FLORIDA STATE UNIVERSITY

DEVELOPING WORD ATTACK SKILLS

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DEVELOPING WORD ATTACK SKILLS

In our culture today so much depends upon one being able to understand what is happening in the community and also the large units of society. Much of this understanding is gained through one's reading ability. It is the responsibility of the school to give the child certain skills and techniques in reading in order that he may make the maximum personal growth, thus enabling him to make a worthwhile contribution in our democratic way of life.

The writer feels that one's ability to read is one of the most important, if not the most important, tool in every phase of development. Each teacher should recognize that definite instruction in word attack and word meanings must be given continuously if one is to attain this satisfying stage in one's growth.

I. HISTORICAL DEVELOPMENT OF WORDS

The alphabet method. About 1860 the alphabet method—often called the a-b-c spelling method—was one of the first for teaching children to read and write. This method and the reason for its use have been ably summarized by Dr. Nila Banton Smith:

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The techniques used were those of learning the alphabet, spelling syllables and words, memorizing sections of content, and reading orally. All children were inducted into the reading process through the alphabetical method because that was the only reading approach known at that time.¹

One of the first pieces of instructional material mentioned in the records of American reading instruction is the horn book.² "The alphabet-spelling method was a highly mechanical, uninteresting, and difficult approach to reading."³ Those who learned by it tended to become slow, laborious readers.

The phonic method. The phonic method followed the alphabet method. The substitution of letter-sounds for letter-names was a natural development from the alphabet-spelling method. The child was first taught the sounds of the letters of the alphabet in a systematic fashion, and then was taught to sound out combinations of letters, usually starting with two-letter combinations. "The word 'cat' would be attacked as: kuh-a-tt, cat."⁴ When a child met a new word he was expected to

¹Nila B. Smith, American Reading Instruction, p. 34, New York: Silver, Burdett and Co., 1934.
²The horn book was a card of printed material tacked to a paddle and protected by a covering of horn. It consisted of one page of a-b-c's, syllabarum, and prayers.
⁴Ibid., p. 66.
pronounce it letter-by-letter and fuse the sounds mentally so as to get the sound of the whole word. The phonic method has two definite points in its favor. It helps the child read in a systematic left-to-right direction and provides a technique by means of which most unfamiliar words can be deciphered. The main objections to the phonic system of the late 1800s and early 1900s were as follows:

1. The old "systems" were synthetically constructed on an arbitrary scheme devised by the author of each system. Some advocated the "initial blend" as ha-d, while others supported the "final blend" as h-ad.

2. The unison drills by thirty or forty bewildered beginners in reading took the form of honking or barking out sounds, such as ac, ac, ic, oc.

3. The child usually associated only one sound with a group of letters as ab, ad, ap, ac.

4. Certain fragments of sounds were known as members of a "family". Sounds such as ug, nug, sug, fug, gug, had no counterparts in the child's speaking-meaning vocabulary.

5. The child was taught the formula: "Whenever you see this—ug, for example, with the short sound of y—say ug. The syllable is the pronounceable unit.

6. The old systems confused sound with meaning.
7. The old systems sacrificed interest.

8. Phonics caused neglect of context clues, as *fan--can*.

9. Unnecessary drill on familiar words which might easily be learned as sight words caused waste of valuable time, and bored the children beyond description, dampening their ardor for reading at the very outset.

10. So tedious and artificial were the systems that it was necessary to think up devices and tricks in the vain attempt to attack associations for remembering sounds and letters. Thus *p-p-p-p* became the "steamboat" sound.

11. Instead of beginning with a known word and pronouncing it, the old systems began with a fragment and built a word upon it layer by layer, i.e., through synthesis.5

The word method. The word method was used in the United States after 1870. It "was based on the recognition and pronunciation of word wholes, with little or no attempt to teach word-analysis skills."6 Unless special training in word analysis is given to overcome this difficulty, the pupil may have trouble in distinguishing between words of similar size and shape, such as "ball" and "bell". Also, the child

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may come to rely too much on the context or setting in which a new word occurs and may do entirely too much guessing.

The sentence method. The sentence method was designed to emphasize the meaningful nature of reading. Pages with sentences in which the same words were used over and over in different combinations were provided for practice in word discriminations. "In many cases the pages made just as good sense reading from the bottom line up as from the top line down."

