

CHAPTER-V

RESEARCH DESIGN AND PROCEDURE

A) SAMPLING PROCEDURE :

In this chapter the researcher has intended to describe the sampling which he has taken for the study and investigation. For this he has thought over various methods of sampling. After a long thought he has selected the Simple Random Sampling for preparing reading vocabulary for adults between the age group of 15-35 years because this method requires only a minimum knowledge of the population, its representative of the population, easy to draw inferences and free from bias and prejudice.

1) Sampling of Adult Population :

The researcher has thought over the factors and he has finally decided the following important factors in considering the population of adult chosen as the sample for the problem. For the present study, the population for the problem is -

- 1) The adult is living in one village out of 15 villages nearby Peth Vadgaon.
- 2) The adult is doing an occupation i.e. cattle breeding, carpentry, pottery for their earnings.
- 3) The adult population consists of both the sexes i.e. male and female.
- 4) The adult population is illiterate.
- 5) The adult population consists of different castes, religions, beliefs and coming from various socio-economic strata of the society.

The problem of selecting sample from this population for the present study is sought in the following manner. The sample ought to be such that it fulfils all the above factors. The researcher has selected 15 villages near Peth Vadgaon as the territorial limit for the present investigation. Adult population of these fifteen villages can act as a cross section of the whole adult population in the State of Maharashtra as well as this can represent the adults of different castes, religious and beliefs which came from various socio-economic adult strata of the society. It means this adult population has a remarkable balanced proportion of these various aspects mentioned above.

Description of Adult Population

Selected as a Sample :

For selecting the number of adults as a sample, it is decided to take a single village as a unit and to include minimum 2 adults from each sex and vocation. Thus, the total number of 100 adults as covered in the study. In all 15 villages are selected as a sample. It can be shown in the following mathematical formula.

$$\begin{aligned}
 \text{Strength of Sample} &= \frac{\text{Expected Adult Population}}{\text{Selected Village Population}} \\
 &= \frac{100}{15} \\
 &= 6.66 \\
 &= 7
 \end{aligned}$$

From the above it is clear that 7 adults from each village has to be selected on a random basis. Though it was decided that 7 adults from each village has to be selected, it is not feasible to do so

TABLE No. 1

NUMBER OF ADULT SELECTED FROM EACH VILLAGE AS A SAMPLE

Sr. No.	Name of the village	No. of illiterates in the village		No. of illiterates between age group 15-35 years in village			No. of illiterate adults selected between age group (15-35 years)		Percentage selected	
		Male	Female	Male	Female	Total	Male	Female		Total
1.	Bhadole	1585	2346	321	427	748	6	6	12	1.60
2.	Bhendavade	630	1028	130	212	342	7	5	12	3.50
3.	Chavare	539	850	109	187	296	4	2	6	2.02
4.	Kasarwadi	326	539	72	121	193	2	3	5	2.59
5.	Latavade	804	1291	172	231	403	5	2	7	1.74
6.	Manpadale	582	887	119	195	314	1	1	2	0.64
7.	Minache	639	1071	136	211	347	4	3	7	2.01
8.	Nillewadi	223	371	65	78	143	1	1	2	1.40
9.	Padali	541	747	112	151	263	1	1	2	0.76
10.	Pargaon	1323	2106	272	521	793	4	6	10	1.26
11.	Sambhapur	260	319	53	67	120	2	2	4	3.33
12.	Savarde	1080	1688	217	342	559	4	4	8	1.43
13.	Talsande	690	1184	142	241	383	2	4	6	1.57
14.	Tasgaon	261	439	54	89	143	1	2	3	2.09
15.	Top	1041	1524	209	307	516	6	8	14	2.71
Total :		10524	16390	2183	3380	5563	50	50	100	28.65
										Average : 1.91

The frequency table of the age group of selected illiterate adults has been given below :

TABLE-NO.2
FREQUENCY-DISTRIBUTION OF THE AGES OF ADULTS

Class Intervals (Years)	Frequency			Cumulative frequency	
	Male	Female	Total	Male	Female
15 - 17	4	4	8	50	50
18 - 21	5	5	10	46	46
21 - 24	7	7	14	41	41
24 - 27	10	10	20	34	34
27 - 30	9	9	18	24	24
30 - 33	7	7	14	7	7
33 - 35	7	7	14	7	7
Total :	50	50	100		

Mean - 25.00

Median - 28.86

Histogram and the frequency polygon of the ages of adults based on the table above.



