CHAPTER III

PREPARATION OF SELF-INSTRUCTIONAL MATERIAL

INTRODUCTION

INSTRUCTIONAL SYSTEM DEVELOPMENT

ADVANTAGES OF SELF-INSTRUCTIONAL MATERIAL

LIMITATIONS

DESIRED COMPONENTS

UNDESIRED COMPONENTS

EXPLANATION OF THE COMPONENTS

PLANNING STAGES OF SELF-INSTRUCTIONAL MATERIAL

--

CHAPTER III

PREPARATION OF SELF-INSTRUCTIONAL MATERIAL

INTRODUCTION:

The present study deals with the effectiveness of self-instructional material in microteaching context. The studies related to this area have been reviewed in the Chapter II. The use of self-instructional material is one of the major media of educational communication. In terms of instructional system development, it is one of the effective environmental situation, which causes change in learner's behaviour. Therefore, for developing such material instructional system development approach needs to be adopted.

INSTRUCTIONAL SYSTEM DEVELOPMENT (ISD)

According to David Merill, a well known instructional system designer (1971), "Instruction is the process where by the environment of an individual is deliberately

manipulated to enable him learn, to emit or engage in specified behaviours under specified conditions or as responses to specified situations". Instruction takes place only when a specific effort has been made to modify the environment in such a way that a specified learning outcome occurs.

In view of this, instructional system designing becomes a process of specifying and producing particular environmental situations which cause the learner to interact in such a way that a specified change occurs in his behaviour. Instruction system developmenter further includes the process of monitoring a student's interaction with this structured environment to enable the designer to assess the effectiveness of a particular design.

The steps of instructional system designing given by different instructional system designs, slightly differ from each other. They are given in Figure No.3.

A careful observation of the figure reveals that there are certain common steps in ISD. They are as follows:

1. Task analysis.
2. Formulation of objectives and specifications.
3. Collection of research and information.
4. Planning.
5. Development of prototype.
6. Tryout and revision.
7. Final product development.
8. Installation and field testing product.
9. Final product revision.
10. Dissemination in the field.

1. TASK ANALYSIS BASED ON JOB INFORMATION:

Job tasks are divided into two main categories -

(1) Categories containing tasks not selected for instruction and

(2) Categories containing tasks selected for instruction i.e. for training requirements. The training requirements are determined

through interviews of concerned people or observation and are verified by subject experts.

2. FORMULATION OF OBJECTIVES AND SPECIFICATIONS:

Like careful analysis of what problem really is, clear-cut and measurable objectives are essential to find real solutions to pupils' learning problems and needs.

Two types of objectives are important in ISD process. These are terminal performance objectives (TOS) and enability objectives (EOS). Enability objectives are necessary intermediate steps to attainment of the terminal objectives.

The terminal performance objectives must be spelt out first in terms of the expected behavioural outcomes and then the enabling objectives. The performance measures for each objective are also needed to be specified.

In short, what exactly each student is specifically to learn about the topic or be able to do upon completing the programme is determined in this step.

3. COLLECTION OF RESEARCH AND INFORMATION:

Formulation of educational programme always involves certain research questions, problems and dilemmas. Certain research questions must be answered prior to the initiation of development work or at least certain arbitrary decisions need to be taken in the light of available information. In case of development of teacher training programme, at least two questions are very crucial:

(1) What skills are essential to effective teaching.

(2) How can we teach effectively the skills selected.

Research related to these two questions should be reviewed before the development of the programme and such literature searches make significant contribution to the development of programme (Baker E.L.1973).

Apart from the abovementioned review, some search must also be made to know whether competing

instructional products exist and how far the proposed product provides a major advance over current practice.

4. PLANNING:

An instructional system development involves the following aspects:

(1) Characteristics of target groups such as their ability, reading, skills, previous knowledge, motivational level and so on.

(2) Specifying instructional strategies and media.

(3) Specifying alternative methods.