The story method. The "word" and the "phonic" methods were used predominately in our schools until about 1915—when the story method began to gain in popularity. In this method the children heard a story as it was told by the teacher, following along in their books as they listened; then they told or dramatized the story, drilled on the words and phrases; and at last read the story. The "story-method" readers presented much more interesting content than the word lists and synthetic sentences of the "word" or "phonic" readers. The "story method", which emphasized drill on whole phrases and sentences as well as words, recognized phonetic analysis

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7Harris, op. cit., p. 69.
as only a subsidiary factor in word perception. The content of the early "story method" readers was for the most part made up of Mother Goose tales and rhymes, fables, and folk tales. "This 'literary' type of reading was interesting and meaningful, but employed such large vocabularies and introduced new words at such a rapid rate that many teachers devoted most of the class reading period to word study rather than to connected meaningful reading."8

The better-balanced "story methods" resulted in more meaningful reading, but they did not reduce the number of words children were supposed to learn at early levels. They not only cut down quantitatively on the phonetic content of their word-perception programs, but also introduced simpler techniques of teaching phonetics—techniques which more closely integrated phonetic analysis with the whole reading process.

The reaction against phonics. By 1920 such a revolt had set in against the old "phonic" method that emphasis on visual word perception came to be considered almost disreputable among many school authorities. "Radical thoughts in the late twenties and early thirties held that if a child was interested at all in reading,

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8Harris, op. cit., p. 70.
no teaching of specific words by any method was necessary or justified.\textsuperscript{9} Meaning was to be considered almost the only factor in word perception, and children were expected to identify new words by "guessing" from context.

Despite the clamor of the radical against developmental programs of reading, organized reading programs improved in many respects. The newer reading programs boldly introduced vocabulary control giving significant recognition to the problem of mastering words. In 1930 the interest content of reading series for the lower grades was greatly improved along with the introduction of controlled vocabularies.

The recognition of need for word perception skills. By 1940, or perhaps a little earlier, there was strong pressure from parents and teachers alike that reawakened educational consciousness to the importance of word perception as a factor in learning to read. Basic reading programs were reinstated in many of the schools which had abandoned them. "Extensive and elaborate remedial programs in the intermediate and upper grades were no longer pointed to with pride."\textsuperscript{10}

\textsuperscript{9}Gray, \textit{op. cit.}, p. 26.
\textsuperscript{10}Gray, \textit{op. cit.}, Pp. 27-28.
They were recognized as evidence of failure to provide adequate developmental reading programs in the elementary grades.

Along with this resurgence of interest in word perception there came an increasing public demand for greater attention to the development of word-attack skills, including the phonetic analysis of words. The need for giving children independence in attacking words that were new to them visually had been felt alike by teachers and parents. This swing back to phonetics or some word perception skills began to present some puzzling questions:

1. What kind of word-perception skills should we develop?

2. Shall we, in response to public demand, reinstate the old mechanical phonic drills and content that inevitably result in dull, word-by-word reading?

3. Shall we go back to the "guessing from context" that was emphasized in the thirties?

4. Shall we develop word-perception skills that are functional in the total reading act?11

Educators say that skill in phonetic analysis is essential for independence in identifying new printed

11Gray, op. cit., p. 28.
words, but this skill should be based on fundamental understandings of how sounds and their letter symbols function in our language. These understandings should develop as generalizations based on the child's experience with words—words which he learns visually as meaningful wholes and not as a series of letter sounds.

"The use of phonetic understanding and skills should be geared into the total process of word perception."  

The balance program emerges. Recently, we have begun to develop more valid practices of teaching word perception that are in line with modern child psychology and modern ideas of reading instruction in its proper relationship to the total reading process. There has been a growing acceptance of the fact that no method of word perception is adequate. The child needs to know how to use various methods if he is to achieve independence in reading. In a well-balanced reading program of today children acquire a basic stock of sight words that they learn as wholes and also develop skills that enable them to attack new words. "These skills include the use of context clues, as well as word-form clues and word analysis, both structural and phonetic."  

12Gray, op. cit., p. 32.
13Gray, op. cit., p. 33.
Significant advancements have been made (1) in identifying and defining and word-analysis understandings and skills that can make the most helpful contribution to efficient reading, (2) in the teaching procedures used for developing word-analysis skills, and (3) in applying word-analysis skills in genuine reading situations where the child is called upon to associate meaning as well as sound with the new words that he encounters.