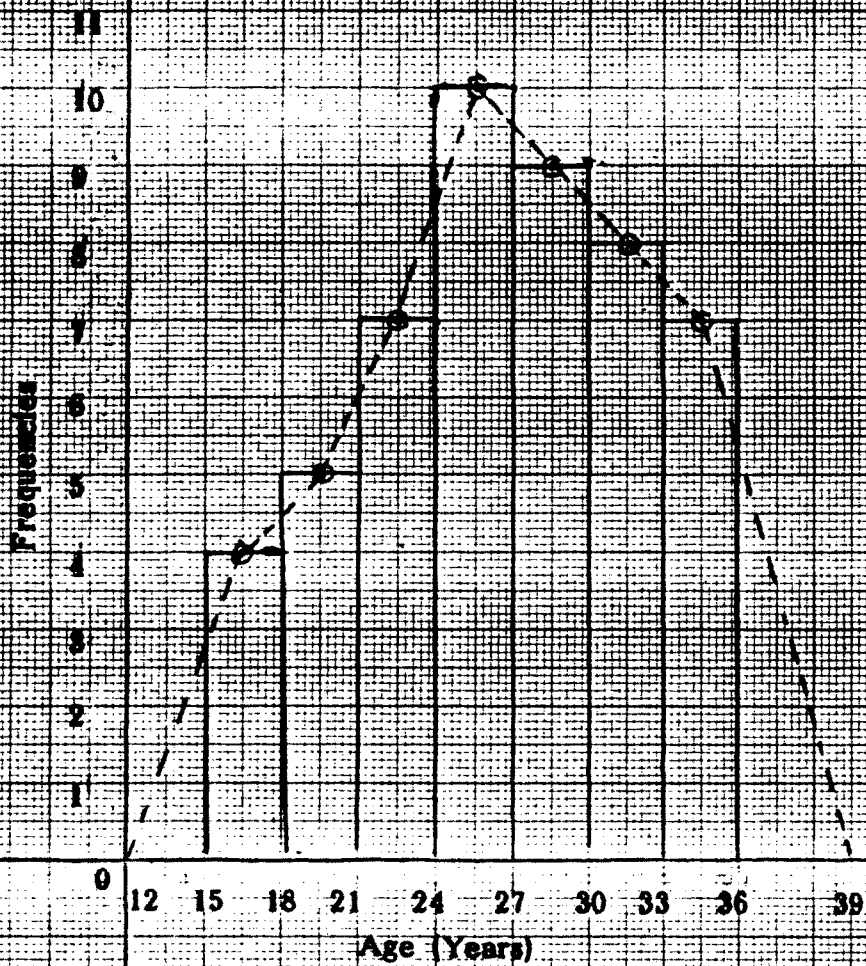
GRAPH No. 1

Histogram and Frequency Polygon of the ages of adults (Male) based on table No. 2

Scale:

1 c.m. = 1 frequency

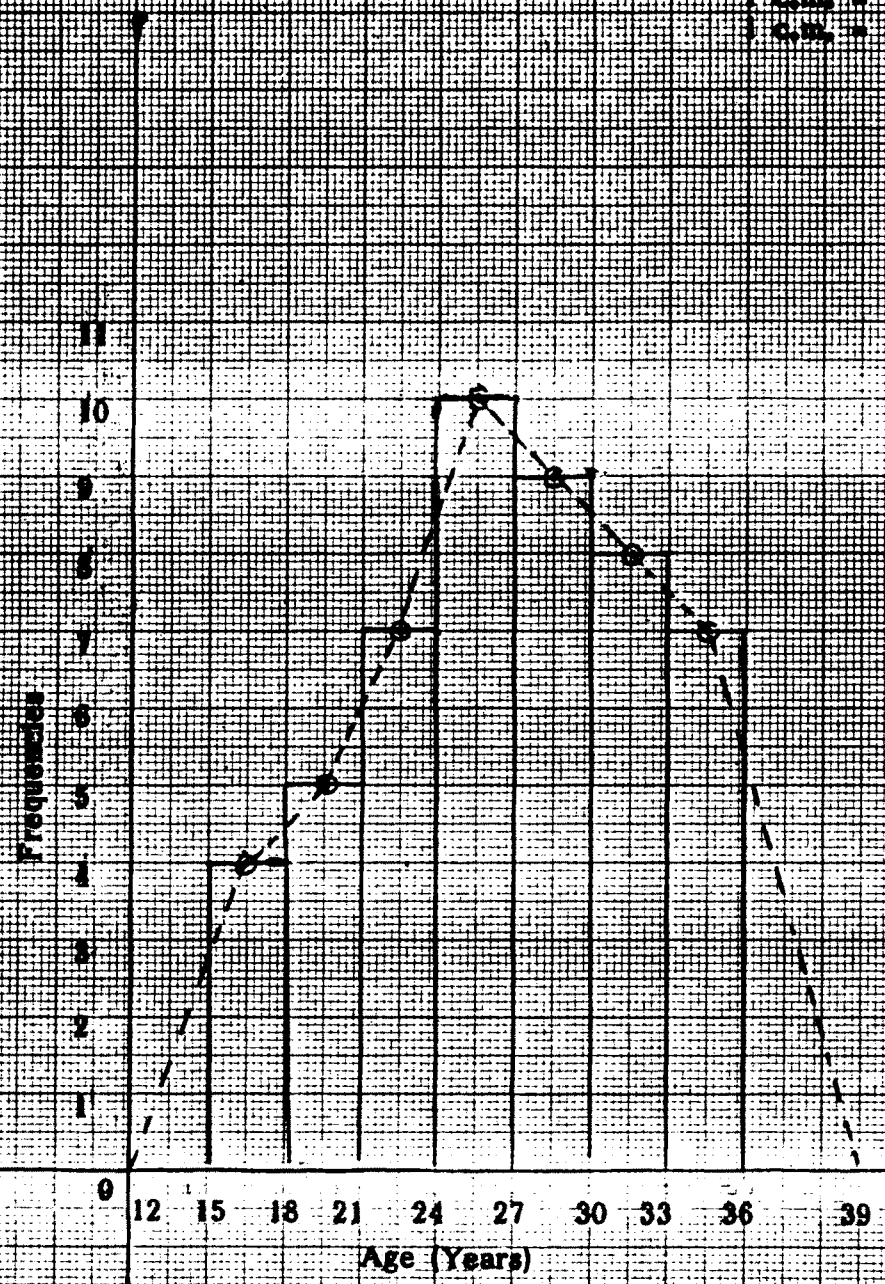
1 c.m. = 3 years



GRAPH No. 2

Histogram and Frequency Polygon of the ages of adults (Female) based on table No. 2

Scale:
 1 c.m. = 1 frequency
 1 c.m. = 3 years



II) Selection of Area as a Sample :

Hatkanangale Taluka of Kolhapur district area was selected as an area of investigation because no single survey had been conducted in this area.

