CHAPTER - I

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1.1 UNIVERSALIZATION OF ELEMENTARY EDUCATION:

Universalization of elementary education has been a national goal since independence. The recent amendment to the constitution has made elementary education a fundamental right of every citizen. This guides the formulation of the policy and programmes in this area. Efforts made during last fifty years have resulted in a manifold increases in the number of institutions, teachers and students during the period 1951 to 2001. Census of India (2001) reported that the total population of the country have approximately increased from 36 crores to 103 crores. Accordingly school going children population has also increased in the same proportion.

‘Education for all (2003)’ defined the elementary education in India from classes I to VIII and roughly covers children in the age group 6 to 14 years. It is further divided into two stages, primary and upper primary education. Primary education lasts up to class V and covers children in the age group 6 to 11 years. Upper primary covers class VI to VIII and covers children in the age group 11 to 14 years.
NCERT conducted seven Educational surveys (1957 to 2002) to collect basic educational facilities available in the country. Government of India conducted the first Educational survey in 1957. The second survey, which was conducted in 1965, recorded total enrolment 5.91 crores in the classes I to VIII, the fourth survey in 1978 recorded enrolment 8.66 crores, where as the seventh survey in the year 2002 recorded approximately 16.92 crores. Total enrolment at primary stage increased from 4.88 crores in 1965 to 6.86 crores in 1978 and 12.24 crores in 2002. It increased from 1.02 crores to 1.79 crores and to 4.68 crores during the same period at the upper primary stage.

1.2 LITERACY RATES IN INDIA (1951-2001):

According to the document entitled, Sarva Shiksha Abhiyan (2005), the literacy rates for the years 1951, 1961 and 1971 relate to the population aged five years and above, while those for the years 1981, 1991 and 2001 relate to the population seven years and above. These rates are given in the following table.

<table>
<thead>
<tr>
<th>Census years</th>
<th>Literacy rates (% age)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Persons</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>1951</td>
<td>18.33</td>
<td>27.16</td>
<td>8.86</td>
</tr>
<tr>
<td>1961</td>
<td>28.30</td>
<td>40.40</td>
<td>15.35</td>
</tr>
<tr>
<td>1971</td>
<td>34.45</td>
<td>45.96</td>
<td>21.97</td>
</tr>
<tr>
<td>1981</td>
<td>43.57</td>
<td>56.38</td>
<td>29.76</td>
</tr>
<tr>
<td>1991</td>
<td>52.21</td>
<td>64.13</td>
<td>39.29</td>
</tr>
<tr>
<td>2001</td>
<td>64.84</td>
<td>75.26</td>
<td>53.67</td>
</tr>
</tbody>
</table>
The literacy rates increased from 18% in 1951 to 65% in 2001, indicating phenomenal growth of literate persons in the country during last 50 years.

1.3 CENTRALLY SPONSORED SCHEMES:

In 1950, India committed itself to provide free and compulsory education for all children in the age group 6 to 11 years within a period of ten years from the commencement of the constitution, i.e., by the end of the year 1961. However, this target was never met. The New National policy on Education 1986 has promised to remove these deficiencies through a programme called “Operation Blackboard”. It set the target to educate the children up to the age of 11 years by the year 1990 and those up to the age of 14 years by 1995. District primary Education Programme(2003) was launched as a centrally sponsored scheme in 1994 first in seven states and subsequently it was extended to 18 states. Government of India launched a scheme, known as Sarva Shiksha Abhiyan (SSA) in the year 2001-2002 in partnership with the state government and local self-government. The following are the main objectives of SSA.

• All children complete five years of primary schooling by 2007.
• All children complete eight years of elementary schooling by 2010.
• Focus on elementary education of satisfactory quality with emphasis on education for life.
• Bridge all gender and social category gaps at primary stage by 2007 and at elementary education level by 2010.
• Universal retention by 2010.

1.4 Objectives of Elementary Mathematics:

The teacher of mathematics must remain alert at all times to the six major objectives of instructions. They are

• Proficiency in fundamental skills.
• Comprehension of basic concepts.
• Application of significant meanings.
• Development of desirable attitudes.
• Efficiency in making sound applications.
• Confidence in making intelligent and independent interpretations

1.5 Importance of Mathematics:

The history of human civilizations reveals the necessity of counting, measuring, weighing and drawing in all aspects of environment. Mathematics is an integral part of the universe whose every aspect is quantitative.
In the computer conscious world today, mathematics plays an important role and the future more mathematically linked. Mathematics gives scope for induction as well as deduction.

