1.0 Introduction

Education is the integral part of one’s life. Education teaches the human being how to live life and how to be happy in life. In the teaching learning process child is at the centre and the teacher is just facilitator, guide. But in the present education system, teachers are at the centre and students are taught using normal methods. Sometimes students are getting bored by this normal method and so many students are giving disrespect to Mathematics and they don’t have interest in Mathematics subject just only due to the Conventional Mathematics teaching in classroom.

In the modern age of science and technology, the role of mathematics is the supreme one. In the other branches of science, it is visible to everybody that one goes on changing the theories as discoveries are made one after another. It is not different in mathematics. The moment some findings are put in the form of formulae and sutras, unless the basic assumptions are also explained, one does get a feeling that everything is perfect and beyond questioning. As Lindsay remarked, “Mathematics is language of sciences and certainly no more marvelous language was ever created in the mind of man.”

Ancient Indian Vedic civilizations are known for being skilled in geometry, algebra and computational mathematics complex enough to incorporate things like irrational numbers. Furthermore, all ancient Indian mathematics literature is composed completely in verse, these sutras, to ensure that information would be preserved even if written records were damaged or lost. Vedic mathematics was presented by Jagadguru Swami Sri Bharti Krishna Tirthaji. Vedic mathematics deals with various Vedic mathematics formulae and their application for carrying out
tedious and cumbersome arithmetic operations, and to a large extent, executing them mentally. A regular practice of the multiple choices Vedic Mathematics system shall help in the following ways: Mathematics, a dreadful subject, is converted into playful and blissful subject which we keep on learning with smiles on the face and joy in the heart. We are living in the age of competitions. Vedic Ganit methods came to us as boon for all competitions. Present Mathematics requires many efforts in learning. O.P. Sahwney (2005) conducted free Vedic Mathematics classes for two weeks at the Habitat Learning Centre. The students were given individual attention and were also evaluated on the basis of their performance. He found that the students feel thrilled to know the time saving devices and have started preferring the Vedic way for solving the sums involving big numbers and checking the corrections of the answers within a couple of seconds. Further, Dr. Ramesh Kollure (2011) conducted a study and found that Vedic Mathematics offers an entirely different approach to Mathematics. It can help overcome “math anxiety” being faced by many kids today. Through its amazingly easy methods, ordinary people with little Mathematical skills can solve complex problems relative ease. Calculations can be conducted at a very rapid pace, irrespective of age. The method does not involve memorizing many complex formulas; only 16 Sutras, or shortcut formulas, cover the entire field mathematics. Learning Vedic Mathematics takes substantially less time an effort as compared to other mathematical system. So there is need of using different methods in classroom which can boost the interest of the students in Mathematics. i.e., Vedic Mental or one or two line methods can be used effectively for solving divisions, reciprocals, factorization, HCF, squares and square roots, cubes and cube roots, algebraic equations, multiple simultaneous equations, quadratic equations, cubic equations, bi-quadratic equations, higher degree equations, differential calculus, Partial fractions,
Integrations, Pythagoras theorem, Apollonius Theorem, Analytical Conics and so on. Whole Vedic Mathematics is one method of teaching Mathematics which makes the teaching of Mathematics interesting and will boost the interest of the students.

In this direction the Sankaracharya of Govardhan Matha Puri Jagadguru Swami Sri Bharati Krishna Teerthaji Maharaja has explored the encoded Vedic mysteries and retrieved a set of mathematical sutras from the Vedic literatures. Swami Sri Bharati Krishna Teerthaji was a scholar extraordinaire and profound master of modern subjects including mathematics. Later after attaining sanyasa he went into solitude at Saradha Peeth in Sringeri and relentlessly pursued the study of Vedic scriptures with the consequence that he reconstructed a set of 16 sutras and 13 sub sutras from the Vedic text covering every branch and part of mathematics. We owe deeply to the Sankaracharya for his revelation to popularize Vedic Mathematics.

The importance of Vedic Mathematics lies in the fact that any type of complex and critical multiplication or division can be done with simplicity. Through this system, students can resort to their own methods, without sticking to any one particular process. Vedic Mathematics presents in front of us a rational and unified structure of mathematics, with harmonizing, easy methods, at par with what most mathematics teachers of today are perhaps looking for - something better to make geometry and calculus easier for pupils.