In case of written material, the decisions like style, size of instructional steps, the number of review exercises and activities are key decisions which are taken at planning stage in the light of objective, entering behaviour, available resources and personnel, etc.

5. DEVELOPMENT OF PROTOTYPE:

This is the design, procurement and production phase. In this function, prototype is

prepared according to objectives, methods and available resources. This may involve considerable review and examination of available materials as well as consideration of a variety of instructional approaches. New materials may also be created (Wittich and Schuller, 1973).

6. TRYOUT AND REVISION:

After prototype development the tryout package is ready. This tryout is done with a representative group of students and evaluation data on 'What works', 'What does not' and 'Why' are collected, in the light of which revisions are done. Three principles are important in the process of revision:

(a) Gap principle,
(b) Irrelevancy principle and
(c) Mastery principle.

The Gap principle requires that all criterions and subordinate skills should be practised. The irrelevancy principle implies the removal of all items not directly related to

the criterion task. The mastery principle suggests that each sub-skill should be attained before the learner is permitted to continue through the programme (Baker E.L. 1973).

7. FINAL PRODUCT DEVELOPMENT:

On the basis of the results of the full scale tryout, the developer is in the position to decide whether the new system is ready to be put into regular use. It may be ready or may require certain revisions and retesting. Successively trying out and revising a combination of components in a natural setting until acceptable levels of performance have been attained, makes the material perfect for installation.

8. INSTALLATION AND FIELD TESTING PRODUCT:

Installation of field testing product means integrating the product into programmes which are combined with existing school instructions or training practices. The main purposes of installation is to determine procedure for widespread implementation in the field.

9. FINAL PRODUCT REVISIONS:

In the light of the experiences of installation of products in the field and the difficulties and problem faced, the final product may need certain modifications which are incorporated in the product.

10. DISSEMINATION IN THE PRODUCT:

This is the final stage of self-instructional product development and involves wider dissemination on commercial basis. This is generally done by the agency other than development agency which is responsible for maintaining operational use of the product.

In the development of self-instructional material all the earlier mentioned steps are applicable with minor variations. However, commonalities in process are more than the variation. The only difference is that only one medium is used, i.e. written material. This material becomes the learning environment.

There are, of course, certain advantages and limitations of this learning environment.

They are discussed below.

ADVANTAGES OF SELF-INSTRUCTIONAL MATERIAL:

The advantages are given below:

(1) Most of the self-instructional materials are developed in such a way that each student moves through the programme at his own pace (Kemp, J.E., 1977).

(2) Another important single characteristic of written material, from scientific or technical point of view is that it is a stable instructional system. An instructional system can be said to be stable when it can be assumed that the same instructional message will be reliably delivered to all students, each time the system is used.

(3) Stable instrumental systems readily lend themselves to scientific study and to systematic improvement by technological methods. There are two reasons for this:

(i) Instructional system leaves little uncertainty as to what is to be evaluated.

(ii) The systems can be easily modified by an interactive process, viz: editing or re-writing, to incorporate scientific principles of construction or to reflect the experience that has been gained during tryouts. Written instructional materials are under permanent process of modifications and editing (Rothkope, E.Z., 1976).

(4) It is comparatively less costly medium and its mass production further reduces its cost as compared to the other media.

LIMITATIONS:

(1) Written materials are useful mainly for cognitive development. The development of skills and effects cannot be achieved through them.

(2) The knowledge of the language used and the reading skills are pre-requisites for the use of such material.

(3) Self-instructional material requires high motivation on the part of students. The

> most carefully written and edited text will not produce the desired instructional results unless the student acts in a suitable way. The student has complete veto power over the success of written instruction. The student also has the opportunity to extend its scope substantially. (Rothkopf E.Z., 1976).