Information of Villages in Hatkanangale Taluka

In Hatkanangale Taluka there are 60 villages in all. Although Hatkanangale Taluka is not urbanized still it has some urban population residing in Ichalkaranji, Peth Vadgaon etc. The present investigation is limited to villages nearby Peth Vadgaon only. It is related to 15 villages in all. This area has been selected because B.Ed. College, Peth Vadgaon has conducted Adult Education classes. There is a great desire for learning in adult population. To the investigator this area is quite feasible as he lives in Vathar Tarf Vadgaon. This area has a variety of businessmen. Hence, other 45 villages have been omitted.

Excluding 45 villages, there are only 15 villages. So the investigator has selected them for preparing reading vocabulary for adult population. The names of these villages are written below :

1. Bhadole
2. Bhendavade
3. Chavare
4. Kasarwadi
5. Latwade
6. Manpadle
7. Minache
8. Nelewadi
9. Padali
10. Pargaon
11. Sambhapur
12. Savarde

13. Talsande
14. Tasgaon
15. Top.

Location of 15 villages :

Hatkanangale Taluka is a developing taluka. Some parts of this taluka like M.L.D.C., Shirol and Ichalkaranji are newly established and some are old one. The locality varies in its socio-economic educational backgrounds and hence adult population also varies in its background. Hatkanangale Taluka is broadly divided in nine parts along with their villages situated in them. These nine parts of the taluka were arranged alphabetically. Then as per random sampling procedure the researcher selected villages from the list alternatively from the bottom of the list. Thus, the last village is Vadgaon and alternative of Vadgaon is Pargaon. In the peryphery of these two villages there comes in all 15 villages which are required for the research of this study. They may be divided in the following manner :

TABLE No.3

SITUATED VILLAGES DIVIDED IN-NINE-PARTS
OF HATKANANGALE TALUKA

Sr. No.	Name of the Part	Name of Villages	Total No. of villages
1.	Hatkanangale	Alte, Biradevwadi, Laxmiwadi, Hatkanangale, Majale, Korochi, Tardal	7
2.	Herle	Halondi, Herle, Male, Nagaon, Shirol, Mouje Vadgaon	6

TABLE No.3 (Contd...)

