In the previous chapter the philosophical bases of vocabulary control have been discussed. In this chapter the earlier vocabulary studies made by different investigators in England, U.S.A., and other parts of the world as well as in India will be discussed.

The review of the earlier studies will help the investigator visualize the problem of his study in its proper perspective. Besides, in the planning of the method and procedure, drawing of the sample, administration of the checklist, collection and treatment of the data, and in the evaluation of the needs for the present study of the vocabulary in English of the students of Class VI (usually 12 +), the review of the earlier vocabulary studies will contribute a lot.

In this connection it need be made clear that, in this chapter, the author will simply review the important vocabulary studies made in the past, with possible comments, but will refrain himself from making any evaluation of them, because, on the one hand the area of investigation of the present study does not include such evaluation, and, on the other hand, most of the earlier studies are empirical in nature and empirical studies could be best evaluated by the findings of the further empirical studies and not by subjective comments.
As a matter of fact, the author will bring to focus, the salient features of the earlier studies, in order to find out adequate guide lines for the present investigation.

Max Muller

The History of vocabulary studies could be traced back to the later half of the nineteenth century when Professor Max Muller made an estimate of a farm labourer's vocabulary. Max Muller's finding indicates that farm labourer's vocabulary consists of 300 words \(^1\). Though P.B. Ballard considers this estimate to be hardly accurate \(^2\), yet Max Muller's interest in vocabulary studies provides incentive to the subsequent researchers.

Reading and others

C.W. Wright refers to Reading of Germany who made vocabulary studies in the late nineteenth century; J. Knowles of Britain who made vocabulary studies in the beginning of the 20th century; and H. Keniston of Spain who made vocabulary studies a little before E.L. Thorndike. R. Lado refers \(^3\) to Keniston's Spanish Idiom List which was prepared on the basis of range and frequency of occurrence. It lists expressions in Spanish that are strange to English speakers. The compiler looked at the expressions in Spanish with English as the frame of reference.

Prof. Stern

Prof. Stern studied the active vocabulary of girls and boys of two and a half. He actually counted the words spoken by
the children. His findings indicate that the active vocabulary of the children of two and a half, consists of 300 words on an average.

**Dr. Rice**

The American founder of 'scope' was Dr. J. R. Rice who, after a short training under German psychologists, made a study of the comparative frequency of use in language of various English words, though his principle objective was the teaching of spelling.

**Prof. Terman**

Professor Terman made a long and careful investigation into children's understanding of words. He convincingly showed that words are a necessary adjunct to human experience, and 'as the mind develops the vocabulary develops too'. The result of his studies shows that an average child of eight has a vocabulary of 3600 words. The number rises to 9000 when the child reaches fourteen. An ordinary adult, according to his estimate, has a knowledge of 11,700 words and a superior adult has a knowledge of 13,500 words.

**Prof. Harkey**

Professor Harkey made an interesting study of vocabulary by counting the words spoken by ten children of ages three and four. He found that the average per day for a child was 11,518, which gave an average of 16 words per minute.
Thorndike's studies

In the twenties, S.L. Thorndike opened a new dimension in the nature and scope of vocabulary studies. Thorndike found out the frequency with which different words are used in the normal reading matter. In fact, frequency was to him an objective as well as a reliable standard by which to judge of its importance. He appreciated the word count method, initiated by Thorndike and asserted that word counts represent almost the first scientific and objective approach to problems of language study.

Thorndike brought out three precious publications consecutively in the small span of a decade. They are:

a) Teacher's Word Book, 1921
b) Teachers' word book of 20,000 words; New York, 1931
c) Teachers' word book of 30,000 words; New York, 1944

Thorndike's word-list was prepared by analysing words from the Bible, general literature, and newspapers. Consequently his lists show some influence of the material on which they are based. Moreover, as they were made at the time of the great war, they show the influence of the great war, e.g., 'Office' - 1st 1000; 'shell' - 2nd 1000; 'casualty' - 10th 1000. Dr. West comments that the material which Thorndike has chosen is non-technical; if he had put in more technical materials 'angels' would have gone down and 'bricks' would have gone up.

Thorndike's word books were prepared to help American
teachers in grading of reading material for students of school age whose mother tongue was English. Bernard Lott states that if Thorndike could have foreseen what parts of his word-books were destined to play in the preparation of reading material for students whose mother-tongue was not English, old-fashioned and literary sources would probably not have been used so extensively for word counts.

Still, according to Dr. West, Thorndike's lists are the best because Thorndike allotted credits for frequency of occurrence. Thus in a word-count of 11,500 words in 'Black Beauty', a popular children book of the twenties, credits were given as follows:

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 4</td>
<td>1</td>
</tr>
<tr>
<td>5 - 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>

The credits were given in the similar manner in 'Little women' with 13,000 word counts; 'Christmas carol' with 8,000 and 'Youth's Companion' with 25,000.

The Teacher's Word Book of 30,000 words, jointly by Thorndike and Lorge, is an improvement upon his earlier work book published in 1921 and the extension of it to include 40,000 words.
published in 1931. It includes the data of these two counts and also of the three counts of over four and half million words each. It helps the teachers to know not only the general importance of each word as far as frequency of occurrence measures that, but also its importance in current popular reading for adults as shown by the large magazine counts and its importance in such juvenile reading as schools and libraries approve.

