CHAPTER- IV
DEVELOPMENT OF PROGRAMMED LEARNING MATERIAL

INTRODUCTION

The target of this examination was to decide the viability of CALL and customized learning as self-learning strategy as for educating of English syntax structure for the four tests were coordinated on the understudies of class ninth by the analyst.

In this, three units of English language structure were instructed to the understudies utilizing three one of kind methodologies to be particular work card strategy the customized learning technique and address strategy. The units of English linguistic use to be instructed were "Tenses" and 'Activity Verb' To finish this examination the expert built up the CALL package and the altered learning material. These materials were so shaped remembering the ultimate objective to being out the reasonability of adjusted learning strategy and the CALL on English dialect structure learning of understudies. In this area the organized technique of the progression of changed learning material is set by the pro.

PROGRAMMED LEARNING- A SELF-LEARNING TECHNIQUE

The Programmed learning is the sort of self-learning technique in which student remains active during learning process. After each session result is given to the student promptly. What's more, in like manner he can continue at his own pace. It is a very individualized instructional methodology for the technique for the change of conduct. The adjusted learning material is created with a specific end goal to play out each one of the components of a teacher. In this procedure the substance to be told is shown to understudy controllably and every movement is reliably related to the previous one. Here the understudy gets the go for broke to consider without any other individual's information the test and overview his own specific execution by differentiating and the cored answers given finally.
DEVELOPMENT STAGE

A Challenging task: The development of a programme is a very challenging, highly dynamic and time consuming exercise. The programmer must have a scientific temper to study all aspects of behavior, its various forms and levels. In writing a programme, a programmer has to be very pragmatic and skillful.

Important Stage in programming: These are as given below:
1. Preparation
2. Constructing or writing the plan
3. Try out and revision
4. Evaluation

I. Preparation

Peter pipe suggests the following points before getting down to details:
1. Be prepare to find that preparation accounts for at least 25 percent of your total time.
2. Do not bother about attaining perfection in one step before you begin the next
3. There is no substitute for hard work. Preparation requires hard work
4. Don’t rely on memory to keep track of new ideas

Steps at the preparation stage. These are listed below:
- Selection of a subject
- Writing supposition about students
- Defining goals in behavioral terms
- Writing the section conduct of the students
- Developing particular framework of substance
- Preparation of a basis test
Selection of a topic to be programmed: Following points should be taken into consideration:

1. Is no programme already available on the topic??
2. Does it allow to develop a simple, logical and systematic programme?
3. Does it meet the requirements of the curriculum?
4. Will it help in lessening the burden of the teacher?
5. Will it expenses and labour involved in the programme be justifiable in terms of the grains.
6. The topic for a programme should be selected from the programmer’s own field of study. In the selection of the unit, the following yardsticks must be applied:
   (a) Is this something the learner must know?
   (b) Is it difficult for him to find a good explanation from other sources?
7. The subject matter should be simple.
8. The beginner programmer should select short units which he can use, evaluate and revise in a fairly brief period
9. The programmer should select a unit from a field which is usually considered a stumbling block to the learner. Of course, the criterion of ease and length should also be taken into consideration

Writing assumptions about the learners: The programme is meant the learners. Therefore, a programme should be fully aware of the characteristics of the learners. Following points should be taken note of:

- The programmer must list basic assumptions about learners in very objective and concrete terms.
- He should describe the age and gender, skills, interested and ambitions of the learners.
- The ability of the learners may be judged from scores obtained on intelligence, aptitude and achievement test etc.
- The programmer should know the educational level of the parents of the learner.
- The programmer should know the socio economic status of the learner.
• The programmer should be quite frank in writing assumptions about learner.
• The programmer should not be concerned about its length or its literary style.

Writing objectives in behavioural terms: should state plainly the sort and degree of the behavioral changes not out of the ordinary from the learners subsequent to experiencing the developer created by him (Note: this aspect has been discussed in detail separately)

Writing the entry behaviour of the learners: We start with something that the learners already know i.e. initial information and knowledge possessed by them. The starting point with respect to one’s behavior is called his entry behavior and the end point as the terminal behavior. Hence the behavior of the learners in terms of the base has been described by the programmer i.e. pre-requisite knowledge, skills, attitudes and interests etc.

Developing specific outline of the content: The course contents to be covered through the programme are decided on the basis of assumptions about the learners, their entry behavior, objectives to be realized in the form of terminal behavior, and the courses of study prescribed by the authorities – school, department of education, board etc.

