

CHAPTER IV

DEVELOPMENT OF INSTRUCTIONAL MATERIAL

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CHAPTER IV

DEVELOPMENT OF INSTRUCTIONAL MATERIAL

Until very recently educators thought and laboured in terms of 'a system of instruction' but today 'a systematic instruction' leading to 'mastery level' learning is the concept that activates most educational endeavours. At first conceptualised by Carroll and subsequently refined by Bloom, the mastery learning model proposed that by modifying the quality of instruction and the amount of time made available for learning, the majority of students will achieve mastery in terms of the objectives set for a given task. A major renaissance in the field of English language teaching then, implies a rethinking of the mechanics of teaching and the role of learners as individuals besides the many other factors relating to the teacher himself.

If as suggested in the preceding paragraph, the mechanics of teaching and the role of learners as individuals are seen in a related manner, one important conclusion that we would have to logically arrive at is that techniques used for one group of learners may not be suitable to another. Mixed ability groups would present such a problem within the same group itself. Under such conditions, the present study which proposes to develop study materials for adults, had to think in terms of suitable techniques for adults. Such an approach involved a comprehensive study of adult-needs,

their peculiarities in terms of study-habits, learning capacities and availability of time. In the light of the above considerations, programmed learning material was found to be an appropriate technique to be adopted for the present study. PLM, incorporating the principles of small steps, immediate confirmation or feedback, active responding, self-pacing and self-testing has been found effective in the instructional process lending itself to a variety of flexibilities. Looking to its suitability for a heterogeneous group of adults, some seeking basic information, some remedial treatment, and yet some others enrichment, PLM was considered a highly relevant technique.

Adults by virtue of their adulthood are capable of independent work. The fact that the English Improvement Classes are availed of by adults who voluntarily seek help in developing their language skills, vouches for their motivation and determination to learn. Intrinsic motivation and capacity for individual, independent work make PLM a suitable technique for adults.

Besides, mastery - learning implies that the longer a learner is exposed to instruction, the greater would be the learning outcome. Constant interaction with the written material, thus was expected to provide greater exposure to the target language and facilitate the mastery of it.

The chapter under report gives a detailed account of the procedure pursued in the preparation of programmed learning material.

4.1 DEVELOPMENT OF PROGRAMMED LEARNING MATERIAL

The development of PLM falls under the following phases:

4.1.1 Preparation

- (a) Analysis of the Course Content
- (b) Behaviour Specifications
 - (i) Terminal behaviour
 - (ii) Entering behaviour and target population
 - (iii) Criterion tests
- (c) Programme Style, Presentation Format and Response Modes

4.1.2 Writing the Programme

- (a) Writing the frames
- (b) Types of frames
 - (i) Teaching frames
 - (ii) Practice frames
 - (iii) Review frames
 - (iv) Criterion frames
- (c) Prompts

4.1.3 Evaluation of the Programme

- (a) Individual try-out
- (b) Editing
- (c) Field try-out

Now, let us discuss these phases in detail.

4.1.1 Preparation

As shown in the chart on the next page, the content of the course includes the following aspects.

DEVELOPING ENGLISH LANGUAGE SKILLS IN ADULTS COURSE CONTENT - ANALYSIS

Unit 1		Unit 2	
Conversational English (Listen and Speak)		Reading (Oral and Silent)	
For What? (Purpose)	How? (Manner)	What?	How?
to greet	Using appropriate courteous refined fluent grammatically correct intelligible	Letters	fluency
to introduce		telegrams	moderate speed
to respond to introductions		newspapers	punctuations
to make a statement		journals	stress
to enquire		magazines	intonation
to respond to enquiry		bulletin boards	comprehension
to request		stories (short)	
to entreat		dialogues	information
to command		novels	survival
to persuade		advertisements	reference
to entertain		traffic signals	pleasure
to socialize		dictionary	developing the reading habit
to agree		encyclopedia	developing the reading attitude
to disagree	Stress		behaviour modification
to impress	Pronunciation		widening vocabulary
to demand	Intonation		value judgement
to complain			
to comfort			
to sympathize			
to reassure			