In spite of these limitations written self-instructional material has a wide utility and popularity. Especially in Indian context, it is the most economical medium. Most of the material that is produced in India on microteaching is in written form. In the present study, similar attempt is done. However, out of the ten steps of ISD discussed earlier, the steps from two to eight were used in the study.

The first step of task analysis has been already done by the earlier research-workers and as a result of the analysis of teacher task, the teaching skills were formed. The general skill,

viz: Questioning of Feedback was selected for the study. This is enclosed in Appendix II.

The objectives of the present skill were first formulated and presented in the beginning of the self-instructional material. They are stated in terms of overt behaviour. The objectives were related to theory, perception and planning for teaching.

A good deal of material and research information was already available. Such material prepared both in India and abroad was reviewed. (See Passi B.K. (1976), Jaangira A.K. and Singh Ajit (1983), Singh L.C. (1979), Paintal I.P. (1982) Borg W.R. (1970), Brown B.A. (1975), Dosajh A.L. (1975), Hargie D.D. (1979), Joshi S.M. (1976) (1981), Passi B.K. and Shah M.M. (1974), Passi Bimala (1976), Turney et. al. (1973), Perrott E. et. al. (1974), British Council Teacher Education Project (1975), Allen D.W. and Ryan K.A. (1969).

The components of the present skill given by British Council Number 29 were carefully studied and finalized. This document is enclosed in Appendix I.

British Council Teacher Education Project Number 29 discusses the skill Questioning for Feedback. Taking into consideration the document 29, components of Questioning for Feedback were determined. They are as follows:

DESIRED COMPONENTS

(1) Testing asumption of previous knowledge.
(2) General feedback questions
(3) Specific feedback question
    (a) Comprehension
    (b) Application
    (c) Open

UNDESIRED COMPONENTS

(1) Uneven distribution
(2) Evaluative reactions
(3) Lack of attention to pupil response
(4) Inadequate feedback questions
(5) Nonuse of feedback

EXPLANATION OF THE COMPONENTS

(1) Testing assumption of previous knowledge:

In planning a lesson, one has to make

assumption about those initial interests, attitudes, knowledge and skills of pupils. It means, readiness of the pupils' mind for the new topic. Such mental preparation is carried out in the stage of set induction.

Therefore, testing previous knowledge has been included in set induction as one of its components.

However, testing assumptions of previous knowledge differ from testing previous knowledge. In this component, the previous knowledge is never tested in set induction but assumed to be known to the class. While teaching if teacher develops doubts about the same he may find need to test the same.

(2) <u>General Feedback questions:</u>

While teaching a lesson teacher has to ensure that pupils have understood concepts and relationship. Such understanding can be tested by asking some general questions which are not related to the subject matter but of general nature, such as, "Have you followed ?", "Do you

understand ?", "Is there any difficulty ?".

These questions help to

(a) ensure the pupils' understanding about taught subject matter,

(b) get the opportunity to ask their difficulties if they did not understand the taught subject matter and

(c) reduce the pupils' mental tension.

Teacher received the verbal and non-verbal response from the pupils. In short, general feedback questions create close relationship between teacher and pupils. It leads to the openness in the class-room environment.

(3) Specific feedback questions:

Through general feedback questions, teacher can get the general information about pupils' understanding. Such questions are not related to a particular or specific topic. Therefore, it is necessary to ask specific questions which are purely based on the content matter.

According to the levels of question, specific feedback questions have the

following six types:

(1) Knowledge

(2) Comprehension

(3) Application

(4) Analysis

(5) Synthesis

(6) Evaluation

Among them, the researcher has taken three types of specific feedback question. The types (4), (5) and (6) have been clubbed together to form the category of open questions. The three types are as follows:

(1) Comprehension

(2) Application

(3) Open

(1) <u>Comprehension:</u>

When the student explains the taught information in his/her own words, then it is said that the student has achieved the understanding about the taught matter. The questions asked to ensure students' understanding are known as comprehension question. Among the most useful

ways of testing comprehension are question seeking new examples of learned/taught generlization or seeking new application of a learned/taught matter.