The contents should be organized logically as well as psychologically and an idea balance struck. Every possible effort should be made to go through the relevant literature: textbooks, workbook, manuals etc. Subject matter experts may also be consulted.

Preparing a criterion test: The model test is intended to discover the viability of a program by measuring the learner's execution on plainly characterized training undertakings. Through the criterion test, the terminal behavior of the learner reached after the completion of the unit of a programme is assessed for ascertaining the extent to which the desire objectives have been realized. A sort of standard to test the programme is set up. In the light of this standard or criterion test, evaluation is made whenever needed.

II. Construction or Developmental Phase

The writing of the programme is carried under the following heads
1. Writing the draft frames in a sequence i.e. from simple to complex.
2. Editing the draft frames by a team of experts usually consisting of
III. Try out and revision
This steps is carried on as under:
(I) Giving the programme to a few individual learners, finding out their reaction and making necessary change in the light of reactions
(II) Trying out the programme on a group of learners at a few places and making changes on the basis of reactions
(III) Trying out the programme in the field

IV. Evaluation
Evaluation enables the programmer to judge the success or the failure of the programme. It is done on internal as well as external criteria. International evaluation is done in terms of three aspects (I) error rate, (II) programme density, and (III) sequence progression. External measure include (A) criterion test, (B) Gain ratio, and (C) learner’s attitude.
The programmer or the evaluator applies 90-90 criterion. In other words, the statements or the frames where 10% or less than that number of learners give incorrect responses are considered to be valid. The statements or the frames, in which more than 10% learners give wrong responses, are deleted.

CONSTRUCTION OF PROGRAMMED LEARNING MATERIAL
In this examination two units of English sentence structure were chosen by the specialist for the development of the modified learning material
1. Tenses

On these two units researcher constructed programmed learning material consisting of frames on Tenses and frames on Action Verbs.
To start with eight casings were produced for each modified learning material for every unit. These eight edges of direction slacked rule to be taken after with respect to perusing and examining modified learning material. Following strides were trailed by the scientist for development of the customized learning material. Steps given by Peter Pipe in forming the modified learning material was moreover trailed by the investigator.

**Planning of the Programmed learning material**

Under this title, the analyst took after the two stages;

1. Selection of the points
2. Content investigation of the units.

**Selection of the topics**

For the investigation, three units of English grammar were selected namely Tenses and Action verb difficulty faced by students in understanding these topics was the main reason for selecting these topics. Another reason was that the researcher had adequate knowledge about these topics.

Keeping these two points in mind, researcher developed programmed learning material on these units of English grammar. He developed total of 112 frames on ‘Action Verb’ alongside the eight frames of guidelines. For “Tenses” researcher created 115 edges, alongside the eight casings of directions.

Prior to the development of customized learning material, the analyst experienced the English sentence structure course book of ninth standard and different guidelines completely. Other English sentence structure book including the reference books on English and English dialect educating was likewise perused by the researcher. He likewise read a couple of theses on modified learning. Following reference books were additionally eluded by him

- Educational Technology (by Dr. R. A. Sharma)
- Teaching Machines and customized Instruction (by Fry and Edward)
Strategies in Programmed Instruction (by S. P. Mullick)

Abhikramit Adhyayan (by Gunvant Shah)

Content analysis

Next step was to analyze the units selected. Hence, researcher analyzed the units of ‘Tenses’ and ‘Action Verb’ and divided into sub-units.

Identification of Objectives

In this progression objectives for educating the units were to be recognized. So the analyst recognized the wide targets or wide points of the chose units of English sentence structure. The targets were for the most part expressed in theoretical dispositional conditions of the learner, similar to his knowing, understanding and so on. For instructing of tenses, it was viewed as essential that the understudy should think about different sorts of Tenses with its significance and illustration. Subtle elements of structure and capacity of different sorts of Tenses ought to be known to the understudies. Comparability for educating of Action Verb, the understudies were required to have the learning of various types of verb with their importance and illustrations.

Writing objectives in behavioural terms

In the wake of recognizing the wide goals of chose unit’s analyst proceeded to indicate the entering conduct and the terminal conduct. The entering conduct relies upon the understudy's learning. Besides, the desire of what understudy will acknowledge is called terminal direct.

The objective in behavioral terms or the terminals direct were the declarations writers to the extent lead which could be watched and measured. These goals confined the base on which demonstrating learning wanders in tweaked learning material were arranged. Following is the summary of entering rehearses for the units Tenses and ‘Action Verb’.