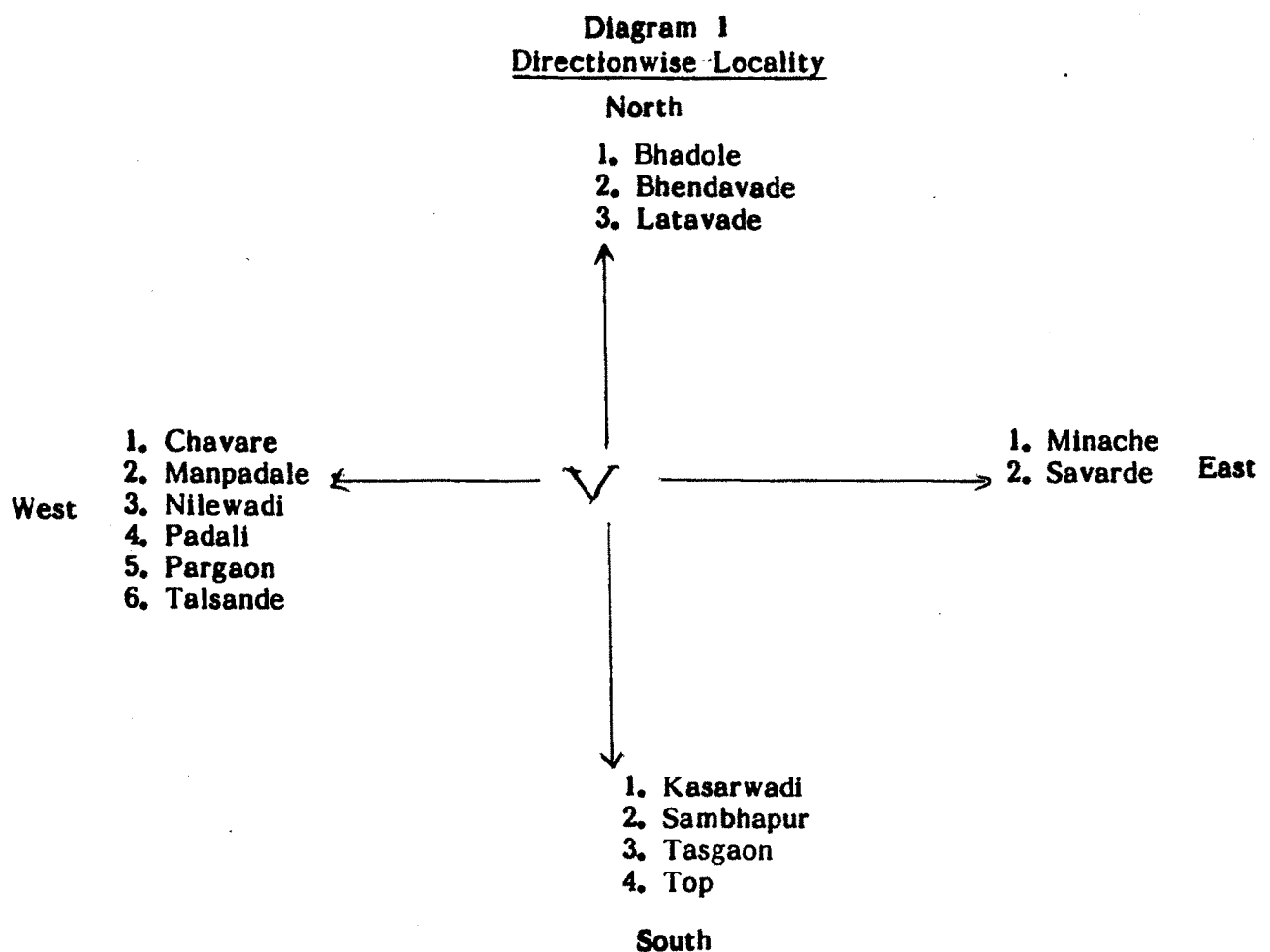
Sr. No.	Name of the Part	Name of Village	Total No. of villages
3.	Hupari	Hupari, Ingali, Pattan-Kodoli, Rendal, Rangoli, Jangamwadi, Talandage, Yalgud	8
4.	Kabnur	Chandur, Kabnur, Rui, Sajani, Tilawani	5
5.	Kini	Ambap, Ambapwadi, Kini Ghunaki, Vathar Tarf Vadgaon	5
6.	Kumbhoj	Hingangaon, Kumbhoj, Khochi, Nej, Narande, Vathar Tarf Udgaon	6
7.	Paragaon	Chavare, Manpadale, Padali, Nilewadi, Pargaon, Talsande	6
8.	Rukadi	Atigre, Chokak, Mangaon, Mangaonwadi, Mudshingi, Rukadi	6
9.	Vadgaon	Bhadole, Bhendavade, Latavade, Minache, Savarde, Sambhapur, Top, Tasgaon, Kasarwadi, Vadgaon (Kasaba) Kapurwadi	11
Total :			60

Nature of the Villages :

The investigator has selected last two parts namely Vadgaon and Pargaon to study the problem. In Vadgaon area there are 9 villages and in Pargaon part there are 6 villages. Thus, the total number in these two parts is 15. These 15 villages are territorially one. There are adult education classes run by B.Ed. College, Peth Vadgaon in

collaboration with the Shivaji University. Hence the most adults are educationally aware. Non-formal primary project for dropouts is being tried out in this area only. These villages are a part of the reserved constituency of Maharashtra Legislative Assembly. Most people are illiterate. Hence, this area has been fixed to study this problem.

The researcher has thought over for selecting the area sample from the point of view of directions. The following diagram will show places of villages in each direction.



To the North of Vadgaon there are 3 villages. To the south of Vadgaon there are 4 villages to the east of Vadgaon there are 2 villages. To the west of Vadgaon there are 6 villages. This diagram shows that all directions and villages have been covered for this random sampling purpose. There is a variation in number of villages but it is due to size of population and coverage of occupations. Hence this area sample is most scientific because it is also within the circumference of 15 kms. from the centre i.e. from Vadgaon all the 15 villages are within 15 kms. distance.

The accompanying map shows the distance of each village from Vadgaon.