(2) Application:

When acquired knowledge is used in the different or new situations, the process is known as 'application'. It can be tested by asking application questions.

(3) Open:

In addition to asking question to ensure that pupils are following the teacher's arguments, it is also valuable to ask open questions. Open questions invite pupils to answer at greater length.

The students must think divergently, while responding to such type of questions. The answers are not only recalling the information or haphazard in nature, but it should be beyond the student's knowledge, ability and information about the particular subject.

For solving any problem, it is necessary to

(a) analyse the problem,
(b) identify the components of the problem and
(c) identify the components which create the problem.

After conforming to these causes, the student should determine the solutions. The student should consider the appropriateness of the particular solution. He should tell that which solution is suitable and why.

In short, in the process of solving problem, three types of mental activities are happened.

(a) Analysis
(b) Synthesis
(c) Evaluation

A question which leads to create the three mental activities, such question is known as 'Open Question'. Open questions enable the students to think logically. They get an opportunity to use their knowledge differently in greater extent.

UNDESIRED COMPONENTS

(1) Uneven distribution:

Feedback questions are asked to all students for soliciting maximum students' response, from different sections of the class-room. In short, teacher should make equal distribution of questions and should accept answers from different students who are sitting in the different sections of the class-room.

By evenly distributing each feedback question, the following things are achieved:

(A) Each student of the different parts of the class gets equal opportunity to give thoughtful answer.

(B) All students actively participate.

(C) It can be ensured that what percentage of the students understand the subject matter.

(D) It is easier for the teacher to take further decision after getting the students' understanding.

In short, it is necessary to ask feedback question to all students by providing equal

opportunity to give response. In microteaching setting if the teacher accepts the answers from one or two students, it is considered as uneven distribution of feedback question.

The teacher should ask all feedback questions by distributing evenly. If he/she does not do so, it should be treated as negative one and entered as an undesired component.

(2) Evaluative Reaction:

For receiving the accurate feedback the teacher should listen carefully to the response without any evaluative reaction, such as, 'Correct', 'Good'. In that case the other students come to know about the correctness and they may just repeat the same answer. This distorts the feedback. All teacher reactions should be non-evaluative. If the teacher expresses his evaluative reaction, it should be entered as undesired component.

(3) Lack of attention to student response:

Whenever pupils respond, it is necessary for teacher to pay full attention to every student

response. If there is lack of attention to student response, it is considered as negative and goes as undesired component.

(4) Inadequate feedback question:

To get proper and specific responses/ feedback, teacher should carefully frame feedback questions. While asking feedback questions, the following precautions should be taken.

(i) The structure of the question should clear so that it should not be vague.

(ii) Giving intentional clues be avoided.

(iii) The questions should be based on the whole content.

The inadequacies in questions may be as follows:

(a) Lack of definition

(b) Leading question/intentional clues

(c) Incomplete coverage of content

(5) Nonuse of feedback:

After receiving the feedback from students, the teacher gets idea about student's understanding of the content taught. He/she should

then make use of received feedback by modifying his/her teaching behaviour. If he/she does not do so, it should be treated as nonuse of feedback.

After the finalization of the components, decisions related to the following points were taken in the planning stage.

PLANNING STAGES OF SELF-INSTRUCTIONAL MATERIAL

(a) Style:

The style selected for the study was a dialogue style. The term 'Style' refers to the manner of writing and dialogue style refers to writing in the form of conversation of talk. In dialogue style, the material is written in the form as if the writer is talking to the readers. As far as possible, simple sentence structure, vocabulary, grammar, active form of verb, short clauses, many pronouns, finite verbs were used. These help in increasing readability and understanding.

(b) Activities and exercises:

The researcher designed three types of activities related to

(1) Perception

(2) Modification and

(3) Generation

(1) The perception activities were related to recognition of desired and undesired components of skill.

