

## CHAPTER 3

## METHODOLOGY

The present study was undertaken to find out the "Impact of Rural Functional Literacy Programme on rural women of Jorhat district of Assam" who had attended the classes of RFLP during the year 1986-87 with respect to their age, religion, caste/sect, marital status, education, occupation, type of work, number of hours of work, ethnic group, value for literacy education, type of family, size of the family, number of children in the family, family encouragement, teacher effectiveness, and classroom facilities.

This chapter describes the following :

- 3.1 Pilot study
- 3.2 Determination of population and sample
- 3.3 Research tools for collection of data
- 3.4 Validity of the tools
- 3.5 pre-testing and reliability of the tools
- 3.6 Procedure of collection of data
- 3.7 Scoring and categorizing the data
- 3.8 Analysis of data

### 3.1 Pilot Study

A pilot study was conducted on 30 learners of the classes of Rural Functional Literacy Programme (RFLP) in 3

centres of Honowal tea-garden of Jorhat district of Assam on 20th November, 1986, to see the feasibility of the study. The tool of the study consisted of an achievement test on literacy, that is, reading, writing, and numeracy. The Project Officer of RFLP, Jorhat district of Assam arranged the visits to the centres for the study and accompanied the investigator for conducting the pilot study.

The investigator by this study tried to find out the following aspects to judge the feasibility of the study in real conditions :

- i) Cooperation of the officers, supervisors, teachers, learners and the local people.
- ii) Ability of the respondents to respond to the statements and the questions of the tool.
- iii) Possibility and availability of transport communication.
- iv) Amount of time needed to conduct the achievement test.
- v) Size of the group and availability of the learners in various centres.

It was found out by conducting the pilot study in 3 Adult Education Centres (AECs) of the classes of RFLP for women in Jorhat district, that :

- i) the officers, supervisors, teachers, learners and the local people were cooperative.

- ii) the learners of the classes understood the language of the tool prepared for the purpose and were able to respond to the questions of the test paper.
- iii) the transport communication was very difficult due to poor condition of the roads and for rainy season.
- iv) the time spent on conducting the achievement test was approximately one and a half hours.
- v) Size of the group of the learners was adequate and the learners were available in the centres. It was seen that the learners were enthusiastic in coming to the centre and in appearing for the test..

### 3.2 Determination of Population and Sample

The population of the study comprised of the rural women of Assam.

The sample for the study was taken from one district namely, Jorhat district, out of 18 districts of Assam. Information from each of the four blocks of Jorhat district of Assam, about the Rural Functional Literacy Programme (RFLP) conducted for women during 1986-87 was collected by the investigator through correspondence with authority and personal visits, for selection of the blocks.

Three community development blocks of Jorhat district of Assam, out of four, under which the classes of RFLP for women

were conducted in the Adult Education Centres (AECs) during the year 1986-87, were selected for the study. Total 77 centres, out of 154 women centres, were selected from these 3 selected blocks. Centres were selected in such a way so that learners from all four sides of each block namely, east, west, north and south were covered. A total of 500 women were selected for the study who had fulfilled the following criteria :

The women who -

- had attended at least 65 per cent of the classes of RFLP during the year 1986-87.
- were within the age of 15 to 35 years at the time when they attended the classes.
- were illiterate or semi-literate at the time of joining the classes.

The women from each centre and under each community development block were selected as shown in Table 3.1. The list of the centres of RFLP and the maps of 3 blocks from where data was collected are given in Appendix III.

The investigator had gone through the office records of the District Adult Education Officer, Jorhat and availed the lists of the learners and centres of the year 1986-87, and randomly selected the Adult Education Centres where the classes of RFLP for women in 1986-87 were conducted regularly.

