CHAPTER III
EARLIER VOCABULARY STUDIES - A CRITICAL SURVEY

In this chapter, a historical survey of the earlier vocabulary studies would be made with the purposes of exploring gaps, avoiding possible overlaps and identifying suitable methods of sampling and data collection and techniques of statistical treatment of data. Infact, no attempt would be made, in this chapter, to evaluate or assess in depth, the earlier vocabulary studies, since the objective of the present investigation is not to make such appraisal. Besides, for such appraisal the design of the research ought to be of historical theoretical type which the present research design is not.

First batch of Investigators

The first spate of vocabulary studies could be located in a time line between a little above and a little below the latter half of the nineteenth century. Max Muller, Kailing, Knowles, Kemisten, Prof. Stearn, Dr. Rice, Prof. Harkey and others form the first batch of investigators in the field.

Professor Max Muller studied a farm labourer's vocabulary, which, according to him, consists of 300 words.
Though the findings of Prof. Max Muller's investigation are not of much importance to a modern researcher of vocabulary, the statistical method of counting the different words spoken by the individuals and making a list of different words, which Max Muller introduced, marks the beginning of a technique that later on became the highly sophisticated method of vocabulary collection, viz., frequency count.

In Germany, Kasten 2 did some pioneering work, in Great Britain, J. Knowles 3 and in Spain, R. Keniston 4 gave the lead to further studies in vocabulary. Prof. Stern 5 followed J. Knowles in Great Britain and made some actual counts of spoken words of boys and girls during early infancy and concluded that the active vocabulary of the children of two and a half, consists of 300 words on an average.

In America, Dr. J. N. Rice 6 studied the spelling vocabulary of school children. In these early days of vocabulary studies, Rice, sampled some schools for selection of students for administration of relevant tools and collection of necessary data. In this respect the design of his study marked a definite improvement upon the earlier studies.

Professor Ruman's 7 studies on vocabulary opened up a new dimension. His approach to the problem of vocabulary
was psychological. Instead of having recourse to simple counts of spoken or written words he carefully studied the relationship of cognitive development and vocabulary. His outstanding findings are as follows:

a) words are a necessary adjunct to human experience

b) as the mind develops, vocabulary develops too

In this respect, Prof. Terman could be considered as a precursor of modern Psycho-linguists.

**Second Phase**

Thurston: The second phase of vocabulary studies started in the twenties of the present century with more elaborate programmes and more sophisticated techniques of data collection and data analysis, when Thurston ⁸ completed his elaborate investigation of different words from a large sample of different kinds of books including Bible and General literature, newspapers, magazines etc. for the production of Teachers' Word Book, in 1921. Subsequently, Thurston brought out Teachers' Word Book of 20,000 words in 1931, and Teachers' Word Book of 30,000 words in 1944.

The objective of Thurston's investigation ⁹ was to prepare a glossary of words which could be used for setting norms of vocabulary for grading reading materials for students whose mother tongue is English. In keeping with the objective
of his study, Thorndike sampled books of interest of the
students whose mother tongue was English. Though such sam-
pling of books restricted the wider applicability of his
lists, yet his lists have become much popular among the
educationists in the countries where English is taught as a
second language. As for example, in India, Thorndike's lists
are still considered general lists and researches on English
vocabulary carried on in India have been greatly influenced
by Thorndike's lists.

Some of the examples ¹⁰ of Thorndike's sampling error
are given below:

1. As the lists were constructed at the time of the Great
   War, they show influence of the Great W.ª.  e.g.,
   Office - 1st 1000; shell - 2nd 1000; casualty -
   10th 1000.