(2) Modifications/rectifications were related to transformation of components from negative to positive components or from inappropriate to appropriate components.

(3) Generation activities were related to the generation of positive appropriate components, in the content of given situation.

(c) The Sections:

The sections included in the instructional material are given in Figure No.4 briefly.

Sr. No.	Material steps	Description
1.	Place of teaching skill	Exact situations or points at which the skill can be used.
2.	Objectives	The reasons and purposes of using skill.

Sr. No.	Material steps	Description
3.	Theory, psychological backgrounds and Research	Theory, psychological background and research related to the effectiveness of skill.
4.	Components and discussion	Description of positive and negative components along with examples.
5.	Summary	Summarization of theory.
6.	Content test along with scoring key	Content test for testing mastery.
7.	Activities	Activities and exercises related to generation, transformation and perception.
8.	Script for analysis and scoring key	Script including desired and undesired components for analysis and key for recognition and checking.

Sr. No.	Material Steps	Description
9.	Guidelines and observation tables	Description of observation matrix as a tool for observation along with guideline for observation.
10.	Model lessons and scoring key	Two model lessons, one from language and the other from social science.
11.	Guidelines for lesson planning	Description of lesson plan, Blue print of actual lesson plan of the model lesson given and principles useful for planning.
12.	Space for lesson planning and self-evaluation of planning	A blank lesson note is for the preparation of plan and test for self-evaluation and a list of appropriate units for planning.
13.	Review of the main points	Summarization of the main points so far discussed.

Figure No.4 : Sections of all instructional materials.

(d) Development of prototype:

In the light of the earlier decisions, the prototype was developed under the guidance of expert. The prototype was revised at least for three times.

(e) Tryout and revision:

One copy of prototype was given to language expert in order to evaluate the material from language and grammatical point of view. Tryout packages were also given to student-teachers and teacher educators along with a copy of questionnaire. The questionnaire included twentyfive closed questions and eleven open questions. These questions were related to terms, vocabulary and language used, organization of points, content tests and its terms, activities related to each component, transcript for analysis, lesson planning and model lessons. The questionnaire is enclosed in Appendix III.

Such tryout is generally taken on small sample. Hence, sample of 5 student-teachers and 5 teacher educators (N = 10) was taken for the tryout.

The analysis of the responses of student teachers and teacher educators as well, is presented ahead.

Question number one, two and nineteen were related to vocabulary and language used. The responses related to these aspects are given in Table No. one to three.

TABLE NO. 3.1

TABLE SHOWING DIFFICULTY LEVEL OF TECHNICAL TERMS AND VOCABULARY

Hampers comprehending			
	To a great extent	To some extent	To little extent
ST	0%	20%	80%
T.E.	0%	40%	60%

TABLE NO.3.2

TABLE SHOWING THE COMPLEXITY OF VOCABULARY AND SENTENCES

Hampers comprehending			
	To a great extent	To some extent	To little extent
ST	0%	20%	80%
T.E.	0%	0%	100%

TABLE NO. 3.3

TABLE SHOWING THE ADEQUACIES OF

OF EXPLANATION OF NEW TERMS.

Explanation of new terms helps in understanding			
	To great extent	To some extent	To little extent
ST	60%	20%	20%
TE	60%	40%	0%

OBSERVATIONS:

(1) Most of teacher educators and student-teachers found no difficulty in understanding the technical and new terms but few of teacher-educators and student-teachers found difficulty to some extent.

(2) All the teacher educators and most of student-teachers found no difficulty in understanding the material due to sentences structure.

(3) Most of student-teachers and teacher educators found that the explanation given for the new terms helps to understand the content at the

moderate level. Some teacher educators and few student-teachers found difficulty to some extent.

FINDING:

From these three tables, it can be said that

(1) The material was easy to understand from the point of view of technical and difficult words and clumsy sentences.

(2) The explanation of the new words helped in understanding the material to some extent. Therefore, it needs some modification.

