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A summary of research on reading vocabulary

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A SUMMARY OF RESEARCH ON READING VOCABULARY

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CHAPTER I

INTRODUCTION

The purpose of this study is to summarize the research on reading vocabulary. The study proposes to:

1. Analyze the research pertaining to basal reading serâs vocabularies
2. Find the size of vocabularies
3. Analyze the research concerning the selection of words for readers
4. Analyze the research on vocabulary tests
5. Find information concerning a meaningful vocabulary
6. Analyze research on learning and mastery of a vocabulary

CHAPTER II

IMPORTANCE OF VOCABULARY

The child's ability to read, to speak, to write, and to think are inevitably conditioned by his vocabulary.^{1/}

Russell^{2/} writes that since one of man's most important activities is the communication of ideas, it follows that one of his most important forms of knowledge is knowledge of words. Teachers have always recognized that knowing words is a great asset to children in their schoolwork and that it has values in out-of-school activities.

According to Gray^{3/}, no one would deny that in our present culture reading is a basic tool of communication, and that in the field of education it is the principal vehicle of learning. It is the indispensable factor in the teaching of nearly every part of the curriculum. Responsibility for instruction and practice in reading must be assumed by everyone charged with the education of children, youth, and adults.

Along this same line Rinsland^{4/} states that accurate

^{1/} J. Conrad Seegers. "Vocabulary Problems in the Elementary School." Elementary English Review 16: 199-204; May 1939.

^{2/} David H. Russell, Children Learn to Read. Boston, Mass. Ginn & Co., 1949. p.95.

^{3/} William S. Gray, Reading in an Age of Mass Communication. New York: Appleton-Century-Crofts, Inc., 1949. p.95.

^{4/} Henry D. Rinsland, A Basic Vocabulary of Elementary School Children. New York. MacMillan Co.; 1945. pp.2-3.

and exact knowledge concerning these symbols-what they are in each grade and how children use them from grade to grade-should lead to a better method of preparing all verbal materials so that learning can go on with the greatest ease and benefit to the whole personality of the growing child. It is obvious that no single piece of research could give a complete or total graded vocabulary. Obviously experts do not agree on the number of words, either total or different, which should be used where fewest words are given, that is, in the lower grades, their disagreement shows lack of knowledge or difficulty and usage of words.

Word study is essential to equip us to command credit and influence with our fellowmen. It is by language that we commend our personality and our activities to others.^{1/}

^{1/}J.J.Callahan. "Word List." Science of Language 2;1939.

CHAPTER III

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ADVANTAGES AND DANGERS OF BASAL READERS

There has been a difference of opinion concerning the use of a basal reading system on the one hand and the use of many readers from many sources on the other. Some teachers have favored one reading system because it is uniform continuation of presenting new vocabulary and skills and a systematic review of preceding vocabularies. Others preferred a variety of readers from many different sources or systems to suit the abilities and interests of the members of the different groups or classes.

In 1930 the interest content of reading series for the lower grades was greatly improved along with the introduction of controlled vocabularies.

In 1934 Smith^{1/} predicted that the basic set of readers would eventually disappear. However, this has not proven true, as yet.

Gray^{2/} states that many schools which have endeavored to teach reading more or less incidentally have found that a surprisingly large number of remedial cases have developed sooner or later. Schools which have found it necessary to provide periods regularly for instruction in reading in order to improve have resulted.

1/ Nila B. Smith. American Reading Instruction. New York: Silver, Burdett & Co., 1934. pp.264-267.

2/ William S. Gray. Journal of National Education Association. p.20, January 1931.

By 1940 basic reading programs were reinstated in many of the schools which had abandoned them.

The modern reading program consists, according to Russell^{1/} in much more than reading from one book. Within recent years basic readers have been changed and improved in content, format, and mechanics of writing perhaps more than any other school texts. In general the modern reading series is constructed on four main principles:

1. It provides continuity of growth in reading skills, habits, and attitudes by means of a carefully graded series of reading materials. So gradually do the materials increase in difficulty that most pupils can advance through the materials with only a little guidance by the teacher.
2. It provides for a wide variety of reading activities. The modern basic series is written on the assumption that children have to read many different kinds of materials for many different purposes. Accordingly it includes both recreational and work-type reading activities with a wide variety of the latter.
3. It provides a complete organization of reading experiences. Research shows that learning to read is a developmental process in which children build upon certain knowledges and skills. Accordingly a good basic series avoids gaps in the learning experiences and provides in an organized way for the different reading abilities children acquire.
4. It provides for a worth-while content of ideas. They contain material selected for their intrinsic value—ideas and types of conduct that are most important for junior citizens of a democracy.

^{1/} David H. Russell, Children Learn to Read, Boston, Mass. Ginn & Co., 1949. pp.104-110.

Bond^{1/} agrees that the basal program provides the framework through which the reading abilities, skills, and techniques are introduced and around which they are built. In the basal program the child is shown how to work with words so that he becomes quick and accurate in recognizing them. It is through the basal program that the child gets an understanding of how to go about learning to read. It gives initial experiences in comprehension abilities. It gives carefully controlled instruction with constant appraisal and additional instruction in order that further refinements may result.

Russell^{2/} further adds that the good teacher uses basal readers as only part of her whole reading program. The modern teacher, then, gives considerable place to a basal series in her program (reports indicate that over 95 per cent of teachers use basic series) but she never hesitates to use other materials as well.

Some of the dangers in the use of basic books which can be overcome by careful planning are:

1. The children of any class cannot all profit by the same book of a basic series. Schools must be careful to provide basic readers on different levels of difficulty for any one class.
2. The teacher must be careful to extend the reading program beyond basic books by using materials of the

1/ Guy L. Bond and Eva B. Wagner, Teaching the Child to Read, New York: The MacMillan Co., 1950. p.196.

2/ David H. Russell, Children Learn to Read, Boston, Mass.: Ginn & Co. 1949 p.106.

community and current interests, thus stimulating her pupils to read materials important to them.

3. Reading materials and situations must be related to the children's other activities.

4. A basic series of readers may not provide all the reading situations needed by some children. Children need guidance in selecting from the wide range of reading materials available today.