Moreover, the project of determining the most frequent meanings of words in the English vocabulary attempted by Thorndike has been highly appreciated by C.C. Fries as such a project rightly attempted to shift the centre of semantic gravity from the basic meaning to the frequent meaning of the words. As for example the frequent meaning of the word 'key' is 'an instrument by which the bolt of a lock is moved', whereas its earlier meaning is 'explanation'. Thorndike's attempted project attacked the problem of vocabulary from a highly pragmatic and practical angle, which was subsequently undertaken by no less an expert than Dr. Test.

Madorah Smith's Study

Basing her test battery on Thorndike's "The Teachers' word book", Madorah E. Smith made an important investigation of the vocabulary of groups of children. Using as a basis every twentieth word from Thorndike's list, she prepared a list of 200 words.

By applying vocabulary tests, she found out the number
of words known to the children and computed a child's total vocabulary by multiplying the number known by 20. Nadorah T. Smith used objects and pictures to elicit the use of the test words. She used standard questions where objects and pictures could not be used.

The reliability of Nadorah T. Smith's test items was tested by comparing with seven published actual vocabularies and by checking with mother's observation in three cases.

The results of Smith's application of tests on 273 children of Iowa City, indicate that vocabulary increases at an extremely rapid speed up to six years and after that the rate of acquisition of words is not rapid. Smith estimated the vocabulary of the average child in grade I as 23,700 and in grade XII as 30,300.

Dewey's study

Dewey's name needs mention as he was also one of the pioneers of vocabulary studies in the early twenties.

Dewey has, in the introduction of his study declared that his word-list may be subjected to serious criticism because 'the heterogeneous selection is by no means representative (sic) of anything in particular, such as the words most used by school children, or by adult, in reading or in writing, and as repre-
sentive of every thing in general is scarcely more definable

Furthermore, beyond the 500 or at most the 1000 commonest words, no statement of the inherently commonest words of English, independent of the particular material analyzed, is possible .... in other important particulars, warranted by the basic conditions 16.

G. Dasey gave frequency counts of a little over a thousand root words and citations in 'The Relativ (sic) Frequency of English Speech Sounds, U.S.A., 1923'. In his list, great care was taken in making the vocabulary representative of a wide range of subjects. In fact, he used twenty sources taking 5% of words from each 19.

But drawing of materials from twenty different sources precludes the accuracy of weighing. Business letters and newspapers are hardly of equal importance. Dr. Fest refers to one 20 who varied the weighing of his different sources, but this was necessarily done by conjecture as to their relative importance.

The difficulties in connecting with awarding credits to the words of vocabularies based on word counts of different sources, led some researchers to study frequency of words in specific types of reading matters 21:

a) Aldridge - Newspapers
b) Ayres - Business letters
c) Pressey - Scientific books.
Dr. Faucett is critical of the general lists that are based on different sources but do not vary their weighing according to the importance of the sources. According to him, those lists are unreliable guides as they agree closely only as regards the first five hundred words, fairly well as to the first thousand but beyond that they show colossal divergencies.

With a view to counteracting some of the drawbacks of the earlier studies, Faucett and Maki prepared a word list, based on the word counts of Thorndike and Horn. 'A study of English word values statistically determined from the latest extensive word counts'. Matsumura Sanshodo, Tokyo-19:2, jointly by Dr. Faucett and Maki contains the list of words classified as follows:

a) Indispensable words: consisting of about 360 for four-fold mastery, i.e.,
1) for understanding
2) for reading
3) for speaking
4) for writing

b) Essential words: consisting of about 1,198 words for three-fold mastery, i.e.,
1) for understanding
2) for reading
3) for speaking
112

e) Useful words for two fold mastery, i.e.,
   1) for reading
   2) for understanding

d) Special words for single mastery, i.e.
   1) for reading

In Faustett scale the 'Indispensable' words make up 50% of the word occurrences in almost any kind of normal English; the 'indispensable' and 'essential' words together over 75% of such word occurrences. These words with wide range, in fact, constitute the great linguistic frame work in which special words of all kinds are put. 23.

4: Horn


It combines the findings of the earlier investigations on writing vocabulary by Anderson, Ayres, Clarke etc., with more extensive word counts. It consists of ten thousand words which are most likely to be written by adults. E. Horn observes 24 that it seems probable that, with very few exceptions, at least, four or five thousand words of high frequency, in this study would appear also with high frequency in a count of similar design and extensive made today.
These five thousand words of high frequency, except 170, are found in the original edition of Thorndike's 'The Teachers' word book', either in the same morphological form or in a base form which by the process of affixation they can be formed.

It has been commented that in the construction of this list of writing vocabulary, too much weight was put to words from business letters. In fact, the words from business letters constitute 30% of the words tabulated. The words like 'shortage', 'specifications', 'compliance' etc., would not have occurred in the first five thousand, had the sample been proportional.

Carnegie Word List

The conference held in New York in 1934 under the auspices of the Carnegie Corporation needs special mention here because it was attended by experts like Faucett, West and Palmer and advised by Japir and Thorndike. Moreover, the Interim Report on Vocabulary selection, widely acclaimed as the most authoritative word list, is the result that the conference produced. The conference applied to a large extent the following principles for the construction of the Interim Report on vocabulary selection:

a) Along with a list of collocations (at once, of course etc.), the selected vocabulary should be drawn up in the form of a general word list.
b) Together with a selection of its commonest derivatives and compounds, the headword should be the effective unit. (noun 'back' is the head word which includes the adverb 'back', verb 'back', adjective 'backward', adverb 'backwards'.)

c) Homonyms should be counted as separate words ('bank' - bank of England, the river bank).

d) Each word should include its inflected forms if any ('be', the headword covers am, is, are, being, been).

e) Each word should include all the main semantic varieties.

f) Widely differing semantic varieties should be treated as separate words ('too' the adverb of degree is to be listed separately from 'too' meaning 'also').

g) A word occurring once in each of fifty different texts should be considered to have wide range. A word occurring fifty times in one particular and not occurring in the other forty-nine should be considered to have a narrow range.

h) Additional credits should be given to a word if it has a large number of regularly formed derivatives.

