

## Golden Research Thoughts



approach, all the capabilities required to perform are closely inter-related. Modules can be developed separately for each of inter-related tasks. The purpose of this article is to explore the important role that modules play in mathematics teaching and how we can use modules to develop creative challenges that lead to improvement in mathematics at plus one level.

### Keywords:

Modular approach, Teaching, Mathematics.

### Abstract:-

Module is a form of self-instructional package and thus regarded as relatively recent phenomena. It enables the learner to have a control over his learning and accepts greater responsibility for learning. Since strategy demands greater maturity on the part of learner, the modules are more appropriate for more mature students. In recent years, the consent of modular curriculum has been under discussion in secondary schools. In modular



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## MODULAR APPROACH OF TEACHING MATHEMATICS FOR THE SELECTED TOPICS AT PLUS ONE LEVEL



### INTRODUCTION

Modular approach is a self contained package dealing with one specific subject in convenient form, so that the learner can complete it at his own pace independently or small groups. It is so structured that the learner can identify the objectives, select material and method and evaluate his own accomplishment.

The modular approach in mathematics learning has been proven to be an effective and efficient tool to help students to learn mathematics themselves. Most subjects can be target with this approach. The production of instructional material is time consuming but the modular effectiveness can be evaluated and thus can be done in a positive way. Mathematics module is a single independent unit of instruction, complete in itself with the primary focus on a few well defined objectives. Modules may be added to further units towards the achievement of long-term goal in mathematics. Module carry a wide variety of labels, including unipack, individualized learning package, and learning activity package.

### MODULAR APPROACH MEANING AND DEFINITION:

Module is a unit of work in a course of instruction that is virtually self-contained and a method of teaching that is based on the building up skills and knowledge in discrete units.

“Module is a short unit of instruction dealing with a conception unit of subject matter” – Russel (1974).

According to the chambers 20th century dictionary (1983) “Module is defined as a set of course forming unit in an educational scheme”.

### CHARACTERISTICS OF MODULE

- ❖ It should be independent.
- ❖ Self-contained.
- ❖ Self instructional.
- ❖ Well defined.
- ❖ Clearly defined objectives.
- ❖ Concern individual differences.
- ❖ Association, structure sequence of knowledge.
- ❖ Systematically organized learning opportunities.
- ❖ Utilization of a variety of media.
- ❖ Active participation by learner.
- ❖ Immediate reinforcement of responses.
- ❖ Mastery of evaluation strategy.
- ❖ Evaluation of the work.

### ESSENTIAL COMPONENTS

#### 1. Rationale

An overview of the content of module and explanation of why the learner should study it.

#### 2. Objectives

What is expected outcome of module? This is stated in behavioral/performance terms.

#### 3. Entry Test

To determine if the learner has prerequisite skills needed to enter the module and check whether the learner already has mastered the skills to be taught.

#### 4. Multi Media Materials

A wide variety of media is used so learners can involve actively and utilize their senses.

#### 5. Learning Activities

Presentation, demonstration, drill, simulation, discovery problem solving etc. may be useful. A wide variety of learning activities increase student interest and cater student needs.

#### 6. Self-Test:

This provides a chance to review and check one's own progress.

#### 7. Post Test:

An examination to test whether the objectives of the module have been mastered.