The understudy may think about:

✓ The subject, object, verb.
☑ Auxiliary verbs (Primary & Modal).
☑ The types of verb.
☑ Use of Articles.
☑ Use of personal pronouns.
☑ Use of parts of discourse.
☑ Use of present and past participle.
☑ Kinds of sentences.
☑ Infinitive, degree and the determiners.
☑ The structure of positive, negative, and interrogative sentences.
☑ The connectives like who, that, which, why, when, where etc.
☑ Phrase, time phrase.
☑ Moods, Number and person.

Programmed learning material was prepared on ‘Tenses’. The terminal behaviour or the behavioral objectives were explained as below.

Students will be able to,

- Define tenses with its sorts.
- State sorts of current state with its verb-frames.
- State sorts of past tense with its verb shapes.
- Give sorts of future tense with its verb shapes.
- Describe different types of verbs utilized as a part of Tense.
- State the employments of straightforward current state.
- Explain the structure and principles with cases of straightforward current state.
- Make the development with cases of basic sentences.
- Give the structure with cases of negative and interrogative sentences of basic current state.
- Make exclamatory and optative sentences.
- Explain the employments of present consistent tense and will make positive and negative structure of it.
- Make the structure of interrogative sentences of present nonstop tense expressing the verbs not utilized as a part of this strained.
- Explain the employments of present impeccable tense and make structure with cases of positive-negative sentences of it.
- State the structure with cases of interrogative sentences of present impeccable tense recognizing the modifiers utilized as a part of this strained.
- Express the employments of present ideal ceaseless tense with the development of positive – negative and interrogative sentences of it.
- State the utilizations with cases of basic past tense.
- Make the structure of positive – negative and interrogative sentences of basic past tense expressing the time phrases utilized as a part of it.
- Express the uses of past continuous tense with the structure of positive negative and interrogative sentences of it.

**Writing the programmed learning material**

After formulation the behavioural objective for this he constructed 115 frames on ‘Tenses’.

For this investigation, the specialist built the vertical example of Frames in direct modified learning material. Autonomous and little idea contains in each casing. Material of the edges was made from easy to troublesome. The objective sort of question (e.g. fill in the hole) was given. The fitting response of the target request was given on the most raised motivation behind the accompanying edge.

The pro has developed the straight kind of changed learning material including unmistakable sorts of housings like (1) lead – in plots (2) Augmenting diagrams (3) Review traces (4) Generalizing diagrams (5) Specifying frameworks et cetera. In lead-
in plots intertwine the explanation about the subject, verb, and question predicate, infinitive parts of talk et cetera was displayed. New information or thought was presented in Augmenting outlines. The substance on Action Verbs and Tenses was displayed in these edges. With the end goal of update, audit outlines were presented. Through the 'summing up outlines', a large portion of the substance of the modified learning material was exhibited. In summing up outlines, at first the illustrations were given. By using the inductive technique of educating, summing up outlines are made. Determining outlines content was presented in a route that, in which control or standard was shown at to begin with, by then the delineations or conditions were given. Each modified learning material stented with eight edges of guideline containing all the relevant information on the most capable strategy to consider the rigid learning material. 'Fill in clear' kind of inquiries or 'finish the sentence' sort of question was asked.

Comments, Views and Evaluation by Experts

In the momentum examination, the analyst built up the customized learning materials on the two units of English sentence structure. Broke down by Experts and English educators’ orchestrated modified learning material.

The specialists and English instructors were requested to give the proposition with reference to the going with request.

➢ Are there any grammatical mistakes?
  - Is there absence of arrangement in the introduction of the substance?
  - Is the writing work of the frames faulty?
  - Are the frames written at the level of the students?
  - Is any frame complicated?

Are the ideas/content focuses exhibited in the edges discovered broken?

Scarcely any recommendations gotten from the specialists and English instructors, which are specified here:
Frames ought to be composed in an linguistic exceptionally important and basic.

- At the finish of each edge, target kind of question ought to be inquired.
- The question ought to be set up such that an understudy can give the appropriate response in the wake of perusing that specific edge.
- There ought to be no irregularity in showing the substance.
- Avoid the multifaceted nature in Language, which is utilized for composing the casings.
- Write the casings utilizing the inductive strategy. That implies summing up edges ought to be composed more in numbers.
- Simple and significant sentences ought to be utilized as a part of composing the frames.
- Content ought to be given the intriguing cases.
- Each casing ought to contain little unit or only one purpose of substance.
- Frames ought to be composed by the level of the understudies.