Regarding building a reading program that would best suit the needs of the individual children, Boney^{1/} says that they have ignored the warnings of reading authorities that systematic instruction, which has usually meant the use of basal readers and their accessories, should be provided to insure orderly vocabulary development, adequate introduction of basic skills, etc. Basal readers are only one type of a number of materials recommended for a balanced program. Similar books cannot be used for dissimilar reading cases.

Through a carefully controlled investigation of different procedures Gates^{2/} and others studied the relative merits of a "modern systematic method" of teaching and "an opportunistic method". The findings in respect to achievement in oral and silent reading were distinctly favorable to systematic teaching, especially in beginning reading. However, a given method does not always secure equally satisfactory results.

1/ C.D.Boney. "Basal Readers." The Elementary English Review, pp.133-136. 1938.

2/ A.I.Gates, Batchelder, and Betzner, Encyclopedia of Educational Research, The MacMillan Co., Boston, Mass., pp.994-995. 1950.

CHAPTER IV

WORD LISTS

Bond^{1/} writes that the child enters the reading program with marked differences in regard to his own vocabulary development. His listening and speaking vocabularies are relatively large; his reading and writing vocabularies are practically nonexistent. Many people assume because the child knows the meanings of words that he must be able to recognize them in print. Such is not the case. In the early experiences in reading the child must have a controlled vocabulary of printed words. This does not mean that language development need be nor should be curtailed. The teacher should read to the child and should use other aids to vocabulary development as well in order that the child may attach meaning to the spoken symbol, may develop extensiveness of meanings, and may gain depth and vividness of meaning.

It is paramount importance, so says Lamoreaux^{2/} that teachers be conscious of the child's reading vocabulary as well as his speaking vocabulary. No one today can say that any particular list of words is the "right" basic vocabulary for children. Authorities differ widely not only as to a basic vocabulary for readers but also as to the way in which it should be determined.

1/ Guy L. Bond and Eva B. Wagner. Teaching the Child to Read N.Y.: The MacMillan Co., 1950. p.196.

2/ Lillian A. Lamoreaux and Doris M. Lee. Learning to Read Through Experience. N.Y. Appleton-Century-Crofts, Inc. p.147. 1943.

ained. If reading is to be functional, the vocabulary of a locale as well as the vocabularies of the various child-life situations of today must be considered in choosing a basic list. It is now understood that reading is a unified process and that mere repetition alone is not enough to insure recognition of a word.

Gates^{1/} says that other things being equal, the less familiar the vocabulary the harder the reading will be. Other things being equal, the heavier the "vocabulary burden", the harder the content. By vocabulary burden is here meant the number of "different" words used in a given amount of material. A particular primer, to illustrate, contains 400 different words in the running 4200 running words which appear in the book. The vocabulary burden could be determined by counting the number of times each word appears and computing the average of these figures or, more easily, by dividing the total number of words (4200) by the number of different words (400). The result would be substantially the same, namely 10.5. This figure gives the average number of repetitions per word. It also indicates the average rate at which "new" words are introduced, namely one new word for every 10.5 running words. Other things such as the character of the words, the evenness with which new words are introduced, the complexity of the ideas and the sentence struc-

^{1/} A.I. Gates. Interests and Ability New York: The MacMillan Co., 1930. pp. 3-35.

ture, etc., being equal, the rate of introducing new words indicates the difficulty of the material. The relation of the number of words in a given body of material to the number of different words thus indicates objectively the difficulty of the content when other factors are reasonably uniform.

Beginning courses in reading vary widely in vocabulary burden. A vocabulary burden suited to pupils of one degree of aptitude for learning to read may be too heavy or too light for pupils of other levels of capacity and that material, especially, which is too heavy with new words may profoundly affect a pupil interest and progress in reading. The typical primary readers, which introduce new words at rates varying from 1 to 10 up to 1 in 7 running words cannot be read even by the brightest classes without supplementary work of some sort. The number of repetitions per word which must be provided in classroom work during the first year are:

Range of I.Q. (Chronological Ages Between 6.1 and 7.5 years at Beginning of Term)	Number of Repetitions to be Provided in Reading Course, i.e. Aside from All Incidental Reading
120-129	20
110-119	30
90-109	35
80- 89	40
70- 79	45
60- 69	55

Russell^{1/} writes that in addition to knowing how many children may be expected to recognize and understand at a particular grade level, teachers will find that studies of words in use, or word-frequency counts, have implications for the reading program. In general such word lists have been made up on the basis of their frequency of use in different situations, such as their occurrence in well-known books or newspapers or appearance in children's writing. Different lists give different results, depending upon the sources from which the words were counted and listed as most frequent or of less frequent use. Since the early 1930's, too, a number of word lists have appeared which are composites of other lists. Thus teachers, curriculum workers, and textbook writers have some good guides as to the most useful words for children to know.

Witty^{2/} states that vocabulary development has been a source of increased concern since the period 1920 to 1930 when attention was repeatedly directed to the unjustifiably large vocabulary of beginning textbooks was compared with the frequency counts of words in lists; extremely large and difficult vocabularies were cited in various textbooks. Accordingly, an era of vocabulary reduction and simplification began.

^{1/} David H. Russell. Children Learn to Read. Boston, Mass.: Ginn & Co., 1949 p.191.

^{2/} Paul Witty. Reading in Modern Education. Boston, Mass.: D.C. Heath & Co., 1949 pp.84-85.

Edward L. Thorndike made one of the first comprehensive lists; "The Teachers' Word Book", published in 1921, contained 10,000 words. A revision in 1931 extended the count to 20,000, while the 1944 edition by Thorndike and Lorge recommends that teachers use the symbols in "The Teachers' Word Book of 30,000 Words" to select words for emphasis in various grades.

The primary readers of recent years, says Stone^{1/} as a rule, are much easier, level by level, than they were previous to 1930, the year there appeared the first series of primary readers satisfactory from the standpoint of vocabulary control. The general tendency since has been to introduce words more gradually and to provide more books in the primary series. This change for the better has been brought about by the research studies of the vocabularies of primary reading by a demand for simpler reading material level by level with the vocabulary carefully controlled.

Betts^{2/} agrees that as far as reduction contributes to a gradual induction of the pupil into the reading activities, this is desirable. More children had a chance to succeed. However, to solve the problem, he thinks differences in rate of progress should be considered. Reduction denies some children an

1/ Clarence R. Stone, "The Vocabularies of Ten First Readers", The Twentieth Yearbook of the National Society for the Study of Education 2:127-144;

2/ E.A. Betts. Foundation of Reading Instruction. Boston, Mass.: American Book Co., 1946

opportunity to progress rapidly, unless a rich and varied collateral reading program is provided.