### STRUCTURE OF MODULE

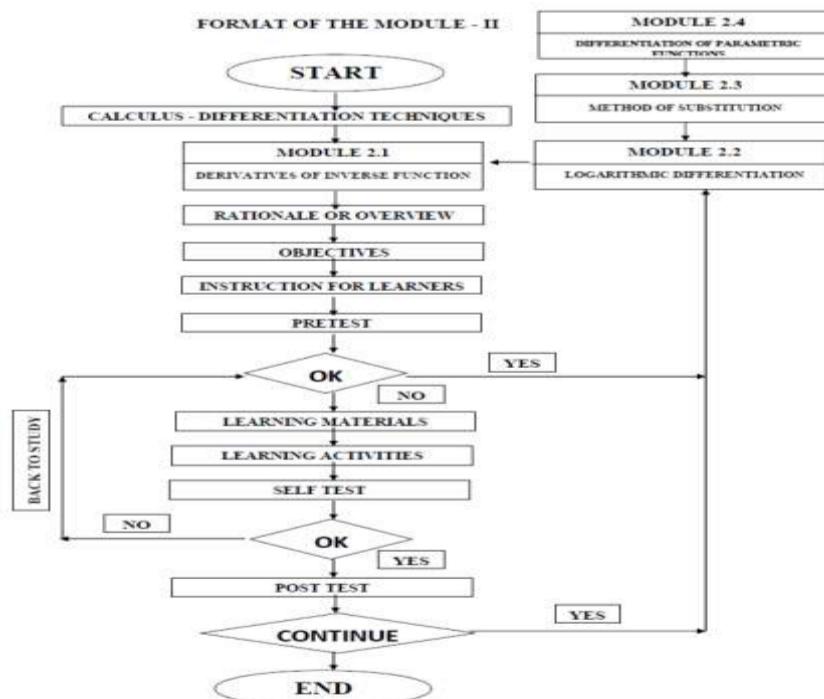
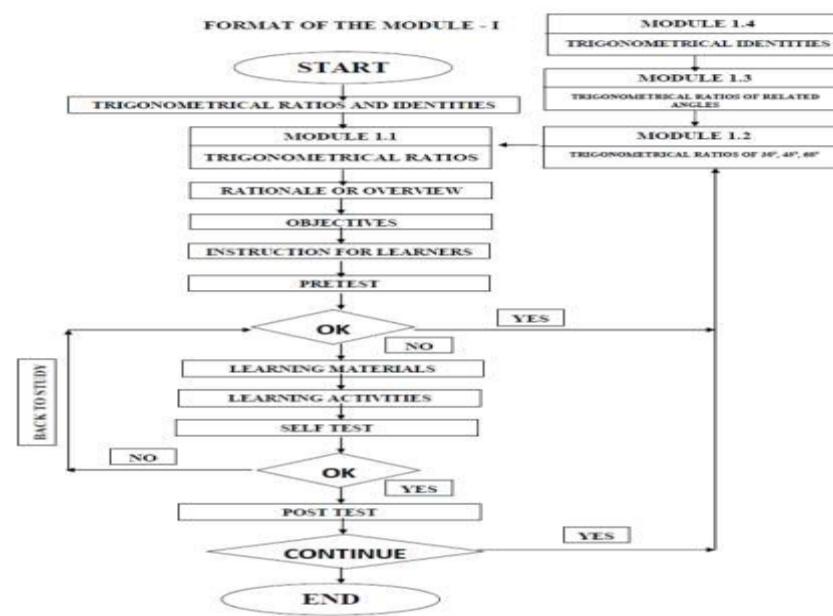
- The title
- The Introduction
- The overview
- The instruction to the users
- The pre-test evaluation and feedback
- The objectives
- The learning activities

- The formative test, evaluation and feedback
- The summative evaluation and feedback

**DESIGN OF MATHEMATICS MODULE FOR THE SELECTED TOPICS:**

Module should include an introduction to the topic and instructions or suggestions about how the various components of the module are to be used. If the module is to be used only under instructor supervision, oral instruction may suffice. In most cases, however, a printed study guide should be part of the module. The printed guide should introduce the topic of the module relate its media and activities to the objectives. It should give instructions for using the materials included with module and directions for the learning activities involved. Questions and space for responses may also be contained in the guide. The study guide should be as simple as possible containing just the essential directions and relevant information.

It is important for the instructor to monitor each learners progress in order to reward successes and to alleviate frustrations. At the conclusion of each module's use, the learner should discuss the activity with the teacher individually or in a small group. The teacher and the student, can go-over the nature of the problem presented in the module, compare answers (if appropriate) and discuss the concepts learned from the module.



#### **PRINCIPLES UNDERLINE IN PLANNING LEARNING ACTIVITIES**

- Plan learning activities on the basis of entry behavior of the learners.
- Base learning activities on the terminal behavior.
- Base learning activities on the needs of learner.
- Make careful gradation.
- Provide adequate for individual differences.
- Provide adequate with his progress.

#### **ADVANTAGES**

- Learning became more effective.
- It establishes a system of assessment other than marks or grade.
- Users study the modules in their own working environment.
- Users can study without disturbing the normal duties and responsibilities
- Modules can be administered to single use, small group or large group.
- Modules are flexible so that implementation can be made by a variety of patterns.
- It is more appropriate to mature students.
- It enables the learner to have a control over his learning.
- Accept greater responsibility for learning.
- It already got wider accessibility in the present educational scenario.

#### **DISADVANTAGES**

- Modules are economical in their use.
- Appropriate only for matured students.
- This methods demands smart classrooms.

#### **CONCLUSION**

When we analyzing the modular method of teaching mathematics at plus level, we can understand that this is more effective, recent and more technology based teaching method in the present educational field. In recent years, the consent of modular curriculum in mathematics has been under discussion in secondary schools. Modular approach provides more flexibility to distance teaching mode as well to learners.

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