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REVIEW OF RESEARCH ON WORD RECOGNITION IN GRADE ONE

Submitted by

Mary Elizabeth Casey

(B.S.in Ed.,Boston University
School of Education 1942)

1948.

Submitted in partial fulfillment of
requirements for Master's Degree in Education

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INTRODUCTION

The purpose of this study is to summarize the research concerning methods of presenting new words in reading in Grade One. It covers studies completed between 1921 and 1947.

Reading is an important tool in school and an aid in business and leisure activities throughout life. It is generally agreed that a child should acquire a sight vocabulary, but there is little agreement on the best method. The author hopes to contribute to the understanding of the values of different methods.

Thus this study proposes

1. To analyze the research pertaining to methods of teaching Word Recognition in Grade One.

2. To draw conclusions on the implications for teaching of research.

Chapter I

BRIEF HISTORY OF METHODS

As a larger percentage of the population of the United States has become literate, reading methods have become more important. Before the introduction of the word method around 1840,[1] the alphabet method and later the alphabet-phonetic method were used.

Alphabet Method

"The ABC method of learning to read became general among the Greeks and Romans and persisted to recent times in the Western World."[2]

In pre-revolutionary days "The techniques used were those of learning the alphabet, spelling syllables and words, memorizing sections of the content, and reading orally."[3] The main content of the books was the Lord's Prayer, the Ten Commandments, and the alphabet. Memorizing the content was more important than learning to read. The few who learned to read, read the Bible and a few other books aloud to the other people.

1. Bumstead, J.F. My Little Primer, Marwin & Perkins, 1840.

2. Huey, E.B. A Psychology and Pedagogy of Reading, Macmillan Company, New York, 1916, p.240.

3. Smith, N.B. Historical Analysis of American Reading Instruction, Silver Burdett Company, 1934, p.34.

"In the case of word recognition difficulty, spelling with attention to syllabication was, of course, the aid commonly used."[1]

Alphabet-phonetic Method

After the revolution there was an attempt to nationalize the language. "The emphasis upon articulation and pronunciation is significant from the standpoint of method in that it brought about the practice of teaching the sounds of the letters as well as their names."[2]

The following set of rules from Leavitt's Easy Lessons in Reading[3] show the stress that was placed on articulation and enunciation in this period.

"Rules

1. Be careful to call your words right.
2. Learn to pronounce them properly.
3. Speak with a clear distinct voice.
4. Do not read too fast.
5. Be careful to observe all the Stops.
6. Learn to use the proper Emphasis,and Inflections of the voice.
7. Endeavor to understand every word you read as you go along. Study your reading lessons very carefully, before you read.
8. Try to read as you were telling a story to your mother, or talking with some of your playmates. Reading is telling from a book.
9. Take pains to read poetry and not to sing it.
10. The emphatic words are printed in Italic letters."[3]

1. Stone,C.R.Better Advanced Reading, Webster Publishing Company, St.Louis,1937,p.2

2. Smith,N.B.Historical Analysis of American Reading Instruction,

3. Leavitt,J. Easy Lessons in Reading, J.Prentiss, Keene,New Hampshire,1935,pp.2,3.

Word Method

In 1832 Worcester[1] introduced an innovation in method, The importance of learning to read words before they were analyzed was stressed.

"Let the teacher remember that a suitable portion for one lesson or exercise, is first to be read by the scholar, if the scholar can read it; if the scholar can not read it, the teacher must read it until the scholar can do it."

"The letters of each word are next to be learned, and the words to be carefully pronounced:

"The sense of the words is to be given, so far as it can be:

"And, finally, the scholar is to select from the Spelling Lesson the word which corresponds to each Cut, and spell it."[2]

Beginning in 1840 Bumstead published several books containing lists of words to be learned by sight with no attempt at sounding. Bumstead's My Little Primer[3] was probably the first book to use the word method. Bumstead's My First School Book[4] lists the words "Man,boy,girl" nine times in varying orders. The rest of the book lists words under different classifications, such as,"Found on land.At school we must," etc.

1. Worcester,S. Primer of the English Language for the Use of Families and Schools, Hilliard Gray, Boston,1932.

2. Worcester, ibid,p.14

3. Bumstead,J.F.,My Little Primer, Marwin & Perkins, 1840.

4. Bumstead,J.F.,My First School Book, Marwin, 1858, p.2

In 1846 James Russell Webb joyfully and independently dicovered the word method and used it in his The New Word Method.