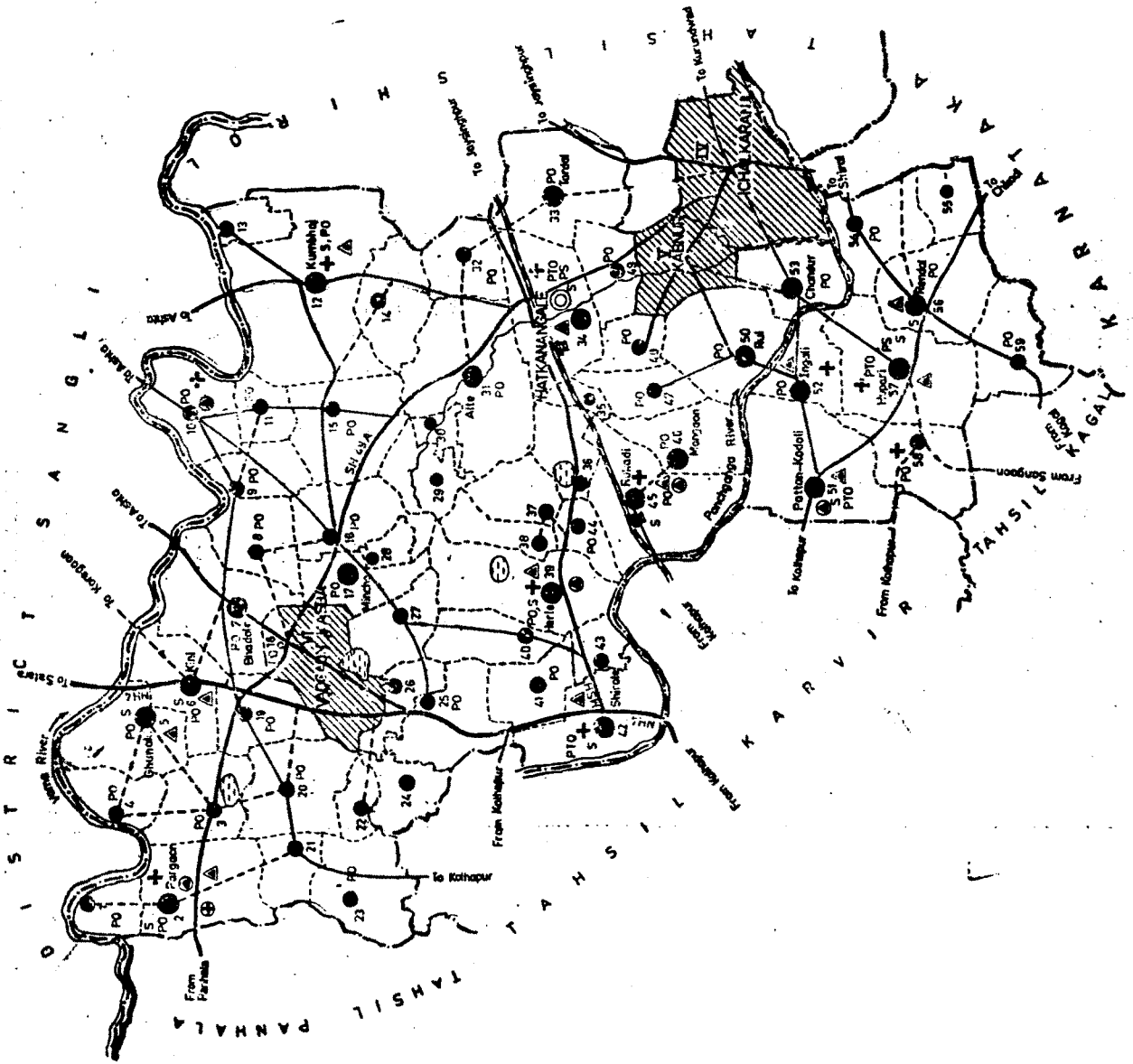
III) Selection of Occupations as a Sample :

As per census booklet source occupations are two types. One of them is major occupation and other is minor one. Under major occupations agriculture occupies the first place because India is a land of agricultural occupation. Hence, agricultural services like cattle breeding, sheep rearing, milk production, poultry, fishery etc. are selected for finalising reading vocabulary for adults. At the same time minor occupations rope weaving, carpentry, pottery, transportation, personal services, cycle repair, retail fruit and vegetables selling have been considered. The following table shows the various occupations selected to study this problem.

MAHARASHTRA

TAHSIL HATKANANGALE

DISTRICT KOLHAPUR



BOUNDARY STATE	---
" DISTRICT	---
" TAHSIL	---
" VILLAGE WITH LOCATION CODE NUMBER	---
HEADQUARTERS-TAHSIL	⊙
VILLAGES WITH POPULATION SIZE: BELOW 200	●
200-499; 500-999; 1000-4999; 5000 AND ABOVE	●
URBAN AREA WITH LOCATION CODE	●
NATIONAL HIGHWAY	▨
STATE HIGHWAY	▨
IMPORTANT METALLED ROAD	▨
UNMETALLED AND OTHER ROADS	---
RAILWAY LINE WITH STATION, BROAD GAUGE	▬
RIVER AND STREAM	~
WATER FEATURES	~
POST AND TELEGRAPH OFFICE	+
POST OFFICE EXCLUDING P.M.S.	+
HIGH/SECONDARY SCHOOL	+
POLICE STATION EXCLUDING RAILWAY POLICE STATION	+
HOSPITAL, PRIMARY HEALTH CENTRE, DISPENSARY	+
IMPORTANT VILLAGE MARKET/JAT	+

Note: Boundary not available in respect of village L.C. No. 18 and Vadgaon Kasba town.
 N.S.H. - Major State Highway