2. The materials which Thorndike has chosen is non-techni-
cal; if he had chosen technical materials 'angels'
would have gone down and 'bricks' would have gone up
- comments Dr. West. ¹¹

If Thorndike had used sophisticated method of ran-
domisation in selection of books, his lists would not have
suffered from such minor deficiencies. But they, randomisation
as a sampling method was not so much in vogue in those days.
Another welcome feature that Thorndike introduced in his list of words is the concept of credits of words. For this welcome feature, Dr. West considered Thorndike's lists as the best in the field. Thorndike allotted credits for frequency of occurrence in a word count of 11,500 words in "Black Beauty" a popular children's book in the twenties as follows:

<table>
<thead>
<tr>
<th>frequency</th>
<th>credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 4</td>
<td>1</td>
</tr>
<tr>
<td>6 - 9</td>
<td>2</td>
</tr>
<tr>
<td>10 - 19</td>
<td>3</td>
</tr>
<tr>
<td>20 - 29</td>
<td>4</td>
</tr>
<tr>
<td>30 - 49</td>
<td>5</td>
</tr>
<tr>
<td>50 or above</td>
<td>6</td>
</tr>
</tbody>
</table>

Besides credits of words, Thorndike explored another important facet of vocabulary vis-à-vis, the frequent meanings of words. The determination of the frequent meanings of words shifted the centre of semantic gravity from the basic meaning to the frequent meaning as for example, the earliest sense of the word 'lace' in English is that of a 'noose or snare; a sense that continues, somewhat, first in 'necklace' and then in the 'lace' by which we fasten our shoes; a 'villain' was formerly only a 'farm-labourer'; a 'knave' was originally a boy, later a servant; 'to spill' was a general
term meaning to destroy and had no special relation to liquids.

In fine, Thorndike's contribution to the approaches and methods of vocabulary studies is remarkable since most of the investigators that followed him in different countries, ink owed a great deal to him. As for example, Madora E. Smith based her tool of research on Thorndike.

Madora E. Smith: The objectives of Madora E. Smith's study were as follows:

a) to find out the number of words known to the children.

b) to find out the rate of increase of vocabulary at different stages of development.

Madora E. Smith constructed a tool viz., vocabulary tests with objects and pictures on the words collected from Thorndike's "The Teacher's Word Book". The method of vocabulary collection from Thorndike's Word Book that she adopted was marked by a commendable statistical sophistication. Instead of collecting all the words in the test, she collected every twentieth word from Thorndike's word book.

At the time of analysis of data and computation of children's total vocabulary, she multiplied the mean number
of words known to the children by twenty. The statistical treatment of data given by her is definitely marked by more sophistication. Besides, she sampled 273 children from different strata of Iowa City, and administered her tool on it.

The findings of her study indicate that the vocabulary increases at an extremely rapid speed up to six years and after that the rate of acquisition of words is not rapid. The findings further indicate that the vocabulary of the average child in grade I is 23,700 and in grade XII is 80,300.

G. Dewey 15: The Major objective of G. Dewey's study was to construct a glossary of English words representative of a wide range of subjects. To attain the objective of his study he sampled reading materials from twenty different sources. And the method of vocabulary collection was random collection sum of 2% words from each of the twenty sources. With such a design of investigation, G. Dewey collected relevant items of vocabulary and prepared a list of over a thousand root words and citations under the name 'The Relative (sic) Frequency of English speech sounds.'

Ponsetti and Nabi 16: The Objectives of their study were as follows:
a) to counteract the major defects of the earlier studies, namely,

1) Their agreement only as regards the first five hundred words and fair agreement as regards the first thousand words but major disagreement beyond that.

2) inspite of their basis on different sources they do not vary their weighting according to the importance of the sources.

b) to classify the words in the list according to their importance.

As regards sampling of items, they sampled words from the counts of Thermike and Hern

As regards treatment of data, they statistically (frequency as a major criterium) determined the importance of words and classified them as

1) Indispensable words
2) Essential words
3) Useful words, and
4) Special words.

The findings of their study indicated that their list of words consisted of about 360 words for four fold
The number of essential words in their list is 1,198. The Essential words are required for threefold mastery vis-à-vis understanding, reading, and speaking. Useful words are required for reading and understanding whereas special words for reading only.