(a) Analysis of the Course Content

Before programming can begin, the subject matter must be analysed into small units that can provide the frames or building blocks of an instructional programme. Hence the subject matter or course content decided upon, taking into consideration the subjects' level of knowledge, their demands and expert-opinions was analysed in a detailed manner. As a result, the English language skills, required for everyday communication were classified under three unit heads:

- Unit 1 Conversational English
- Unit 2 Reading and
- Unit 3 Writing

Unit 1

The first unit includes the following essentials that make oral communication effective:

- i) greetings and polite expressions
- ii) pronunciation, intonation and stress
- iii) situational dialogues
- iv) introductions and courtesies
- v) 'wh' word questions and polite enquiry
- vi) telephone etiquettes and
- vii) contractions

Unit 2

The second unit imparts basic information regarding the considerations and practices that make reading in English correct and effective.

Oral reading consists of the following sub-skills:

- i) pronunciation
- ii) speed
- iii) fluency
- iv) comprehension
- v) punctuation
- vi) intonation and
- vii) stress

Silent reading consists of i) reading for information, ii) for behaviour modification, iii) for reference, iv) for critical judgement, v) for developing the reading habit, and vi) for developing the reading attitude.

Unit 3

The third unit undertakes to impart basic information regarding the main ingredients that make communication in English, through writing, both appropriate and effective. Instructional points include the following items:

- i) hand-writing
- ii) capitalisation
- iii) punctuation
- iv) vocabulary
- v) spelling
- vi) paragraphs
- vii) idioms
- viii) margin
- ix) abbreviations and
- x) letter-writing

(b) Behaviour specification

(i) Terminal behaviour

The specification of objectives for programmed instruction must be in terms of behavioural end-products, in terms of what the student must be able to perform. Mager (1962) states that actual written specification of the objectives of an instructional sequence can be defined as "an intent communicated by a statement describing a proposed change in a learner". At first the objective may not be stated in great detail, but as the programme is developed, they should become specific until they are stated as particular tasks the students should master.

At this point the investigator would point out a variation with which the present investigation employed the programmed learning material for instructional purposes. Unlike disciplines which encourage programming to impart knowledge in a particular subject (e.g. 'heat' or 'electricity' in Physics, acids and alkalis in Chemistry, etc.) language is a skill-subject and language-development is a matter of mastering certain skills and forming correct language habits. While acquisition of knowledge can be successfully and totally tested on a programme that is sequenced scientifically, the applicational aspect can only be partially tested through a programme. To illustrate the point, a criterion frame placed after teaching, practising and reviewing a teaching point, would ensure that the subject

has learnt that the response to 'how do you do' after an introduction is 'how do you do?' and not 'I'm fine'. However the real test of the situation can only take place when the same subject is faced with a real life situation where he is required to respond to someone's 'how do you do?'. Although not in real-life situations, situations simulated in the class-room during practical sessions can to a great extent test and certainly prove a better learning experience to the adult learner. Clarifications through discussions, tests and feedbacks can further corroborate in the acquisition of correct language habits.

This implies that in the present course, it is more valid and feasible to specify terminal behaviour with regard to an instructional unit than for the PLM alone. Since an instructional unit is composed of the following techniques:

- i) lecture
- ii) PLM
- iii) tape-recorder
- iv) discussion
- v) practical work and
- vi) feedback sessions after unit tests,

each of the techniques in an integrated manner interact to achieve the instructional objectives for each unit. Further, the skills being interrelated in themselves, the carry-over impact from the first unit to the second, then the combined effect to the third and the final turnout make such a course valid. The following list of terminal behaviours based on

each of the three units may be viewed in this light. It must be pointed out further that the basic theory of the course was programmed for each unit.

Unit I Conversational English

At the end of the treatment, the adult learner will be able to

- a) use the greeting 'Hello' and 'Hi' appropriately.
- b) use the phrase 'good evening' to greet some one late in the evening and not 'good night'.
- c) greet a person who has just been introduced to him saying 'how do you do?'
- d) respond to 'how do you do?' with 'how do you do?'
- e) use the following courteous phrases 'glad to meet you' and 'pleased to meet you', on being introduced to someone for the first time.
- f) employ 'please' as a prefix or suffix to a request
(e.g. Please let me have a pen. Let me have a pen, please.)
- g) say 'yes, please' when he would accept an offer of food, a ride in a car etc.
- h) acknowledge a favour done by someone with a 'thank you'.
- i) say 'thanks' only to some one younger, inferior in position or equals.
- j) refuse an offer politely saying 'no, thank you' (at the dining table, to an offer of a car-ride, a cigarette etc.).