15 VILLAGES UNDER THIS RESEARCH STUDY IN HATKANANGALE TALUKA

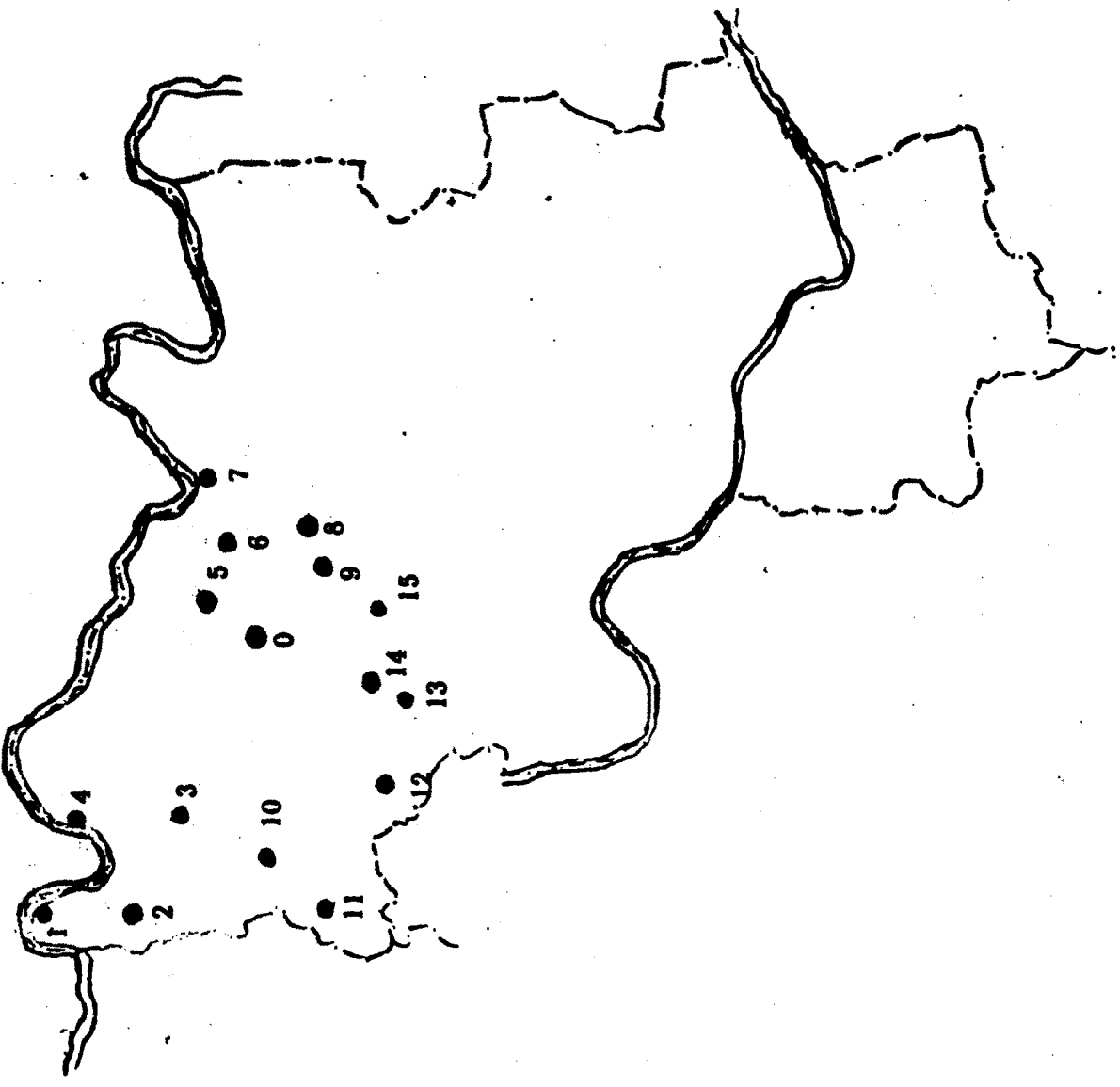


Table-No-4

Distance of each village from Peth-Vadgaon

Sl. No	Name of village	Distance from Peth Vadgaon in Km.
0	Vadgaon	0
1	Nilewadi	15
2	Pargaon	10
3	Talesande	8
4	Chavare	12
5	Bhadole	3
6	Latavade	5
7	Bhendavade	8
8	Savarde	5
9	Minache	3
10	Padali	9
11	Manpedale	12
12	Kasarwadi	9
13	Top	6
14	Sambhapur	5
15	Tasgaon	5

TABLE-NO.5OCCUPATIONWISE ILLITERATE-POPULATION

Sr. No.	Name of Occupation	Male	Female	Total
1.	Agricultural Services			
	Cattle breeding and milk production	4	5	9
	Sheep rearing	4	5	9
	Poultry	2	2	4
	Farm labourers	5	5	10
	Fishery	2	0	2
2.	Non-agricultural occupations			
	Mining	5	5	10
3.	Article Production			
	Floor Mill	0	2	2
	Rope Production	5	5	10
	Carpentry	2	1	3
	Cane and bamboo work	2	2	4
	Cobbler	2	4	6
4.	Non-metal Production			
	Pottery	1	4	5
5.	Other productive occupations			
	Gold, smithy	1	0	1
6.	Construction			
	Construction and supervision	1	1	2
	Over buildings, roads, wells painting, electric fitting	1	0	1

TABLE-NO. 5 (Contd.)

Sr. No.	Name of Occupation	Men	Women	Total
7.	Retail Sale			
	Fruits and vegetables retail salesman	1	1	2
	Cattle salesman	1	1	2
8.	Transportation			
	Carrier	2	0	2
	Carriage	2	0	2
9.	Personal services			
	House man House maid	1	2	3
	Laundry work	1	2	3
	Hair cutting	2	0	2
	Tailoring	1	2	3
10.	Repairing services			
	Cycle repairing	1	0	1
Total		50	50	100

Table No. 6

MAJOR OCCUPATIONWISE ILLITERATE-POPULATION

Sr.No.	Major Occupations	Male	Female	Total
1.	Agricultural Services	17	17	34
2.	Non-agricultural occupations	5	5	10
3.	Article production	11	14	25
4.	Non-metal paroduction	1	4	5
5.	Other productive occupations	1	0	1
6.	Construction	2	1	3
7.	Retail sale	3	3	6
8.	Transportation	4	0	4
9.	Personal Services	5	6	11
10.	Repairing Services	1	0	1
Total :		50	50	100