He realized only sixteen sutras cover all branches of mathematics – arithmetic, algebra, geometry, trigonometry, physics, plain and spherical geometry, conics, calculus, both differential and integral, applied mathematics of various kinds, dynamics, hydrostatics, static, kinematics and all.
1.1 Rationale of the study

Education is fundamentally the ‘enlightenment’ of light. It confers dignity to a man. It helps to transform the human personality into a pattern of perfection through synthetic process of development of the body and upliftment of the mind. It supplements the emotions and illumines the spirit. Thus, “Education is the development of all those capacities in the individual which will enable him to control the environment and fulfill his responsibilities” – John Dewey.\textsuperscript{iv}

The world is changing fast due to technological developments. Education alone is not enough for the growth and development of the individuals; the practical use of education in their life is a must and this can be done with the help of technology. Technology may be defined as the “Systematic application of scientific or other organized knowledge to practical task” (Galbraith, 1967)\textsuperscript{v} and at various times in the history of education, technology has been introduced in the hope that it would enhance teaching and learning. Application of technologies are seen everywhere. Therefore, education is a process of human enlightenment and improvement for the achievement of a better and higher quality of life. A sound and effective system of education results in the enfoldment of learners’ potentialities, enlargement of their competencies and transformation of their interests, attitudes and values recognizing the enormous potential of education, nearly every nation has taken radical steps to improvise its own social identity and also to keep in pace with the rapid changes that the world is going through in the field of education. In light of this the Government of India has also considered to renew every five years the current education system and to take corrective and improvising actions to ensure its effectiveness in the society. The effectiveness of any educational system is achieved only when its educational process results in true learning in the individual and as a result leads to human
resource development in its true sense. In the 21st Century, a teacher is not the only source of knowledge or information because of globalization. The advances in technology are changing the whole nature and philosophy of education and by this it is forcing us to get reformed thoroughly.

According to Dr. Abdul Kalam, the whole purpose of education in this century is to develop and enhance the potential of human resources and progressively transform it into a knowledge society. Every Nation wants to produce students who ultimately become the knowledge workers in their own economy to be global citizens. In the 21st Century, the need for competitiveness, in the field of Higher Education knows no bounds.

In the words of Dr. Kalam, “The competitiveness is powered by knowledge power. Knowledge power is powered by innovation. Innovation is powered by science and technology and technology is powered by resource investment.”

The main reason for social exclusion in all over India is illiteracy and thus ignorance or lack of awareness. General education of India is not in a very good position in comparison to other developed countries. Various policies were adopted and many commissions had been appointed to improve Indian education. But desired result has not been achieved. Even though some of Indian students excelled in the world in different fields, a large percentage of our children drop out at primary level of education. Reference to science education the scenario is very pathetic. It is matter of concern to see a fall in the number of youngsters seeking career in science. It is disturbing to have a situation where scientists of excellence are hard to find. It is essential to utilize our young brains in various fields especially in science and technology. So Government has initiated various programmes to involve maximum no. of our youngsters in the field of science and technology. As a
result significant change has been seen in towns and cities. But equal changes have not reached the rural areas of our country. Since more than 75% people of India live in rural areas, therefore India will develop in technological field if more and more students of rural and interior areas can be attracted towards science and technology.

In case of State of Gujarat the scenario is rather more concerning. Gujarat State is one of the economically growing states of India and is witnessing socio-political disturbances mostly centred with younger generation. General education system faces many problems in every stage. Mainly it is the imbalance of teacher student ratio. For example - many primary schools in rural areas have only one teacher, on the other hand, in urban areas; enrolment of students is quite less comparison to the number of available teachers. This is mainly because like other people, many teachers do not want to work in interior places. Interference by the politicians and their agents makes the matter worst.

Science education in Assam is far behind from the rest of the country. Every year less than 10 percent of total high school students go for science and mathematics in 10 + 2 level. If timely action is not taken, we will have shortage of qualified mathematics and science teacher in secondary and higher level. Table below gives the picture of the number of students studying arts, science and commerce in Assam (under Gujarat Secondary Education Board (Gandhinagar). Less than 10 percent of the students appeared for science stream in Science Stream examination.

Some important facts about learning mathematics and science:

A. Study of mathematics

Develops logical thinking ability in every sphere of life,

Increases problem-solving and analyzing capacity in everyday life problems,

Provides language and tool to explain everything of life scientifically,
Helps to understand the world and increases career options.