We consider today that unless we teach children some workable techniques for attacking new words independently, their only alternatives when reading and studying on their own are: (1) to guess at any words that are not yet in their sight vocabulary, (2) to seek out some grown-up and ask for help, or (3) to skip the new words entirely without attempting to determine what they may be or how they may affect the sense of what is being read.
II. DEVELOPMENT OF WORD MEANINGS AND WORD RECOGNITION

Importance of meaning background. The possession of a rich fund of word meanings is a prerequisite to adequate comprehension and interpretation in reading. An adequate meaning vocabulary is essential to intellectual maturity, and the entire school program should be examined to determine how it contributes to the acquiring of vivid, accurate concepts. Meaning backgrounds, including meanings of words, are basic to reading. Several comprehensive surveys\(^1\) of research on the development of word meanings have been published. Meanings grow out of the personal experience of the child. Gates describes the process briefly as follows:

Word concepts or word meanings are built up in a variety of ways. In the first stage, as in early infancy, words are given meanings by being associated with some thing, situation, event, or experience. The word book is given meaning by being presented orally while the pupil is looking at a book. The word comes to stand for the pupil's experiences with the object. As the pupil acquires efficiency in using language, meanings may be enlarged, enriched, and made more definite through language activities themselves, as well as through additional experiences with objects and events....In brief, the meaning which occurs to a child when he first reads a word depends upon all his past

\(^{1}\) J. Conrad Seegers, "Recent Research in Vocabulary Development", Elementary English Review, XXII (February, 1946), Pp. 61-68.
Ways of developing meaning. The teaching of vocabulary comprises both enriching new words and extending their meanings. Every experience that the child has had has contributed in some measure to the enlargement of his background of understanding.

1. Experience.—All experiences in which the child is confronted with a real situation offer many opportunities for building backgrounds for the understanding of words. Such first-hand experiences include all the experiences that the child has—both in and out of school. He takes trips, goes to the zoo, on a picnic, to a farm, and he learns the meaning of new words.

2. Guidance.—The responsibility of the teacher is to see that children have the opportunities for experiences. She should encourage, establish and cooperate with enterprises which provide first-hand experiences for her class, such as a trip to the canning plant, lumber mill, airport, and dairy. In such ways new words and new meanings of words may easily be added to the child's written and spoken vocabularies. Experiences such as reading, listening to the radio, seeing moving pictures, and models all help build backgrounds of word meanings. "The school should be organized to provide for the proper learning experiences for the well-rounded development of the whole child."

A good program will make provision for:

1. Rich and varied experiences with the things, situations, events, and activities, and other phases of reality which the words mean or represent.

2. Rich and varied experiences with the things, situations, events, and activities represented in still and motion pictures, models, graphs, and diagrams, and in other ways.

3. Rich and varied experiences with the ideas in verbal form including hearing about them, talking about them, and reading about them.

4. Abundant, well-selected experiences in deriving the word meanings, both in the most obvious and in more informal and varied forms from the context of printed passages.\(^5\)

The teacher must create experiences which will enable the pupils to read specific content, to insist that they find the common ground of meaning; and finally, to encourage free and open criticism, appreciation, and reaction.

Word recognition techniques. In considering word-recognition techniques it must be realized that some techniques are not effective, and that other techniques while effective for the most part, can be over-

emphasized to the point that they become detrimental rather than helpful to word recognition.

Use of expectancy of words and concepts. It is evident that when a person is reading in a well-known field, one in which he is very familiar with the terminology, he recognizes the words and concepts much more rapidly than he does in a less known field because he expects to meet them in the discussion of its topics. "A person reading in a given field or on a given topic, anticipates to a degree the words that he meets, is prepared to meet them, and thereby is the more able to recognize them instantaneously."  

Use of context clues. The use of context clues is one of the most important, if not the most important, means of recognition. It is a rapid sort of recognition technique in which the meaning of the word is sometimes derived completely from its setting. The effective use of context clues is developed in the first place through having the child read meaningful material from the beginning. In other words, the child should recognize words in the actual process of reading meaningful material, as John is five ____ old. If the pupil knows the word

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6 Bond and Bond, op. cit., p. 146.
five and old but not the word years in the sentence, he should be encouraged to keep the story in mind and "hop over" the unknown word to see whether the rest of the sentence does not suggest what it may be.

**General word configuration.** The general shape and characteristic of a word is studied visually. As the child becomes more familiar with sight words, he normally builds up a larger background of words which are recognized purely at sight from the general characteristics of the words. Pupils should be trained to scrutinize certain words so carefully that they will recognize them at sight through their general appearance, or configuration. Important words that appear in the particular content that is being read should be recognized through general configuration such as laughing, enough.

**Use of striking characteristics.** The use of striking characteristics of words as a means of instantly recognizing them is another rapid visual technique. A word recognized by one person because of its striking characteristics may not be so easily recognized by another. This method is effective until other words having the same striking characteristics are introduced. "At that time, because the method of attack is not sufficient to meet the new situation, they may get into difficulty and
experiences which have been in any way associated with the word. What he understands when he reads will be substantially what he understands when he hears the same word spoken in the same context, or substantially what the word means when the pupil himself uses it in a spoken context.