Those who constructed the Carnegie word list laid much importance on the structural words. Another contribution made by
the Carnegie experts was their indication of semantic varieties. They noted the frequency of a particular word, viz., 'depend'; the Carnegie Report referred to three meanings viz.,

- a) be supported by
- b) trust
- c) be conditioned by.

J.J. Hornby observed that the Carnegie experts failed in one respect. It supplied inadequate recommendations as to which of the semantic varieties supplied in it deserves priority.

**Dr. West's Studies**

Dr. ... West, one of the leading pioneers of vocabulary studies, has greatly contributed to the enrichment of vocabulary investigation. His 'General Service list of English words'\(^ {27} \) was first published as part V of the Carnegie Interim Report of Vocabulary Selection. He revised this and presented it in its present form in 1947. To make his study comprehensive and foolproof to a great extent, he sampled:

- a) encyclopedia
- b) magazines
- c) textbooks
- d) novels
- e) essays
- f) poetry

The original sample included about two and a half
million words but this sample was supplemented by another sample of the same size. The special feature of this study is that meanings have been regrouped and frequencies expressed as percentages so that the teacher and text book writers may find it easier to understand and use the list. An example will illustrate the point further:

Games - 638 (l) - amusement, children's play, fun and game: 9%

Games with the idea of completion etc.
e.g., cards, football, etc. 38%

Games a particular context. E.g., We won two games. 23%

Games athletic contest, olympic games. 8%

This means: In a count of five million words, the word games occurred 638 times. In 9% of these occurrences, it meant children's play.

Besides semantic count, Dr. West classified words into the following four main categories in 'Language in Education'.

CLASS I: ESSENTIAL WORDS:
A count of any material whatsoever, so long as it is a running prose, will give a predominating number of essential words as 'A', 'The', 'Which', 'Who', 'Is', 'Do', 'Say', 'Thing' etc. One cannot say anything without them. There are about three hundred such words, and until one has got all these words the task of composition is extremely difficult.
A count of any literary material will give a number of words which are not in any way specialized in their reference, and are in most cases synonyms and refinement of words which have already become essential words. Thus 'Say!' is an essential word whereas 'Reply', 'Question', 'Assert', 'Deny', 'Suggest' are general words. 'Do' is an essential word whereas 'Attempt', 'Achieve', 'Finish', 'Accomplish' are general words. For elegance or exactness of expression these words are necessary. But materials such as technical descriptions might use very few of them.

A study of any ordinary material will reveal a large number of words dealing with the common environment-- and activities of men such as 'Food', 'Eat', 'Sleep', 'House', 'Wife', 'Field', 'Animal', 'Money' and so on. Such words are common in narrative materials; even a history or geography book would contain them in fairly large numbers but in a book of Chemistry or Physics they might be rare.

Specialized materials contain certain words peculiar to that material. While 'Money' is a common environmental word, 'Rupee', 'Pound', 'Dollar' are specific environmental words. 'Animal' is a common environmental word but 'Camel', 'Bison', 'Reindeer' are specific environmental words.
Dr. West 'predicted with absolute certainty'\textsuperscript{30} that the child would need all the class I words. He was fairly sure as to the first part of Class II; but the later words of Class II would not be used unless the child is going to study the language in its literary aspect. He was moderately certain with regard to class III. About Class IV words, he could not be sure at all.

The words of different classes are mixed together in Dr. West's General Service list of words. The first five hundred words are chiefly consisting of essential words and common environmental words. The next thousand are greatly general words and common environmental words. Specific environmental words start appearing considerably at the end of the second thousand.

As regards the size of the vocabulary, Dr. West opines that 5,000 words would give a boy the ability to read any ordinary Boys' book: Henty, Valentine, Marryat etc., without too much dictionary work; about 7,000 words would enable a boy to read almost any novel\textsuperscript{31}. With regard to production vocabulary he considered a vocabulary of 2,000 words 'good enough for anything and more than enough for most things'.\textsuperscript{32}

Moreover, attempts\textsuperscript{33}, were made by Dr. West in his readers to grade vocabulary in point of frequency, starting with the most frequent words and continuing with less frequent words and so on at the following stages:
H. Champion has criticised Dr. West of having treated vocabulary in respect of word-frequency as isolated disconnected words. But English is not a language of single words, it is essentially an idiomatic language in which many single words are used with multiplicity of meanings, e.g., the preposition 'on' in 'the book is on the table', 'he is on the committee', 'he is on duty', 'John is on the move', 'on condition that', 'on his arrival'. The proper grading of vocabulary involves not only the grading of words but also and more important the grading of phrases and idioms.

Palmer's Studies

H. E. Palmer, whose contribution to vocabulary studies is great, postulated that the vocabulary must be selected with the greatest care and perspicacity; it should include none but the commonest and most characteristic units, representing the most important ergonic classes. A vocabulary of this nature may be termed as the 'Microcosm of the language'. 'Thousand Word English', the best thousand word vocabulary, prepared jointly by
Palmer and A.S. Hornby, in accordance with the principles of frequency, ergonic combination, concreteness, proportion and general expediency, may be described as the microcosm of the language.

