

DEVELOPMENT OF PROGRAMMED INSTRUCTIONS



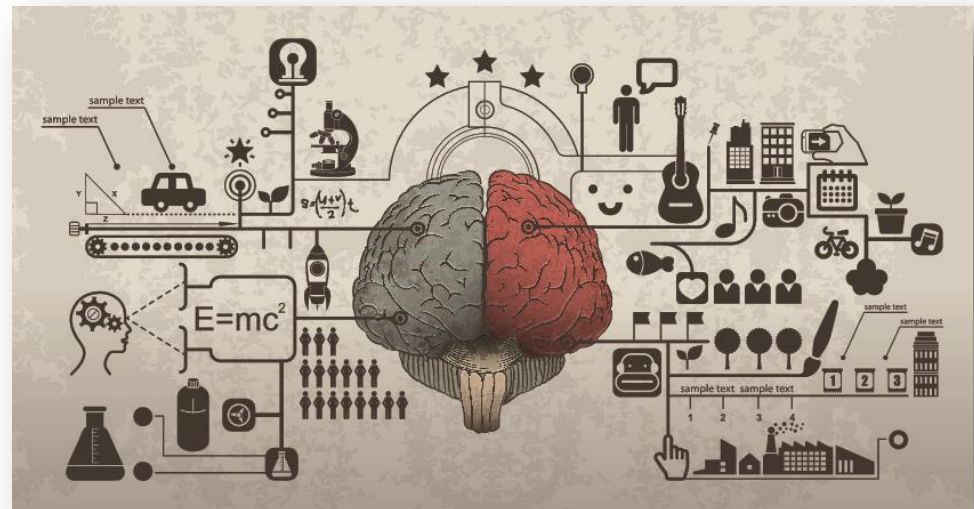
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MEANING OF PROGRAMMED INSTRUCTIONS

- **B.F. Skinner** has defined this concept as the science of learning and art of learning. "It is termed as instructional technology". which is based on psychological principles of learning.



DEFINITION OF PROGRAMMED INSTRUCTIONS

- "Programmed instruction is the process of arranging the material to be learned into a series of sequential steps, usually it moves the student' from a familiar background into a complex and new set of concepts, principles and understanding."

(Smith and Moore,1962)



PURPOSE OF DEVELOPMENT OF PROGRAMMED INSTRUCTION

- To Manage human Learning Under control Conditions.
- To Promote learning at the Peace of Learner.
- To Provide quicker response.
- Programmed instruction enabled students to learn more extensively in a limited amount of time.
- Programmed instruction utilized '*branching*' which tailored instruction and feedback according to the needs and responses of each individual learner.



STEPS FOR DEVELOPMENT OF PROGRAMMED INSTRUCTION

According to Peter Pipe-

- Topic
- Write a General Statement
- Define Your Objective in Behavioural terms
- Defining, Entering Behaviour
- Construction of Criterion Test
- Develop the content Outline