Following are brief descriptions of the word lists for primary reading which have been most frequently utilized according to Stone.^{1/}

1. The Horn List, 1925

Dr. Ernest Horn compiled three extensive studies of words spoken by children one to six years of age and formulated a list of approximately 1,000 words most commonly used.

2. The Gates List, 1926-1935

The original Gates list of 1,500 words "selected to be suitable for use in all forms of reading material in grades 1, 2 and 3" was published in 1926. First a list of 4300 words was made on the basis of frequency as shown in the Thorndike List, in young childrens' literature, in series of primary readers, and in spoken vocabulary of young children. Gates states that 1,500 words for use in all forms of reading matter in Grades 1, 2 and 3 should be chosen from-

- a.) 25,000 Thorndike List from Childrens' Literature
- b.) Any words not in above found in 1,000 words of highest frequency as determined by a count in a selection of young childrens' literature
- c.) All additional words found in thousand most frequent words in a series of readers for primary grades.
- d.) All additional words found in 1,000 most frequent words in spoken vocabulary of young children.

^{1/} Clarence R. Stone, Progress in Primary Reading. Atlanta, Georgia Webster Publishing Co., 1950 pp.99-104.

Ten criteria related to utility, interest, and difficulty were set up. The final selection of words was made on a numerical rating obtained by combining (1) composite judgments of experts on the interest of the word to children: (2) composite judgment of experts on the utility of the word for children: (3) frequency of appearance in selected primary literature: (4) frequency of appearance in childrens' spoken language: (6) frequency of appearance in representative literature for older children. The 1935 list of 1,811 words was formulated the same way. This list has been widely used by authors of readers.

3. Kindergarten List, 1928

2,596 words most frequently used by young children

4. Stone, 1936

A core vocabulary of 2,000 important words was selected from a result of a vocabulary study of 12 pre-primers, 29 primers, 26 first readers, 20 second readers and 11 third readers. This core vocabulary was distributed into seven levels according to the general trend of their placement in the different series of readers.

In 1921 he made a new study of 21 pre-primers, 21 primers, 21 first-readers, 21 second-readers, and 21 third-readers published from 1930-1941 and formulated a more accurate and more nearly up-to-date graded vocabulary by reading levels from the pre-primers to the third and fourth reader level, a total of ten levels. He selected 2,136 words from among 5,314 different words.

In 1930 Wheeler and Howell^{1/} found that ten first readers, then in wide use, had a total of 2,061 words counting all variants, except plurals in s as separate words.

^{1/} H.E. Wheeler & Emma Howell. "A First-Grade Vocabulary Study." Elementary School Journal 31:52-60 September 1930.

In 1931 Packer^{1/} reported that ten first readers, then in wide use, had a total of 3,541 different words counting all variants, except plurals in s as separate words.

In 1934 Aline E. Gross^{2/} reported a study of ten pre-primers revealing a combined vocabulary of 393 words, counting all forms separately except the singular possessive for a total of 8,831 words of reading material. This study reveals the word difficulties confronted by children under a plan of teaching beginning reading which involves the use of a number of pre-primers previous to primer reading and with no orderly plan of introducing and repeating new words.

Witty^{3/} writes that the reading textbooks also tended to repeat words again and again in order that "basic" vocabularies might be thoroughly mastered. At the pre-primer and primer level, this reduction was often carried to an extreme. Some pre-primers contained such a meager vocabulary that little useful work in concept building could be accomplished. Moreover, the repetition of words was so great that monotony resulted and children lost interest in the stories.

1/ J.L.Packer, "The Vocabularies of Ten First Readers" The Twentieth Yearbook of the National Society for the Study of Education 2:127-144.

2/ Aline E. Gross, "A Pre-Primer Vocabulary Study " Elementary School Journal 35:48-56 Sept. 1934.

3/ Paul Witty Reading in Modern Education Boston, Mass.: D.C. Heath & Co. 1949 p.86.

Thus, due to the statistical studies of readers and the appearance and the use of standard primary word lists there has been progressive decrease in the wide variation of the vocabularies of different series of primary readers and of different books for a particular level such as primers. From 1934 to 1940 there was a big decrease in the variance of vocabulary in pre-primers. Vocabulary control for the pre-primer period has been further aided by the recent common practice of having two or more pre-primers in a series of primary readers.

The word list compiled by Rinsland was derived from a count of over six million running words found in the written work of pupils in grade 1 through 8. More than 200,000 individual papers were examined and a list of 25,632 different words were assembled. The words which appeared three or more times in any one grade are presented in alphabetical order. A convenient table presents these 14,571 words according to their frequency in each grade.

Another widely used word list was prepared by Buckingham and Dolch for the construction of textbooks. They state that the first way in which one may determine the size of a grade vocabulary to be selected from a word count list is by a consideration of the probable vocabulary development of the average child. If we know approximately what size of vocabulary to expect, we can simply count down from the high end of the frequency list until we have included the assumed number of words.

Stone^{1/} feels that a new graded list needs to be made every ten years. Words in pre-primers and primers should be selected, with very few exceptions, from those most commonly spoken by children up to and including the age of 6 years. The words should have interest, appeal (color, action, animals, etc.) and be useful in other immediate and future readings. There should be an ease of learning.

Russell^{2/} states that in the problem of vocabulary control, there is no agreement about the size and the repetition of vocabulary in two sample primers, the replies reliably favor a shorter primer containing fewer different words. The total vocabularies favored for the different books are smaller than those in most of the readers now in common use. Practically all answers indicate an interest in a complete, well-organized reading program based on a foundation of carefully built readers.

Of at least equal importance, says Patterson^{3/} to the number of words, the ratio of new words to the page, and the ratio of printed to orally acquired words, is the nature of the words

1/ Clarence R. Stone. Progress in Primary Reading. Atlanta, Ga.: Webster Publishing Co., 1950 pp. 105, 106, 360-361.

2/ David H. Russell, "Opinions of Experts About Primary Grade Basic Reading Programs" Elementary School Journal p. 609 June 1944.