Shades or degrees of meanings. There are three shades or degrees of meaning, what have an influence upon an individual's effectiveness as a recognizer of words and as a reader, and which have an influence upon the interpretations and inferences he makes while reading. The three phrases or shades of meaning as described by Bond are:

(1) **Simple recognition**.--The individual is able to attach meaning to a symbol. On hearing the word *cat* each child will get a different picture.

(2) **Extensiveness of meanings**.--The individual is able to associate two or more distinct meanings with a symbol. The word *band* has various meanings:

- I play in the **band**.
- The **rubber band** is large.
- The **hat band** is torn.

(3) **Depth or vividness of meanings**.--The individual is able to make use of deeper and finer appreciations and broader concepts and generalizations in interpreting a symbol.²

and confusion unless supported by other methods."\(^7\)

A program of extensive reading under the motivation of purposeful goals causes the child to tend to read more rapidly and thereby encourages dependence upon these two almost instantaneous techniques of word recognition. In using these techniques the child should be taught to accompany such use with a marked dependence upon the context to enable him to anticipate the word and to tell him when to look more sharply at it or to study it in more detail because he is in error. If the child has a nice control of the vocabulary in the early grades, which gives many repetitions of words, it enables him to become so familiar with many words that he can effectively depend upon these two techniques together.

**Use of small words within larger words.** The use of small words within larger words is another useful and rapid technique for word recognition. Yet, it cannot be depended upon at all times to be an effective means of recognition. Too much dependence upon searching within a word for smaller known words in order to recognize the larger word may get the person into rather serious difficulty, as *shave, s-have*. This method is

\(^7\)Ibid., p. 152.
best taught in the actual process of analyzing words in contextual reading. The teacher should use it frequently in helping to recognize words.

**Use of large known parts within words.** According to Bond large known parts within words can be taught through a comparison between words that employ the large sight unit that is being emphasized.\(^8\) Several of the more familiar large known parts upon which the reader depends are *ight, tion, een, ell, and all.*

**Use of careful visual study of the word.** It is necessary for a word to be given a more exact and closer visual inspection than is indicated in any of the preceding techniques. Bond states that the frequency with which the child will have to resort to this time-consuming method of a thorough inspection from left to right of the word, starting at the beginning of the word and going completely through to the end of it will depend upon his facility with the more rapid methods, with the extensiveness of his sight vocabulary, with the difficulty of the material, and with the familiarity that he has with the topic about which he is reading.\(^9\) Much of

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the job of teaching careful visual study is in showing the child what is expected of him and wherein he is in error.

**Use of syllabification.** A beginning in the technique of dividing words into syllables may be made in the first grade. High levels of efficiency in dealing with long and complex words should not be expected until the pupils have had many months of experience. It is highly important that skills begin to appear in the latter part of the second grade and the early part of the third grade. Gates has the opinion that a fairly definite program of instruction in syllabication should be introduced early in the third grade. Syllabification breaks the word into relatively large elements. Often these parts are well known smaller words. Too, syllabification teaches the system which is used in the most usable book for word recognition, namely, the dictionary. It is used in both visual and sounding analysis of words. Care should be taken in the teaching of syllabification to get the child to go systematically through the word from left to right, because any method that breaks the word into segments may bring about confusion as to the order of the segments.

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Use of phonetic analysis. In developing phonetic ability, the teacher should be concerned with only those sound elements which are in the words comprising the basal vocabulary or the words encountered frequently. Phonetic analysis should probably not be introduced until after the child has developed a considerable sight vocabulary and has begun to be inquisitive about similarities among words. McKee says:

...there is reason to believe that phonetic training should be postponed until the pupil begins to notice likenesses and differences in words and until his consciousness of the need for a key to unlock strange words is aroused.\textsuperscript{11}

Phonetic training is usually introduced sometime during the latter half of the first grade.

Letter-by-letter sounding. From time to time it might be necessary for the child to resort to letter-by-letter sounding. It is to be avoided because it is time-consuming, inefficient, and calls for a high degree of blending ability and, in longer words, a considerable memory span.