Table 3.1 Number of Women Taken from Each Centre  
of RFLP under Each Community Development  
Block of Jorhat District of Assam

Name of the blocks	Total centres of women (1986-87)	Total centres taken (50%)	Women from each centre	Total women from each block
1. Jorhat North-West Development Block	52	26	7	182
2. Titabar Development Block	78	39	6	234
3. Jorhat Development Block	24	12	7	84
Total	154	77	-	500

### 3.3 Research Tools for Collection of Data

A questionnaire having six parts was constructed to be used as a tool for collection of required data for the study, (Appendix IV). The items of the tool were prepared after the investigator did the following :

- Collected the prescribed syllabus, courses and textbooks of RFLP from the Directorate of Adult Education, Assam, Dispur, Guwahati, to prepare the tool.
- Read the textbooks of the RFLP which were prescribed by the authority and gone through the whole course of RFLP.
- Read books and research articles which were related to the present study.
- Reviewed other research studies related to the present study.
- Discussed with the subject matter specialists, the District Project Officer, RFLP, Jorhat and District Adult Education Officer, Jorhat district, Jorhat.
- Interviewed some rural adult women who had attended the classes of RFLP conducted during the year 1986-87.

#### 3.3.1 Description of the Tools

##### 3.3.1.1 The First Part of the Tool:

The first part of the questionnaire consisted of a check list and questions regarding the background of the learners, etc:

## I Personal Factors

1. Age
2. Religion
3. Caste/sect
4. Marital status
5. Education
6. Occupation
7. Type of work
8. Number of hours of work
9. Ethnic group
10. Value for literacy education

## II Family Factors

11. Type of the family
12. Size of the family
13. Number of the children in the family
14. Family encouragement

## III Institutional Factors

15. Concept of teacher effectiveness
16. Classroom facilities

### 3.3.1.2 Second Part of the Tool

The second part of the questionnaire consisted of the achievement test administered to measure the literacy achievement of the women learners achieved through the classes of RFLP in (a) reading, (b) writing, and (c) numeracy.

### 3.3.1.3 Third Part of the Tool

The third part of the questionnaire consisted of 33 multiple choice type statements regarding the knowledge gained

through the classes of RFLP to know the level of awareness of the women regarding (a) agriculture and veterinary, (b) family planning and health and hygiene, (c) general knowledge about politics, economics, history and education.

#### 3.3.1.4 Fourth Part of the Tool

The fourth part of the questionnaire consisted of statements with structured answers of multiple choice type of variety and rating scale on functionality to know the level of application of knowledge by the women which they might have gained through the classes of RFLP. It contained ten questions each having sub-questions regarding (a) family planning, (b) economics, (c) agriculture , and (d) education.

#### 3.3.1.5 Fifth Part of the Tool

The fifth part of the questionnaire consisted of 2 points rating scale to measure the opinion of the women regarding the usefulness of RFLP for women. This part had 22 statements out of which 13 were for and 9 were against the usefulness of RFLP.

#### 3.3.1.6 Sixth Part of the Tool

The sixth part of the questionnaire consisted of 2 points rating scale to measure the opinion of the women regarding women development through education. It consisted of total 17 statements out of which 11 statements were for and 6 were against the women development through education.



### 3.4 Validity of the Tools

The questionnaire was constructed in English language. Afterwards the whole questionnaire was translated into the regional language, Assamese, as all the respondents of the study were from Assam.

#### 3.4.1 Content Validity of the Tools

The questionnaire was checked by two content experts to see that all the aspects of the content were included with proper emphasis. The experts were Shri N. N. Das, District Adult Education Officer, Jorhat district and Shri B. N. Baruah, Project Officer, RFLP, Jorhat, Assam who were directly related to the RFLP.

### 3.5 Pre-testing and Reliability of the Tools

The questionnaire was checked by Shri J. N. Sharma, Siddhanta, Head, Department of English, J.B.College, Jorhat and Shri S. K. Borthakur, Lecturer, Department of English, D.H.S. Kand College, Dibrugarh, Assam for clarity and correctness of the language used and proper emphasis and correct translation from English to Assamese language as they were expert in both the languages.

Pre-testing was done on 17th June, 1981 and 17th July 1987 on 30 learners by administering test-re-test method by keeping one month gap to check the reliability of the tools.

Coefficient of correlation between 2 sets of scores was computed to see the reliability of the tool to measure the

level of awareness, development of opinions of the respondents regarding usefulness of RFLP and development of opinions of the respondents regarding women development through education.