Question numbers three, four, sixteen, eighteen and twenty were related to presentation and organization of content points. The responses are given in the tables.

TABLE NO. 3.4

TABLE SHOWING THE RESPONSES RELATED TO PRESENTATION AND ORGANIZATION OF CONTENT

Helps in comprehending -			
	To great extent	To some extent	To little extent
ST	100%	0%	0%
TE. .	100%	0%	0%

TABLE NO.3.5

TABLE SHOWING RESPONSES TO THE INCLUSIONS OF IMPORTANT POINTS

Includes important content points -			
	To great extent	To some extent	To little extent
ST .	100%	0%	0%
TE .	100%	0%	0%

TABLE NO. 3.6

TABLE SHOWING RESPONSES RELATED TO CORRECT INFORMATION.

Accuracy of information -			
	To great extent	To some extent	To little extent
ST	100%	0%	0%
TE	100%	0%	0%

TABLE NO. 3.7

TABLE SHOWING RESPONSES RELATED TO RELEVANT EXAMPLES

Exemples are relevant -			
	To great extent	To some extent	To little extent
ST	100%	0%	0%
TE	100%	0%	0%

TABLE NO. 3.8

TABLE SHOWING RESPONSES RELATED TO SEQUENCING OF POINTS.

Sequence is appropriate -			
	To great extent	To some extent	To little extent
ST	100%	0%	0%
TE	100%	0%	0%

OBSERVATIONS:

(1) All the teacher educators and student-teachers found that the organization and presentation of the content was appropriate.

(2) All the student-teachers and the teacher-educators found that all important points were included in the material.

(3) All the student-teachers and teacher-educators found the information given in the material was completely accurate.

(4) All the student-teachers and the teacher-educators found that examples given in the

material were relevant to the content.

(5) All of the teacher educators and the student-teachers found that the sequencing of the points in content was appropriate.

FINDING:

From the above observations, it can be said that the content of the material was accurate, included relevant examples and was well-organized in sequential manner. It was also easy to understand.

Question No. five and six were related to content test. The responses are given below.

TABLE NO.3.9

TABLE SHOWING RESPONSES RELATED TO CONTENT TEST AND THEIR ORGANIZATION

Difficulty level of items differ			
	To great extent	To some extent	To little extent
ST	80%	20%	0%
TE	100%	0%	0%

TABLE NO.3.10

TABLE SHOWING RESPONSES RELATED TO CONTENT COVERAGE OF THE TEST

Coverage of the content -			
	To great extent	To some extent	To little extent
ST	100%	0%	0%
TE	100%	0%	0%

OBSERVATION:

(1) All the teacher educators and the student-teachers found that there was no difficulty level of the item differed, but some of student-teachers found it to some extent.

(2) All teacher educators and the student-teachers found that the test items covered the content.

FINDING:

The tables indicate that the test item covering the theory discussed in the material was accurate and relevant and the difficulty level of the item slightly differed.

Question No. seven, eight, nine, ten, eleven and tuelve were related to activities. The responses related to these items are given in the following tables.

TABLE NO.3.11

TABLE SHOWING RESPONSES RELATED TO EASE IN UNDERSTANDING OF ACTIVITIES

Easy in comprehending	To great extent	To some extent	To little extent
ST	100%	0%	0%
TE	80%	20%	0%

TABLE NO.3.12

TABLE SHOWING RESPONSES RELATED TO THE CHALLENGING NATURE OF THE ACTIVITIES

The activities are challenging -	To great extent	To some extent	To little extent
ST	100%	0%	0%
TE	0%	100%	0%

TABLE NO. 3.13

TABLE SHOWING RESPONSES RELATED TO THE INTERESTING NATURE OF THE ACTIVITIES

The activities are interesting			
	To great extent	To some extent	To little extent
ST	100%	0%	0%
TE	60%	40%	0%