The word mathematics is derived from a Greek word “Inclined to learn”. Mathematics is based on logic. Some mathematicians have used logic to develop mathematics from a set of axioms. It develops logical thinking and it has aesthetic appeal.

Mathematics can be divided into “Pure mathematics” and “Applied mathematics”. Pure mathematics seeks to advance mathematical knowledge for the sake of discipline development rather than for any immediate practical use. Applied mathematics seeks to develop mathematical techniques for use in science and other fields.

The most important skills in mathematics are careful analysis and clear reasoning. Nearly every part of our life involves mathematics. It has played an essential role in the development of modern technology, the tools, materials, techniques and sources of power that make lives and work easier. Mathematical knowledge is used for physical, social and cultural development of a child.

1.6 NEED AND IMPORTANCE OF IN-SERVICE COURSE FOR THE TEACHERS:

The programme of Action(1986), has strongly advocated the importance of continuous studies for the teachers because of the reason that of all factors that influence the quality of education. The quality,
competence and character of teachers are undoubtedly, the most significant. Teachers at all stages have to be expected to undertake or promote research, experimentation and innovation. Teachers have an important role in extension and social service. They have also to participate in the management of variety of services and activities which educational institutions undertake to implement their programmes.

The following are the broad objectives of in-service education showing the need and importance for the teachers.

- Teachers may update their level of knowledge in accordance with the changing need of society.
- Various professional skills and competencies which have direct bearing for quality teachers may be acquired through such courses.
- Teachers may directly be in touch with the latest development of science and technology in the field of education.
- Teachers may improve upon their quality of teaching by employing a number of devices, techniques contributed by educational technology.
- A teacher may acquire thorough knowledge of child psychology which would assist for effective and result oriented teaching.
- A teacher may update himself about the technique of preparation of question bank, question papers, model papers and modern evaluation techniques etc.,
• A teacher may learn various techniques for effective classroom management.

• A teacher may enrich his knowledge about the various service cum administrative matters required for him in future.

• Creation of conducive & democratic environment, ideal teacher taught relations etc., can be learnt through such courses.

1.6.1 TRAINING:

Training was a means of ensuring specific tasks were carried out in accordance with a predetermined procedure.

1.6.2 SSA PLAN ABOUT IN-SERVICE TRAINING:

➢ School quality capacities and professional competencies of teachers.

➢ Conducting need based in-service training to teachers on content and methodology and evaluation techniques.

➢ Training on preparation and use of low cost and no cost TLM.

➢ Training on MGT.

1.6.3 ROLE OF DIET IN IN-SERVICE:

DIET has seven branches. In-service field programs, field interaction, innovation co-ordination branch (IFIC) has following activities regarding training.

• Identify training needs of elementary teachers in the district, and prepare a perspective plan for meeting such needs.
Organizing orientation programs for Resource persons who would conduct in-service programs for teachers at other centers in the district.

Organize in-service education programs for teachers and Head masters, at the institute.

Organize in-service education program for teachers in the distance/distance-cum-contact modes.

To evaluate and monitor the quality and efficiency of in-service programs in and outside, the DIET and to strive for their continuous improvement.

1.6.4 FOLLOW UP ACTIVITIES OF THE TRAINING:

Follow up activities play a major role in assessing the impact of a training program. Two types of follow up activities are immediate and long term. Immediate follow up activities:

- Whether the training objectives have been achieved.
- Whether the participants have accepted the content.
- How much of the content has reached the participants?

1.6.5 METHODS TO IMMEDIATE FOLLOW UP:

- Feed back from trainees regarding
- Adequacy of content
- Methodology of training
- Difficulties in implementation
Suggestions to improve

Feed back tools to assess

1.6.6 FEED BACK TOOLS TO ASSESS THE IMPACT OF TRAINING:

- Direct from trainees
- Feed back forms
- Letters
- Group discussions, suggestions, Sharing experiences, etc.,
- Attitudinal and behavioral changes observed in the trainees.
- Impact of training in the class room.
- By assessing the class room activities.
- By conducting and comparing the achievement Test scores.
- By observing the attitudinal and behavioral changes of teacher and students.
- Feed back from parents/other teachers who were not covered by the above training.