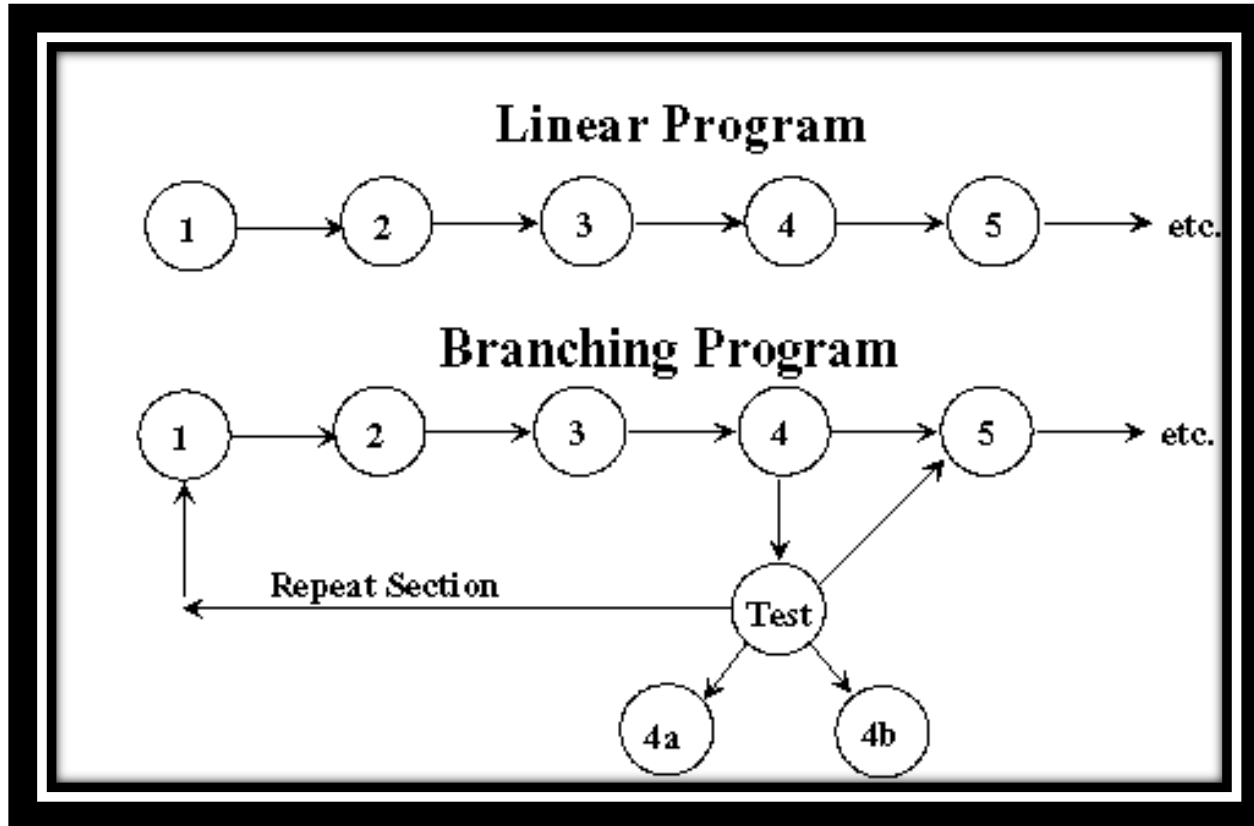
STEPS FOR DEVELOPMENT OF PROGRAMMED INSTRUCTION

According to Taber and Glaser-

- Selecting and Using Try out on students
- Programme Training
- Programme Writing
- Editing and Processing
- Final Try-out
- Programme Manual



TYPES OF PROGRAMMED INSTRUCTIONS



LINEAR PROGRAMME

- Linear Programme Exposed to small amount of information and Proceed form or one Item of information to the next in Ordinary fashion.



FUNDAMENTAL PRINCIPLES OF BRANCHING PROGRAMME

○ Exposition-

Learner should perceive the whole phenomena exposed to him. He would learn better if the whole concept is presented to him.



○ Diagnosis-

It refers in identifying the weakness of learner. After exposition it is assessed whether student could learn the concept or not. A multiple choice format is used to diagnose the weakness of the learner.



○ Remediation-

Diagnosis provides the basis for remediation. Remedial instructions are provided on the wrong page. If a learner chooses wrong alternative, he has to move to wrong page where remedial instruction is provided to him to get back to home page.



STRUCTURE OF PROGRAMME

○ Home page/ Content Frame:

It is this page on which the content unit or concept is presented as a frame and followed by multiple choice questions. Its purpose is to impart new knowledge or teaching. MCQ helps in assessing the attainment of the learners. The question aims to diagnose learning difficulties of the students.

Each home page includes the following:

- Repeating student response.
- Positive confirmation.
- New information.
- Question.
- Alternatives followed by frame numbers, where the student should go next.



○ Wrong Page/ Remedial Frame:

When the learner chooses the wrong response, it indicates the weaknesses or difficulties of learning the concept. He would get further clarification and remediation for the concept so that he may understand the concept. He would be directed to go to the home page where he has to again choose the correct alternative.

Each remedial frame or wrong page includes the following:

- Repeating student response.
- Negative confirmation.
- Reasons why he is wrong.
- Further explanation in simple language.



DEVELOPMENT

The following steps are used in the development of a branching programme:

- (a) Selection of a topic
- (b) Assumptions about learners:
 - Entering behaviour
 - Terminal behaviour
- (c) Content analysis (preparing flow chart)
- (d) Preparing criterion test
- (e) Writing programme frames
- (f) Try out
- (g) Home assignment. Evaluation or validation of the programme.



EXAMPLE OF DPI

- Those who support programmed instruction stress that it can improve classroom learning, presenting even the most difficult subjects in small steps so that all student can succeed. It was Skinner who proposed the use of **TEACHING MACHINES** designed specifically for this purpose.



○ Here is an example of Skinnerian programmed instruction:

○ 1. Manufacture means to make or build. Chair factories manufacture chairs. Copy the word here:

○ _____

○ 2. Part of the word is like part of the word factory. Both parts come from an old word meaning make or build.

○ manu _____ure

○ 3. Part of the word is like part of the word manual. Both come from an old word for hand. Many things used to be made by hand.

○ _____fature

○ 4. The same letter goes in both spaces:

○ m_nuf_cture

○ 5. The same letter goes in both spaces:

○ man_fact_re

○ 5. Chair factories _____ chairs. (Casas, 2000)



USES OF PROGRAMMED INSTRUCTION

- Programmed instruction materials can be reproduced and displayed to a large group or to multiple individual as often and in as many various locations as are needed (distribution).
- Additionally programmed instruction increases student independence and student achievement.
- When class size increases in a traditional classroom achievement tends to decrease, but with programmed instruction this is not an issue. Student achievement is not affected by an increase in class size.





THANK YOU

Education Technology