From the above table it has been clear that whole illiterate adult population is 50 male and female 50. It means in all 100 adults. It has been thought over while selecting this sample. Under agricultural services total number of illiterate population is 34, i.e. 17 males and 17 females. Under non-agricultural occupation total number of illiterate adult is 10, i.e. 5 males and 5 females. Under material production the total number is 25 of which there are 11 males and 14 females. Under pottery there is only 1 male and 4 females. Thus, this population comes to 5. Under 5th occupation there is only one male but there is no female at all. Under 10th category there is also one male only. The total number is also one. These 5th and 10th category of occupations though represent minimum number of illiterate adult population yet it is essential for making the sample wider and reliable. Under the category number 5th, 8th and 10th there is no female illiterate adult engaged in those occupations. But their number under 1st, 2nd, 3rd, 4th, 6th, 7th and 9th is enough as a representative for these occupations. The total number of occupations is 10 and selected illiterate adult population is 50 males and 50 females. Thus, it comes to 100 only.

B) Sources of Data Collection :

For the present study, four types of vocabulary are collected. One is from Marathi dictionary. The second is from the daily news paper namely 'Pudhari'. The third from forms which are useful in day to day life of illiterate adults. These forms are called, 'other material' by the investigator. The fourth is from the 'source material' prepared by Indian Institute of Education, Pune for neo-literates.

Collection of Reading Vocabulary :

1) Dictionary -

For the collection of reading vocabulary for illiterate adults the Marathi dictionary has been analysed. The researcher has decided to analyse the words alphabetically from the 'Sugam Marathi Sabdakosh' to prepare the reading vocabulary for illiterate adults of the age group 15-35 years having various occupations. This dictionary has been published by 'Suvichar Prakashan Mandal, Pune and Nagpur. Its editors are Prof. S.N. Banahatti and B. Dharmadhikari. This is the sixth edition of this dictionary. As it has been published in big cities of two regions namely Vidarbha and Western Maharashtra of the State of Maharashtra, this dictionary has been selected for the preparation of reading vocabulary for all illiterate adults between the age group 15-35 years of Maharashtra. This dictionary was published after independence and it has a wide coverage. Hence this was included in the source material.

2) News papers -

The another source material which was used for listing reading vocabulary was the popular newspaper published in the Kolhapur city namely 'The Daily Pudhari' This newspaper has a wide circulation and it has also rich columns from point of view adult education. It has much important reading materials for adults.

The researcher has collected the issues of this paper from 1st September, 1990 to 30th September, 1990. In fact there should be thirty numbers but as there were two holidays in that month. There are 28 issues which were considered. The researcher underlined the words which

will fall within the reading coverage of illiterate adults between the age-group of 15-35 years. At the end the researcher has planned to collect all underlined words and they are to be grouped on the basis of alphabets.

3) Other material as a source -

The researcher has also selected the following other material:

a) Credit society forms - The researcher has collected forms required to open an account in the credit society, form required for crediting the money, form essential to draw money and other necessary forms from the credit society and co-operative bank.

b) Postal forms - The researcher has collected money order form, register form, crediting the money form, drawing out money form. This has been considered because even the illiterate adult does this type of transaction in his life.

c) Dairy forms - The researcher has collected membership form, dairy milk card, milk register form. The rich as well as the poor person keeps a cow or buffalo and sells his milk in dairy.

The investigator underlined the words on the every type of form which will be useful for the illiterate adults. At the end the researcher has planned to collect all underlined words and they are to be grouped on the basis of alphabet.

4) Indian Census (1991) economic census booklets -

The researcher has collected the two booklets from the census office. He used these two booklets for the problem under study. From

one booklet occupation list was prepared. The other booklet was used for major classification of occupations and minor occupational groups coming under the major one. In this way the researcher has fixed the list of occupations which is to be used together the vocabulary.

5) Record of Primary Schools -

The researcher contacted B.E.O. office at Hatkanangale. He has prepared one circular. The B.E.O. office is requested to send this circular to headmasters of primary schools in villages. This source is useful from the stand point of view of collecting data. This data is related to occupations and male and female illiterate adults between age group of 15-35 years. From this circular the researcher has got information regarding occupations, male and female doing that occupation and the ages of males and females with their names under study.

6) Census-Report -

The census report of 1981 related to Kolhapur district was also used. From this census report the researcher has understood the distance of each village from Vadgaon city, direction of each village from the centre, total number of population, illiterate population and male and female of each village. Thus this source of material is also very useful.

C) Methods and Tools used for Data Collection :

1) Method used for Data Collection -

The researcher has adopted 'Normative Survey' method to study this problem. According to George J. Mouly this method comprises a variety of specific techniques and procedures all similar from the stand point of purpose - that is to establish the status of the phenomenon under

Investigation. This method is very common. It is an organized attempt to analyse, interpret and report the present status of a social institution, group or area. This method seeks to answer the problem under investigation.

The word 'Survey' indicates the gathering of the data regarding current conditions. The word 'normative' is used because surveys are frequently made for the purpose of ascertaining which is the normal or typical condition or practice.

The normative survey method is very commonly used. This method is generally based on large cross-sectional samples and it determines the present status of the phenomenon.