- k) say 'sorry' as an apology and as an expression of sympathy.
- l) say 'excuse me' to stop a stranger on the way.
- m) use the same phrase before disturbing a group.
- n) use it as an apology in the place of 'sorry'.
- o) respond saying 'you're welcome, when some one expresses gratitude.
- p) use in the place of 'you're welcome' phrases like 'It's been a pleasure, 'It's alright', 'not at all' etc.
- q) say 'pardon' when he wants a statement repeated.
- r) say 'pardon me' when he seeks forgiveness.
- s) use the more polite question beginnings like
 May I, Can I?, Would you please, Can you please,
 Could you please, Would you mind, Could you tell me,
 Can I be of help?
 as against the less polite 'wh' word question beginnings.
 (e.g. May I know the time please? instead of 'what is the time?' 'Could you tell me where the post office is?' instead of 'Where is the post office?'
- t) Distinguish between the short and long vowel sounds in speech.

i and i : (tin and teen)
 ^ and a: (cut and cart)
 ə and ɔ: (about and turn)
 ɒ and ɔ: (top and torn)
 u and u : (shook and shoot)

- u) Pronounce the diphthong sound 'ei' correctly as in 'table' and 'paper'.
- v) Distinguish between and speak correctly the following consonant sounds
- | | |
|---------------------|---------------------------|
| 'p', 'b' and 'f' | (pet, bet, fetch) |
| 'v', 'w' and 'hw' | (vine, wine and when) |
| 's', 'ʃ' and 'tʃ' | (sip, ship and chip) |
| 't', 'd', 'θ' and ð | (tin, din, thin and then) |
| 'z', 'dʒ' and 'ʒ' | (zoo, jar and pleasure) |
- w) refer to a phonetic dictionary, to correct his own pronunciation.
- x) engage in polite conversations in the following and similar situations and for the following and similar functions:
- asking the way
 - at the dining table
 - shopping
 - at the railway counter
 - while waiting to board an aeroplane
 - at the school
 - apologizing
 - approaching a stranger
 - giving and receiving instructions
 - making excuses,
 - enquiring, etc.

y) Introduce friends on formal and informal occasions in the appropriate manner:

- i) introduce first a man to a woman
- ii) introduce first a boy to a girl
- iii) introduce first a younger person to the older person
- iv) introduce first an individual to the group and vice versa.

z) make and receive phone-calls employing the following telephone-etiquettes:

- i) speak his own name or phone number on picking up the phone to answer a call
- ii) say 'wrong number' if the caller is trying to contact some other number
- iii) say 'hold on' if the caller would like to speak to someone else, whom he would be in a position to locate in a short while
- iv) engage the line only for a short time
- v) wind up the call and say 'good-bye' if he is the caller
- vi) wait for the caller to conclude and say 'good-bye' if he is the receiver of the call
- vii) engage in a polite conversation

27) Use the following contractions in speech:

you're, I'm, she's, he's, they're, can't, couldn't, won't, wouldn't, shan't, shouldn't, mustn't, oughtn't, ain't, don't, didn't, wasn't, weren't, isn't, aren't.

Unit II Reading

At the end of the treatment the adults will be able to

1. list the following factors that make oral reading effective
 - i) speed
 - ii) fluency
 - iii) pronunciation
 - iv) intonation
 - v) stress and
 - vi) punctuation
2. read a paragraph with reasonable speed
3. read sentences fluently
4. pronounce words correctly
5. intone interrogative sentences correctly
6. intone exclamatory sentences correctly
7. pause at a period, comma, colon and semi-colon.
8. establish the habit of reading for pleasure and information
9. cultivate the habit of reacting critically to what is read
10. meet the practical needs of daily living such as being alerted to danger, finding one's way about, keeping up with current events, keeping in touch with relatives and friends
11. cultivate a thoughtful reading attitude.