The findings of their study further indicate that in almost any kind of normal English, the Indispensable words make up 50% and Indispensable and Essential words together 75% of the word occurrence.

Interim Report on Vocabulary Selection

The Interim Report on Vocabulary Selection is still considered as the most dependable word list in English. This list is not a product of any individual's labour. The entire design of the investigation including criteria of vocabulary selection, sampling procedure, treatment of data etc., was drawn at the Carnegie Conference held in New York in 1934. The major contribution made by the Carnegie Word List is the indication of semantic varieties. The list refers to the different meanings of each word.
Dr. West

Dr. M. West carried on several studies on different aspects of the wide problem area of vocabulary. Infact, he worked on the following:

a) construction of word list

b) classification of words into different categories

c) preparation of Readers based on controlled vocabulary.

Word lists:

So far as his word lists are concerned, he published General Service List of English Words as part V of the Interim Report of Vocabulary Selection. In 1947, he revised the General Service List on the basis of a thorough investigation of a wide sample of books viz., encyclopedias, magazines, text books, novels, essays, books of poems etc.

The special characteristic of his 1947 revision is the computation of the frequencies of meanings of each word. The following table illustrates the point.
<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>words</strong></td>
<td><strong>word frequency</strong></td>
<td><strong>meanings</strong></td>
<td><strong>meaning frequencies in %</strong></td>
<td></td>
</tr>
<tr>
<td>Games</td>
<td>638</td>
<td>amusement, children</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>play, fun &amp; game</td>
<td>9 %</td>
<td></td>
</tr>
<tr>
<td>Games</td>
<td></td>
<td>with the idea of competition</td>
<td>38 %</td>
<td></td>
</tr>
<tr>
<td>Games</td>
<td></td>
<td>athletic contest</td>
<td>8 %</td>
<td></td>
</tr>
<tr>
<td>Games</td>
<td></td>
<td>Olympic games</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Games</td>
<td></td>
<td>A particular context e.g. we won two games</td>
<td>43 %</td>
<td></td>
</tr>
</tbody>
</table>
Classification of words

Dr. West's sustained investigation on vocabulary led to classification of English words into:

1) Essential words - there are about 300 such words
2) General words - these are refinements of essential words e.g., 'say' is an essential word whereas 'Reply', 'Question' etc., are general words.
3) Common environmental words - words dealing with common environment such as 'food', 'cat' etc., and
4) Specific environmental words - words dealing with specific environment such as Rupees (India), Pound (U.K.), Dollar (U.S.A.), Ruble (U.S.S.R.)

Readers based on Controlled Vocabulary

Dr. West prepared supplementary Readers for Indian children on Controlled Vocabulary with progressive increase of words in ascending stages:

1. Supplementary I 458 words
2. Supplementary II 758 words
3. Supplementary III 1072 words
4. Supplementary IV 1415 words
5. Supplementary V 1779 words
6. Supplementary VI 2280 words.
C.W. Ogden’s approach to the problem of vocabulary central is marked by a fundamental difference with those of the earlier studies. As a matter of fact, Ogden took a psycholinguistic approach to the problem of vocabulary. Instead of sampling reading materials to institute a frequency count of words, he made an exploration of the ideas that man ordinarily wants to express. Then he went to prepare a list of minimal words which could serve as vehicles of expression for these essential ideas of man. This is undoubtedly, a novel approach to the problem of vocabulary and indeed a departure from the beaten track. But in fact, Ogden’s Basic vocabulary of 850 words consisting of 600 nouns, 150 adjectives, 13 verbal operators, a number of prepositions and a few derivatives, has not become popular with teachers who teach English as a second language, not to speak of those who learn English as a first language.