The normative survey method has the following steps :

- 1) Selection of the problem.
- 2) Preparation of the plan.
- 3) Preparation of tools.
- 4) Data gathering.
- 5) Analysis and interpretation of data.

The researcher has followed all the above five steps to investigate the problem under study. There were problems before him. As he has studied and successfully completed 'Diploma in Adult Education', he has selected this problem. Then in consultation with his guide by Trial and Error Method he has prepared synopsis and it was approved by all. After preparing the plan he thought over for number of tools which will be useful in this study. He has a detailed discussion about the nature of

tools with his classmates and guide and finalized tools. With the help of tools he has collected required data. Then he analyzed and interpreted the collected data. The detailed description of gathering of data and its analysis and interpretation is written in Chapter number VI of this research work.

II) Testing for Reading-Vocabulary -

The researcher has to scrutinise the following sources and responses to prepare reading vocabulary for adults.

1) 'Sugam Marathi Sabdakosh' by Dr.S.N. Banahatti and B. Dharmadhikari.

2) The Daily Pudhari from 1-9-1990 to 30-9-1990.

The words selected from above two have been marked on the basis of (i) illiterate adults and (ii) occupations undertaken by them.

3) Words marked by the Project Officer, the supervisor, male organiser and female organiser of Non-formal Primary Education Project.

4) Responses of illiterate adults between the age group 15-35 years.

In calculating number of words for reading vocabulary a matrix prepared by the investigator is to be used. On one matrix there are 25 names of illiterate adults and 35 words for judging reading words which are useful in their day today life. In all 4 matrices are to be used for 10 illiterate adults and for 200 words. The responses are to be grouped in the following manner.

class-intervals	:	No. of words
according to	:	responded
frequency	:	
	:	
I.e. 40 - 54	:	44

The above testing is based upon the class-intervals according to frequency. There were 20 class intervals and 200 words classified in these class-intervals. In this way the researcher has intended to incorporate all words having response 25 and above and all words having response below 25 to omit. In this way a general list is to be prepared as reading vocabulary for illiterate adults.

III) Different Tools Used for Data Collection -

1) Official Circular -

The researcher has read Indian census booklets (1991) for list of occupations. Then he has selected 10 major occupations. They are-

1. Agricultural services
2. Non-agricultural occupations
3. Article production
4. Non-metal production
5. Other productive occupations
6. Construction
7. Retail sale
8. Transportation
9. Personal services.
10. Repairing services

Under each category the minimum occupations are two and maximum are six. In all there are thirty three sub-occupations. The researcher has prepared the chart. (See Appendix No.1). The chart is given to Block Education Officer at Panchayat Samiti, Hatkanangale. The concerned officer is requested to circulate this chart amongst primary school headmasters of 90 schools. Out of these 90 schools 45 headmasters responded. Of these 45 the researcher has selected 15 villages because they are having different occupations required for study. From this circular the researcher has got information regarding occupations, male and female doing that occupation and the ages of male and female under study. This tool is useful to collect the information related to male and female illiterate adults between age-group 15-35 years and total population of illiterate adults of each village.

2) Matrix -

The investigator has prepared himself a matrix as a novel tool to study the problem further. This matrix consists of 26 vertical columns and 36 horizontal rows. From the vertical side column No. 1 is used to write words. The other 25 columns are used for positive or negative marking. Positive marking is shown by the sign (✓) tickmark. Negative marking is shown by the sign (x) cross against each adult and each word.

The big column which is horizontal is used for writing names of adults selected under this research study. In this way, this matrix is to be used for writing names of twenty five illiterate adults and 35 words. These 25 adults will show their ability for reading 35 words. Then

these words will be considered for final listing on the basis of the strength of their frequency. It means this matrix is useful as a 'tryout' tool for finalising adult reading vocabulary of this region. This tool is used for calculating reading word vocabulary of 100 adults, doing different vocations and having different sex i.e. male and female aging from 15-35 years living in 15 villages selected for study of this problem.

3. Oral interview -

The investigator has further used unstructured oral interview tool to study the problem. To make this tool effective factors mentioned under sampling have been considered i.e. occupations, sexes, age-group. This has been kept flexible. With the help of the matrix and by means of other material such as object, picture, occasions, sentences, discussion etc. the researcher has tried to draw reading words which are useful for deciding the reading word vocabulary.

Time bugetting is also done. It has been planned that four adults are to be interviewed in a week. It means 16 persons are to be interviewed in a month. For 100 adults six months and one week will be required. The probable period is chalked out from 1st January, 1991 to 1st week of July, 1991. The adult has been to be interviewed when he is not engaged in his work.

The researcher has thought over about the place of interview. It is not reasonable to call them to a place where I live. So their place of living is selected for getting natural and unpressed responses. If they would have been called to the public place like Gram Panchayat Office,

Chawadi, temple, village, school, they would not have been given free responses for oral questions asked by the Investigator. Hence their (place of living) residence has been selected thinking that it is not only suitable to men but comfortable to women also.

Oral unstructured interview technique has been resorted to study this problem. Establishment of actual or face to face rapport with the adult will get actual words. If one goes on the field he gets answers related to their environment and business. The place of interview is being familiar there are no artificial hinderences. With these reasons in mind the researcher has preferred this approach to any other research tool to study his problem.

On the basis of this research design and procedure, 'Analysis and Interpretation of Data collected' will be described in detail in Chapter No. VI of this dissertation.