Unit III Writing

At the end of the treatment, the subjects will be able to

1. write capital letters where necessary
2. use the following punctuation marks in a given paragraph
 - period
 - comma
 - colon
 - semi colon
 - exclamation mark
 - question mark
 - apostrophe
 - quotation marks and
 - hyphen appropriately
3. use the following abbreviations in writing:
 - U.A.E. for United Arab Emirates
 - U.S.A. for the United States of America
 - U.S.S.R. for Union of Soviet Socialist Republic
 - U.N.O. for United Nations Organization
 - APO for Army Post Office
 - W.H.O. for World Health Organization
 - B.B.C. for British Broadcasting Corporation
 - N.B. for Note carefully (lat. nota bene)
 - R.S.V.P. for Please Reply (Fr. repondez sil vous plait)
 - Ph.D. for Doctor of Philosophy

4. write

- (c) a letter of application
- a letter of requisition
- a letter of order and
- a leave letter

following an acceptable pattern:

- (a) Leave a reasonably wide margin
- (b) Write the heading
- (c) Write the salutation
- (d) Write the introduction
- (e) Write the purpose
- (f) Write the subscription
- (g) Write the signature
- (h) Add a postscript if necessary

5. Write a friendly letter

6. Enumerate the factors that make writing in English correct and effective:

- (a) capitalisation
- (b) punctuation
- (c) vocabulary
- (d) hand-writing
- (e) abbreviations
- (f) spelling
- (g) paragraph writing
- (h) margin
- (i) idioms
- (j) clarity

(ii) Entering behaviour and target population

The behaviour the learner brings to the programme determines the level at which the programme must start and provides the base upon which the programme builds. DeCecco (1970) defined entering behaviour as 'the present status of the students' knowledge and skill in reference to a future status the teacher wants him to take'. Programmed learning material and the whole course itself is prepared specifically for adults who have had formal education upto the S.S.C. level (minimum). At that stage adults should be in a position to communicate in English fairly well both verbally and employing the written mode of expression. However the existing situation does not justify the stipulated expectations of policy makers and curriculum designers. The present investigation attempts to bring the subjects to the level they should have already attained and to take the fast learners further in the attainment of skills and knowledge.

The group being highly heterogenous in terms of academic qualifications, occupation and age, a definition of entering behaviour becomes a difficult task. However it is presumed that i) they can understand simple English when spoken to

- ii) they can speak simple sentences in English
- iii) they can accurately and independently recognize simple words in English
- iv) they can read a paragraph fairly fluently
- v) they can write simple sentences in English

- vi) they have a reasonable vocabulary (both active and passive)
- vii) they can spell simple words correctly
- viii) they can recognize the following parts of speech in a sentence
(noun, verb, adjective and adverb)

(iii) Criterion - referenced tests

The concept of programmed instruction demands that programmes be accompanied by carefully prepared tests which may involve only the actual material explicitly covered in the learning sequence or involving extension, generalisation or application of the learned material called 'transfer'. These tests serve two purposes; first they state specifically a sample of the terminal repertoire that the programme was designed to impart. Secondly for the programmer the tests provide a feedback on the basis of which modifications can be effected.

Criterion referenced test was first introduced by Glaser (1963) to make the decision between tests designed to compare individuals and tests designed to measure individual achievement relative to some specified domain of task. In assessing the performance of individual learners, for each of the three units, a criterion referenced test was prepared which consisted of short answer questions, completion tests, paragraph-answer questions and oral questions to test pronunciation, speed, fluency and comprehension.

Pillet (1974) suggests a shift from mere summative evaluation, that is assessing the success or failure of a programme at some terminal point to formative evaluation which consists of periodic assessment of the programme. Such an evaluation provides scope for efficient intervention at appropriate points in the programme. A criterion test followed soon after by a feedback discussion can facilitate better learning prospects.

(c) Programme Style, Presentation Format and Response Mode

The style of programming followed in the present study is linear as frames appear in sequence and all the students proceed through the same sequence of frames, responding to every frame with no deviations or reversals. Students' responses to a frame are immediately confirmed.