B. Study of science

Increases creativity to come up with changing society,
Develops inquisitiveness why things happen,
Develops thinking ability in every sphere of life including nature
Increases analyzing capacity in everyday life problems

Develops thinking from the viewpoints of protecting our environments and teaches proper use of natural resources. Thus, in every sphere of life nobody can deny the importance of mathematics and science. World is progressing day by day in the field of health, engineering, agriculture, electronics and telecommunications, nuclear science, bioscience etc. To cope up with the world progress a large number of our children have to study science and technology. Therefore it is essential that our school children should be provided proper knowledge of mathematics and science in their school level so that they can prepare themselves for future study in science and technology. An environment is to be created so that maximum number of students can be attracted towards mathematics and science. Since our India is a great nation with the rich heritage of cultural, economic, political and religious adversities of different aspects of the life. Culture of the Indian people is largely attracted by the ancient literature of the religious like as, Ramayana, Mahabharata, Vedas…etc. Vedic literature of Indian culture is the great heritage, so in this purpose, researcher had attempted to check to effectiveness of empowering the mathematics education through Vedic Techniques of teaching mathematical skills.

1.2 Statement of the Problem

The title of the present study was verbalized as:

“Effect of Vedic Mathematical Techniques on Mathematical skills at class VII “
1.3 Explanation of Key words

1.3.1 Effectiveness

The UNESCO definition of Effectiveness (educational) is: An output of specific review/analyses (e.g., the WASC Educational Effectiveness Review or its Reports on Institutional Effectiveness) that measure (the quality of) the achievement of a specific educational goal or the degree to which a higher education institution can be expected to achieve specific requirements.

In the present study effectiveness implies the impact measured by student achievement in Mathematics.

1.3.2 Vedic Mathematical Techniques

‘Vedic Mathematics’ is an ancient unique technique of calculations based on simple rules and principles, with which verbally, any mathematical problem can be solved be it algebra, trigonometry, arithmetic of geometry.

It is an ancient technique, which simplifies multiplication, divisibility, complex numbers, squaring, cubing, square and cube roots. Even recurring decimals and auxiliary fractions can be handled by Vedic mathematics.

1.3.3 Conventional Mathematical Techniques

Conventional Mathematics technique means the present teaching of mathematics in the classroom by the teacher i.e. oral work, drill work, written work, assignment technique, programme learning, computer assisted instruction technique.

1.3.4 Upper Primary Level (Class VII)

As it is determined by Education Department of Human Resource and Development Ministry of Govt. of India and duly recognized by Gujarat Council of Educational Research and Training, Gandhinagar. In the proposed study as per above
directives Class 6 to 8 are considered to be upper primary school. Class 6 to 8 is considered to be upper primary school (class VII).

1.3.5 Method

According to Cambridge International Dictionary, method means ‘a particular way of doing something.’

A ‘method’ is a set of procedures of a collection of techniques used in a systematic way which it is hoped will result in efficient learning. A method consists of a number of techniques probably arranged in a specific order.viii

1.3.6 Mathematics Achievement

Score on Mathematics achievement test developed by Investigator, was considered as the Mathematics achievement.

1.3.7 Skill

A skill is the learned ability to carry out a task with pre-determined result often within a given amount of time, energy and ability. In other words the abilities that one possesses. Skills can often be divided into domain- general and domain – specific skills. Here the mathematical skills are selected like speed, accuracy, interest, concentration etc.

1.4 Objectives of the study

The following are the objectives of the study. These objectives are divided into two sections.

1. Task objectives

2. Research objectives
1.4.1 Task objectives

- To study the text book of Mathematics of class VII of Gujarati Medium School prescribed by GCERT and Dept. of Education, Govt. of Gujarat, Gandhinagar in order to select for Teaching Mathematics through Conventional Mathematical Techniques and Vedic Mathematical Techniques.
- To prepare teaching material accordingly plan of teaching Mathematics and to develop for Conventional Mathematical Techniques and gets its significance by experts.
- To prepare teaching material accordingly plan of teaching Mathematics and to develop for Vedic Mathematical Techniques and gets its significance by experts.
- To prepare Mathematical skills (speed, accuracy and interest) test and gets its significance by experts.
- To prepare the test to measure achievement in Mathematics.