Still, Ogden occupies a prominent place in the history of vocabulary studies because he introduced the concept of minimal vocabulary i.e., Basic vocabulary, and since Ogden’s sustained investigations have been carried on in different countries to construct lists of minimal words required by the students of different age levels.
Besides, Ogden diverted the direction of the focus of enquiry. Till Ogden the main thrust of all investigations was on the frequency, range and semantic varieties of words as has been already stated in the previous sections of the chapter but since Ogden there has also been efforts to count the essential ideas that the students of different age levels want to express. This has brought a balance in the lists of words in the sense that the useless words, which found place in the earlier studies due to their high frequencies can hardly find their place in the lists, as easily, now a days, because their ability to express essential human ideas is also taken into consideration and on the event of the presence of easier synonyms of them in the lists there is a possibility of their being slashed out of the list.

C.W. Wright

C.W. Wright's study needs special mention here since his investigation was South-Africa based. The major objective of his study being the Construction of a Glossary of English words common in use in South Africa, he sampled a wide range of books either published or greatly read in South Africa and saw through 1,620,912 running words in order to collect 24,763 different words which he arranged in the glossary, according to the principle of frequency.
E.W. Deloh 24

Deloh's study was delimited to basic sight vocabulary only. He prepared a glossary of 220 words which do not include nouns. A second list of 95 nouns was also constructed by him.

A.L. Gates 25

Gates prepared basic reading vocabulary for the primary grades consisting of 1500 words.

Martin 26

Martin studied the development of quantitative concepts in little children. The study is very much helpful to the primary teachers since it explains the psychic mechanism through which a child understands meaning of words such as some, any, several etc.

I.A. Kiliab 27

By administering vocabulary tests on the children of different age levels in a longitudinal study, she found out that the recognition and reproduction of the first grade students have the greatest variability. The ratio diminishes with subsequent years of study.
VOCABULARY STUDIES IN INDIA

In India vocabulary studies have been carried on by the students at the Ph. D and M. Ed. levels, by the research fellow under special institutions like C.I.E.P.L., Hyderabad, Indian Statistical Institute, Calcutta etc. The studies on English vocabulary by K. Keskar, U. Chadda, H. Bernard, and N. Desagupta are some of the representative works in the field.

K. Keskar

Keskar's research design followed a sophisticated pattern. For collection of words, he sampled a huge range of authoritative sources like the General Service list of Dr. West, Nagpur list, the Minimum adequate vocabulary of Dr. West, the History and principles of vocabulary control by Herman, Bengers - lists K.L.M. and many others.

His sample on which the test was administered consisted of teachers of English, framers of Syllabi, writers of text books and staff members of C.I.E.P.L., Hyderabad.

The test constructed by him for collection of data was a Questionnaire.

On the basis of the responses to the various items of
his questionnaire, he prepared a glossary of 3500 English words. The glossary could be used for text book writing and teaching at the school level. The study was carried on under the Central Institute of English and Foreign Languages, Hyderabad.

**U. Chadda**

The major objective of U. Chadda’s study was to explore and examine the vocabulary resources of third year students. The sample of the study represented a cross section of male and female, science and arts students reading in the third year class. With an elaborate battery of vocabulary tests he collected data that indicated that out of 300, the highest score was 262, the lowest score 10, the total average 52.2.

The average score of the female students was 53.1% and of the male was 50.7%. The average score of the Science students was 54% and of the arts students was 48.3%.

The other important features of the research design are that the sophisticated techniques have been used by the investigator for determining the reliability and validity of the test. The validity of the test was determined by comparing the performances of the students with their pre-university result. The reliability co-efficient of the test
This study was also carried on under the central Institute of English and Foreign Languages, Hyderabad.

**H. Bernard**

Bernard carried on his investigation on a sample representing the cross section of arts, science, and commerce students reading in the higher secondary schools and P.U. colleges in Chatanagpur area.

The tool of his research was a battery of vocabulary tests containing simple structures of each of which bore an underlined word for translation into students' mother tongue.

The findings of his study indicate the average recognition vocabulary of the students, familiar status of each word, the strength and weakness of the students in subject categories of vocabulary, the strength and weakness of the students in grammatical categories: verbs, nouns, adjectives etc. This study was carried on under C.I.E.F.L., Hyderabad.