Most of the linear programmes constructed thus far are of the kind suggested by Skinner and employ small steps and relatively few responses in a given frame. But the present study which has as its target population only adult learners, has employed larger steps and more responses in some frames. However, care was taken to see that every frame or step contained only one teaching point. Following is a large step demanding many responses taken from the third unit on writing. (No.35)

Correct language habits do not just end with some stray items like tense, prepositions and articles. There are typical English usages that have to be learnt and used. More reading and a wider exposure to spoken English can enable you to distinguish between right and wrong language habits. Like every other habit, once you get used to one way of doing or saying a thing, it is difficult to do something else until you are convinced that your way of doing a certain thing is wrong. If your realisation is followed by a constant effort on your part to adapt yourself to the new habit (language) results can be successful. To quote just one example, many of you are in the habit of asking your friends questions like "Where you are going?" "What you are doing?" "When you will be coming?" etc. Now, an English speaking person or someone who knows English fairly well, will not recommend the above usages. The correct enquiry will be "Where ARE you going?", "What ARE you doing?", "When WILL you be coming?" etc. You need not view this as grammar. This is just the habit that you have to switch over to, if you are to use English correctly.

The following sentences are obviously wrong:

- a) Why you are standing here?
- b) Where Mr. Shah is staying?
- c) How she is managing without a servant?
- d) When you can come home?
- e) What you are studying?

Now, write the correct form of each sentence against the wrong one.

Correct sentences:

- a) Why are you standing here?
- b) Where is Mr. Shah staying?
- c) How is she managing without a servant?
- d) When can you come home?
- e) What are you studying?

The use of a tape-recorder in the instruction of the first and second units was another variation in the programming technique, which was introduced with the following specific objectives:

- i) to offer varying stimuli and prevent monotony which is a common censure against PLM
- ii) to provide a reference point for speech and reading skills in English (the cassette contains male and female voices of native speakers of English)
- iii) to provide ear-training by more chances of exposure to spoken English.

Dialogues like the following three, entitled, 'Meena is late to class', 'Asking the way' and 'At the table during lunch' are provided on tape for the adults to read and listen at the same time. Besides providing variety, the recordings assist the learner in providing ear-training and correcting his own incorrect language habits with regard to pronunciation, intonation and stress.

Meena is late to class by ten minutes. The teacher has already begun the day's lessons	<p>Meena: Please excuse me teacher; May I come in?</p> <p>Teacher: You're late by ten minutes, Meena; What's your reason?</p> <p>Meena: There was an accident at the University cross roads and our bus was held up for nearly half an hour.</p> <p>Teacher: Come in, you couldn't really help being late then.</p> <p>Meena: Sorry, all the same teacher for causing inconvenience.</p> <p>Meena walks in.</p>
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Asking the way : Meena is looking for the post office. She is not sure of its location; so she stops some one on the road...

Meena:	Excuse me, Can you tell me where the Post Office is?
Stranger:	Yes, ofcourse. But, do you know the town fairly well? Do you know the Botanical garden, for instance?

Meena: Yes, I came by it.

Stranger: Well, if you get straight back there, it would be easy for you to find the post office. From the garden gate you keep walking straight ahead until you reach the traffic police circle. Then, turn right... Go a few yards and on your left you'll find a brick building. You can't really miss it.

Meena: Is it very far? Would you suggest that I hire a rickshaw instead?

Stranger: If you are in a hurry, yes; otherwise it's a very short walk; must not take more than five or six minutes.

Meena: Thank you very much.

Stranger: You're welcome.

At the table during lunch

Renu: Daddy, would you please pass me the dal?

Dad: Sure, (while passing the bowl containing dal) you would like to have some more rice?

Renu: No, thank you. I've had enough.

Mother: Ramesh, one more chapatti?

Ramesh: Yes, please.. the meat is so soft and the gravy delicious perhaps I can finish all those chapatties.

Mother: This preparation is new. Glad you like it. Meenu's mummy gave me the receipe for it. She used to conduct cooking classes, do you remember?

Ramesh: Yes, just round the corner, there used to be that room on the second floor with all colourful dishes painted on the door. Passing by my mouth used to water.

In accordance with the linear style of programming frames have been placed between horizontal lines and the correct answers given in the margin of the frame that immediately follows.