1.4.2 Research objectives

- To study the effectiveness of Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to mathematical skills in teaching Mathematics among the students at class VII.
- To study the effectiveness of Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to mathematical skills in teaching Mathematics among the male students at class VII.
- To study the effectiveness of Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to mathematical skills in teaching Mathematics among the female students at class VII.
➢ To study the effectiveness of Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to mathematical skills in teaching Mathematics among the urban students at class VII.

➢ To study the effectiveness of Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to mathematical skills in teaching Mathematics among the rural students at class VII.

➢ To study the effectiveness of Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to mathematical skills in teaching of Mathematics among the high score in achievement test of students at class VII.

➢ To study the effectiveness of Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to mathematical skills in teaching of Mathematics among the low score in achievement test of students at class VII.

➢ To study the effectiveness of Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to mathematical skills in teaching of Mathematics among the high score in achievement test of male students at class VII.

➢ To study the effectiveness of Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to mathematical skills in teaching of Mathematics among the high score in achievement test of female students at class VII.
To study the effectiveness of Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to mathematical skills in teaching of Mathematics among the low score in achievement test of male students at class VII.

To study the effectiveness of Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to mathematical skills in teaching of Mathematics among the low score in achievement test of female students at class VII.

1.5 Variables of the study

Variables are the conditions or characteristics that the experimenter manipulates, controls or observes. The following variables were considered in the present study.

1.5.1 Independent Variables

The independent variables are the conditions or characteristics that the experimenter manipulates or controls in his attempt to certain their relationship to observed phenomena.\textsuperscript{ix}

In the present study, the investigator wanted to measure the effect of Conventional Mathematical Techniques, Vedic Mathematical Techniques and Gender on students’ achievement in Mathematics. So the following independent variables were considered for the present study.

- Conventional Mathematical Techniques
- Vedic Mathematical Techniques
- Gender: Male and Female
- Habitat: Urban and Rural
- Achievement Test : Above mean - High and Below mean – Lower
1.5.2 Dependent Variables

The dependent variables are the conditions or characteristics that appear, disappear or change as the experimenter introduces removes or change independent variables.\(^x\)

In the present study the effectiveness of Vedic Mathematical Techniques and Conventional Mathematical Techniques was measured on students’ achievement in Mathematics’ so the dependent variable was Achievement in relation to Mathematical skills (Speed, Accuracy and Interest).

1.5.3 Control Variables

Some independent variables not included in the study may affect the dependent variable. The Investigator has controlled to maintain the validity of research work.

In present study two types of control variables will be involved. One is subject related control variables and second is student’s personal domain related control variables. The following variables will be controlled during the implementation of the treatment.

Subject related control variables are:

1. Standard  
2. Medium  
3. Subject  
4. Content

Student’s personal domain related variables were controlled using statistical technique ANCOVA as:

1. Pre-achievement test in 6\(^{th}\) Standard.

1.5.4 Intervening Variables

It was assumed that the following variables might have been affected during the study:
1. Other’s help

2. Interaction among the group and between the groups

3. Interest and enthusiasm towards the subject

4. Novelty (Innovative aspects) of the study

Table 1.1
Description of variables and its Source

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of Variable</th>
<th>Types of Variable</th>
<th>Level</th>
<th>Description of Level</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gender</td>
<td>Independent</td>
<td>2</td>
<td>Male Female</td>
<td>Collected Information</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Habitat</td>
<td>Independent</td>
<td>2</td>
<td>Urban Rural</td>
<td>Collected Information</td>
</tr>
<tr>
<td>3</td>
<td>Mathematical Techniques</td>
<td>Independent</td>
<td>2</td>
<td>Experimental Control</td>
<td>Collected Information</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Pre Achievement Score</td>
<td>Independent</td>
<td>2</td>
<td>High Low</td>
<td>Collected Information</td>
</tr>
<tr>
<td>5</td>
<td>Mathematical Achievement</td>
<td>Dependent</td>
<td>1</td>
<td>----------</td>
<td>Mathematical Achievement Test</td>
</tr>
</tbody>
</table>

1.6  Hypotheses

The word hypothesis consists of two words: ‘Hypo’ and ‘thesis’.

‘Hypo’ means tentative or subject to the verification.


Thus hypothesis is a tentative statement about the solution of the problem.

L. R. Gay (1972)\(^{xi}\) defines that “A hypothesis is a tentative explanation for certain behaviors, phenomena or events that have occurred or will occur.”

