

CHAPTER - 1

INTRODUCTION

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1.1 INTRODUCTION

Education is the most important invention of mankind, it begins at birth and end at his death. It is a process of growth in which the individual is helped to develop his talents, power, interests and ambitions. This growth is an integrated and harmonious process. Education should aim at developing the innate potentiality and unique individuality of each child according to his nature there fore learning experience every attempt is made at all levels of education to match with the capability of the learner and for that suitable curriculum are framed.

The National Policy of Education was adopted in 1986. Twenty three task forces were constituted for this purpose and enough weight age was given to educational technology and its use.

The National Policy of Education 1986 has recognized that “a human being is a positive assets and a precious national resource which needs to cherished, nurtured and developed with tenderness and care coupled with dynamism. The policy has also emphasized that each individuals growth present a different range of problems and requirements at every stage from womb to the tomb” implying that an individual’s individuality and dignity should be respected his need, interest, aptitude and abilities taken in to the account by the Educational system.

We blame the child on his failure in performing a task but failure to perform a task should not always be interpreted as the failure of the child. It may be due teacher’s inability to make the task clear. It may be due to the poor of inadequate teaching or teaching material. It is a common experience that children who happened to weak in a certain subject tend to get weaker in it unless a special effort is made to take their problem in a systematic

manner. It is also found that some times even the brighter children fail to make sufficient progress.

A considerable number of children in the class fail to achieve what they could if provided proper opportunities to work according to their abilities. Hence the students should be allowed to set their own pace and be given supplementary remedial instruction. Programmed learning material can be very fruitful in this.

Science based technology seems to be the alternative to meet the challenge. Since programmed learning is based on the finding of science it can be used as an alternative.

Programmed instruction is a self – instructional material developed on the psychological principles of teaching – learning process. A rapid learner can cover the material quickly and a slow learner may proceed on his own pace. This frees the learner from the same type of teaching material delivered to the whole class at the same pace. Programmed learning material helps the learner to teach himself at any place and pace according to his convenience. Different types of programmes have their special advantages and facilitate learner's initiative participation and involvement according to their interests and ability. They provide scientific teaching and learning for efficient and effective acquisition of knowledge and skills. The analytical thinking and self – direction of learners are also promoted through the use of programmed learning materials.

According to schramm (1962) “ By programmed instruction I mean the kind of learning experiences in which a programme takes the place of a tutor for the student and leads him through a set of behaviour designed and sequenced to make it more probable that he will behave in a given desired

way in the future. In other words, he will learn what the programmes designed to teach him”.

By 1967, when the United State National society for the study of Education published a yearbook on programmed instruction there was general agreement among the experts that the process could be defined by the following steps:

- 1 formulation of objectives;
- 2 designing and testing of appropriate criterion measures to determine
When the objectives have been achieved;
- 3 definition of the target population;
- 4 analysis of learning task;
- 5 preparation of prototype programme;
- 6 development testing programmes; and
- 7 validation of programme.

In the development testing, Mackenzie and other (1970) remark that the purpose is to improve the programme and in validating it is to obtain data to demonstrate the effectiveness of the programme.

The programmes are usually divided into two: (i) linear, and (ii) branching. Schramm (1962) mentioned the following salient features/characteristics of programmed learning meaning only linear programmes in the context. “To sum – up, there are the essential elements of programmed instruction: (a) an ordered sequence of stimulus items; (b) to each of which a student responds in some specified way; (c) his responses being reinforced by immediate knowledge of results; (d) so that he moves by small steps; (e) therefore, making few errors and practicing mostly correct responses; and (f) from what he knows by a process of successively closer approximation towards what he is supposed to learn from the programmes”.

Again programmed learning is also divided into three distinct types: (i) linear, (ii) branching, and (iii) adjunct auto – instruction, skinner (1961) invented and was in favor of the linear programme. As the name indicates there is a single line which all the students have to follow. This programme allows all the students to read and respond to the same frames. The student makes progress along a single line/tract from one frame to another irrespective of the answer. Most linear programme use constructed and multiple choice responses. A few programmes also use both constructed and multiple choice responses. The linear programme is generally response – centered and in each frame only enough material is presented to evoke the correct responses.

The branching programme allows the learner to take any number of different paths through the curriculum. In this programme the student proceeds to the next frame until he makes an error. Each response is evaluated and that evaluation determines where the student is provided with help to avoid making that wrong again. A student who is able to do very well is given chance to go ahead, whereas any body committing many mistakes is required to retrace his steps of take an alternative route to resolve difficulties.

In short, Programmed learning is an educational innovation and auto – instructional device. It is a practice of braking down a body of subject matter into its constituent elements and requiring the pupil to master one step before proceeding to the next. It allows for more pupil involvement in the learning process. Since it is a self – instructional device, it is mostly individualized being adapted to individual differences. In this technique, learning is more rapid as well as interesting. It is directed towards specific objectives and retained better as well as longer.

1.2 STATEMENT OF THE PROBLEM

“A study of the relative effectiveness of the programmed learning method and conventional method in the teaching of mathematics for student of class VI.”

1.3 OPERATIONAL DEFINITIONS

Conventional method: - The conventional method is the method adopted by the teacher under normal circumstances most of the time. Here communication is one sided and the lecture method is commonly used as conventional method.

Programmed method: - In this method instructional material is provided by the teacher to pupil in forms of small units called frames. This gives opportunity to students for self learning.

1.4 OBEJECTIVES OF THE STUDY

- To develop a programmed learning unit of the linear type in mathematics for class VI.
- To develop achievement test for the study.
- To compare the achievement of the student studying by the traditional method of teaching with that of the student studying through programmed materials.
- To evaluate the relative effectiveness of the programmed learning methods on boys and girls separately

1.5 VARIABLES

A variable is something that varies. It is property that takes on different values.

List of variables :-

- Age
- Socio – economic status
- Level of achievement
- Methods of teaching



Since the students are of the same class, age has been assumed to be almost equal.

As students belong to the same school socio – economic status is also assumed to be almost equal.

On the basis of pre test, two uniform groups were formed.

Thus above two variable i.e. intervening variable are controlled.

In this study variables considered are – method of teaching and the
_____ level of achievement

Independent Variable :-

The teaching method is independent variable. The experimental group was taught by the programmed learning method and the control group by the conventional method.

Dependent Variable :-

Achievement here is the dependent variable. Since the topic being the same the operant factor is the different method of teaching.

1.6 DELIMITATIONS OF THE STUDY

- The population chosen is restricted to just one class i.e. VI.
- The study is limited to just one school.
- It includes 26 students in experimental group and 25 students in controlled group.

1.7 ASSUMPTIONS MADE

- Since both the methods were used by the same teacher the teacher

- The magnitude of the achievement test is taken to the role criterion for the effectiveness of teaching method.
- Prior to the experiment the two groups had their instruction in the conventional way of teaching thus the difference in the achievements of experimental group, if any could only be attributed to programmed instruction.

1.8 HYPOTHESIS

- There is no significant difference in the performance of the student's taught through programmed learning method and conventional method.
 - There is no significant difference in the performance of boys and girls
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