The coefficient of correlation was computed by using the following formula -

$$r = \frac{\sum x y}{\sqrt{\sum x^2 \times \sum y^2}}$$

where r = coefficient correlation

x = score of first test

y = score of second test

(Garrett, formula 28, p. 139, 1966)

The reliability coefficient of the third, 5th and 6th parts of the tool for the aspects of awareness, opinion regarding usefulness of RFLP and opinion regarding women development through education was found to be 0.98 which was considered reliable. The reliability of each aspect of the test was found as :

<u>Aspects</u>	<u>Reliability coefficient</u>
- Awareness	0.97
- Opinion regarding usefulness of RFLP	0.98
- Opinion regarding women development through education	0.99

The questionnaire was checked by Dr. N. S. Pathak,

Professor of Psychology, Faculty of Educational Psychology, M. S. University of Baroda for the method to be utilized for statistical analysis of the data.

### 3.6 Procedure of Collection of Data

Prior to pre-testing the investigator had met the Additional Director of Adult Education, Assam, Guwahati with a letter seeking permission to conduct the study and to collect the necessary information from Jorhat district of Assam (Appendix V). After getting the permission and direction to the District Adult Education Officer, Jorhat for giving the investigator all possible help and cooperation, the investigator contacted the following officers seeking all possible local help to facilitate and speed up the collection of data:

- The District Adult Education Officer, Jorhat.
- The District Project Officer, RFLP, Jorhat.
- The Assistant Project Officer, RFLP, Jorhat.
- The Block Development Officers of (i) Jorhat North-West Community Development Block, Dhekargara, Jorhat; (ii) Titabar Community Development Block, Titabar - Jorhat; and (iii) Jorhat Community Development Block, Baghchung, Jorhat, Assam.

The investigator had administered the questionnaire and the achievement test personally to each learner. She asked each question of parts III and IV of the questionnaire orally and the responses were read out to them. The pre-structured responses were tick marked by the investigator according to

the answers of the respondents. The statements of the parts V and VI of the questionnaire were read out by the investigator and the respondents had to say whether they agreed with the statement or not and whether they developed that opinion before or after attending the classes of RFLP.

The investigator was accompanied by the supervisors of RFLP of the areas which were under their supervision to show the location of the Adult Education Centres and to introduce the instructresses and the learners of the classes of Rural Functional Literacy Programme.

Data collection was done in the first part of the year 1988.

### 3.7 Scoring and Categorizing the Data

The weightage given to various items of all the six parts of the questionnaire is given in Appendix IV.

After all the information of all six parts of the tool had been collected, it was scored. The data of all the parts of the tool were categorized to facilitate the analysis of the data. The total number of the respondents which might fall in each category was considered while deciding the range of score for each category. The categorizing of all aspects of all parts of the tool were decided in the same pattern except the achievement test which was done according to the guidelines of the Directorate of Adult Education, Government of India, New Delhi.

### 3.7.1 Scoring and Categorizing the First Part of the Tool

The first part of the questionnaire contained questions regarding background information of the respondents of the study. For the variables namely, age, religion, caste/sect, marital status, education, occupation, type of work, number of hours of work, ethnic group, type of the family, size of the family, number of children in the family, no scoring had to be done and they were categorized directly according to the questions.

The questions about the variables namely, value for literacy education, family encouragement, teacher effectiveness, and classroom facilities had to be scored to find out the extent of responses. Minimum and maximum scores for these variables were as :

<u>Variables</u>	<u>Question Number</u>	<u>Minimum score</u>	<u>Maximum score</u>
- Value for literacy education	10	9	27
- Family encouragement	14,15	25	75
- Teacher effectiveness	16	12	36
- Classroom facilities	17,18,19	0	15

The categorization of each variable with range of score and description wherever needed is given below :

<u>Sl. No.</u>	<u>Variables</u>	<u>Categories</u>	<u>Range of score/ description</u>
1.	Age	a) Young b) Older	15-25 years 26-35 years
2.	Religion	a) Hindu b) Muslim c) Chiristian	