Palmer and Hornby examined the Interim Report on vocabulary selection and Thorndike's first thousand or so words, and from those counts they discovered an adequate vocabulary of maximum utility. In preparing the vocabulary they were guided by the following principles:

a) If the principle of frequency is carried to its logical conclusion, the child would hear nothing of nouns until the first two hundred words of the word frequency list had been fully learnt. But certain most frequent words such as : 'a', 'the', 'my', 'your' etc. would remain but meaningless without nouns.

b) The presentation of words must be accompanied by their ergons. The presentation of the verb to 'be' must be accompanied by a group of adjectives or adverbs of place, together with the subjects. Infact, the compromise between frequency and ergonic combination should be made in the construction of word-list.

c) The words with highest frequency are most difficult to concretise and vice-versa. This problem should be solved by making a compromise between the law of frequency and of ergonic combination.
d) The principle of proportion should be taken into consideration in preparing word list. The principle of proportion should be applied not only to ergonic categories, but also to other aspects of language.

e) If by parochial consideration of the frequency principle a comparatively less frequent word is omitted from a list of words for a certain grade, not only a perceptible gap will be created in the category but also it will not be easy to find a place for it in future. According to Palmer, in such cases the principle of frequency must be subordinated to that of expediency.

Consideration of these principles in the construction of thousand word vocabulary by Palmer and Hornby has made these words and their simpler derivatives cover 75 to 90 per cent of normal usage in Modern English.36

C.W. Ogden's Basic Vocabulary:

C.W. Ogden visualized the problem of vocabulary control from a different direction. Instead of engaging himself to the pursuit of word frequency in the reading materials he concentrated to finding out the essential ideas that man ordinarily wants to express. Then he prepared a list of 850 words, which though 'goes on a single sheet', is capable of expressing most economically the essential ideas of man.
I. Morris observes that to achieve the maximum economy in words, basic vocabulary:

a) implements the principle of one notion = one word, thus doing away with all synonyms.

b) collates 18 verbal 'operators' with adverbs and other words and thereby finds superior substitutes for hundreds of verbs, e.g. 'go' (com) in: enter; go away - depart; give in - yield; make up - compose.

c) collates the operators with nouns as other substitutes of verb forms e.g.: 'has a wash' for wash; 'keeps in mind' for remember; 'gives his word' for promises.

d) adopts a minimum count listing only need words and not derivatives.

e) extends the use of words to cover semantic varieties.

f) confines the language experience of the learner to a single vocabulary.

As a result, Ogden's Basic Vocabulary of 850 words consist of:

a) 600 nouns
b) 150 adjectives
c) 18 verbal operators
d) a number of prepositions, adverbs, pronouns and conjunctions

e) a few derivatives (formed by adding prefixes and suffixes to known words.

Thompson and Wyatt refer\textsuperscript{38} to the findings of a critical examination of Basic English by a study-group at the Department of Educational Research, Ontario College of Education, University of Toronto. The study pointed out that Ogden had introduced in his Basic English in all 3925 learning items.

But such an economy of words has made Basic English quite unintelligible to the average English speaking person. The oft quoted example: 'the servant of the Church said it was very kind of the women of good birth to help him in making the meeting of friends come off so well' - proves the fact of unintelligibility.

Moreover, Basic English may be useful for speaking English but unsuitable for reading of normal English. It has failed to distinguish between 'mastery' and 'recognition' of vocabulary.

About 'inclusions' and 'omissions', it may be pointed out that some highly abstract words have been included whereas some common words have been omitted.
Included: suggestion, protest, impulse, design, apparatus, statement, process, insurance, delicate, automatic, authority, degree, harmony, ornament, tendency, frequent, fertile, violent, theory, structure, shock rhythm, reaction, range, operation, observation, motion, fiction, expansion, disgust, comparison, argument, approval, adjustment

Excluded: mad, crowd, shout, plenty, chair, spot, both, buy, sell, rich, fresh, thank, please, ride, bring, wait, hold, find, try, while, during, shall, should, always, perhaps, afterwards, without, instead, can, ask, live, behind, understand, except, instead.

In India Basic English has hardly become popular because to the Indian students learning of English idioms and phrases is much greater difficult than the learning of words.

Following Ballard, it may be said that because a pupil knows the meaning of 'put' and 'with', it does not follow that he will also know that 'to put up with' means 'to endure'.

Risland's study

Risland made an elaborate study of the written vocabulary of children. He made a patient count of more than six million running words from children's writings including:

a) letters
b) themes
o) examination scripts
d) class works
e) home works
and other odd materials from a large number of schools of
different places.

It has been observed that though the frequencies for
all words with a total frequency of three or more for combined
grades and very useful interpretative tables are included, there
are a considerable number of marked inconsistencies in the
relative frequencies of individual words from grade to grade
which are difficult to explain and are contrary to the evidence
from other counts of children's writings. On the other hand, the
frequencies for most of the very common words are fairly con­
sistent from grade to grade, e.g., 'time', 'they', 'there', 'to'
'she', 'was', 'when' and 'you' are listed in all grades in the
first hundred of highest frequency.

C.W. Wright's Study

C.W. Wright conducted a vocabulary study in South
Africa on frequency basis. The main objectives of his study was
to prepare a list of words common in use in South Africa. He
analysed the content in terms of vocabulary of religious books,
newspapers, periodicals, fictions, classics, science books,
poetry books, either published or widely read in South Africa.
different words, arranged according to the principle of frequency.