The profitable guidelines given by the guide, which were remembered amid the composition of the modified learning material. The proposals gotten from the specialists and English educators were led and the best possible customized learning material.

**Try-out**

After writing, thirty students for pilot testing or try-out were selected by researcher. The thirty students selected standard IX of English Medium School was observed by the researcher. Few points she kept in mind were:

- The challenges acknowledged by the understudies in comprehension or perusing the frames.
- The troublesome and convoluted words utilized as a part of an frame.
• The trouble level of the substance exhibited in an frame.

• Problems faced by the understudies in comprehending the inquiries given in each frame.

• Tenure of tests and different challenges faced by understudies in illuminating the tests.

The analyst enhanced and rolled out a couple of improvements in it, after experiment with of the modified learning material. These progressions had been made in the wake of having the dialogs with the guide, specialists and instructors. Zones in which changes were made by researcher like (1) the day and age for finishing the casing and the modified learning material, (2) issues happened amid the classroom administration, (3) the mix-ups found in the customized learning material.

Final writing

After try different things with, the specialist built up the last type of modified learning material. In the midst of the composed work of decisive kind of self – learning material, she recollected the recommendations given by the guide, masters and English teachers. In the customized learning material organized on 'Tenses', there were 115 edges. The modified learning material was organized and composed through MS WORD in PC. The photocopy of each edge was organized and given to each subject of the examinations drove in the present examination.

The scientist arranged 8 casings of guidelines in each modified learning material. These edges displayed the guidelines on the best way to study or read the modified learning material. The edges of guidelines were given to understudies took after by alternate edges.

FINAL FORM OF CONSTRUCTED PROGRAMMED LEARNING MATERIAL

In the present examination, 115 casings in the customized learning material arranged on "Tenses" by the scientist. For modified learning material in every eight casings of directions were consolidated. Every one of the casings were set up in the direct style.
To develop the edges of the customized learning material vertical example was utilized. The example of direct kind of program is appeared in the Figure 4.1.

![Frame 1][Frame 2][Frame 3][Frame 4]

**FIGURE 4.1**

Layout of Linear programme

The topic was shown in little strides called outlines. A touch of data and a clear was there in each edge. The reactions for the spaces were given on the highest point of the following edge. Answers were composed on the different reaction sheet by understudies. Answers were than to be checked. In the event that understudies' answers are correct, they will go to the following stage (outline), else they will do the progression once more. Thusly, Programmed will be finished in a well ordered way by the understudy. The customized learning material arranged on "Tenses" has given in addendum 1.

**GUIDING INSTRUCTIONS FOR THE USE**

In the present study the programmed learning material prepared is extremely valuable for understudies, educators, principals and different researchers. The managing directions are given for the utilization of the modified learning material. At the point when an instructor or a primary shows English units like Tenses and Action Verbs through these self-learning materials, these guidelines are critical:

Frames should be given one by one subsequent to giving the edges of guidelines.

- To give edges of headings at first to the understudies and to train them to scrutinize it purposely.
- In one period not more than 12 edges will be given to the understudy
The question asked in an edge is not the test yet rather it just surveys whether the understudies have grasped the edge or not.

Answers of the request asked for that in traces are be given in an alternate answer sheet. To scrutinize the accompanying packaging exactly when the proper reaction of the request is correct.

This is to advise to the understudies to think about the casings intentionally.

There are singular contrasts among the understudies. So unreasonable for each one of the students to finish the edges in a given time. In this situation, give greater chance to understudies to learn.

If fundamental, educator should manual for the understudies in the midst of the learning of altered learning material.

The material of customized learning toward the finish of a period ought to be reclaimed by the instructors. Following day, in the start of the period, modified learning material to the understudies for self-learning will be given.

**PLANNING FOR THE TRADITIONAL LECTURE METHOD**

In the present examination, the analyst in like manner orchestrated the lesson making game plans for teaching through the address strategy. The specialist masterminded the lesson organizing in detail for teaching of Tenses and Action Verbs keeping the three perspectives:

(1) Objectives,

(2) Teaching centers

(3) The detail of the substance.

The arranging is displayed here period shrewd keeping just two angles like (1) Objectives and (2) Teaching focuses.