Adaptability of attack. The child must have at his command many techniques for recognition. He must have

the ability to adapt his repertory of techniques to the word being recognized. The technique or techniques to be employed depend upon the word being studied. "The ability to change or modify the attack to suit different recognition needs within a word is the crux of effective and rapid word recognition, and hence this ability must be developed."\textsuperscript{12}

\textbf{Principles of word-attack.} There are certain suggestions for teaching word recognition which aid materially in developing word-recognition techniques in a manner that will make adaptability more probable in applying the various techniques. Bond gives the following suggestions:

1. The more analytical types of word-recognition techniques should not be undertaken until after the child is thoroughly aware of the meaningful nature of reading and has built a usable sight vocabulary.

2. Always teach word recognition in meaningful material.

3. Teach word recognition in situations where it is important to the child to recognize the word.

4. Be sure that the child knows the meaning of the word or has the background necessary to derive the meaning.

5. Avoid isolated drill. The child

\textsuperscript{12}Bond and Bond, \textit{op. cit.}, p. 164.
should recognize and remember words as sight words.

6. Build the habit of inspecting words rapidly, thoroughly and systematically from left to right.

7. Teach the child to analyze the word visually before he attempts to sound it.

8. Develop the habit of noticing similarities among words and differences between them.

9. Teach word recognition in material that is at the child's reading level.\(^{13}\)

Harris has the opinion that many of the difficulties in word recognition that persist beyond the primary grades are the results of inadequate teaching.\(^{14}\) Integral parts of good practice are the teacher's alertness to notice signs of difficulties in their early stages and the application of comparatively simple remedial procedures in everyday teaching. Most children who need remedial help in word recognition show a small number of specific weaknesses. One child may need daily training to overcome a reversal tendency, another may make mistakes on vowel sounds; and still another may concentrate on neglecting or mispronouncing word endings. These children have made some progress in word recogni-

\(^{13}\)Bond and Bond, *op. cit.*, Pp. 164-170.

\(^{14}\)Harris, *op. cit.*, p. 314.
tion, but have developed faulty habits or have failed to learn some important elements of word recognition. Their remedial work should be aimed directly at the specific faults that are evident in their reading.

Overcoming specific faults in word recognition.

(1) Weaknesses on letter sounds.--"The number of children who do not know the sounds of many of the letters of the alphabet is surprisingly large." In teaching a letter, the important thing is to provide vivid association which the child can use in recalling its sound, as \( t - \) the tick of a clock. Monroe has pointed out that many children who confuse letters do not hear the differences between letters clearly. She advocates preliminary training in auditory discrimination.

(2) Errors on beginnings, middles, and ends of words.--There are many poor readers who observe carefully only the beginning of a word they cannot recognize at sight, and guess at the rest. The kind of training which is most directly beneficial in these cases is based on the teaching of common phonograms which combine with initial consonants to form many different words presenting the phonogram as a unit, rather than as a group of individual

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15Harris, op. cit., p. 315.
16M. Monroe, "Remedial Treatment in Reading", Elementary English Review, Vol. 10 (1933), Pp. 95-97, 112.
letters, such as "and - hand, sand, land, band". The words should then be presented in context in such a way as to stimulate the child to pay careful attention to the total word. Some of the errors on word endings consist of failure to note or discriminate endings, as, a, ea, ed, ly, est, er, ness.

Confusions on the middle of words usually involve vowel confusions and, therefore, call for practice on discriminating vowels. One should give practice on lists of words which are alike except for the median vowel, such as hit, hat, hot, and hut.

(3) Phonic devices and word games.--Harris tells us that there are many devices and games that can be used to add variety and interest to a program of training in word recognition. A few of the popular ones are: Lucky Wheel, Phonic Strips, Rhyme Making, Darts, Anagrams, Racing, and Word Hospital.

(4) Reversal errors.--The term "reversal" is used to describe a variety of different kinds of errors, including: (1) confusion of single letters, such as a, e, h, and d; complete reversals of words such as saw and was; pot and top; on and no; (3) partial reversals of

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17 Harris, op. cit., p. 318.
words such as ram for arm, ate for tea, even for never, and (4) reversals of the order of words in a sentence as "The dog saw a boy" for "The boy saw a dog." Reversals of words, parts of words, and the order of words in sentences usually indicate that the child needs training to develop a consistent left-to-right sequence in reading.

(5) **Omissions, additions, and substitutions.**--Have the child reread the word on which he made the mistake and point out the differences between what he said and what the word really is.

(6) **Difficulties with long words.**--Above the fourth grade level, difficulties in word recognition are more likely to involve long words than short words. The main requirement in teaching an adequate method of attack on long words is emphasis on a systematic procedure of dividing a long word into recognizable groups of letters and combining them in left-to-right order to get the whole word, as over come, o-ver-come.