TABLE NO. 3.14

TABLE SHOWING RESPONSES RELATED TO EASE OF THE ACTIVITIES

Activities are easy -			
	To great extent	To some extent	To little extent
ST	40%	60%	0%
TE	40%	60%	0%

TABLE NO. 3.15

TABLE SHOWING RESPONSES RELATED TO DIFFICULTY LEVEL OF ACTIVITIES

Activities are difficult -	To great extent	To some extent	To little extent
ST	0%	20%	80%
TE	0%	0%	100%

TABLE NO. 3.16

TABLE SHOWING RESPONSES RELATED TO CLARITY OF INSTRUCTIONS RELATED TO THE ACTIVITIES

Instructions are clear -	To great extent	To some extent	To little extent
ST	100%	0%	0%
TE	100%	0%	0%

OBSERVATION:

(1) All the student-teachers and almost all the teacher educators found that the activities were quite easy to understand.

(2) All the student-teachers found that the activities were challenging to a great extent. All the teacher educators experienced that the activities were challenging to some extent.

(3) All the student-teachers found the activities were interesting.

(4) Most of the teacher educators found the activities were interesting to great extent but few of them found to some extent.

(5) Most of the student-teachers and teacher educators found the activities easy to do to some extent but some of both found themselves easy to great extent.

(6) All the teacher educators found the activities not to be difficult.

(7) Most of the student-teachers did not find the difficulty level of activities but

rest of student-teachers found it to some extent.

(8) All the student-teachers and the teacher educators found clarity of instruction related to activities.

FINDING:

A careful observation of the above tables indicates that the activities included in the material are challenging, interesting neither easy nor difficult.

The instructions related to the activities given in the material are clear. Therefore, the majority of the readers understand the activities.

Question No. thirteen was related to analysis of transcript. The responses are given in the following table.

TABLE No.3.17

TABLE SHOWING RESPONSES RELATED TO SCRIPT FOR ANALYSIS.

Script analysis is easy -	To great extent	To some extent	To little extent
ST .	60%	40%	0%
TE .	100%	0%	0%

OBSERVATION:

(1) All the teacher educators found the script for analysis very easy.

(2) Most of the student-teachers found the script for analysis easy to great extent while the remaining found the script for analysis easy to some extent.

FINDING:

On the basis of the above table, the finding can be said that it is easy to recognize desired and undesired behaviours in the script given in the material for analysis to great extent.

Question No.fourteen, fifteen, twentyone and twentytwo were related to the self-evaluation and planning. These responses are given in the following tables.

TABLE NO.3.18

TABLE SHOWING RESPONSES RELATED TO GUIDELINES OF PLANNING.

Guidelines help in planning -			
	To great extent	To some extent	To little extent
ST	80%	20%	0%
TE	100%	0%	0%

TABLE NO. 3.19

TABLE SHOWING RESPONSES RELATED TO SELF-EVALUATION TEST

Helps in evaluation			
	To greant extent	To some extent	To little extent
ST	80%	20%	0%
TE	100%	0%	0%

TABLE NO. 3.20

TABLE SHOWING RESPONSES RELATED TO INFORMATION REGARDING LESSON PLANNING

Easy in comprehending			
	To great extent	To some extent	To little extent
ST	100%	0%	0%
TE	100%	0%	0%

TABLE NO.3.21

TABLE SHOWING RESPONSES RELATED TO INFORMATION OF LESSON PLANNING AND THE MODEL LESSON PLANS

Useful in planning -	To great extent	To some extent	To little extent
ST	80%	20%	0%
TE	100%	0%	0%

OBSERVATION

1. All the teacher educators and most of the student-teachers found the guidelines sufficient for lesson-planning.
2. Some of the student-teachers found the guidelines helpful in planning to some extent.
3. Most of the student-teachers and all the teacher educators found the self-evaluation criteria helpful in evaluation of a lesson-plan. However, rest of the student-teachers found that self-evaluation test helps in evaluation to some extent.