1.6.7 LONG TERM IMPACT:

- Comparison of pre-test and post-test scores.
- The difference in test scores is proportional to the impact of the training.
- If no significant change is observed in the test scores it is to be concluded that the training has not been effective.
1.7 TEACHING:

Teaching is something one person does to another. Teaching may involve

- Telling
- Explaining
- Demonstrating
- Discussing

Teaching is a complex human act performed by complex human organism (students) carried in the complex situation called the classroom. Barr (1961) who said that teaching means many different things, and that teaching act varies from person to person and from situation to situation.

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Flanders (1970) explains teaching as a transactional activity between the teacher and the taught.

1.8 TEACHING OF MATHEMATICS:

It can be said that, in no area other than mathematics, there is constant and systematic emphasis on the conceptual approach. In fact, as asserted by Skemp (1963) mathematics is not a collection of simple facts which can be demonstrated and verified in the physical word, but a structure of closely related concepts arrived at by a process of pure thought.

Lovell (1966) equates teaching of mathematics to the development of conceptualized construction.
Once the natural numbers and their properties have been isolated as it were, by more abstract thinking which is able to reflect on the result of intention, mathematics at once becomes a more conceptualized construction. It can be concluded that

- Mathematics is a product of pure thought.
- Mathematics is a highly conceptualized construction.
- Mathematics is a regular structure of closely related concepts.
- Elementary concepts of mathematics can be acquired by direct experience from the physical world.
- Higher order abstract concepts in mathematics can be arrived at by the process of pure thought and logic or intuition.

### 1.8.1 PRINCIPLES INVOLVED IN CLASS ROOM TEACHING OF MATHEMATICS:

Following two principles are most important in classroom teaching.

- Increase students participation in the class room.
- Encourage students to think in the class room.

### 1.8.2 ACTIVITIES AND GAMES:

Activities and games help in making students to think in the class room. Students must be fearless about expressing their views on a point being discussed, and about asking and answering questions. Best discipline is not achieved by fear but by understanding and acceptance of rules.
1.8.3 CLASS ROOM DISCUSSION:

Class room discussion can lead students to make generalizations and extensions of concepts and patterns and to find connections to what they have already learnt all of which is extremely important in mathematics.

1.8.4 LANGUAGE AND MATHEMATICS:

Children may find the language used in the mathematics class room quite different from every day language. Many words may be new and unfamiliar. Some times familiar words are used with very different meanings. It is important for the teacher to language and vocabulary. A number can be taught in the following languages.

- Things language
- Action language
- Sound language
- Numeral-alpha-numeric language
- Spoken math language
- Pictorial language

In spite of all these languages numerical language is the universal mathematical language.

1.8.5 TEACHING MATHEMATICS (A PRESENT SCENARIO):

Mathematics has always occupied an important place in school curriculum. The Education Commission (1964-66) recommended mathematics as compulsory subject for students at school level. The course
content recommended was partly influenced by international opinion at that time and favoured ‘new mathematics’, which later pervaded secondary education. It was suggested that content should be presented in a manner such that too much emphasis should not be given on computation.

In the teaching of mathematics emphasis should be more on the understanding of basic principles than on the mechanical teaching or numerical computation. Later the National Policy on Education (1986) also considered the importance of Mathematics in general education and suggested that mathematics should be visualized as the vehicle to train a child to think, reason, analyze and to articulate logically. Apart from being a specific subject it should be treated as concomitant to any subject it should involving analysis and reasoning. As a result of this, efforts were made to expand the scope of mathematics teaching. But the application of learning theory to mathematics has not been very significant. It is observed that in the average school, today, instructions still conform to a mechanical routine and continue to be dominated by the old besetting evil of verbalism. It remains as dull and inspiring as ever before. It is considered as one of the most difficult subject in school. The reason for teaching of M mathematics is more oriented to prepare the child for examination.

1.8.6 ISSUES ON MATHEMATICS TEACHING:

When teaching children mathematics, it is important to be aware of our attitudes to some of the really important issues. All of us teachers, feel that a few children in each class are keen learners and learn
mathematics more quickly than the others. We may also feel that some do not learn at all. We often like to divide children into categories of those who like mathematics and those who hate mathematics. As children go to higher classes, this gap becomes more sharply defined. Many of us may have various things to change this scenario and may have ended up disappointed that many children do not appear to be making any effort.