This study is important because American and British word frequency lists are not expected to fit equally well in all countries. Moreover, local frequency of not only specific environmental words but also of words of other categories could be ascertained only by study on the line of Wright. To a teacher such a list will serve as a more reliable guide. 'Rupee' will form an effective ergonic combination in India, 'Pound' in England, 'Dollar' in the U.S.A. Local studies on the line of Wright in various countries will reveal important facts about distributions and proportions of words.

**Three more studies**

D.J. Rawat has referred to three important vocabulary studies on vocabulary of primary school children.

a) **Edgar Dale**. This is a study of 3000 words known by 80% of the fourth graders. The list has been prepared from a list of 10,000 words, based not on frequency but on understanding of meaning and used according to Dale-Chall readability formula.

b) **Sight Vocabulary**. E.W. Dolch, conducted sight vocabulary studies. His study gives a word list of basic sight vocabulary of 220 words (excluding nouns) and a second list of 95 nouns. Both the lists are important for remedial work or for building primary grade vocabularies.
c) A reading vocabulary for primary grade: A.I. Gates' study is a list of approximately 1500 words based on earlier word lists. It is probably the best single source for words that should ordinarily appear in the basic reading vocabulary of the primary grades.

SOME STUDIES IN DEPTH

Encyclopedia of Educational Research, 1960, has reported a series of studies on vocabulary. Some of them are as follows:

1. Leopold and Velten, Warner and Kaplan: They investigated the dynamics by which multiple meanings of words are acquired and by which the child's concept of a word may change.

2. Martin: He investigated how children develop meanings of quantitative words such as 'some', 'any', 'several' etc. Martin's study may provide incentive to the future researchers who may make this kind of detail study which is very much needed in this area.

3. De Saucy: He made a very interesting study on 'mastering of vocabulary'. His experimental findings indicate that 100 visual exposures to a word are equivalent of 20 auditory exposures or writing the word 5 times attentively.
She made studies on recognition and reproduction vocabulary of the children. The findings of her study indicate that scores in recognition and reproduction vocabulary of the first grade students have the greatest variability. The ratio diminishes with each subsequent year of study.

He conducted a number of investigations for the measurement of vocabulary difficulty in terms of density index and difficulty frequency index divided by density index.

VOCABULARY STUDIES IN INDIA

He made an interesting study of the reading vocabulary in English of P.U.C. and final year of secondary school students of Chotana area. 1500 words from the general service list by Dr. best and 100 words from the Central Institute's P.U.C. vocabulary constituted the test. The basic item of the test was a simple structure bearing an underlined word for translation into student's mother tongue. Mainly arts students, a few commerce students and a small section of science students formed the sample of the study.

The study threw light on...
1. The average recognition vocabulary of the students in the area

2. The familiarity status of each word on the tested list in the Chotanagpur students' vocabulary

3. The strength and weakness of the students in different subject categories of vocabulary

4. The strength and weakness of the students in grammatical categories: verb, nouns, adjectives etc.

U. Chadda

The investigator studied the vocabulary resources of third year Degree students. The findings of the study are:

1. Out of 500, the highest score was 282, the lowest 10.

2. 52.2 was the total average

3. 54.2 was the average score of the science students, and 48.3 was the average score of the arts students.

4. The average score of the female students was 52.1 and of the male students was 50.7.

5. The total of mean score on all the forms was 156.21.

6. The reliability of the test is .90

7. The performance of the students of the Pre-University Examination correlated with the performance in the vocabulary test.
There was positive correlation between grammatical performance and vocabulary performance.

Under the auspices of the Central Institute of English and Foreign Languages, Hyderabad, a 3500 word vocabulary for teaching English in Indian Schools was prepared. For the construction of the list of words, the following sources were sampled:

a) two earlier studies by the Institute of English and Foreign Languages, Hyderabad

b) the general service list of Dr. H. West

c) the I.I.C.S.F. or Nagpur list

d) the minimum adequate vocabulary of Dr. W. West

e) the History and principles of vocabulary control by Hermon Bongers, lists A, L, X

f) word study by J.C. Rickwald, Vols. 1 - 3.

g) An investigation into vocabulary resources of third year degree students by U. Chadda, lists A and B

h) preparatory general English, Physical and Social Sciences

i) "horndike", transposed: a restatement of the 400
highest frequency items by J. Dobbyn

j) the concrete nouns from O.U.L., under the areas such as food, animals and birds, clothing etc.

The procedure consisted of questionnaire sent to:

a) teachers of English

b) framers of syllabi

c) writers of text books

d) staff members of the Institute (C.I.E.M.I.)

e) research fellows of the Institute (C.I.E.M.I.)

who gave their opinions on the basis of which the final list was prepared. The list will greatly help text book writers to set their targets.

SOCIAL STUDIES

Educational investigation in Indian Universities (1939-61) has referred to some studies in vocabulary made by M.A. and students, which are summed up as follows:

1. Pali Pandya

made a survey of English vocabulary of pupils in Gujarati schools in standard VII. He made suggestions for preparation of
English Primer based on his study. His dissertation was approved by the Bombay University.
2. S. Parvi:
made an analytical survey of English sentences and phrase patterns and vocabulary selection in some of the standard Readers in use in the city of Bombay. His dissertation was approved by the Bombay University in 1953.

3. J.D. Dabho (Kum):
in her dissertation for M. Ed in 1950 standardised vocabulary (English) for Indian children of the age group 12-14 years.

4. R. Lavni (Sat):
made an estimate of meaning vocabulary in English of Class VII of the words existing in their Readers. Her dissertation was approved by the Lucknow University in 1960.

5. N.S. Nadkarni (Kum):
in her dissertation for M. Ed in 1959 made a survey of common English vocabulary of pupils in Marathi schools in standard VII. She made suggestions for the preparation of English primer based on it.

