currents. It gives a clear idea to the students that how formation and movement of ocean current takes place.

4. This programme comprises wonderful pictures and diagrams which the researcher had derived from the Internet and modified it according to the student’s needs.

5. Beautiful background colours were used to avoid the monotony in the lessons and to make it lively and interesting. It was also hoped that students having good visual memory would be able to associate the background colours with different content and thus remember distinct contents on different slides in a better way.

6. Motion pictures were use to grab the student's attention and to make it more lively. Many pictures and diagrams were included which the students can not observe in the textbook.

7. Word Art and different Font Colours were used to enhance visual impact of important words.

8. This CAI programme is developed by the researcher her self (self made programme).

9. This CAI Programme is developed by the researcher herself.
**Geography:** C.V. Good says "The science of earth, including a study of land, water, air, the distribution of plant and animal life, man and his industries and the interrelations of these factors".

For this research the word Geography is used for one of the school subject included in the social studies, the syllabus of which is prescribed by Maharashtra State Bureau of Textbook Production and Curriculum Research.

**VII standard Student:** - "An Individual for whom Instruction is provided in an educational programme under the jurisdiction of a school, school system, or other educational institutes."19 (Singh S.K. 1997)

In this research VII Std. students means 11+ Age group boys and girls studying in VII Std., in private as well as aided Marathi medium secondary school having S.C.E.R.T. syllabus & located in Pune Municipal Corporation area.

1.8 **OBJECTIVES OF THE STUDY**

1. To find out the limitations of traditional method for teaching Geography.

2. To find out the reasons behind the limitations of traditional method for teaching Geography.

3. To prepare a computer Assisted Instruction Programme on the selected units from the subject Geography, considering limitations of traditional methods.

4. To study the effectiveness of CAI programme.
1.9 HYPOTHESES

1 Research Hypothesis

The computer Assisted Instruction Programme when used as a method of Instruction will be more effective than the traditional methods of teaching.

2 Null Hypothesis

There is no significant difference between mean scores of experimental group and control group at 0.01 level of significance.

1.10 ASSUMPTIONS

1 The students learned the content of Geography up to 6th Std., according to the syllabus framed by S.C.E.R.T. Maharashtra State.

2 The teachers in the schools use various traditional methods of teaching Geography i.e. Description, Question-Answer, Explanation, Text Book method etc.

3 The students of VII Std have basic knowledge about the use of computer.

1.11 SCOPE AND LIMITATIONS

1.11.1 Scope

1. The selection of Topics is based on the level of difficulty, abstractness, and taking into consideration, the opinions of teachers.

2. Difficult and abstract concepts or topics for which there is ample information available on the Internet are included in the study.
3. The six schools included all the three types of schools namely, only boys, only girls, and co-education schools.

4. In this research all levels of Intelligence were considered.

1.11.2 Limitations

1. The research is limited to the students of Std. VII from different Marathi medium private as well as aided secondary schools located in Pune Municipal Corporation area.

2. The schools included in this research are aided, private, Marathi medium schools having facility of well equipped computer Laboratory.

3. The schools represent different socio-economic strata.

4. The students from one division of each school selected for experiment were included in this study.

5. The research is limited to the Topics in Geography from the syllabus of Std. VII prescribed by S.C.E.R.T. (Maharashtra State)

6. The result and conclusions are applicable to only such type of schools as covered in the study.

1.12 SIGNIFICANCE OF THE STUDY:-

In this modern world computer has become the key word. In every walk of life the use of computer became essential. The present
research is an attempt to explore the usefulness of computer in the teaching of Geography. This can make the teaching and learning more interesting and challenging as well as effective.

The present research study would help to get information regarding present situation of teaching Geography in Secondary Schools.

Through this research the researcher wants to provide a new and different technique for teaching which can help the teachers to achieve the different aspects of a subject like Geography.

This study may provide the information that how the CAI can help the students in self learning. The students can learn any subject with their own pace and because of this it will help to create a good learning atmosphere in the classroom.

It will help the students to achieve the different objectives of Geography such as International understanding objectivity, usability and it will relate them to their day to day life situations. It will also help the students to use as many sensory organs as they can.

It will help the teachers to make the teaching learning process joyful and entertaining. Teachers can use their imagination and creativity while preparing the CAI programme for their own subject because it is not only useful for the teaching of Geography but also useful for subject like Science, Mathematics, and English.

The study may helpful for teachers for teaching difficult and abstract concept, where it is not possible to give direct experiences such as eruption of volcano. Because of animation the students can easily take the view of the same.

It also helps in maintaining the discipline of the class because like other methods the students are not just the passive listeners but they are active participants in the class. Indirectly this can serve the basic
principle of Education i.e. “Learning by doing”. Therefore this CAI program will help and become useful to teachers, students, parents, and every educated person from the society.

REFERENCES


5. Fairgrieve James, (1937), "Geography in Schools", Page no. 8, University of London Press.,