3/ Samuel W. Patterson. Teaching the Child to Read. Garden City New York: Doubleday, Doran & Co., Inc. 1930 pp. 141-142.

used in our primers and first readers. As far as possible they should represent the concrete rather than the abstract. Furthermore, it must be remembered, their mere length may not spell difficulty of recognition. The pupil's unfamiliarity with his background of meaning and association is of far greater moment.

Thorndike's summary of a number of these studies as reported by Stone^{1/} gives us our best evidence for judging how large a word list we may expect the average child of any particular grade to know. In Dolch's basic sight vocabulary list of 220 words he omitted all nouns from his list. He contended that certain words of importance in the pre-primer and primer stages, especially nouns like farmer, pony, and chicken, are not of importance above that. Some question this, thinking it is an inadequate reading vocabulary.

Some of the studies indicate that the curve at the beginning of grade 1 should start at 3,000 words. The makers of the kindergarten Union List have placed this point at about 2,000. We may accept that figure as a conservative estimate, fully recognizing that many children of high intelligence and wide experience enter school with a vocabulary development one or two years ahead of their less favored fellows. Between these two extremes all seem to agree that the curve should be slightly

^{1/} Clarence R. Stone. Progress in Primary Reading. Atlanta, Ga.: Webster Publishing Co. 1950 p.361.

concave upward, becoming steeper year by year. The figures for each year represent the total average vocabulary at the end of the year. The annual increase for any grade is easily secured by subtracting the total for the grade before, constituting from one-fourth to one-half of the total, the use of an adequate amount of highly interesting material with a minimum of word difficulties is of the greatest importance. The standard graded vocabulary will be invaluable to authors and teachers in constructing reading materials of various types, including reading tests, carefully graded with respect to vocabulary. This is good for lessons in phonics and in visual perception and analysis of word forms. These lists are a help in selecting series of readers that insure vocabulary expansion level by level. In selecting basal readers, it is important to consider what per cent of new words in each volume is among important words most commonly used in reading tests of that level.

In making a careful study of some of the basic reading series in wide use today Adams^{1/} says it reveals outstanding differences among them in the way in which these books are prepared. These differences arise in spite of the very encouraging fact that the publishers engage reading specialists, psycholo-

1/ Fay Adams; Lillian Gray, and Dora Reese. Teaching Children to Read. New York: The Ronald Press Co., 1949 p.435.

gists, and teachers to aid in preparing reading materials. We may find that one series presents 1,320 words in the first three grades, while another series presents 1,375 words in the same grade. A casual examination might lead one to think that, so far as vocabulary is concerned, there is no real difference between the two. But a closer examination might show that there is a marked difference in which the words are presented.

It is quite possible, according to Dolch^{1/} that before a child receives his first book, he may know as many as fifty sight words. For some reason most pre-primers assume no sight vocabulary at all.

Harrison^{2/} writes that modern basic readers and supplementary books written for the primary grades usually have a controlled vocabulary of not more than a few hundred common words. For example, in pre-primers, and first-readers planned for a basic reading program in the first grade, the total number of new words is likely to be between 300 and 400 different words. By the end of third grade the basic materials often contain only about 1400 or 1500 different words. Of course children read many other books in the primary grades, but in general a small vocabulary will not begin to affect their reading much until some time in the third grade, when they begin to branch

^{1/} Edward W. Dolch. Teaching Primary Reading. Champaign, Ill.: The Gerrard Press, 1950. pp.254-255.

^{2/} M. Lucile Harrison. Reading Readiness. Boston, Mass.: Houghton Mifflin Co., 1939. p.185.

out more widely in their reading.

In pre-primers and primers, publishers usually add no more than two new words per page; in first-readers, no more than three; in second-readers, four; and in third-readers, five. There is no real reason for these particular figures. The first publisher to control vocabulary used them, and all others have followed his step. Because there are some pages with fewer new words or with no new words, the average of new words per page is considerably less than the figures given. Usually if publishers have a low average of new words per page they advertise the fact. Publishers of primary books compete very strenuously to produce "easy books". A low vocabulary load is assumed to be proof of an "easy book".

There is much competition between publishers as to total vocabulary load of their primary series. This competition has about reached a standstill, however, as a minimum number seems to have been reached in which the stories in the ordinary book can be told. In fact, a few publishers have begun to argue against such great restrictions. The usual number of total figures for modern series are, however, about as follows:

Pre-primer	50 new words
Primer	100 new words
First-reader	150 new words
Second-year books	400 new words
Third-year books	1300 new words

Dolch^{1/} further says that if we add the numbers for pre-primer, and primer and first-reader, we find that the first-year books together have a total of 300 words, or nearly as much as the second-year books. Yet, surely, the children learn sight words much more rapidly the second year than the first. In addition, several studies indicate that the average child learns only about 200 sight words during the first year, if measured at the end of the year. The first-year books as given above present considerably more than that number.

Because of these two facts—limitation of learning the first year and faster learning during the second—there seems to be much wisdom in not expecting the average child to finish the first-reader the first year. Perhaps the average child might well begin the first-year reader at the beginning of the second year. Schools which follow this practice are quite satisfied with it. Of course the rapid learners finish all the first-year books the first year, and the slow learners do not even do as well as the average.

^{1/} Edward W. Dolch. Teaching Primary Reading. Champaign, Ill.: The Gerrard Press, 1950. p.256.

CHAPTER V

TEACHING VOCABULARY

There are almost as many systems of teaching reading as there are authors of sets of readers. There is no single best way of teaching reading. Plan should never be regarded as a prescribed form for any reading lesson. Nearly all the reading systems, however, can be classified under one or another of a few basic methods. There are alphabet, phonic, or phonetic, word, and sentence methods, etc. The main difference in these methods lie in the procedures they use for teaching word recognition. Back in 1908 Huey distinguished these methods. With some amplification this classification is still useful.

It is generally agreed today that the mechanical alphabet-spelling and phonetic methods should have no place in the teaching of reading to beginners. Methods which start with larger meaningful wholes are generally approved. There is a division of opinion about the relative merits of starting with words or starting with sentences. In both the word and sentence methods emphasis is placed on the recognition of words as units, not as collections of letters. Both methods stress the meaningful nature of reading.

Establish the learning rate for each child. The learning rate is the number of words a child can retain in a twenty-minute period. Ten words would be a maximum for the first grade.