6. S. Saxena (Sat)
studied the role of environment in children's English vocabulary. The dissertation was approved by Sagar University 1961.
7. A. J. S. Haber:
made a study of English vocabulary with reference to pupils of Class VII. His dissertation was approved by Rajasthan University in 1961.

8. B. M. R. Naidu:
made an investigation into the reproduction vocabulary in English at Middle School Level. His dissertation was approved by Saugar University in 1952.

9. K. S. Jain:
made a meaning vocabulary study in English of the pupils of Lucknow city in terms of the words in their Readers. Her dissertation was approved by Lucknow University in 1958.

10. G. Rastogi:
made an estimate of meaning vocabulary in English. His dissertation was approved by Lucknow University in 1958.

11. K. S. Chate (Kum):
constructed an objective Achievement Test of Active Vocabulary in English for pupils of Class VII. Her dissertation was approved by Saugar University in 1960.
In 1931 he made a study of word-frequency in Bengali. He collected materials from different sources. Instead of preparing a common list taking words from different sources, he kept the count separate so as to be able to show the frequency order in the individual departments. Dr. West has observed that Probodh Deb Choudhury has varied the weighting of his different sources, but this was necessarily done by conjecture.

His objective was to prepare a list of easy Bengali vocabulary for the pupils of elementary grades. His list consists of 3500 words of high frequency. Against most of the words subject areas from which they have been collected have been mentioned but some words go without such references.

He has the honour of having made what is probably the first scientifically constructed word list in Hindi. The first list contained only 1000 words. Later on, with the cooperation of the Department of Education, Central Provinces (the then) the second list which consists of 4000 most common Hindi words was published.

One of the striking findings of Coenig is that Hindi
books used new words more frequently than English Primers (American). In Hindi books each new word comes after every second to eleventh word. The vocabulary burden of Hindi primers which is 11.8 fell far short of its counterpart in American primers which is 20.

R. S. Bhat

Bhat may be regarded as one of the earliest investigators in the field. He instituted an inquiry into the vocabulary attainment of children of age group 5-9.

A limited number of children in the city of Bombay formed his sample. As his sample was small, he adopted the 'peep hole' method. This method is generally applied in child psychology as well as in comparative psychology.

The findings of his study indicate:

a) No. of words known to the children of age 5 years:
   500

b) No. of words known to the children of age 6 years:
   640 - 1140

c) No. of words known to the children of age 7 years:
   850 - 1990

d) No. of words known to the children of age 8 years:
   920 - 2910
Bhai observed that 'vocabulary attainments of Marathi speaking children from the 6th to 10th year are less than those of children in the Western countries'; besides 'the children of different (social) classes use different words to denote one and the same thing especially in early stages'.

N. Mukerji has commented that Bhat 'thus opened the door ajar from cross-cultural studies which in future may prove to contain a rich field if pursued more systematically'.

V.R. Scelkar:

He studied the reproduction vocabulary in Marathi of pupils who had completed the primary course. His method and procedure consisted of:

a) analysis of essays written by children in terms of vocabulary

b) determination of the frequency of words used by the children

c) grammatical classification of words; and

d) content classification of vocabulary.

The size of the sample used was 270. Analysis of essays written
by the children gave 100,139 running words and 2883 different words. The different words were classified.

Joelkar did not use any statistical devices for the analysis of data.

He studied the basic vocabulary of Gujarati children of the age 11. By counting the number of running words and different words from four parallel text books he prepared a list of 8000 words. He classified the words according to frequency and prepared objective tests which were administered on 461 pupils. As regards the reproductive vocabulary, 996 pupils of 12 schools from rural and urban areas were given written work on any of the 33 topics of narrative, descriptive and reflective types. The compositions written by the pupils gave 103,113 running words and 4025 different words.

The findings of his study indicate that the recognition vocabulary of the pupils of 11 consist of 7932 words and reproduction vocabulary 4025 words. The words were classified according to their grammatical forms, the distribution of which are as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nouns</td>
<td>66.7 %</td>
</tr>
<tr>
<td>Pronouns</td>
<td>1.1 %</td>
</tr>
<tr>
<td>Adjectives</td>
<td>15.4 %</td>
</tr>
<tr>
<td>Verbs</td>
<td>11.27 %</td>
</tr>
</tbody>
</table>
Infact, Vakil's study is marked by a sophisticated tone in research design as well as in statistical analysis of data.

He instituted a comparative study of vocabulary comprehension as well as arithmetical abilities of children of age groups 8 to 13. Though his study is not mainly on vocabulary, yet some of his findings on vocabulary are really noteworthy. According to him, the average vocabulary of the Gujarati child of 12 is 12,390. His findings on the sex differences of linguistic scores demand mention here.

<table>
<thead>
<tr>
<th>Age</th>
<th>Mean score for boys (3,792)</th>
<th>Mean score for girls (2,155)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 ♦</td>
<td>12.75</td>
<td>11.20</td>
</tr>
<tr>
<td>8 ♦</td>
<td>15.40</td>
<td>14.50</td>
</tr>
<tr>
<td>9 ♦</td>
<td>18.95</td>
<td>17.39</td>
</tr>
<tr>
<td>10 ♦</td>
<td>24.20</td>
<td>24.35</td>
</tr>
<tr>
<td>11 ♦</td>
<td>30.20</td>
<td>30.05</td>
</tr>
<tr>
<td>12 ♦</td>
<td>33.50</td>
<td>32.95</td>
</tr>
<tr>
<td>13 ♦</td>
<td>35.10</td>
<td>34.50</td>
</tr>
<tr>
<td>14 ♦</td>
<td>37.70</td>
<td>36.75</td>
</tr>
<tr>
<td>15 ♦</td>
<td>41.30</td>
<td>41.95</td>
</tr>
<tr>
<td>16 ♦</td>
<td>45.10</td>
<td>45.50</td>
</tr>
</tbody>
</table>
The findings indicate that there is little sex difference in the score, which according to N. Mukerji, finds support in the works of western workers in the field.