In the present study following null hypotheses were formulated:

**Ho1:** There is no significant difference between mean scores among the total sample students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.
Ho₂: There is no significant difference between mean scores among the total sample of male students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

Ho₃: There is no significant difference between mean scores among the total sample of female students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

Ho₄: There is no significant difference between mean scores among the total sample of rural students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

Ho₅: There is no significant difference between mean scores among the total sample of urban students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

Ho₆: There is no significant difference between mean scores among the total sample of high achiever students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

Ho₇: There is no significant difference between mean scores among the total sample of low achiever students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.
Ho₈: There is no significant difference between mean scores among the total sample of high achiever male students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

Ho₉: There is no significant difference between mean scores among the total sample of high achiever female students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

Ho₁₀: There is no significant difference between mean scores among the total sample of low achiever male students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

Ho₁₁: There is no significant difference between mean scores among the total sample of low achiever female students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

Ho₁₂: There is no significant difference between mean scores among the total sample of high achiever urban students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

Ho₁₃: There is no significant difference between mean scores among the total sample of high achiever rural students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.
**Ho_14:** There is no significant difference between mean scores among the total sample of low achievers urban students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

**Ho_15:** There is no significant difference between mean scores among the total sample of low achievers rural students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

**Ho_16:** There is no significant difference between mean scores among the total sample of rural male students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

**Ho_17:** There is no significant difference between mean scores among the total sample of urban male students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

**Ho_18:** There is no significant difference between mean scores among the total sample of rural female students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

**Ho_19:** There is no significant difference between mean scores among the total sample of urban female students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.
Ho$_{20}$: There is no significant difference between mean scores among the total sample of high achiever rural male students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

Ho$_{21}$: There is no significant difference between mean scores among the total sample of high achiever urban male students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

Ho$_{22}$: There is no significant difference between mean scores among the total sample of high achiever rural female students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

Ho$_{23}$: There is no significant difference between mean scores among the total sample of high achiever urban female students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

Ho$_{24}$: There is no significant difference between mean scores among the total sample of low achiever rural male students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.

Ho$_{25}$: There is no significant difference between mean scores among the total sample of low achiever urban male students of class-VII after learning through Conventional Mathematical Techniques and Vedic Mathematical Techniques in relation to Mathematical Skills.
1.7 Importance of the study

In the present education system some of the students are getting bored and are not interested in teaching with Conventional Mathematics Technique. So, many students are lagging behind in mathematics subject. Moreover, due to lack of interest wastage and stagnation comes. There is an urgent need to implement new techniques of teaching mathematics which can boost the interest of the students. The question of teaching the best method in mathematics is constantly hindering to the researcher. So the researcher has decided to compare two methods of teaching Conventional Mathematics and Vedic Mathematics (The ancient Hindu scientists of Bharat in 16 sutras laid down simple steps for solving all mathematics problems in easy to follow 2 to 3 steps.). The result of this research will be useful to the students and teachers as this is comparative study between Conventional Mathematics Technique and Vedic Mathematics Technique.

1.8 Scope of the Study

The research findings of the study cannot be applicable to all the situations so it is inevitable to know the scope of the study.

The research study aims at the study of conventional mathematical techniques and Vedic Mathematical Techniques of teaching Mathematics to Std.VII in Visnagar Taluka of Mehsana district of Gujarat state. The present study was carried out taking 6 units of VII standard of Mathematics.

1.9 Limitations of the study

Due to limitations of time, the present study was limited to the following aspects:

- The research tool has been developed by the researcher himself.
- The research being experimental in nature is restricted only to Visnagar
Taluka of Mehsana District of Gujarat State.

- The research is restricted only to Std. VII of Gujarati Medium schools of GCERT, Gandhinagar, during the year of 2012-13.

- There are so many Techniques of Mathematics Subject Teaching but the present research study deals with Conventional Mathematics Techniques and Vedic Mathematics Techniques only.

- It was not possible to make equal group regarding IQ. So the groups were made equal using statistical technique ANCOVA.

1.10 Lay Out of Next Chapters

In the present study the researcher presents five chapters.

In chapter two the researcher presents theoretical literature, summary of related previous researches and review of previous research work and significance of present study.

The third chapter deals with origin of the study, population, sampling, methods of research, design of the programme, data collection and data analysis technique.

Chapter four focuses on analysis and interpretation of data with graphs and tables.

Chapter five includes summary, hypotheses, findings, comparison with the previous studies, implications and recommendations.
Endnotes