(7) **Inability to make use of the context.**--All good readers make use of context clues, therefore, they should be taught first of all how to guess at a word from

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the meaning of the rest of the sentence.

(8) **Slowness in word recognition.**--The most helpful procedure for increasing speed of word recognition is to use flash cards or tachistoscopic exposure. According to Dolch, 50 percent of the reading material are repetitions of only 220 different words. He, also, shows a need for training in both letter phonics and syllabication, if a satisfactory degree of independence in attacking new words is to be attained.20

(9) **Repetitions.**--The oral reading of many children is jerky and painful to listen to because of the way they continually repeat what they have already read. Children who repeat are self-conscious and nervous. They need to have their confidence built up, by giving them opportunities to rehearse easy selections carefully and then to read the selections before children who are unfamiliar with the story. They, also, need large doses of encouragement and praise, and opportunities to read material on their level.

(10) **Refusal to attempt words.**--The majority of refusals are caused by inadequate word recognition; they diminish in frequency as skill in word recognition im-

proves. Encourage the child who is having this trouble; praise him for all successful efforts.

**Teaching word recognition in severe disabilities.** Three major methods for teaching word recognition to the severe reading disability case have been worked out: the kinesthetic, the phonic, and the visual.

1. **The kinesthetic method.**—This method was described by Grace M. Fernald and Helen B. Keller in 1921. It emphasizes tracing and writing words as basic procedures. This method has several desirable features:

   1. It enforces careful and systematic observation and study of words.
   2. It makes necessary a consistent left-to-right direction in reading.
   3. It provides adequate repetition.
   4. Errors are immediately noted and corrected.
   5. Progress can be noted by the child at practically every lesson.
   6. The sensory impressions from tracing, writing, and saying the words reinforce the visual impressions and seem to be of definite value to children whose visual memory is very poor.

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The main objections to the method are: too much guidance by the teacher in directing and too cumbersome a tracing-writing procedure.

(2) Methods based on sounding and blending.--
The systems of sounding-blending recommended for non-readers use the letter by letter method of blending.\textsuperscript{22} They begin by teaching the child to sound and recognize individual letters, and then teach how to blend sounds together so as to get recognizable words. Stanger and Donohue give a good description of how to introduce blending.\textsuperscript{23}

(3) Methods stressing visual analysis and visualizing.--Words are taught as wholes, to be recognized at first on the basis of general shape or configuration. Pictures and illustrations are used freely as ways of introducing and giving clues to words. Workbook exercises are used to present new words and to give practice in word recognition and comprehension.

It is not always possible to tell in advance what procedure will work best with a child. Determining the

\textsuperscript{22}\textit{Harris, op. cit.}, p. 335. \\
pupil's needs is far more important than devotion to a particular plan of procedure and then adapt a plan to fit the child's needs. "Specific abilities and handicaps of pupils must be kept in mind." Any program that provides adequate motivation, insures careful observation of words and word parts, and enforces consistent left-to-right habits in reading will succeed.

The Third Year Readiness Test was given to twenty-two pupils during the first month of school as a diagnostic procedure of word recognition techniques.

TEST 4

PHONETIC PARTS

<table>
<thead>
<tr>
<th>word</th>
<th>no. missed</th>
<th>word</th>
<th>no. missed</th>
<th>word</th>
<th>no. missed</th>
<th>word</th>
<th>no. missed</th>
</tr>
</thead>
<tbody>
<tr>
<td>herd</td>
<td>1</td>
<td>down</td>
<td>2</td>
<td>dew</td>
<td>1</td>
<td>loud</td>
<td>2</td>
</tr>
<tr>
<td>point</td>
<td>3</td>
<td>lay</td>
<td>2</td>
<td>raw</td>
<td>3</td>
<td>burn</td>
<td>6</td>
</tr>
<tr>
<td>hard</td>
<td>1</td>
<td>noon</td>
<td>0</td>
<td>boil</td>
<td>2</td>
<td>jar</td>
<td>0</td>
</tr>
<tr>
<td>hurt</td>
<td>1</td>
<td>fault</td>
<td>3</td>
<td>joy</td>
<td>2</td>
<td>tart</td>
<td>1</td>
</tr>
</tbody>
</table>

Possible score = 16

The range of ability was from 0 to 6 with ur missed the most frequently. No pupil had difficulty with

---

24Harris, op. cit., p. 344.
the oo and ar sounds.