**N. Desai**

This is the only vocabulary study in English carried on in Meghalaya. The major objectives of the study were as follows:
a) construction of a glossary of English words containing the weight and difficulty value of each word for class VI.

b) determination of the gap between the actual and the estimated vocabulary of the students of class VI.

The tool of the research consisted of four batteries of vocabulary test with multiple choice items on 2043 English words drawn from several books vis., text books, supplementary books, grammar books, composition books etc.

The data collected from the text books were given a statistical treatment for determination of weight of words. The formula \( W = \frac{R}{T} \) was used for the purpose, where:

- \( W \) : weight of words
- \( R \) : Range of words
- \( T \) : Total number of books from which words were collected.

The data collected through administration of the four batteries of vocabulary tests were statistically treated for determination of difficulty value.
The sample on which the batteries were administered was drawn from the three districts of Meghalaya viz., Khairi hills, Jaintia hills and Garo hills.

The study was carried on at the Department of Education, Gauhati University for Ph.D degree in 1975.

**ENGLISH VOCABULARY STUDIES AT M. ED LEVEL**

Besides these major vocabulary studies in English, some studies have been carried on by the M.Ed students at several universities in India. Though these studies do hardly have the maturity, fineness and sophistication that can render them fit to be posted on the national map of vocabulary studies, yet they have a place in the minds of the vocabulary investigators because from their experiences, from their drawbacks and failings the future researchers can draw necessary guidance and direction.

**P.K. Pandya** 32 studied English vocabulary of the students of class VII. **S. Sarma** 32 studied the environmental variables that affect children's vocabulary. **S.K. Parya** 32 studied English sentences, phrase patterns and vocabulary selection in some of the standard Readers in use in the city of Bombay.
R. Laxmi also made an estimate of meaning vocabulary in English of class VII of the words found in their Readers.

K. S. Jais also made a study of the meaning of vocabulary in English of the pupils of Lucknow city. The words were collected from the prescribed text books.

G. Bostedt also made a study of meaning vocabulary.

Besides, A. J. S. Hehar, B. M. R. Naidu, K. S. Chate, N. S. Nadkarni, J. D. Dabbe and many others studied various aspects of the problem concerning vocabulary in English. These studies constitute a thrust in the direction viz., they attempt to find out the difficulties that an Indian student experiences while learning English as a second language. With more and more emphasis on structural approach in class room teaching, vocabulary as an element of language was losing its importance in the domain of teaching methodology. But these studies have brought the importance of vocabulary to the surface.

VOCABULARY STUDIES IN INDIAN LANGUAGES

Sunmiti Kumar Chatterjee

Sunmiti Kumar Chatterjee's elaborate internationally renowned study on the Origin and Development of Bengali
Language needs special mention here since a significant portion of his study is devoted to Bengali vocabulary. The findings of his highly sophisticated study indicate the proportion of the various elements in the Bengali vocabulary as found in the biggest yet published dictionary, and by far the best (by Jnanendra Mohan Das: Calcutta, 1323, 1st edn: 1917). In Dr. Chatterjee's own words 'A rough survey of this dictionary showed between 32 to 33 thousand sanskrit words (tatsamas), and there are some 2,400 Persian (Perso-Arabic) words, about 700 English and some 100 Portuguese, with a few Dutch (not identified) and French and other foreign words. The rest are either native Bengali (tadbhava and desi) or old borrowings from Sanskrit (completely naturalised, semi tatasmas) or borrowed from cognate N.I.A. speeches. Taking in round numbers, the tataama element stands at 33,000; and Persian at 2,500 and the English and other European at 1,000 (considering possible omissions, and also the fact that many tadbhava words occur in different spellings), the percentage of words, on the basis of Jnanendra Mohan Das Dictionary, would roughly be:

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native words (tadbhava, semi tatasmas) and</td>
<td>1.45%</td>
</tr>
<tr>
<td>tadbhava borrowings from sister speeches</td>
<td></td>
</tr>
<tr>
<td>2. Tatsama or Sanskrit words</td>
<td>44.00%</td>
</tr>
<tr>
<td>3. Foreign words: Persian</td>
<td>3.30%</td>
</tr>
<tr>
<td>English, Portuguese etc.</td>
<td>1.25%</td>
</tr>
</tbody>
</table>
Some other interesting findings of Dr. Chatterjee's study that have relevance to the present investigation are:

a) Bengali began to lean on Sanskrit from the beginning. The old native tathhava forms were dropped to a great extent, even from the popular speech, tatesnas and semi-tatesnas taking their place.

b) In modern Bengali, the Colloquial has a surprising small percentage of Sanskrit words.

c) Analysing different elements in some pages of some given Bengali literary words, the findings are:

<table>
<thead>
<tr>
<th>Works</th>
<th>Pages</th>
<th>Tatesna</th>
<th>Tathhava &amp; desk</th>
<th>Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indira</td>
<td>5</td>
<td>153</td>
<td>536</td>
<td>7</td>
</tr>
<tr>
<td>Prakurhila</td>
<td>4</td>
<td>137</td>
<td>724</td>
<td>20</td>
</tr>
<tr>
<td>Thakurdidas Jhuli</td>
<td>5</td>
<td>125</td>
<td>734</td>
<td>14</td>
</tr>
<tr>
<td>Butom Pecmar</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naka</td>
<td>4</td>
<td>140</td>
<td>576</td>
<td>81</td>
</tr>
</tbody>
</table>

d) In treating a literary, political or philosophical subject, the vocabulary has to be more Sanskritic, although the treatment may be entirely colloquial. Avoidance of tatesna words is almost impossible in Bengali.
e) There is a steady increase going on in the English element in Bengali vocabulary. The English loan words are names of objects, ideas and institutions brought into India by Britons. Any newspaper would show the amount of English which finds place in Bengali journalism of the present day. Trades, literature, science, art, politics, history - in fact almost all the avenues of life and of literature are favourable for the introduction of English terms.

f) The Portuguese words are names of objects and ideas introduced by the Portuguese into India and they indicate the extent of the material culture which Bengal and India owe to the Adventurous Iberians.

Prebend Deb Chaudhury

Prebend Deb Chaudhury worked under no less a man than Dr. West. The objectives of his study were to prepare lists of words in Bengali instead of preparing a common list. He sampled words from different sources and kept the count separate so as to be able to show the frequency order in the individual departments. He varied the weighting of his different sources but this was done not following any sophisticated statistical procedure. This study was carried on at Dacca University in 1931.
Samaradra Nath Roy

This study was sponsored by the Indian Statistical Institute, Calcutta. The objective of this study was to construct a Glossary of easy words in Bengali to be used by the text book committees, text book writers and teachers of elementary schools in West Bengal. Samarendra Nath Roy sampled words from a wide range of subject areas and against each word of the glossary the subject area from which it has been drawn has been mentioned. Only a few words go without such reference. From the omnibus list of words, he isolated the words of highest frequency and incorporated them in the Glossary. Thus the glossary consisting of 3500 words was constructed.

J.C. Keenig

In Hindi, J.C. Keenig initiated the vocabulary study. He constructed a 1000 word list from first and then with Government support prepared a list of 4000 most common Hindi words. The findings of his study indicate that in Hindi books every new word comes after every 10th to 11th word.

R.G. Bhat

So far as the method of vocabulary collection is concerned, Bhat's method marks a departure from the common run since he adopted 'peep hole' method for collection of data.
Deep hole method is very much popular with child psychologists.

Since that's sample consisted of little children of the age group 5 - 9, the method proved to be suitable for collection of data.

The findings of his study indicate that the number of words known to children of:

- 5 is 900
- 6 is 640 - 1140
- 7 is 850 - 1900
- 8 and 9 is 1190 - 4100

Seelkar's study is limited to the reproduction vocabulary in Marathi of the pupils who had completed the primary course. The sample of his study was drawn from a cross section of children of both sexes who had completed primary course in Bombay. The size was 270. The method of vocabulary collection comprised of the analysis of the essays written by the children in terms of vocabulary. The analysis of data was made by determining the frequency of words used by the children, grammatical classification of words and content classification of vocabulary.