To improve the situation, it is important for the teachers to understand and argue about the reasons for its existence. Some of us believe this to be arising from genetic differences and inherited factors. Some children are slow because they belong to genetically less intelligent families, or because they come from illiterate parents, impoverished homes and therefore have not developed their I.Q. All these reasons are related to their family, cultural and social background as well as individual factors. All these factors affect the child much before she starts her schooling and continue as out-of-school influences.

1.9 LEARNING:

Learning is something we can only do for ourselves. Learning happens only when the person under instruction.

➢ Grasps the subject, mentally or physically.

➢ Translates it in to words or actions that make sense to them.

➢ Locates it alongside all the other things they know or can do and does something with their new found knowledge to make it their own.
1.9.1 Figure 1.1 The learning cycle

![Learning Cycle Diagram]

1.9.2 MEANING OF A CONCEPT:

Learning mathematics takes place only when the students understand the concept.

According to Osgood (1953) A concept is the acquisition of a mediating process that can be abstracted from the stimulus objects.

According to Bruner et.al (1956) a concept is a class or grouping response an act of categorization, involves rendering different things equivalent.

1.9.3 SKILL IN LEARNING MATHEMATICS:

Concrete to abstract:

Mathematics is a subject in which abstraction plays key role. Numbers are abstract concepts which are acquired slowly by very young children. However as children grow older and older and become more
familiar with using them, numbers become more concrete objects in their own right.

Mathematic concepts are built up with concrete to abstract. A further level of abstraction is achieved when children learn algebra and the concepts of a variable or a function. If children have to acquire concepts at a more abstract level, they require a thorough familiarity with the proceeding, more concrete level.

In class four children will have opportunity to sharpen their mental computational skills of adding and subtracting two and three digit numbers. This is not to be done by dragging them through the tedium of respective exercises, but rather by giving these numbers a concrete basis. Two digit numbers are presented through number building, they become familiar with the structure of two digit numbers. This concrete representation is later expanded as a ‘number colony’ to include three digit numbers.

1.9.4 USING RELATIONAL THINKING TO SUPPORT THE LEARNING OF ARITHMETIC:

Many fundamental mathematical ideas involve relations between representations of numbers and operations on them. Once students begin to think about relations, true/false and open number of sentences provide flexible contexts for representing these relations in order to draw children’s’ attention to them and for children to express their own understanding. These number sentences can provide specific contexts for
children to talk about their understanding of basic mathematical ideas. Class or small group discussions of appropriately selected number sentences can provide a basis to lift out these big ideas for discussion and examination by all members of the class.

The development of students' mathematical thinking should not be perceived as one more topic to teach. Ideally, it should be an integral part of the teaching of arithmetic concepts and skills. Once students have learnt to think about relations, true/false and open number sentences can be used to support the learning of many arithmetic concepts and skills.

1.10 ASSESSMENT:

Figure 1.2 The role of assessment

SUMMATIVE:

Summative assessment is generally carried out at the end of a course or project. In an educational setting, summative assessment is typically used to educate students and assign them a course grade.
FORMATIVE ASSESSMENT:

Formative assessment is used to aid learning. In an educational setting, formative assessment might be for providing feedback on a students work, and would not necessarily be used for grading purpose.

1.10.1 USE OF DIAGNOSTIC TEST:

- Distinguish between ‘Mechanical learning and learning with understanding.
- Identify and target common misconceptions.
- Develop higher level thinking skills, strategies and habits.
- Provide diagnostic feedback to the students.
- Help to identify patterns of errors or weakness in a class.

1.10.2 THE TEST DEVELOPMENT PROCESS:
Figure 1.3 The test development process

1. Specification of purpose
   (Determine what to test)

2. Transplanting purpose into operational terms
   (Blueprint etc.,)

3. Item writing, revisions

4. Item try out and analysis (pre-test)

5. Statistical and qualitative Discrimination difficulty
   Appropriateness of alternativeness

6. Assemble test in final form

7. Standardisation
   Administration
   Directions, Scoring

8. Technical analysis of test (Reliability, validity, norms)
1.10.3 REVISION:

In mathematics even more than in other subjects, progress depends crucially on how well pre-requisite concepts and skills are mastered. Many concepts are interdependent and tightly connected. This means that there are two points that the teacher must pay attention to. The first is revision and reinforcement. Any material that is learnt is subject to a slow decay in memory. Since this can have severe consequences for making progress in mathematics, the teacher needs to fit in revision exercises and tasks into her class room teaching schedule.