TEST 5
SHORT VOWELS

<table>
<thead>
<tr>
<th>Word</th>
<th>No. missed</th>
<th>Word</th>
<th>No. missed</th>
<th>Word</th>
<th>No. missed</th>
<th>Word</th>
<th>No. missed</th>
<th>Word</th>
<th>No. missed</th>
</tr>
</thead>
<tbody>
<tr>
<td>match</td>
<td>2</td>
<td>cock</td>
<td>4</td>
<td>line</td>
<td>13</td>
<td>hump</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>shut</td>
<td>1</td>
<td>note</td>
<td>16</td>
<td>trap</td>
<td>4</td>
<td>thin</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pond</td>
<td>3</td>
<td>met</td>
<td>6</td>
<td>wag</td>
<td>3</td>
<td>teeth</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>wade</td>
<td>14</td>
<td>pen</td>
<td>2</td>
<td>slip</td>
<td>2</td>
<td>fog</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Possible score - 16

The range of ability was from 1 to 16. Apparently the pupils were marking each vowel rather than distinguishing the short vowel sounds.

TEST 6
LONG VOWELS

<table>
<thead>
<tr>
<th>Word</th>
<th>No. missed</th>
<th>Word</th>
<th>No. missed</th>
<th>Word</th>
<th>No. missed</th>
<th>Word</th>
<th>No. missed</th>
<th>Word</th>
<th>No. missed</th>
</tr>
</thead>
<tbody>
<tr>
<td>wake</td>
<td>1</td>
<td>cube</td>
<td>8</td>
<td>inn</td>
<td>10</td>
<td>need</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>nine</td>
<td>1</td>
<td>hut</td>
<td>11</td>
<td>load</td>
<td>5</td>
<td>meat</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>use</td>
<td>6</td>
<td>nose</td>
<td>5</td>
<td>pie</td>
<td>3</td>
<td>kept</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>shot</td>
<td>8</td>
<td>teach</td>
<td>2</td>
<td>size</td>
<td>4</td>
<td>nail</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This test has a range of ability from 1 to 14. Probably the same thing was true for the long vowels as the short vowel test above-marcking each vowel rather than knowing the long vowel sound from the short vowel sound.
TEST 7

SAME WORDS AND DIFFERENT WORDS

<table>
<thead>
<tr>
<th>words</th>
<th>no. missed</th>
<th>words</th>
<th>no. missed</th>
</tr>
</thead>
<tbody>
<tr>
<td>saw - was</td>
<td>1</td>
<td>very - every</td>
<td>2</td>
</tr>
<tr>
<td>nap - pan</td>
<td>2</td>
<td>head - heard</td>
<td>4</td>
</tr>
<tr>
<td>after - after</td>
<td>0</td>
<td>pets - step</td>
<td>2</td>
</tr>
<tr>
<td>no - on</td>
<td>6</td>
<td>gone - gone</td>
<td>2</td>
</tr>
<tr>
<td>tired - tried</td>
<td>11</td>
<td>of - for</td>
<td>3</td>
</tr>
<tr>
<td>bowl - bowl</td>
<td>0</td>
<td>eight - eight</td>
<td>2</td>
</tr>
<tr>
<td>catch - watch</td>
<td>1</td>
<td>own - now</td>
<td>2</td>
</tr>
<tr>
<td>home - home</td>
<td>0</td>
<td>even - ever</td>
<td>2</td>
</tr>
</tbody>
</table>

The range of ability was from 0 to 11.

According to the tests there is a wide range of differences in abilities. It is interesting to note the frequency of different kinds of faulty habits which underlie lack of success in word recognition and word analysis. The teacher must recognize these differences and emphasize those techniques in which the pupils have not developed the skill. Through these tests the teacher can see the techniques that cause the most difficulty and then plan experiences so that these simple words can be learned.
III. PROGRESSIVE SYSTEMATIC SEQUENCES IN A WORD ATTACK PROGRAM

The existence today of a large number of frustrated and insecure readers emphasizes the need for systematic guidance in word attack in a sequential program. It is Adam's¹ opinion that such a program covers a period of several school years, with each phase of growth in phonetic and structural analysis taken up gradually at different developmental levels. Following is an outline of a word-attack program² for the elementary school. In each application level the child builds onto and utilizes the skills acquired at preceding levels.

Pre-Primer Level

I. Building a stock of serviceable sight words. The term serviceable is used to point out the need for practice on words for which sufficient, immediate, and future repetition is assured.

II. Association of word forms with useful meanings.

A. Recognizing words by means of context, or experience clues.

B. Recognizing words by means of picture clues.

III. Development of accurate visual perception and association—noting similarities and differences between word forms.
   A. Total configuration.
   B. Distinguishing details.

