



Dept. of Education, Patna University  
EDUCATIONAL TECHNOLOGY & ICT

Course no.: S.C.5

Course Credit: 4

Semester: 4th

Unit: IV Modern Technologies in Education

E-Content by: Asst. Prof. Bibha Kumari

# **BRANCHING PROGRAMMING**

## **CONTENTS**

1. Introduction
2. Frames Arrangement in Branching Programming
3. Fundamental Principal of Branching Programming
4. Characteristics of Branching Programming
5. Limitations of Branching programming
6. Keywords
7. Self check questions
8. Suggested Readings
9. Topic(s) for next class

## **OBJECTIVES**

After studying this topic, students will be able to:

- Know the fundamental of Branching programming
- Learn Branched system of frames to learn programming
- Know the characteristics of Branched programming
- Understand the limitations of programming

## **INTRODUCTION**

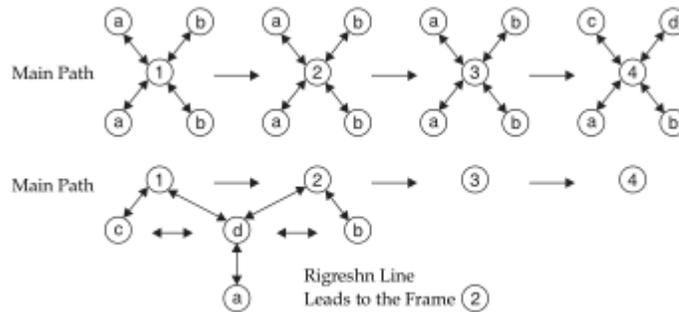
The second type of programmed instruction is the Branching or Intrinsic or Crowderian programming. It has been propounded by *Norman A. Crowder* in 1954. There are several principles of effective teaching is used. All scheduled activities are controlled by the students so it is called internal programming

## **FRAMES ARRANGEMENT IN BRANCHING PROGRAMMING**

In a branching program item the student is given short discussion of the material to be learned, followed by a multiple choice question designed to test the point just discussed. Each answer alternative has a page number beside it. The students choose what he believes is

correct answer to the questions and turns to the page number given for that answer. If he has choose correctly, he is lead to next item and if has choose an incorrect answer, he is directed to a page where in the reason for incorrectness is dismissed or it is given remedial instruction.

The specifically designed for therapeutic or her original part series is directed towards and later again come to the office and are asked to answer. This action, which lasts as long as the student does not give the right answer.



The above style shows multiple choice response pattern, that a student is required to discriminate and choose the one right answer which is presented along with a number of the appreciable with incorrect answers. Learners who make the wrong choice from among those presented are asked follow another trade or branch which corrects their error or further classifies the point in question. the branching sequence may continue for a number of frames, again depending on students responses, before he finds himself on the main track.

The above pattern of multiple choice questions are necessary whenever we want to say something special to students who cannot get the right answer straight away. At other times, we may prefer to use one of the following forms:

- a) Constructed - Response questions
- b) Constructed - choice questions
- c) Block questions and
- d) Linear sequence.

a) Constructed - Response questions

These are the questions to use when we want to student decide on (construct) his answer without being shown any alternatives. We pose the questions in the normal way and we ask the student to write down his answer. We leave it to the student to decide on the rightness on his answer. we are not offering remedial help against his going wrong but he can return to look over to previous page.

b) Constructed - choice questions

The student is asked to write down his answer to a direct questions and then turn a page to check his answer. When he reaches the next page, he is reminded of the question and is given

a set of alternatives answers from which he must chooses and the one that most resembles his own. If he choose an incorrect answer, then we give him remedial help in the usual way.

c) Block (package) - question

These rather like the comprehension questions commonly used to a test a passage of reading in an English examination. the student is presented with quite a chunk of information and is expected to answer several questions about it. This format would be quite wrong for the initial teaching. the student is being asked to process a lot of information and make several quite involved responses. Furthermore, he will be given neither immediate knowledge of results nor individual remedial help.

d) Linear Sequence

Sometimes we may want to use a linear sequence in our basically branching programmed - particularly when we have to get the student to do some memorizing : formulate, symbols, related technical terms, arbitrary but fixed procedures. this is the kind of learning that will need practice-much more than will conceptual understanding.