The response mode employed in the present programme was mostly overt. Whether such responses contribute significantly to learning or not, they provide the data on the basis of which programmes are revised.

The adult learners are required to provide overt responses either by filling in blanks or constructing their own responses, selecting the right answer or even by matching words from two given lists.

4.1.2 Writing the Programme

(a) Writing the frames:

Once the content and tasks are analysed, behaviours specified and decisions made regarding the programming style, formats and response modes, the actual programme-writing can be launched upon. According to Markle (1969)

'frame' or item is a 'segment of material which the student handles at a time. It may vary in size from a few words to a full page or more'. Generally a frame would require a response (overt or covert) and provide for knowledge of results before the student proceeds to the next frame. In writing the frames, the following Skinnerian theories of learning were kept in mind:

- i) There should be constant exchange between the programme and the student (keep the student alert and busy)
- ii) Insist that a given point is thoroughly understood (follow the principle of active responding)
- iii) Let the students compose responses (more recall items than recognition items)
- iv) Present just that material for which the student is ready.
- v) Hold the students' interest.
- vi) Guarantee a correct response at every step.
- vii) Reinforce the student for every correct response.

(b) Types of frames:

One of the basic tenets of linear programmes is that students learn best by actually attempting the task to be learned as they are learning it. Thus a programme is presented as a series of units called 'frames', most of which

invite the students to respond actively. A frame usually presents a small unit of information, requires active responses and may be arranged to give immediate reinforcement.

The four types of frames i) teaching frame

ii) practice frame

iii) review frame and

iv) criterion frame

used in a sequence in the instruction of a teaching point can yield encouraging results in terms of the learning outcome.

The following frames are illustrative of the four types in the given order.

- i) The most important human activity, you will agree is communication. As social beings, we need to communicate to those around us. Sometimes we may be required to listen to communication; sometimes we may have to respond to communication. Sometimes we may communicate to others; at other times someone else may communicate to us.

When we want to express our feelings, ideas or intentions, we use the skill that is known as com_____tion.

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- ii) It is very essential for any human being to live in a community. Community life cannot be possible without communication, because it is the very thing that holds a community together. Can you think of living in a society for long without

having to communicate with people around?

Life will not be practically possible without _____.

iii) In the first unit of this course, you learnt that SPOKEN LANGUAGE is the primary phenomenon among human beings. Communication through word of mouth is an essential part of living together as a community. You learnt also that there are other methods of communicating too.

Although gestures and body-movements could be used for communicative purposes, spoken language is a simple method of communication that human beings are capable of.

iv) Yes, language, in its spoken form is the quickest and easiest means of human communication. Quick, because unlike writing which necessitates thought and their organisation on paper; hence more time, speech is loud thinking and as such, need not take much time. Easy, because while writing involves activities like finding a paper, pen, eraser in case something goes wrong etc. speech does not require that you move around. You remain where you are and state your opinion, express your feelings, make known your demand or need.

Communication, in its _____ is quicker and simpler than communication in its written form.

(c) Prompts:

A prompt is an extra assistance included in a frame to give the student a good chance of giving the correct answer. It is believed to be a stimulus added to the terminal stimulus to make the correct response more likely while the student is learning. The term is used synonymously with 'cue' and is generally synonymous with the non-technical term 'hint'. Skinner classified prompts into two major types: formal prompts which provide knowledge about the form of the expected response, such as the number of letters, the initial letter or the sound pattern (prompted by a rhyme) and thematic prompts which depend on meaningful associations that make it likely for the student to give the expected response. In the present programme, both formal and thematic prompts have been used. The technique of gradually reducing the strength of prompts or the 'vanishing' or 'fading technique' has been employed with every teaching point.

4.1.3 Evaluation of the Programme

Testing and evaluation of the programme constitutes the last phase in the developmental process of a self-instructional programmed material. Upto this point, although

learners' needs were absolutely kept in focus, the sequencing of the content and its presentation in small steps remained largely the programmer's task. His sequence and style of presentation may or may not suit the consumer-learner. Hence the programmer at this stage is required to test the PIM on adult learners to evaluate its effectiveness in terms of its suitability to their need. Experts suggest three phases in the evaluation of a programme before it can be recommended for actual implementation. They are as follow:

- i) Individual try-out,
- ii) Editing
- iii) Field-testing and final draft for experiment.