IV. Development of accurate auditory perception and associations.
   A. Identification of pupil names and selected words labialized by the teacher.
   B. Noting similarities of selected sounds in rhyming words.
   C. Identifying words that have the same initial consonant sounds.

V. Development of accurate kinaesthetic perception and associations.
   A. Learning accurate formation of speech sounds.
   B. Establishing the habit of silent study before oral interpretation.

First Grade

I. Association of word forms with meaning: ability to identify word forms and determine meanings from the context.
   A. Ability to use picture clues and configuration
II. Development of accurate auditory perception and association.
   A. Sensitivity to likenesses and differences in sounds.
   B. Recognition of rhyming elements.

III. Development of accurate visual perception and associations.
   A. Ability to make pictorial associations.
   B. Sensitivity to likenesses and differences in word forms.
      1. Total configuration
      2. Initial consonants
   C. Ability to identify known words within words.

Second Grade

I. Alphabetical sequence of letters required in locating entries.

II. Recognition of consonant blends, such as bl, st, tr.

III. Recognition of silent consonants in consonant digraphs, such as th, wh, sh.

IV. Recognition of short vowels in one-syllable words.

V. Recognition of long vowels in final e words.

VI. Recognition of long vowels in monosyllabic words containing vowel digraphs.
VII. Recognition of common diphthongs.

VIII. Recognition of word variants.
   A. Plurals formed by adding s or es.
   B. Nouns formed by adding y.
   C. Adjectives formed by adding er, est, or y.
   D. Adverbs formed by adding ly.
   E. Root words in variants.

IX. Recognition of known words in compound words composed of two familiar words.

X. Recognition of contractions.

Third Grade

I. Recognition of syllabic divisions of words.
   A. Auditory perception of syllables.
   B. Knowledge of meaning of syllables.
   C. Visual perception of syllables.

II. Application of principles of syllabication.
   A. Double consonants between two vowels.
   B. Single consonant between two vowels.
   C. Consonant before final le.
   D. Suffix ed preceded by d or t.

III. Application of phonetics to syllables.
   A. Closed and open syllables.
   B. Final e in last syllables.

IV. Recognition of hyphenated compounds and use of
term hyphen.

V. Recognition of common prefixes and suffixes.

VI. Interpretation of diacritical markings over "long" and "short" vowels.

VII. Recognition of common contractions, and use of terms apostrophe and contraction.

VIII. Recognition of common abbreviations, and use of term abbreviation.

IX. Recognition of antonyms, and use of term opposite.

Fourth Grade

I. Recognition of compound words and use of term compound.

II. Recognition of root words.

III. Recognition of derivatives.

A. Formed by adding prefixes.

B. Formed by adding suffixes.

IV. Recognition of inflectional variants.

A. Possessives.

B. Plural nouns.

C. Verbs.

D. Variants by adding er of agent.

E. Variants by adding er or est of comparison.

F. Variants by adding ly or y.

G. Use of term singular.
V. Application of phonetics to syllables.
   A. Letters, or letter combinations, representing same speech sound.
   B. Variant sounds represented by same letter, or letter combinations.
   C. Diacritical marks.
   D. Phonetic respellings.
   E. Key words in dictionary.

VI. Recognition of function of accent marks.
   A. Accent on pronunciation.
   B. Accent on two-syllable words.
   C. Primary accent.
   D. Use of term accent.

VII. Application of principles of syllabication:
    syllables commonly used as prefixes and suffixes.

VIII. Interpretation of dictionary, glossary, and index information.
   A. Location of information.
      1. Alphabetical sequence.
      2. Alphabetizing by first and second letters.
      4. Parts of dictionary.
   B. Pronunciation.
      1. Respelling.
      2. Key words.
3. Syllabication.
4. Accent.
5. Preferred pronunciation.

C. Meanings: Use of terms, antonym, synonym, and homonym.

IX. Interpretation of graphs, charts, maps, and other pictorial aids.

Fifth and Sixth Grades
I. Association of meanings with higher level abstractions (e.g., democracy, hope).
II. Identification of shades of meanings.
III. Increased understanding of shifts of meaning, or variability of meanings influenced by context.
IV. Interpretation of figurative and idiomatic language.
V. Use of terms: suffix, prefix, root, stem, dia-critical mark, primary accent, secondary accent, and homograph.

VI. Interpretation of dictionary, glossary, and index information.
A. Cross references (e.g., see shake).
B. Change of accent (e.g., homographs).
C. Principal parts of verbs.
D. Comparative and superlative forms of adjectives.
E. Etymology.
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