1.10.4 INFORMAL TESTING:

Frequent and quick testing of individual student is a part of class room teaching. Apart from the mid term or end of term exams and tests, brief written test and oral questioning could be done from time to time during teaching itself. Such informal testing can provide valuable data to the teacher who needs to have an accurate idea of learning levels of individual student in her class.

1.11 TEACHING LEARNING MATERIAL & CLASSROOM PROCESSES:

Long ago the Greeks and the Romans used to convey messages through words, pictures, symbols, etc. Rousseau, a great educator discouraged the use of more words in education. He advocated that the mind of child, nature of body and its surroundings should be taken into account. As a result of this; a shift took place from teacher to child-centered education.
Froebel was another exponent who pleaded that children should learn from things around them. The basic philosophy of this system is that children also grow like plants or flowers in a garden. He considered a school as a garden and teacher as a gardener, who has to look after the little human plants and has to water them to become beautiful and perfect. His kindergarten with gifts and songs provides activity for the students. Doctor Maria Montessori was a scientist, physician and educationist. She desired to teach children through real experiences by giving them concrete material and maintaining learning situations for them. Montessori’s didactic apparatus provides even more opportunity for the pupil to learn by doing. Montessori stressed the importance of senses. From the day of its birth, a child beings to learn with the help of its senses. The learning through senses is more permanent than mechanical learning. The child is interested in seeing concrete things. It wants to handle and manipulate and the teacher should provide occasions for the pupil to satisfy their curiosity of doing things. Materials facilitate the pupil to learn effectively.

Teaching is a process through which a certain amount of knowledge is imparted, certain skills are developed and right type of attitudes, values and interests are inculcated.

Teaching involves the following:

- Interacting between teacher and students through content.
- Providing and developing skills.
- Providing knowledge to students.
- Processing the information.
- Communicating the knowledge.
- Integrating the knowledge.
- Organizing the information.
- Correlating the facts.
- Energy consuming job.

The result of teaching is learning. Learning to be more specific is for
- Concept formation.
- Remembering.
- Reproducing whenever needed.
- Helpful for intellectual growth.
- Development.
- Change of behavior.
- Better thinking.
- Better living.

The materials used in the teaching and learning process facilitate the teacher to teach his lesson in an orderly manner. It makes the difficult concepts simple in a scientific way for pupil. Teaching learning material is very crucial in the context of learner. The teaching learning process, which is tri-polar in nature, becomes meaningful when the teacher plans appropriate strategies. The teaching learning material should be in accordance with the maturity levels of the learner. Models, specimens, actual objects and use of locally available material and kits of different nature
are some of the examples of the teaching learning materials. Edgar Dale’s Cone of Experience needs special mention in this context.

It is said that “I hear I forget, I see I remember, I do I understand”. This implies doing is very important than mere passive listening. The teaching learning material help in the process of conceptualization. The teaching learning material relate the content with methodology. In a way it is an asset to the child and the teacher to realize the objectives of the lesson. The passive class turns active and the child feels at home when the teaching learning material are used in the classroom. Seeing and doing are two important process that motivate the child to learn the concepts in a natural way.

The importance of materials used in the teaching learning process cannot be ignored. Material helps the teacher to teach in a better way and helps the students to learn better. The material is

- For interacting with the content.
- For developing motivation.
- For active participation in learning.
- For better display in the classrooms.
- Helpful for learning of concepts.
- Helpful for processing from concrete to abstract thinking.
- Used for visualization of concepts easily.
1.11.1 SIGNIFICANCE OF TLM:
• TLMs arouse interest and motivate the pupils to action stimulating physical and mental activity.
• TLMs reduce verbalism and contribute towards the clearness of perception and accuracy in learning.
• TLMs extends first hand experience when the students see a demonstration, handle the apparatus, perform the experiment themselves and prepare charts, sketches and models etc.,
• TLMs correct misconceptions and secure additional ideas among the students.
• TLMs help in bringing vivid reality into the classroom.
• TLMs are best attention compellers
• Means of arousing interest and securing attention to the desired relationships.
• Maintain favorable attitude towards learning.
• Establish vivid and accurate imagery.