4.1.3.1 Individual Try-out

During the individual try-out, frames were tried out on five adult learners. The process continued till the frame-work of all the three units were ready. The responses of each learner were studied and errors noted down. On the basis of the data obtained as a result of the individual try-out the programmed material for all the three units were revised. This method of evaluation of a programme assumes that the responsibility of 'instruction' rests with the programme and not with the learner. Hence, when a learner commits an error, it is assumed to be the limitation of the programme rather than that of the trial subject.

4.1.3.2 Editing

The first draft of the programme, after due modifications was given to the programming expert to check whether programming principles have been adequately adhered to. Content experts had greatly monitored the determination of the content prior to frame-writing. However trial of the PLM on thirty-seven B.Ed. students of English Methods (1979-1980) of the M.S. University, Baroda yielded considerable help in modifying the first draft of the programmed learning material. Their specific comments in terms of the content, size of frames, cues, language used, and taped dialogues were constructive in nature. They being future teachers of English and adults themselves critically read the instructional material and offered suggestions orally and in writing on a sheet of paper separately provided to them for the purpose. Some of their observations were as follow:

- i) too small frames
- ii) too much repetition
- iii) taped dialogues not clear

Apart from the above comments all the other observations referred to the effectiveness and suitability of the learning material. The suggestions were taken into consideration and necessary modifications effected, and the programme finalised for field testing.

4.1.3.3 Field Testing

Since field-testing involved a combined use of all the instructional techniques, a detailed report of it is more pertinently placed after the discussion of the other instructional devices (on page 144).

4.2 DEVELOPMENT OF SUPPORT MATERIAL

It has been reported earlier that considering the heterogeneity that exists in the English Improvement Classes in terms of the learners' age, academic qualification, occupational variety, intelligence level and socio-economic status and in line with mastery learning concepts which require provision for individual differences, it was decided that the larger part of the content be presented through programmes and the remaining through non-programmed support materials. In keeping with this decision, some grammar items, principles of pronunciation (phonetics) and letter-writing were selected and self-instructional support materials prepared. Reading supplementaries were selected and adapted to consolidate the learning and development of the reading skill.

Rationale for the choice of grammar items in preparing support material is discussed in the preceding chapter. Pronunciation being a sensitive factor in the realm of oral communication and considering the importance of correct pronunciation in speech, 'phonetics' was made easy for adults

and given in the form of support material. That letter-writing is a necessary skill for the progress of individuals and organisations and the lack of this skill has turned out to be a major problem to adults has been recognized by a majority of adults. There have been letter-writing training programmes offered by Productivity Councils and other agencies. Realising adults' need for skills in correspondence, provision was made by way of self-instructional support-material.

It may be stated however that the support material was used in a variety of ways; for individual work, for practice drills (phonetics) and for practical work (reading).

Support materials appear under the following titles in Appendix A.ii

- Phonetics
- Reading
- Letter writing
- prepositions
- Types of sentences
- Tenses
- Capitalisation, Punctuations and Articles
- Vocabulary and
- Model Dialogues

4.3 LECTURE

As adult learners are more accustomed to the traditional instructional technique 'lecture', it was felt appropriate to retain it and begin each instructional unit with a structured

introductory lecture. Lecture as a teaching technique has two objectives to perform; provide motivation and introduce the instructional unit that is to follow. Introduction of each unit by the teacher through a lecture highlighting the need for certain concepts included in the PLM and briefing the adults regarding the procedure to be undertaken in the learning of a subsequent unit, interspersed with illustrations from real life situations was felt both necessary and stimulating.

According to the number of instructional units, three lectures were structured, points of which are given in Appendix B. Lectures, each lasting an hour was succeeded by PLM and during the lecture, there was scope for interaction.

4.4 DISCUSSION

Discussion, selected as a teaching device for developing language-skills had the following objectives:

- i) Clarifying doubts arising while reading the PLM and support material
- ii) Consolidating concepts and theories learnt through PLM and support material
- iii) Applying principles learnt through lecture, PLM and support material through interaction with the group
- iv) Receiving more exposure to the spoken language.