## **FUNDAMENTAL PRINCIPLES OF BRANCHING PROGRAMMING**

The branching programming is based on three fundamental principles:

1. Principles of Exposition

The learner should perceive the whole phenomena which should be so exposed to him. It means a student learns better if the whole concept is presented to him. The complete information is provided on home page. It serves two purposes:

Teaching and Diagnosis

2. Principles of Diagnosis

The principle refers to identity the weakness of learner. After exposition it is assessed whether he could learn the concept or not. If he could not learn what are the causes for it. A multiple -choice format is used to diagnose the weakness of learners.

3. The principle of Remediation

The diagnosis provides the basis for remediation . The medial instruction are provided on Wrong Page. If learner choose wrong alternatives, he has to move to a Wrong Page. Where remedial instruction is provided to him and directed to return to Home page. He is asked to choose the right response. It is known as a principle of remediation.

## **CHARACTERISTICS OF BRANCHING PROGRAMMING**

Their main features are as follows:

1. Branching programming than linear programming compared to each text frame comes more teaching materials.
2. Needs of students at various positions have the freedom to reach the final position.
3. Programming it is controlled by the students.
4. It serves psychological as well as social motivation to the learners.
5. It can be used for conceptual as well as descriptive content of teaching.

6. This programming based on student's potential errors that emphasizes teaching materials.
7. Incorrect response, the student is given the opportunity to correct it. He then reaches to the next step until he could not answer his first major post.
8. Each frame has to make it very clear and big.
9. The strategy plays an important role in the development of student's reasoning power.
10. The student - centered strategy.
11. The strategy is based on traditional tutorial method. It gives emphasis to difficulties and needs of each and every learner.
12. This initiative remains equal interest in learning the subject.
13. These mistakes could not impede the learning process because it assumes that the initiatives it has learned from the mistakes and the mistakes to fix the system is organized.
14. By initiatives such materials, books and teaching - machines both are useful.
15. The differentiation potential of initiative, creativity and problem - solution is helpful in the development of qualifications.

### **LIMITATIONS OF BRANCHING PROGRAMMING**

1. The students take little interest to use scrambled text books because they are used to follow the sequence of pages in their study.
2. When learner selects wrong response he has to move on the same material of the home page for choosing the correct response. This reduces the probability of important in learning difficulties.
3. The learner has to select a response from given multiple choice alternatives. He can select his response by guessing without comprehending the concepts. Therefore, it will help in diagnosing the learning difficulties. There is no check for the guessing.
4. It has no sound theoretical formulations or theory.
5. It cannot be used for preparing instructional material in every school subject.
6. Even whole content of a subject cannot be presented through this strategy.
7. It is relatively expensive initiatives.
8. It is more useful for higher classes.
9. The initiative for the creation of skilled and trained and qualified teachers are required.

### **KEYWORDS**

- Initiative - Opening move

- Emphasize - Accent
- Frame - Lesson

### **SELF CHECK QUESTIONS**

1. What is Branching Programming?
2. Explain 'Frames Arrangement' in Branching Programming.
3. Write fundamental principles of Branching programming.
4. Write characteristics of Branching Programming.
5. Write about limitations of Branching Programming.

### **SUGGESTED READING**

1. *Educational Technology - S.K. Mangal,*
2. *Educational Technology - R.A. Sharma*

### **TOPIC(S) FOR NEXT CLASS**

1. Development of Programmed Instruction Material.

**Contact :**

*Email id. - hrntbibha@gmail.com*

*Mobile no. - 9905623081*