The words are taken from two readers. In grades 4,5,and 6 the words are taken from words used every day in class work. The words selected should be colorful,abstract,some phonetic,some non-phonetic,and some long and some short. An hour after teaching the words the children are tested on the same words.

Children have to be ready to read. Mental age is a factor,but no one mental age guarantees reading well,bThe way and method it is taught is important.

Boys have a superior speaking vocabulary. However,eight out of ten reading cases are boys. Their auditory rates are high.

It is generally agreed that a period of preparation is necessary before children are ready to begin to use primers. The period of preparation is used to teach a small vocabulary of sight words which are frequent and important in later reading. The earliest words are taught by means of charts and labels, and blackboard materials and work-books which present the words in connection with pictures. The words are presented in various combinations with much repetition until they can be easily recognized. As soon as a sufficient number of words has been learned, the children are introduced to book reading in extremely easy little books called pre-primers. Then they progress to primers and first readers. The consensus of opinion is that oral and silent reading should be equally prominent in first grade reading. Most authorities believe that some training in phonetic analysis of words is necessary. There is nearly universal agreement that phonetic analysis should not be introduced until after the children have learned a sight vocabulary of over 50 words.

Rapid progress in fundamental reading attitudes and habits comes in the second and third grade program of instruction. In these grades a thorough basis should be provided in the basic habits and skills/ Training in the techniques of word analysis and word recognition needs to be given throughout this

period. Increasing emphasis should be given to silent reading. A liking for reading should be built all along the way.

Educators have still not resolved the problem raised by Rousseau and others, of how much the child should be let alone in his development, including vocabulary development. The value of a rich background of experiences is accepted by all.

Opinion is somewhat divided about the value of a direct attack on vocabulary problems. Practice and research in vocabulary-building today indicate considerable faith among school people in direct instruction in vocabulary.

Some general activities to be included in teaching the meaning of important words are:

1. The provision of wide background of first-hand experiences
2. Visual aids
3. Numerous opportunities for oral-language expression and learning
4. Explanation by teacher
5. Oral reading and story-telling by the teacher
6. Use of pupil-made materials
7. Emphasis upon concept-building in the content field
8. Wide reading
9. Use of the dictionary
10. Informational word study
11. Direct word study

Then in later grades, as they begin to work with the extensive printed materials available today their vocabularies will be closely related to their reading and other school success.

Actually children use not one vocabulary but several vocabularies (hearing, reading, speaking, writing). The relative size of these different vocabularies change with children's development. When most children come to school, their hearing (or understanding) vocabularies are relatively large. Their speaking vocabularies are ordinarily considerably less, and their reading and writing vocabularies are probably nonexistent or not more than a few words. Beginning in the first grade, often in the second half of it, their reading or word-recognition vocabularies begin to grow rapidly. Toward the end of the first grade most children begin to write a few words. The reading and writing vocabularies continue to grow rapidly in the primary grades and somewhere about the fourth-grade level, the reading vocabulary overtakes and passes the speech vocabulary.

Although knowledge of words is closely related to spelling ability, Russell^{1/} says it is logically even more closely correlated with most measures of reading ability. Indeed, good vocabulary is important in general school achievement, it would seem particularly necessary in spelling, reading and other

^{1/} David H. Russell. Children Learn to Read. Boston, Mass.: Ginn & Co., 1949. pp. 183-188.

There is some research evidence, according to Smith^{1/} to indicate that vocabulary may not be so closely related to reading success as are intelligence and other factors for typical children in the first two grades. Typical children coming from English-speaking homes ordinarily have a speaking vocabulary of at least 2500 words about the time they enter the first grade.

There are many children who have learned to read with books which did not employ vocabulary control, and that such books were richer in content and therefore more valuable to the child who read them. All children who learned to read a generation or two ago learned under these conditions. Numerous studies made about 1920 and later showed that school readers might introduce more than a 1000 new words in each volume, with more than half of these words never repeated at all. However, one should first look back at the figures for retardation in school and for elimination from school in those days. Such figures show that vast numbers of children learned very slowly and were retarded many years behind their proper grade. Nowadays we want all children to learn to read in their first years of school, and we want them to like reading so much that they will go to books with pleasure. Vocabulary control is making this outcome possible as it has never been possible before.

^{1/} Madora E. Smith "An Investigation of the Development of the Sentence and the Extent of Vocabulary in Young Children" University of Iowa Studies in Child Welfare 3:5; May 1936.

In reading "Across Series" the vocabulary control within a series is intended to enable all children to read the series with pleasure because at all times they will know most of the words. In the primary books, new words are introduced slowly, and old words are reused consistently. Vocabulary difficulty arises, however, when the teacher wants the class to take up supplementary books or books of another series. Many studies have been made of the overlapping of vocabulary between various series of readers. Spache^{1/} says that their purpose is to let a teacher know that which series has the greatest degree of overlapping with the book she has just finished. Such overlapping is usually no more than one-third and seldom as much as one-half. Other studies have sought to find out "the commonest words" in the books of any grade level and irrespective of grade level.

Stone^{2/} further adds that before we had graded primary word lists the maker of the first-grade had no good guide to go by in the selection of the vocabulary. Today with the graded vocabularies available, there is no reason why any maker of a first-grade test should not select a suitable vocabulary and we are getting primary reading tests more suitable and better graded vocabulary.

1/ Spache, George, Elementary English Review, February 1941.

2/ Stone, C.R. Progress in Primary Reading Atlanta, Ga.: Webster Publishing Co., 1950, pp. 104-105.

Harris^{1/} says that most authorities agree that children rely on auditory before they use visual cues for words.

Stone^{2/} states that experience has established the chronological age of 6 as the psychological time for the child to begin to learn to read. The unusual child of 6 has acquired certain of the sociological arts including spoken language, has become vastly independent in comparison with the infant, and has arrived at the point where he desires to learn to read as he sees others about him reading. Factors on reading progress are: chronological age, mental age, intelligence quotient, experience, visual discrimination, auditory discrimination, language abilities, personality factor, attendance, social-economic status, and kindergarten training and sex differences.

Strong teaching methods can largely eliminate reading failures.

The relation of reading to oral language background is clearly brought out by studies which have been made. The relationship between hearing vocabulary and comprehension and reading vocabulary and comprehension is extremely close. A good language atmosphere is needed at home.^{3/}

1/ Albert J. Harris. How to Increase Reading Ability. New York: Longmans, Green, & Co. 1940 p.207.