U. G. Lakdavalla

She investigated the reproduction and recognition vocabularies of Gujarati children of 13.

She analysed six text books approved for standard "II in terms of vocabulary and prepared a list of those words which were found in all the six books with their frequency. Words not found in one or more text books were compared with Vakil's list for age 11 and 3405 words out of 10,112 were common in both Vakil's list and Dave's tentative list. The remaining words were shown to the experienced teachers for their opinion as to how many of those could be accepted or rejected.

The words were classified into three lists and three tests each with ten subtests were constructed. The first, second, and third tests were applied on 456, 455 and 456 students respectively. Only those words which could be recognised by more than 50% of the respondents were accepted.

Finally a list of 12167 words was prepared which included:
140

a) 4506 found in three or more text books sampled

b) 3405 words common in both Vakil's and Dave's tentative lists

c) 3949 words for which there was unanimity among teachers.

d) 307 known to more than 50% of the pupils according to the test.

These words were further classified according to grammatical forms and semantic considerations.

J.T. Raval

He investigated the recognition and reproduction vocabulary of Gujarati children of age group 12.

For the preparation of the reproduction vocabulary question papers were analysed and experienced teachers were consulted. Finally the students were consulted and 29 topics were selected for essays and 5 topics for letters.

The sample consisted of 240 children from Bombay and 1060 children from Gujarat, studying in standard VI in forty seven schools.

By analysing the essays and letters written by pupils the word lists were prepared. Word lists were constructed according to frequency and grammatical classification.
Haval analysed six approved Gujarati text books for preparation of recognition vocabulary. He drew materials from related literature and previous studies as well.

The findings of the study indicate that in the recognition vocabulary 95.73 per cent were content words, whereas in the reproduction vocabulary the percentage was only 69.26.

B.K. Chandrasekhariah 65

He constructed a graded vocabulary of 4000 to 5000 words, for all schools in the state. The objective of the investigation was to make the list comprehensive enough to prove itself the basis for all reading programmes and the production of reading materials for the children of class I to VII in Mysore state.

For the construction of the tentative list, readers were analysed in terms of vocabulary, word list published by the adult Education Council was consulted, word list published by the Mysore Education Federation was reviewed, and many miscellaneous sources were tapped.

Ten teachers from each of the 80 districts in Mysore state were selected for examining the tentative list as well as for grade-placement of words.
The break-up of words in each standard was as follows:

<table>
<thead>
<tr>
<th>Standard</th>
<th>Words</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>700</td>
</tr>
<tr>
<td>II</td>
<td>700</td>
</tr>
<tr>
<td>III</td>
<td>700</td>
</tr>
<tr>
<td>IV</td>
<td>700</td>
</tr>
<tr>
<td>V</td>
<td>800</td>
</tr>
<tr>
<td>VI</td>
<td>750</td>
</tr>
<tr>
<td>VII</td>
<td>650</td>
</tr>
</tbody>
</table>

V.R. Jagannathan:

He investigated Hindi and Tamil Homonyms and prepared a list of Hindi and Tamil words having the same sound but different meaning.

The language generally used by the Brahmins of Tanjore district was the area of the study.

S.K. Sharma:

Basic Hindi vocabulary of the students of Class I was investigated. Several text books were analysed for collection of a large number of words. Out of these words 1527 words were finally selected and divided into 12 checklists.

One percent of the total population of 140,000 constituted the sample. 1400 students of class IV formed the sample. The responses of 1400 students of each word were recorded.
The percentage of students knowing each word and the limits of confidence were found out from the data.

The findings of the study indicate that:

1. With regard to some words, percentage of correct responses was low implying that the words are difficult. The total number of such words was 146.

2. With regard to some words, percentage of correct responses was relatively high implying that the words are easy. The total number of such words was 231.

3. With regard to some words, percentage of correct responses was neither high nor low implying that these words are best suited to this class. The total number of such words was 1250.

The study includes a glossary of 1627 words with their difficulty value.

J.M. Tamhane 68

The investigation aimed at preparing a formation-vocabulary in Marathi language for the students in the age group 6 to 8 and 9 to 10. 8000 students of standards I to IV of primary schools of eight districts of Vidarba region formed the sample.

For collection of reproduction and recognition vocabu-
lary, the following procedure was adopted:

1. Students' responses under controlled conditions were observed.
2. Students' responses under free-play situations were observed.
3. Students' responses under specially organized situations were observed.
4. Oral and written work-sheets of the students were analysed.

Words having a frequency of 70% or more were retained. The proforma and principles recommended by T.C. Foeing were used for counting of words for reproduction vocabulary.

The findings of the study could be summed up as:

a) For the students of age group 6 to 10, the total general vocabulary was 4550 words.
b) For the students of age group 6 to 8, the total reproductive vocabulary was 1705 words.
c) For the students of age group 6 to 10, the total recognition vocabulary was 755 words.
d) For the students of age group 6 to 8, the total recognition vocabulary was 246.
e) For the students of age group 9 to 10, the total reproductive vocabulary was 1057.
f) for the students of age group 8 to 10 the total recognition vocabulary was 2090 words

g) the tentative basic word list consists of 2043 words and the basic vocabulary consists of 1,135 words.