Around 1880 the practice of spelling out new words was generally abandoned.

Reactions to the Word Method

"After the word method had been in use for a few years, a growing dissatisfaction sprang up in some quarters because children who had been taught by this method were not able to read well in the upper grades." [1]

Elaborate Phonetic Method

"The Pollard Method was the forerunner of several other reading systems which heavily stressed phonetics. None,however, went to such extremes as Miss Pollard did. Most of them ad* vocated the teaching of some whole words before giving practice in sounding letters and phonetic elements. Neverthless,the foundation of the method in each case rested upon an elaborate and highly organized system of phonetics." [2]

The following quotation from the Preface of The Beacon Primer describes the phonetic method

"Besides the consonants and the short sounds of the vowels,there are but few phonetic rules which the pupil needs

1. Smith,N.B.,ibid p.131

2.Ibid p.132

to learn before recognizing the majority of English words. These rules, when brought to his understanding through practice on long lists of selected words where only one difficulty is presented at a time, quickly and surely develop the reading power".[1]

Sentence or Story Method

"Contemporaneously with the elaborate phonetic system, we find another and larger group of authors expanding the word method into the sentence method or the story method with phonetics receiving subordinate emphasis."

"Following the publication of Farnham's manual entitled The Sentence Method, several reading systems appeared which were based on his theory. A method which made use of entire sentences or even whole stories as a starting point offered a happy opportunity to introduce cumulative folk tales from literature into readers for beginners."[2]

Free and Treadwell's Primer[3] contains such folk tales as The Little Red Hen, The Old Woman and Her Pig, The Billy Goats Gruff, and others. The teaching procedure from story to word is briefly described.

1. Fassett, J.H., The Beacon Primer, Ginn & Company, Boston, 1912, p.111

2. Farnham, G. The Sentence Method, 1895

3. Treadwell, H.& Free, M. Reading Literature, The Primer, Row Peterson, Chicago, 1910, p.119

"It is a part of the plan of this book that each story to be told to the children with much fuller detail, as in the original, before beginning the study of it in the book. Children readily get the brief sentences as given here, and the word-getting follows."

"The recognition of words is necessary to getting the thought, but word-recognition or mere word-naming is not reading. Drill upon the words is essential in the early stage of learning to read, though this study of words should be made a separate lesson, or at least kept distinct from the reading of the story."[1]

Kinaesthetic Method

In 1916, in the University of California, Southern Branch, seven children, who had failed to learn to read after years of classroom instruction, and several weeks of individual reme dial instruction, made phenomenal progress in reading using an individual kinaesthetic method.

"In the specific class studied lip and kinaesthetic elements seem to be essential link between the visual cue and the various associations which give it word meaning."[2]

Since this time it has been used successfully in classrooms with children having some difficulty.

1. Treadwell,H.& Free M. Reading Literature, The Primer, Row Peterson, Chicago,1910,p.119.

2. Fernald,J.M.& Keller,H.,"The Effest of Kinaesthetic Factors in the Development of Word Recognition in Case of Non-Readers" Journal of Educational Research, 4:355-77 (December,1921)

Silent Reading Emphasis

By 1918 a large percentage of the people could read so there was less necessity for oral reading. In an effort to improve comprehension and speed, silent reading was emphasized. "The method frequently used in teaching silent reading to first grade children was that of presenting sentences which required action response".

In 1922, Watkins wrote "How To Teach Silent Reading To Beginners".[1] It did not, however, advocate teaching all beginning reading by silent reading methods.

Activity Programs

By 1925 activity programs were introduced. Making reading meaningful to the child from the beginning was stressed.

"The fact is widely recognized that the early lessons must deal with words and word groups as units until the meaningful associations have been definitely established."[2]

In some schools reading was taught incidentally as the children felt the need for it. Other teachers had a regular period for reading skills and had activities to enrich the meaning. The following changes were noted in first grade reading.

1. Watkins, How To Teach Silent Reading To Beginners, Lippincott, 1922
2. National Society for the Study of Education, The Twenty-Fourth Year Book, Part I. Report of the National Committee on Reading, "Development of a Vocabulary", pp.79,80.

(1) Experience charts with teacher and child as co-authors were used in beginning reading.

(2) Phonics had less emphasis and were not generally taught until a basic vocabulary of one hundred words was acquired.