**Lesson Planning for ‘Tenses’**
<table>
<thead>
<tr>
<th>PERIOD</th>
<th>OBJECTIVES</th>
<th>TEACHING POINT</th>
</tr>
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</table>
| Period – 1 | Students will be able to,  
  - Define Tenses.  
  - State current state with its verb-shapes.  
  - State past tense with its verb frames.  
 |  |  
 | o Meaning of Tense.  
 | o Kinds and verb types of current state.  
 | o Kinds and verb types of past tense.  
 | Period – 2 | Students will be able to,  
  - Give future tense with its verb shapes.  
  - Describe different types of verbs as a part of Tense.  
  - State the deployments of basic current state.  
 |  |  
 | o Kinds and verb types of future tense.  
 | o Various types of verb utilized as a part of tense.  
 | o Uses of basic current state  
 | Period-3 | Students will be able to,  
  - Explain the structure and guidelines with cases of positive sentences of straightforward current state.  
  - Give the structure with cases of negative and  
 |  |  
 | o Construction of positive sentences of basic current state with its illustrations and standards.  
 | o Negative and interrogative sentences of basic current state with its development  
  
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### Period – 4

Students will be able to,

- Make the structure of interrogative sentences of present nonstop tense expressing the verbs not utilized as a part of this strained.
- Make the structure of cases.
- Make exclamatory and optative sentences.
- Explain the employments of present ceaseless tense and will make positive and negative structure of it.
- Imperative sentences with development and cases.
- Uses of present ceaseless tense with its positive and negative development
- Interrogative development of present consistent tense with verbs by and large not utilized as a part of this strained.

### Period - 5

Students will be able to,

- Uses of present ideal tense with its
<table>
<thead>
<tr>
<th>Period - 6</th>
<th>Students will be able to,</th>
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<tbody>
<tr>
<td></td>
<td>o state the utilizations with cases of basic past tense.</td>
<td>o Uses of basic past tense.</td>
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<td></td>
<td>o Express the employments of present ideal consistent tense with the development of positive – negative and interrogative sentences of it.</td>
<td>o Construction of decisive and positive and negative development.</td>
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<td></td>
<td>o State the structure with cases of interrogative sentences of present impeccable tense distinguishing the qualifiers utilized as a part of this strained.</td>
<td>o Uses of present ideal nonstop tense with its positive and negative development.</td>
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<td>o Explain the employments of present impeccable tense and make structure with cases of positive-negative sentences of it.</td>
<td>o Construction of interrogative sentences of present impeccable consistent tense.</td>
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<td>Period-7</td>
<td>Students will be able to,</td>
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<td>o make the structure of positive – negative and interrogative sentences of past tense expressing the time phrases utilized as a part of it.</td>
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<td>o express the employments of past persistent tense with the structure of positive-negative and interrogative sentences of it.</td>
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<td></td>
<td>o The rules happened in past consistent tense.</td>
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<td></td>
<td>o Use of past ceaseless tense with its positive-negative and interrogative development.</td>
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<td></td>
<td>o The rules happened in past consistent tense.</td>
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<td></td>
<td>o Use of past ideal tense with its positive-negative development.</td>
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<td></td>
<td>o Interrogative development of past ideal tense with its standards.</td>
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<td>Period-8</td>
<td>Students will be able to,</td>
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<td></td>
<td>o describe the employments of past flawless consistent tense.</td>
<td>o express rules existed in past impeccable constant tense.</td>
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<td></td>
<td>o make the structure of positive – negative and interrogative sentences of past impeccable ceaseless tense.</td>
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<td></td>
<td>o Uses of past ideal nonstop tense with its positive-negative development.</td>
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<td></td>
<td>o Interrogative development of past ideal constant tense with its principles.</td>
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<td>Period - 9</td>
<td>Students will be able to,</td>
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<td></td>
<td>o state the employments of basic future tense with particular parts of &quot;will&quot; and 'should'.</td>
<td>o Employments of basic future tense</td>
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<td>o Construct the</td>
<td>o Positive-negative and interrogative development of basic future tense</td>
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<td>o Uses of future nonstop tense with</td>
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<td>Period- 10</td>
<td>Students will be able to,</td>
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<td>o Describe the employments of future flawless tense and develop positive – negative and interrogative sentences of it.</td>
<td>o Uses of future flawless tense</td>
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<tr>
<td></td>
<td>o State the employments of future impeccable nonstop tense and develop positive-negative and interrogative sentences of it.</td>
<td>o Construction of self-assured sentences of future immaculate tense.</td>
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<td></td>
<td>o Interrogative development of future flawless tense and employments of future impeccable consistent tense.</td>
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<td></td>
<td>o Construction of emphatic and interrogative sentences of future flawless ceaseless</td>
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</table>
| Period 11 | Students will be able to,  
| | • Express more information about tense. | • More information about the tense. |