4. All of the teacher educators and the student-teachers found the information regarding lesson-planning easy in comprehending to great extent.

5. All the teacher educators and almost all the student-teachers found the information regarding lesson-planning and model lesson plans quite useful while the remaining student-teachers found it to some extent

FINDING:

These observations indicate that the information regarding the lesson-planning and model lesson plans are useful to great extent for planning a lesson. The guidelines provided for the planning are also highly useful.

However, the self-evaluation test is useful for student-teachers to great extent at eighty percentage level.

Question No. twentythree and twentyfour were related to the model lessons. The responses

are given in the following tables.

TABLE NO.3.22

TABLE SHOWING RESPONSES RELATED TO MODELS

Help in acquiring desired behaviour -			
	To great extent	To some extent	To little extent
ST	60%	20%	20%
TE	100%	0%	0%

TABLE NO. 3.23.

TABLE SHOWING RESPONSES RELATED TO INSTRUCTIONS OF MODEL LESSON OBSERVATIONS

Instructions useful for observation -			
	To great extent	To some extent	To little extent
ST	60%	40%	0%
TE	100%	0%	0%

OBSERVATION:

1. Most of student-teachers found the models helpful in acquiring desired behaviours to great extent. Rest of the student-teachers found them helpful to some extent or to little extent.

2. All the teacher educators found the models helpful in acquiring desired behaviours to great extent.

3. Most of the student-teachers and all the teacher educators found the instruction useful for lesson observation while the remaining student-teachers found the usefulness of instructions to some extent.

FINDING:

The models are sufficiently useful for acquisition of the desired behaviours, so also, the instructions for lesson observation are useful.

Question No.twentyfive was related to the acquisition of the skill of teaching. The

responses are given in the following table.

TABLE NO. 3.24

TABLE SHOWING RESPONSES RELATED TO SKILL ACQUISITION OF TEACHING

Useful for skill acquisition -			
	To great extent	To some extent	To little extent
ST	80%	20%	0%
TE	100%	0%	0%

OBSERVATION:

1. Almost all the student-teachers found that the material was useful for acquisition of skill after sufficient reading.
2. The remaining student-teachers found the usefulness of material for acquisition of skill to some extent.
3. All the teacher educators found that the material was highly useful for acquisition of skill after reading thoroughly the same.

FINDING:

The material is useful for acquisition of skill. However, additional readings or some other activities need to be given.

Remaining open questions were related to difficult words, sentences and other inadequacies of material. Table No. 3.25 shows frequencies of these inadequacies and difficulties.

TABLE NO.3.25

TABLE SHOWING INADEQUACIES OF THE MATERIAL

Sr. No.	Inadequacies of material	Frequencies
1.	Difficult words/terms	12
2.	Complex statements/sentences	6
3.	Activities not liked	5
4.	Examples not liked	6
5.	Essential points to be included	6
6.	Wrong sequence of points	4
7.	Required changes in the instructions regarding the observation	6

Sr. No.	Inadequacies of material	Frequencies
8.	Inadequacies in transcripts for analysis	5
9.	Inadequacies in model lesson	8
10.	Inadequacies in lesson plan	8

The table shows that inadequacies were in a small number. However, these inadequacies were also noted down and necessary rectifications/ modifications/replacements/explanations/additions and omissions were done in the material.

Nevertheless, it can be concluded that the material developed was very easy to understand, well organized, interesting and quite useful for the planning microlesson and acquisition of teaching skill, and it was appropriate for the final product development.

(7) FINAL PRODUCT DEVELOPMENT

In the light of analysis of tryout the package was modified and printed for the installation in the field.

(8) INSTALLATION AND FIELD TESTING PRODUCT

Installation and field testing was done by using pre-test and post-test single group design. The details of the experiments are discussed in the next Chapter. (The self-instructional material developed is given in Appendix II).