1.11.2 NEED FOR TLM:
• Depends upon the capacity and experience of the learner.
• Below average students need TLM more compared with bright students.

1.12 COMPETENCY:
Competency is nothing more than an improved modern term applied to an ancient human value. Applied to teachers, competency means the
right way of conveying units of knowledge, application and skills to the students. Present text book is prepared on the basis of minimum levels of learning.

1.12.1 MINIMUM LEVELS OF LEARNING (1976):

The minimum Levels of Learning (MLL) strategy is an attempt to combine quality with equity. The objective of this strategy is to access to education irrespective of sex, caste, creed and location. The focus of MLL is development of competency based teaching and learning. It had been stressed that emphasis should be laid on MLL in respect of three subjects namely language, Mathematics and Environmental Studies. This programme had been initiated throughout the country with the help of voluntary agencies and research institutions.

1.12.2 MULTIGRADE TEACHING:

Some primary schools are large sized, some are of ordinary size while some are small ones. In the large ones, teachers teach grade wise while or even section wise. Sometimes, even two teachers practice team teaching in the same grade by sharing subject teaching. In the small ones, a teacher has to combine several grades and Multigrade teaching is practiced.

1.12.3 METHODOLOGIES OF MULTIGRADE TEACHING:

- Direct Teaching
- Monitorial Assistance
- Peer Tutoring
- Self-Study
- Collective Teaching
- Field Trips
- Extended Teaching
- Supplementary Reading Material
- Liaisoning with Community Members
- Collective Teaching in Multigrade School Situations

1.12.4 IN-SERVICE TEACHER TRAINING IN MULTIGRADE TEACHING FRAMEWORK

Figure 1.4 In-service Teacher Training in Multigrade Teaching Framework
PHASE-II

Task performance

1. Direct teaching
2. Peer group work
3. Self study
4. Collective teaching

Task evaluation

1. Feed back
2. Supervised teaching
3. Follow up

1.12.5 COMPETENCY TABLE FOR PRIMARY MATHEMATICS:

A student entered in a primary school must attain mastery level in 207 competencies in mathematics during his primary schooling. Following table explains the number of competencies a child must study in class I to V.

**TABLE 1.2 COMPETENCY TABLE FOR PRIMARY MATHEMATICS:**

<table>
<thead>
<tr>
<th>Class</th>
<th>Number of competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>24</td>
</tr>
<tr>
<td>II</td>
<td>22</td>
</tr>
<tr>
<td>III</td>
<td>48</td>
</tr>
<tr>
<td>IV</td>
<td>60</td>
</tr>
<tr>
<td>V</td>
<td>53</td>
</tr>
<tr>
<td>TOTAL</td>
<td>207</td>
</tr>
</tbody>
</table>
1.13 SCOPE OF THE STUDY:

Learning mathematics with interest is a great task. As the investigator visited schools and examined the answer sheets of the students for the purpose of training found that the students are not answering the statement problems. This study will motivate the students to learn mathematics with confident and interest. Activity based learning makes the students to think and bring out their creativity. This will automatically arouse their interest. Coining words for statement problem is another task for the students. Module prepared by the investigator makes the process of statement easier by introducing activity cards. Once the interest aroused will not be stopped. So this will surely help the students and teachers.

1.14 NEED AND SIGNIFICANCE OF THE STUDY:

The investigator is working as a lecturer in DIET Krishnagiri in IFIC branch. The investigator conducts in-service training to the teachers. The achievement of student is not up to the mark even if the training is given to the teachers. So the investigator wanted to know the effectiveness of training in the class room teaching. As suggested by the guide, instead of studying the effectiveness of DTER training, the investigator prepared a module and gave training to the teachers. Primary mathematics includes mathematics for class 1 to 5. present study aims to class IV mathematics, because the number of competencies to be achieved by class IV students is 60 which is the maximum number of competencies in the list. Statement problems need language skill also. Present study helps the students to
write statement from the question. Hence the investigator selected this topic for the study.

1.15 CONCLUSION:

Mathematics is an important subject in the primary curriculum. Teaching and learning of mathematics is an art. If a child likes a teacher then it likes the subject handled by the teacher. It is necessary for the teachers to give training to handle the subject. Appropriate methodology is necessary to change the classroom environment as joyful one. If the training is implemented it raises the achievement. An attempt is made to study the impact of in-service training in the classroom teaching of primary mathematics.