2/ Clarence R. Stone Progress in Primary Reading Atlanta, Ga.: Webster Publishing Co. 1950 p.247.

3/ Irving H. Anderson and Walter F. Bearborn The Psychology of Teaching Reading New York; The Ronald Press Co. 1952 p.147.

Gray^{1/} says that phonetic training may help some. In expert hands it can produce satisfying results.

Anderson^{2/} says, however, that English is not strictly a phonetic language. In the alphabet method letter names and sounds have no real meaning to the child. However, together, the alphabet and phonetic method promote word analysis skill, encourage correct word pronunciation, foster accurate word recognition, stress left-to-right direction of word attack, and aid in spelling. Eye pauses and fixations occur in the alphabet way.

The word method constitutes the quickest way of teaching reading as far as teaching a basic sight vocabulary and for getting the process of reading under way is concerned. Problems involved with this are inaccurate word perception, failure in word analysis, limited reading vocabulary, and word-for-word reading. Meaning suffers. Word method clearly needs the support of other methods.

Regarding the phrase method, it is impractical. It is too much to expect the average beginner to learn to read by phrases. It is likely to involve failure to discover individual words of the phrase units. It is good after the children are well on their way to reading.

^{1/} Samuel W. Patterson. Teaching the Child to Read Garden City, New York: Doubleday, Doran & Co., Inc. 1930 p.155.

^{2/} Irving H. Anderson and Walter F. Dearborn. The Psychology of Teaching Reading New York: The Ronald Press Co. 1952 pp.257-294.

The sentence and paragraph or story methods are designed to develop a thought-getting attitude as the first step to reading. It serves to discard word-for-word reading, captures the child's interest, and permits an easy introduction to reading.

Anderson^{1/} believes in blending all these methods. He says to start with experience-reading method (1) transmitting idea of reading, (2) develop a thought-getting attitude as a first step to reading, (3) arousing an interest in reading. The introduction to pre-primers is usually taught by word method. This will check the habit of memorizing the reading and launch the child on the road to real reading. The alph^abet and phonetic methods are next called into action to promote skill in word analysis to help counteract inaccuracy which characterizes learning to read by the word method, and they will help the children to gain an independence in word recognition. Have quick recognition drills, then bring in phrase method to combat reading word by word.

Russell^{2/} states that in the problem of vocabulary building, instruction is given in such techniques as those of the mastery of a sight vocabulary, auditory and visual discrim-

1/ Irving H. Anderson and Walter F. Dearborn. The Psychology of Teaching Reading New York The Ronald Press Co. 1952 p.294.

2/ David H. Russell, Gretchen Wulfing, and Odille Ousley.

ination, phonetic analysis, and the use of context clues. As a result of the various approaches, each child is helped to develop the methods of word-attack best suited to his capacities. In the early stages of reading, the major task of the learner is to appreciate the visual symbols of words and attach a single meaning to each. Soon, however, the enrichment of the meaning of familiar words and the acquisition of new words increase in importance until, at last at the upper levels, vocabulary building is paramount. Acquiring larger recognition and meaning vocabularies ordinarily proceeds all through school and into adult life. Three basic elements are present in vocabulary building, namely, meaning, auditory, imagery, and visual imagery.

Gray^{1/} states that we should try to insure that the words children are expected to learn in their early reading experiences are words that are in their speaking-meaning vocabularies. Careful distribution of new words in reading materials is important.

^{1/} William S. Gray. On Their Own in Reading New York: Scott, Foresman & Co. 1948 pp. 27, 43.

CHAPTER VI

MEANING IN VOCABULARY

Russell^{1/} thinks that perhaps more important to teachers than the total number of words a child knows is the amount of meaning he attaches to particular words. A number of studies of childrens' understanding of concept illustrate the fact that their knowledge of useful words is often incomplete throughout much of the elementary school, but that it develops rather continuously as the child matures. These studies suggest that teachers cannot rely upon their pupils' understanding of a particular word, but they also indicate, more hopefully, that pupils grow rather continuously in their true understanding of concepts and that school programs can foster such understanding.

Bond^{2/} writes that in the initial reading lessons, of necessity, there must be a control of the words to be recognized visually. This needed control of printed words is a problem completely apart from the expansion of word meanings. The teacher must do everything possible to keep the children's interest in spoken language alive and expanding while the first learnings in visual recognition are being made. Direct instruction designed to extend knowledge and use of words must be undertaken during the prereading and initial reading stages. There are three so-called

1/ David H. Russell. Children Learn to Read. Boston, Mass.: Ginn & Co., 1949. pp.188-191.

2/ Guy L. Bond and Eva D. Wagner. Teaching the Child to Read. Boston, Mass.: The MacMillan Co., 1943. pp.140-213.

levels of meaning:

1. Simple recognition

The child attaches some meaning to the word symbol

2. Extensiveness of meaning

The child attaches two or more distinct meanings to words that have different meanings

3. Depth or vividness of meaning

The child has deeper understanding and greater appreciation of the concept or concepts involved

To these may be added such descriptions as accuracy and organization or usefulness of concepts. The teacher is concerned with extensiveness of meaning because so many common English words have at least half a dozen different meanings.

Textbooks, says Dolch ^{1/} follow the learning principle of repeated association, by reusing each new word soon after it appears and making sure of a minimum reuse, such as five times in the same book. Then, all the new words of each book are repeated in the following book. As we plan most study learning of new words, we also plan a continued reuse of old words. These two elements make up what is called vocabulary control, which is

^{1/} Edward W. Dolch. Teaching Primary Reading Champaign, Ill.: The Garrard Press. 1950 pp. 256-257.

absolutely essential in maintaining and increasing sight-vocabulary in the most effective way in school readers.

Stone^{1/} voices concern about methods and materials in primary grade reading, saying that we have tended to go to extremes, of which the present unjustifiable restriction of vocabulary is an example. We have the problem of providing for adequate vocabulary expansion along with the problem of providing sufficiently easy material at each level.

Lewerenz^{2/} says that the interesting book has relatively many image-bearing or sensory impression words. Quantities of adjectives, adverbs, and verbs are employed which awaken the imagination. The dry books, on the other hand, employ relatively few descriptive terms that have no inherent descriptive value.