After working through PLM the group was given a number of points based on the instructional unit and the concepts covered therein. To ensure maximum participation the teacher could

call on particular learners to depict a certain situation and others for opinions and yet others for counter opinions. Even the few who may not actively participate had the occasion to listen to and be benefitted by the interactions. Discussion points are given in Appendix C.

4.5 PRACTICAL WORK

Oral and written exercises for individual and group work, additional dialogues for consolidation and enrichment were prepared in terms of the tasks the adults would be called to perform based on each unit, in order to optimise learning outcome.

Unit I

Practical work for the first unit on Conversational English included more dialogues based on different situations and functions. The support material entitled 'Phonetics' was used for demonstration and practice drills during the practical work session before they could take the material home for self-instruction. Since the unit's primary emphasis was on oral communication, practical work included construction of situational dialogues, on the given models and role-playing the same. Chain dialogues where adults participate asking questions and responding was another aspect of practical work.

Unit II

Passages from the support material entitled 'Reading' were used as reading supplementaries to facilitate development of oral reading skills and skills of comprehension and summarising

through silent reading activities. Some passages were used for model readings and practice, and dialogues were used for learning some typical modern usages and role-playing. The dialogue on 'Foot baller's Pay' has many such usages which can make conversation in English easy and enjoyable.

Unit III

Practical work for the unit on 'Writing' involved writing activities much more than the earlier units. The skill in focus being writing such an exercise in practical work was both relevant and necessary.

The support material entitled 'Letter Writing' was used for practical work in small groups to facilitate more speech opportunities. Group reading of the support material followed by practice in letter-writing based on given situations further provided exercise in developing letter-writing skills.

Practical work at this stage involved small groups analysing a cartoon or a given scene (picture, painting, poster etc.) discussing in the group and writing a paragraph individually. Such an exercise besides providing practice in writing encourages creative writing, too.

Practical work for each of the units is given in Appendix D.

4.6 FIELD TESTING

Individual try-out is part of the developmental stage whereas field-testing is more formal. At this stage the

programme is tested in the actual learning situation. For the purpose of field-testing, an existing English Improvement Class sponsored by the Rosary School Social Service Centre Baroda was selected with its strength of twenty one adult learners. However six of them discontinued from whom relevant data could not be collected. Hence the field-trial constituted only fifteen adult learners, and was conducted during December 1979.

All the teaching techniques - lecture, PLM, tape-recorder, support material, discussion, practical work and feedback sessions were sequenced as specified to make learning effective. However only the support materials meant for practice work in class was used at this stage.

A comprehensive test administered at the beginning and end of the course indicated whether terminal behaviour has been attained as indicated on the test. The rate of progress also could be measured by comparing the mean performances in the pre and post tests. The following table presents the mean scores on the comprehensive tests and criterion tests.

Table 4.1 : Table showing Mean and SD of various tests

	Pretest	Unit I	Unit II	Unit III	Posttest
Mean Score	28.06	53.06	37.40	44.66	46.00
SD	3.33	16.12	10.29	9.00	8.82

As may be seen from the above table the mean performance of the adult learners increased from 28% on the pretest to 46% in the posttest. The greatest gain has been in the area of conversational English and the least in reading. Although there has been a considerable gain from the below pass-level achievement (28%) to 46% in the posttest, denoting a development of skills, in view of the mastery-level the progress has not been satisfactory. The ultimate object of field-testing is to pin-point specific areas which need improvement in the programme. A study of the test-performance and general observation gave scope for further modifications in the course on the whole.

At this point it was decided to make the support material on grammar items a necessary and integral part of the course, seeing that the adults who could evince good progress in conversational items failed when they had to construct a sentence whether it be in speech or in writing. The point that should be stressed here is that a good part of the support material prepared with a view to providing remedial instruction to those who were in need of it came to be given a more or less uniform treatment and required to be studied by all the learners.

The criterion tests also required modifications in terms of a uniform difficulty level throughout all the three units.

4.7 REVISION AND FINAL DRAFT

The material thus modified and revised based on data gathered during the field-trial was finalised for validation.

The following chapter reports the details regarding the experiment conducted for the validation of the course along with its results.

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