Sl. No.	Variables	Categories	Range of score/ description
3.	Caste/sect	a) General b) SC/ST c) OBC/MOBC	(Appendix I)
4.	Marital status	a) Unmarried b) Married	Including widow, divorced, and separated.
5.	Education	a) Illiterate b) Semi-literate	Those who could read, write and count to some extent.
6.	Occupation	a) Non-working b) Working	
7.	Type of work	a) Farm labourer b) Tea-garden labourer c) Other worker	
8.	Number of hours of work	a) Less hours b) More hours	Working for less than 4 hours Working for 4 hours and above
9.	Ethnic group	a) Assamese b) Non-Assamese	
10.	Value for literacy education	a) Highly valued b) Poorly valued	16 - 22 10 - 15

## II Family Factors

11.	Type of the family	a) Nuclear family b) Joint family	Husband, wife and children. Husband, wife, children, inlaws and relatives.
12.	Size of the family	a) Small family b) Medium family c) Large family	2-5 members 6-10 members More than 10 members
13.	Number of children in the family	a) Few children b) More children	1-4 children More than 4 children
14.	Family encouragement	a) More encouraged b) Less encouraged	31 - 37 27 - 30

<u>Sl. No.</u>	<u>Variables</u>	<u>Categories</u>	<u>Range of Score/Description</u>
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### III Institutional Factors

15. Teacher effectiveness	a) Effective	21-33
	b) Non-effective	13-20
16. Classroom facilities	a) Adequate	10-15
	b) Inadequate	5-9

### 3.7.2 Scoring and Categorizing of the Second Part of the Tool

The second part of the tool was the test on literacy achievement. It had 3 sub-aspects namely, (a) reading, (b) writing, (c) numeracy. The scores of each sub-aspect of literacy achievement are given below :

<u>Sub-aspects</u>	<u>Minimum Score</u>	<u>Maximum Score</u>
(a) Reading	4	12
(b) Writing	3	9
(c) Numeracy	3	9

The respondents were categorized for the levels of literacy achievement in each sub-aspect as score scored by them as :

<u>Levels of Literacy Achievement</u>	<u>Sub-aspects of Literacy</u>		
	<u>a. Reading</u>	<u>b. Writing</u>	<u>c. Numeracy</u>
Good	10-12	8-9	8-9
Average	6-9	5-7	5-7
Poor	4-5	3-4	3-4

The scoring of each question in the literacy achievement test was scored as :

<u>Sub-aspects</u>	<u>Description</u>	<u>Score</u>	
		<u>Printed</u>	<u>Hand-written</u>
a. Reading	<u>Fluency</u>		
	- Those who read at least 20 words correctly and fluently were marked	3	3
	- Those who read 10 to 19 words correctly and fluently were marked	2	2
	- Those who read less than 10 words were marked	1	1
	<u>Pausation</u>		
	- Those who paused and emphasised correctly at least 60 per cent were marked	3	3
	- Those who paused and emphasised correctly at least 30 per cent were marked	2	2
	- Those who paused and emphasised correctly less than 30 per cent were marked	1	1
b. Writing	<u>Printed passage</u>		
	- Those who wrote whole passage correctly with correct spacing and punctuation were marked	3	-
	- Those who wrote whole passage correctly but without proper spacing and punctuation were marked	2	-
	- Those who wrote incorrectly without spacing and punctuation were marked	1	-
	<u>Hand-written passage</u>		
	- Those who wrote all correct answers with correct writing were marked	-	3
	- Those who wrote at least 3 correct answers with correct writing were marked	-	2
	- Those who wrote less than 3 correct answers with correct writing were marked	-	1



<u>Sub-aspects</u>	<u>Description</u>	<u>Score</u> <u>Hand-written</u>
	- Those who filled up all gaps correctly were marked	3
	- Those who filled up at least 50 per cent gaps correctly were marked	2
	- Those who filled up less than 50 per cent gaps were marked	1
c. Numeracy		
		<u>Addi- Subtrac- Cost and</u> <u>tion tion value</u>
	- All correct answers were marked	3 3 3
	- At least 50 per cent answers correct were marked	2 2 2
	- Less than 50 per cent answers correct were marked	1 1 1

The achievement test on literacy was prepared and scored on the basis, "Evaluation of learning outcomes"— guidelines on learner evaluation by the Directorate of Adult Education (DAE), Ministry of Education, Government of India, New Delhi, 1985.