Dolch^{3/} has these words to say concerning vocabulary difficulty:

1. Vocabulary difficulty is a basic element in reading difficulty. There is a need for word meaning.
2. Vocabulary difficulty is only one part of reading difficulty. Mere sentence length is a factor in reading

1/ Clarence R. Stone "A Vocabulary Study Based on 107 Primary-Grade Books" The Elementary School Journal 42:452-455. 1942.

2/ Alfred S. Lewerenz "Selection of Reading Materials by Pupil Ability and Interest" The Elementary English Review 16:151-156 1939.

3/ Edward W. Dolch Elementary English pp.142-149. March 1949.

difficulty, so is unusual word order or order of sentence parts, and "idea difficulty" which is a degree of remoteness of idea from reader's past experience.

3. Taking multiple meanings into account is a difficult problem.

4. Meaning and sight vocabularies are very different things. Books for the first three or four grades are likely to be written within the area of familiar words which may be known at sight by children. So at that level, meaning vocabulary and sight vocabulary may agree.

5. Choose the size of list to fit your needs.

6. Study the words "not on the list"

Find-

a.) Most of the "not on the list" words are obviously harder than those on the list.

b.) In many cases words are no harder than many of the words included in the list

7. Consider source of a list

8. Consider subject matter lists

In the writing of materials for beginners, Harris^{1/} concludes that great care is taken to use only words whose meanings are already familiar to the children, or can easily be explained

^{1/} Albert J. Harris. How to Increase Reading Ability New York: Longmans, Green, & Co., 1940 pp. 269-272.

to them. As the child progresses in reading, new words and ideas are introduced which may be unfamiliar to him in meaning as well as in appearance. Unless care is taken to make sure that he will learn the meanings of these words, they may remain for him little more than nonsense sounds.

When in reading, a child comes across a word and says that he does not know it, there are three possible explanations: (1) he may be able to pronounce it but has no understanding of what it signifies; (2) he may know the meaning of the word if presented orally but be unable to recognize it; and (3) he may be both unable to pronounce it and ignorant of its meaning. If a child has difficulties of the first type, he needs to have his meaningful vocabulary built up for him. If his difficulties are of the second type, he needs training in word recognition. If he is weak in both word recognition and meaningful vocabulary, both kinds of training need to be given simultaneously.

Causes of deficiencies in meaningful vocabulary are:

1. Low intelligence
2. Lack of intelligent stimulation and practice in the use of language
3. Dislike for it

For providing a background of experience:

1. Provide children with a background of meaningful experience
2. Wide reading in interesting material

3. Teach the meanings of new words-only words which are really important or essential for understanding the selection-at first or talk over after reading.

Review.

4. Use dictionary

CHAPTER VII
VOCABULARY TESTS

The results from standardized tests are often used for evaluating achievement. Therefore, it is logical to assume that the tests should measure what has been taught.

Bond^{1/} informs us that standardized tests derive their merit from the reliability with which they measure individuals within a group. Most standardized tests have been carefully constructed so that on repeated tests a pupil gets approximately the same score. The tests have merit in that they can give a maximum of information in a minimum of time. The tests are relatively accurate measures of the pupil's ability in the attribute being measured by the tests, They are so designed that they may be easily scored. By and large they measure important attributes-reading abilities and skills-that have been thought to be of sufficient importance to warrant careful measurement. The greatest single value in standardized tests is, however, that their norms make possible comparisons of the attainments of a class or of individuals within the class in various important learnings in reading.

These tests are usually constructed in a multiple-choice form of two types. In one type the child has a key word

^{1/} Guy L. Bond and Eva Wagner. Teaching the Child to Read. New York: The MacMillan Co., 1950. pp.406-414.

upon which he is being measured. Another type is one in which the child is to select among four or more words the one that best describes a picture or an explanatory sentence. Another type of test designed to measure purely the meaning vocabulary of the child is one such as the Durrell Reading Capacity Test in which the examiner reads the words and the child is requested to select from several pictures the correct ones to illustrate the words.

Stone^{1/} says that one result of reading tests has been to emphasize the wide individual differences in reading attainments on the part of the pupils of almost any class in the primary grades and the large amount of overlapping in reading levels of the pupils of any two classes a half year or even a year apart. Before we had graded primary word lists the maker of the first-grade test had no good guide to go by in the selection of the vocabulary. Today with the graded vocabularies available, there is no reason why any maker of a first-grade test should not select a suitable vocabulary and we are getting primary reading tests more suitable and better graded vocabulary.

Gates^{2/} states that the reading of first graders is limited largely to the specific words they have learned, their score

1/ Clarence R. Stone. Progress in Primary Reading Atlanta, Ga., Webster Publishing Co. 1950 pp.137-141.

2/ A.I. Gates. "The Measurement and Evaluation of Achievement in Reading", The Teaching of Reading: A Second Report, for the National Society for the Study of Education, Thirty-Sixth Yearbook 1:359-390, 1949.

on a standard test will probably depend greatly on the number of such words included in the test.

According to Patterson^{1/} there should be a spoken vocabulary test at the beginning of first-grade work. This test may be improved. On the other hand, such a standard test as the Pressey First Grade Attainment Scale in Reading (Revised), Public School Publishing Co., or such a series as the Stormzand-McKee Vocabulary Tests may be found very useful.^{2/} These latter tests will be especially suitable in determining the bounds not only of vocabulary but also of general information and intelligence. The tests are based on a vocabulary of more than twelve hundred words derived from a number of trustworthy sources, in addition to personal investigation by the authors. In this connection the teacher will do well to study the list of some thousand words found in "the spoken vocabulary of children up to and including 6 years of age", as given in the Twenty-fourth Yearbook.

The number of oral symbols which a child has already acquired will vary with the pupil. The number of new words which the teacher helps the child to learn before he reads a book will also vary, possibly all the way from fifty to eighty. The time during which these new written or printed symbols have been acquired will include probably the very earliest six to eight

1/ Samuel W. Patterson. Teaching the Child to Read. Garden City, New York: Doubleday, Doran & Co., Inc., 1930. pp. 113-115.

2/ Martin Stormzand and Jane McKee. The Progressive Primary Teacher. Boston, Mass.: Houghton Mifflin Co., 1938. pp. 90-116.

weeks of the first year.