The findings of the study indicate that the repre-
Auction vocabulary of the children consisted of 2885 words.

His study was delimited to the basic vocabulary of the eleven year old children. By counting the number of words from a sample of 4 text books he prepared a list of 8000 words. He classified the words according to frequency and constructed some batteries of vocabulary tests on the classified words. He administered the batteries on 461 pupils. The data drawn through administration of the tests were then analysed.

The study was delimited to the reproduction and recognition vocabularies of Gujarati children of 13 yrs. From a sample of six text books, Vakil's list of words for age 11 yrs and Dave's tentative list, she collected words on which three batteries of vocabulary tests were constructed. The batteries were administered on three groups viz., the first battery was applied on 456 students, the second on 455 and the third on 456 students.

The words recognised by 50% of the students were incorporated in the list for the construction of a glossary of 12167 words.
The objective of the study was to investigate the recognition and reproduction vocabulary of twelve year old Gujarati children and prepare word lists on the basis of the investigation.

For the construction of the test of the research, the question papers were analyzed, experienced teachers and the students were consulted. Finally two batteries viz., 29 topics for essay writing and 5 topics for letter writing were constructed.

The batteries were administered on a sample of 240 children drawn at random from the schools in Bombay and 1060 children drawn at random from the schools in Gujarat, reading in class VI.

The data thus collected were analyzed and word lists were prepared according to frequency and grammatical classification.

The objective of the study was the construction of graded vocabulary. For the collection of vocabulary the following areas were explored viz., text books, word list
published by the Adult Education Council, word list published by the Mysore Education Federation and many other miscellaneous sources.

For analysis of data and grade placement, ten teachers of each of the 20 districts were involved. The analysed data give the following break up of words in each grade:

- Standard I to IV: 700 words each
- Standard V: 800 words
- Standard VI: 750 words
- Standard VII: 650 words

S. L. Sharma

The objective of the study was to prepare the basic vocabulary in Hindi of the students of class VI. The vocabulary was collected from a wide range of text books.

The test was administered on a sample of 1400 students of class VI drawn at random from the schools in Punjab.

The collected data were given a sophisticated statistical treatment which include application of the formula for determination of difficulty value of each word. Thus a glossary of 1627 words with their difficulty value was constructed.
The objective of the study was to investigate the gap between the estimated vocabulary and the actual spoken vocabulary of the students of age 7 - 9 reading in the schools of Rajasthan.

The findings of the study indicate that the estimated vocabulary was 821 and the actual spoken vocabulary was 1232.

Studies at the M. Ed level

Besides these studies, some more studies have been carried out at the M. Ed level. Of these mention may be made to B. U. Parekh's study 49 of the Basic Gujarati vocabulary of the children of age group 5 - 9 on the basis of word frequency; M. F. Vaidyar's 50 investigation into the spoken vocabulary of Marathi children of age level 3 - 5; G. Thakur's study 51 of the mathematics teaching vocabulary at the Malayalam secondary schools; G. J. Khanduja's study 52 of the reproduction vocabulary in Gujarati of the pupils who have completed the primary course.

Vocabulary studies in Hindi at the M. Ed level are many. Of these M. Goel's study 53 of the reading vocabulary of the pupils of class I; J. P. Tiwari's investigation 54 into the reproduction vocabulary of the pupils who have completed
the primary stage; M. Saraswati's 55 critical study of Hindi vocabulary for grade II; D.S. Sudha's 56 enquiry into the influences of Chattisinghri dialect on the actual vocabulary in Hindi at the middle school stage at Ropar district and S. Singh's study 57 of word load in Hindi text books for class VII may be mentioned as representative of the nature, area, objectives and delimitations of the studies in Hindi vocabulary at the M.Ed level.