*C.C. Rukmini*

The investigator instituted a comparison between the estimated vocabulary and the actual spoken vocabulary of the students of age 7 plus reading in the schools of Rajasthan.

The findings of the investigation indicate that while the total estimated vocabulary collected from the nationalised text books was 821, the actual vocabulary spoken by the children of age 7 was 1232. In both estimated and actual vocabulary nouns predominate, the percentage being 62.56 and 51.55 respectively.

The study suggested that the size of the text book vocabulary could be increased to a considerable extent.

a) **M. Ed. Thesis (Gujerati)**

1. S.U. Parek in his M. Ed. thesis, approved by the Maharaja Sayajirao University of Baroda in 1957, studied the Basic Gujarati vocabulary of the children of age group 5 to 9 on the basis of word frequency.

b) **M. Ed. Dissertation (Marathi)**

1. H.J. Katanar, made a study of Marathi vocabulary common in use with the children in Tumsar (age group 5-6). His dissertation was approved by Nagpur University in 1961.

2. M.R. Wadaskar, in his M.Ed dissertation in 1960 approved by Nagpur University studied the spoken vocabulary of Marathi children of age group 5-6.

c) **M. Ed. Dissertation (Malayalam)**

1. J. Thakamma (smt) made an investigation into the vocabulary used for the teaching of Mathematics in Malayalam in Secondary schools of Kerala state (Kerala University 1961).

d) **M. Ed. Dissertations (Gujerati)**

1. S.B. Mangshi made a study of vocabulary (Gujerati) of 100 Gujarati children of the age group 4-6. Bombay University approved his dissertation in 1958.

2. G.J. Khandadia, studied the reproductive vocabulary in Gujarati of the pupils who have completed the primary course
in 1951. Bombay University approved her dissertation

3. U.T. Lakdawala (Kum), Bombay 1960, studied the Basic vocabulary of Gujarati children at the age of 13

4.

e) M. Ed. Dissertations (Hindi)

1. K. Goel (kum) studied the reading vocabulary of pupils of Class I in Hindi. Her dissertation was approved by Allahabad University in 1953.

2. Hiranjnan Nath prepared the Basic vocabulary list in Hindi for the first grade students in Ambala Division. The Punjab University approved her dissertation in 1958.

3. Harshai B.s. made an investigation into the reproduction vocabulary in Hindi of pupils at the age of 11. His dissertation was approved by Jabalpur University in 1953.

4. J.P. Tiwari made an investigation into the reproduction vocabulary in Hindi of pupils who have completed the primary stage. Sagar University approved his dissertation in 1956.

5. K. Saraswati (Kum) made a critical study of Hindi vocabulary for grade II. In 1957 Allahabad University approved her thesis.

6. O. Prakash in his dissertation approved by Delhi
University in 1953 prepared a vocabulary list in Hindi for for grave VI and VII of Delhi schools in the form of a group test.


8. KK Bhatnagar (Kum) constructed a Hindi vocabulary test for students of Class VI. Lucknow University approved the dissertation in 1954.

9. D.S. Sukla made an enquiry into the influence of Chattisgarhi Dialect on the active vocabulary of Hindi at the middle school stage in Reapur District. Sagar University approved her dissertation in 1961.


11. B. Singh (amt) made a study of word-load in Hindi text books for Class VII in U.P. The dissertation was approved in 1960 by Lucknow University.

(3) M.Ed. Dissertation (Tamil)

1. V.V. Ranganathan made a critical study of text books in Tamil for detailed study in forms I to III with special ref-
erence to vocabulary employed. Madras University approved it in 1953.

**a) M. Ed. Dissertation (Sanskrit)**


**b) M. Ed. Dissertation (Urdu)**

1. Freni Anis (smt) made a critical study of the vocabulary of Urdu Books written for the children of Class II and III. The dissertation was approved by Nagpur University in 1961.

**Concluding Comments**

In fine, most of the earlier studies are on the first language. Very few are on the second language. Moreover, majority of them attempted to find out the importance of different words by frequency counts. Though Dr. Jast considered the range factor in his study, he did not combine both the factors of frequency and range to measure the weights (credits or importance) of different words in arithmetical terms, which the present investigator will attempt and report in the subsequent chapters.

Besides, very few studies attempted to find out the
difficulty value of word, which is an important determinant of
difficulty of vocabulary control. Some studies on the difficulty value of
words (S.I. Shama's studies) are on the first language. Indeed
there had not been a single study of the kind on English as a
second language, though findings of the studies on difficulty
value of English words would have been of great value to the
teachers of English.

Moreover, there are quite a considerable number of
studies on how and to what extent the variable like socio-
economic conditions affect the actual vocabulary of the pupils,
but the findings of those studies have not provided us with
separate lists of words containing the difficulty value of words
in respect of the pupils hailing from the upper socio-economic
background and the lower socio-economic group. Such lists would
have been of great value to the teachers of English.

Indeed, the findings of the earlier studies do not,
to a sufficient extent, throw light on the following:

a) Vocabulary difficulties of the second language

b) Weight derived from frequency and range of words of the
   second language

c) Difficulty value of words of the second language

d) Difficulty value of words of the second language in
   respect of the pupils hailing from the upper socio-economic
group
e) difficulty value of words of the second language, in respect of the pupils hailing from the lower socio-economic group

As the earlier studies left the aforesaid five areas, unexplored, the present author will make an attempt to cover them in the present investigation and report in the subsequent chapters.