Thorndike's "The Teacher's Word Book" will assist the children to choose these sight words wisely, though, generally speaking, the teacher's choice will be determined for by the basal reading system in use in her school.

Witty^{1/} adds that vocabulary is such an important acquisition that its development should be appraised systematically. Teachers find it helpful in making such appraisals to observe the child's use of words in conversation and in writing. Vocabulary tests will aid to some degree, and diagnosis based on word counts will also prove relevant. Although a concern for vocabulary growth should characterize the teacher's efforts at all grade levels it is especially significant in the early stages of the child's reading experience.

Dolch^{2/} also feels that if testing is to function in the schools as it should, tests constructed rather definitely from the teacher's point of view are needed.

The close relationship between size of vocabulary and school achievement has been shown in different research studies. This is not surprising, because, in turn, both vocabulary and school achievement are closely related to general intelligence.

1/ Paul Witty. Reading in Modern Education. Boston, Mass.: D.C. Heath & Co., 1949. p.221.

2/ Edward Dolch, "Exercises in Reading." Elementary School Journal. p.59, September 1933.

For example, it has been found that a rather good prediction of mental age on the entire tests of the Revised Stanford-Binet Scale may be made from the vocabulary sections. Even when the factor of intelligence is held constant, however, a close relationship between vocabulary and school achievement is evident.^{1/}

Traxler^{2/} found that the partial correlations between vocabulary and total scores on the Stanford Achievement Test with intelligence quotients held constant range from .65 to .84 in grades 4 and 7, with a median of .73. If a recognition vocabulary and knowledge of word meanings are often considered as component parts of general reading ability. Obviously a child's understanding and interpretation of sentences and paragraphs will depend considerably upon his knowledge of the individual words in the larger units.

Witty^{3/} says that a number of factors have undoubtedly contributed to the underestimation of children's vocabularies. For example, the vocabulary rating in the Stanford-Binet Intelligence Test is obtained from responses to a sample of fifty words. These words were selected from a vest pocket dictionary con-

1/ David H. Russell. Children Learn to Read. Boston, Mass.: Ginn & Co., 1949. p.183.

2/ Arthur E. Traxler, "The Relationship between Vocabulary and General Achievement in the Elementary School." Elementary School Journal, 45:331-333: February 1945.

3/ Paul Witty. Reading in Modern Education. Boston, Mass.: D.C. Heath & Co., 1949. p.87.

taining only 18,000 words.

Jack ^{1/} found that the highest percentage of test vocabulary which is basic reader vocabulary is found in the De-Vault Primary Reading Test for gradesland 2, form I with 79.79 per cent. Closely following this comes the Detroit Reading Test for grade 2, form A with 75.80 per cent and form B with 73.50 per cent. There is a need for tests with a higher percentage of words included in the tests which are words in the Ginn Basic Series, and tests which will sample their basic vocabulary adequately.

Seashore ^{2/} wrote that unless we give a person an opportunity to show all of the words that he knows by taking a sample from the unabridged dictionary we simply do not know the true size of his vocabulary.

Another source of misinformation stems from the findings of frequency lists of words such as those of Thorndike and many others, that a running count of all the words found in newspapers, personal correspondence, etc. will be made up very largely of a relatively small number of words which are used over and

1/ Barbara Jack, "A Comparison of the Vocabularies of 10 Standard Achievement Tests in Reading with the Vocabulary of the Ginn Basic Readers, Thesis, Boston University, School of Education, 1947 pp.51-52.

2/ Robert Seashore. "How Many Words do Children Know?" Seventh Bulletin for Elementary Teachers by D.C. Heath & Co. Vol.2 2:3-17 Nov. 1947.

over again in countless situations.

Yoakum^{1/} thinks that the fact of individual differences suggests the need for different reading sequences for children of different capacities. But it does not indicate that easier sequences are necessary for either the average or rapid reader. And since the easier sequences generally result in restricted vocabulary, the result of the use of easier sequences with average and fast learners may be to retard their maximum growth in reading rather than to increase it.

1/ Gerald A. Yoakum. "An Ounce of Prevention in Reading " Journal of Educational Research 37:100-109 1943.

CHAPTER VIII

SUMMARY

The purpose of this study was to summarize the research pertaining to reading vocabulary in respect to basal readers, tests, word lists, teaching and meaning.

The modern teacher uses basal reading series but also uses other materials, as well, all selected to fit the needs and rate of progress of the children. Through a basic series the child gets an understanding of how to go about learning to read. He is shown reading skills, techniques and reading abilities. Many schools which have taught reading incidentally have had large numbers of remedial reading cases and have found need for regular reading periods of instruction to improve. Controlled vocabulary helps all children to read and to help them to like reading.

The chronological age of 6 is the time to start reading. The more familiar the vocabulary is to the child the easier it will be for him to read. The relation between vocabulary and comprehension and reading vocabulary and comprehension is very close. A good language atmosphere at home helps in reading. Children rely on the auditory before they use visual clues for words.

There is no particular list of words that is right basic vocabulary for a child. In choosing a list that the child's locale and experiences are considered is very important. The words should represent the concrete rather than the abstract.

Long words are not necessarily the hardest to learn.

Words are introduced gradually and more books are provided in the primary series. The primary series usually have a controlled vocabulary of not more than a hundred common words.

Pre-Primer	50 new words
Primer	100 new words
First-reader	150 new words
Second-year books	400 new words
Third-year books	1300 new words

When a child enters school he has a large listening and speaking vocabulary. In the early experiences in reading he must have a controlled vocabulary of printed words. After that he can use books and then later he can form new skills. Phonetics come after 50 sight words have been learned. Methods which start with large meaningful wholes are approved above starting with just letters. A liking for reading should be instilled all the way and the child's interest in spoken language must be kept alive and expanding while the first learnings in visual recognition are being made.

Some research show that vocabulary may not be so closely related to reading success as are intelligence and other factors for typical children in the first grade.

Each child develops methods of word attack best suited to his capacities. After new words are acquired, more recognition and meaning vocabulary building becomes most important all along

through meaning, auditory imagery and visual imagery. There must be meaning to words for children, through meaningful experience, wide reading in interesting material and teaching the meanings of important and essential words. Vocabulary tests are very important in early reading to appraise vocabulary development. Vocabulary and school achievement are closely related to general intelligence.

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