In Tamil, V.V. Ramagathan 58 made an analysis of text books in terms of vocabulary for detailed study in forms I to III. In Sanskrit, M.R. Dharmabhut 59 made a basic vocabulary study whereas in Urdu, Fazil Anis 60 critically studied the text books for vocabulary analysis.

These studies at the M.Ed level lack, barring very few, the necessary experimental control, sophisticated statistical treatment and suitability of the tools. Still, they occupy a place in the history of vocabulary studies since they reflect the felt needs of the teachers - the needs of vocabulary control from different angles of vision.

Methods adopted by the Investigators for Collection of Vocabulary

In the foregoing sections a critical survey of the earlier vocabulary studies have been made. In this section,
an attempt would be made to list the different types of methods that the researchers of the earlier studies adopted for collection of different categories of vocabulary viz., reading vocabulary, spoken vocabulary, basic vocabulary, reproduction vocabulary etc. With a view to making a selection of one or two for the collection of vocabulary by the present investigator.

1. **Word Frequency Counts**

Almost ninety percent of the researchers prepared word frequency lists by actually counting the different words found in different kinds of reading materials and noting the frequency of occurrence of each.

2. **Spoken vocabulary**

For collection of spoken vocabulary in studies delimited to it, or in studies in which the construction of spoken vocabulary list is one of the objectives, the home situation pictures, school situation pictures, play situation pictures, relevant conversations, peep-hole method and actual word frequency count of spoken vocabulary of the children have been used by most of the investigators. Besides, the children, in some cases, have been asked to speak on selected topics or asked some selected questions to answer. The children's answers were tape-recorded and analysed.
3. **Collection of Writing vocabulary**:

In earlier studies on writing vocabulary, the words were collected from samples of written essays, compositions, project reports, examination scripts, wall paper magazines, school magazines etc.

4. **Collection of Reading vocabulary**:

In the earlier studies on Reading vocabulary, the words were collected by administering vocabulary tests of mainly multiple choice type. In some of the studies questionnaire was also used for collection of words.

5. **Collection of Reproduction vocabulary**:

The earlier studies on Reproduction vocabulary are quite a few in number. In these studies the question papers, text books, class works etc., were analysed for selection of some topics. On the selected topics, batteries of questions were constructed and administered on the samples. The responses of the students to the items of batteries of tests were analysed in terms of vocabulary and words collected.

6. **Collection of listening vocabulary**:

In few studies by foreign researchers, the listening vocabulary was collected. In these studies the words were collected from the children by administering oral vocabulary tests.
7. **Collection of sight vocabulary:**

In few studies by foreign investigators, the sight vocabulary was collected through vocabulary tests.

**Various tools used in the earlier studies**

The tools used in the earlier vocabulary studies may be listed as follows:

a) **The Schedule:**

   administered personally to groups of respondents

b) **The Questionnaire:**

   of the closed and open form types

c) **Observation sheet**

d) **Check lists**

e) **The Interview**

f) **Content Analysis:**

   (mainly book analysis, question paper analysis etc.)

Explanatory notes on all these items have been given in Chapter V.
Types of statistical treatment given in the earlier studies

The types of statistical treatment given in the earlier studies may be listed as follows:

a) Tabulation of words in order of frequency and classification of words according to high, medium and low frequency.

b) Determination of the central tendencies of the vocabulary. Scores of the students viz., mean, median and mode.

c) Measures of Relative position viz., quartiles, deciles, and percentiles.

d) Measures of variability - standard deviations.

e) Confidence interval for population mean.

f) Test of significance of difference between means and standard deviations.

The explanatory notes on all these items have been given in the notes and references section of this chapter.
Concluding Remarks

From the critical survey of the earlier vocabulary studies, the investigator could identify an area, still unexplored, on which an investigation could be taken up. Besides, the investigator could ascertain the efficacies of different methods and types of statistical treatment, on the basis of which she would be in a position new to proceed with her investigation, the significance, objectives and scope of which have already been discussed in the foregoing chapter.