### 3.7.3 Scoring and Categorizing the Third Part of the Tool

The third part of the tool had 33 multiple choice type of statements to measure the development of awareness regarding 3 sub-aspects. The statements were divided into 3 sub-aspects as follows :

<u>Sub-aspects of Awareness</u>	<u>Question Nos.</u>	<u>Minimum Score</u>	<u>Maximum Score</u>
a) Agriculture and Veterinary	1,2,7,8, 11,17,19, 29,30,32,33.	0	20

<u>Sub-aspects of Awareness</u>	<u>Question Nos.</u>	<u>Minimum Score</u>	<u>Maximum Score</u>
b) Family planning and health and hygiene	3,4,5,6,9, 23,24,25, 27,28.	0	47
c) General knowledge	10,12,13,14, 15,16,18,20, 21,22,26,31.	0	15

The respondents were categorized for the level of awareness according to the score scored by them, as:

<u>Level of Awareness</u>	<u>Sub-aspects of Awareness</u>		
	<u>a) Agriculture &amp; Veterinary</u>	<u>b) Family planning and Health and Hygiene</u>	<u>c) General Knowledge</u>
High	13-17	17-24	11-14
Medium	10-12	13-16	8-10
Low	5-9	6-12	3-7

#### 3.7.4 Scoring and Categorizing the Fourth Part of the Tool

The fourth part of the tool had 10 questions to measure the development of functionality of the respondents. The questions were divided into four sub-aspects as follows :

<u>Sub-aspects of Functionality</u>	<u>Question Nos.</u>	<u>Minimum Score</u>	<u>Maximum Score</u>
a) Family planning	1	0	1
b) Economics	2, 3, 6,7.	41	124
c) Agriculture	4,5.	0	10
d) Education	8,9,10.	21	63

The respondents were categorized for the level of functionality according to the score scored by them, as:

Level of Functionality	Sub-aspects of Functionality			
	a) Family planning	b) Economics	c) Agri- culture	d) Education
High	1	60-83	1	31-42
Low	0	45-59	0	23-30

### 3.7.5 Scoring and Categorizing the Fifth Part of the Tool

The fifth part of the tool had 22 statements in the form of yes/no. It was categorized according to the score scored by the respondents as :

Opinion of the respondents regarding usefulness of RFLP:	Minimum Score	Maximum Score
	22	44

The levels and range of score of the development of opinion regarding usefulness of RFLP are as follows :

<u>Level of Opinion</u>	<u>Range of Score</u>
Favourable	34 - 44
Unfavourable	22 - 33

### 3.7.6 Scoring and Categorizing the Sixth Part of the Tool

The sixth part of the tool had 17 statements in the form of yes/no. It was categorized according to the score scored by the respondents, as:

Opinion of the respondents regarding women development through education:	Minimum <u>score</u>	Maximum <u>Score</u>
	17	34

The levels and range of score of the development of opinion regarding women development through education are as:

<u>Level of Opinion</u>	<u>Range of Score</u>
Favourable	27-34
Unfavourable	17-26

### 3.8 Analysis of Data

The plan for analysis of data was made in consultation with Dr. N. S. Pathak, Professor, Department of Psychology, Faculty of Educational Psychology, M. S. University of Baroda. Different statistical measures for various purposes were used for analysis of the data, they are as :

<u>Purpose</u>	<u>Statistical Measures</u>
- To find out the background information of the respondents.	Percentage
- To find out itemwise responses of the respondents regarding the variables- value for literacy education, family encouragement, teacher effectiveness, and Classroom facilities.	Percentage
- To find out the overall levels of literacy achievement, awareness, functionality, development of opinion of the respondents regarding usefulness of RFLP, and development of opinion regarding women development through education.	Percentage
- To find out the differences in the levels	

of literacy achievement, awareness, functionality, development of opinion of the respondents regarding usefulness of RFLP, and development of opinion of the respondents regarding women development through education with respect to the selected variables.

Chi-square test

The formula for calculating the  $\chi^2$  (Chi-square) value was based on Garrett's book (1966, formula 69, p. 253) formula :

$$\chi^2 = \frac{(f_o - f_e)}{f_e}$$

Where,

$f_o$  = Observed frequency

$f_e$  = Expected frequency