(3) Individual differences were recognized and some attempts were made to provide for them.[1]

The Best Method

In 1935, Cooper[1] studied ten beginning reading systems published between 1925-1932. "There is no agreement as to a single best method of procedure".

In 1944, Russell[2] made a questionnaire study of the opinions of 125 reading experts.

"Sixteen percent favor preliminary sentence drill involving use of context clues to include all new words, and the same percentage approve such drill on selected words. Eleven percent favor preliminary phrase drill on selected words, and ten percent favor each of ten other methods of presenting new words".

The studies of Cooper and Russell show that publishers of reading systems and reading experts do not agree on the best method of teaching beginning reading. With the possible exception of the alphabet method which fell into disuse around 1880, all of the methods mentioned are still in use.

1. Cooper, I.M. "A Comparative Study of Organization for Teaching of Ten Beginning Reading Systems". J.Educ.Res.28:347-57(Jan1935)

2. Russell, D.H. Basic Reading Programs", Elemntary School J.44:602-9 (June, 1944)

Before the introduction of the word method around 1840 the alphabet and later the alphabet-phonetic method were used. Since the introduction with the exception of the elaborate phonetic method of Miss Pollard, all methods have advocated the acquisition of a sight vocabulary in beginning reading.

This paper deals with investigation into the best method or methods of acquiring a sight vocabulary.

Chapter Two

REVIEW OF RESEARCH ON METHODS OF TEACHING WORD RECOGNITION IN GRADE ONE

Cole[1] divides methods of teaching reading into four types:(1) Alphabetical-Oral Method, (2) Phonetic Method, (3) Look-and-Say Method, and (4) Phrase Reading or Sentence Method. A combination of these is used in teaching Word Recognition in Grade One today.

Alphabetical-Oral Method

Smith[2] says "The practice of learning the alphabet and spelling words as an initial step came generally to be abandoned early in this period." (1880-1918)

In 1915 Winch[3] compared the alphabetical-oral method with the phonic method. Thirty-eight beginning first graders were paired for learning rate of nonsense sounds and symbols. The difference between the groups was statistically significant and the author concluded:"It appears clearly that in the early stages of teaching reading to young children a phonic

1. Cole,l. Improvement of Reading,Farrar and Rhinehart,1938,pp.4-14

2. Smith,N.B.Historical Analysis of American Reading Instruction Silver Burdett,Boston,1934,p.128

3.Winch,W.H."Teaching Beginners to Read in England",Journal of Education Research Monographs,Bloomington,Illinois:Public School Publishing Company,1925,p.81

method is superior to an alphabetic method."

Gates[1] reports "In the course of our investigations, twelve beginning pupils were taught, under experimental control, to depend chiefly upon the spelling attack. More than half of these experienced grave difficulty in word recognition and reading and a fourth, though more competent, were hampered in some degree by what appear to be innate limitations of this procedure."

Both studies were conducted with small numbers of children, but the findings in both were significant. The evidence of Winch and Gates, plus the fact that the alphabet-oral method has been abandoned generally since about 1880, lead the author to conclude that the alphabetical-oral method is a relatively ineffective method of teaching beginners to read.

Phonics versus Word Method

In 1928 Sexton and Harron[2] carried out an experiment in phonics versus no phonics with 929 first grade children.

Tests were given at the end of the first five months, first year, and second year. They found that "The results clearly indicate that the teaching of phonics functions very little or not at all with beginners in reading during the first five months. It begins to be of some value during the second five months but it is of greater value in the second grade."

1. Gates A.I. New Methods in Primary Investigation. Teachers College, Columbia, New York, 1928

2. Sexton E.K. and Harron, J. "The Newark Phonics Experiment", Elementary School Journal, 28:690-701 (May, 1928)

In 1937 Tate[1] studied the influence of phonics on silent reading in Grade One. 36 children in the contro; group were taught by the look-and-say method. 37 children in the experimental group were taught phonics for thirty minutes every day. At the end of the experiment the Gates Primary Reading Test, Type 1,2,and 3 were administered and he found "Phonics instruction and drill, as judged by the results of the Gates Primary Reading Test, Type 1, is far superior to the look-and-say method in developing the ability to recognize words. (2) The results of Type 2 of the Gates test give a slight indication that the look-and-say method is superior in developing ability to comprehend sentences, (3) Look-and-say is superior in developing ability to comprehend paragraphs of directions."

In 1938 Smith[2] attempted "to discover the relative merits of direct phonic instruction and word as a unit instruction in primary reading."

"Fifty children in each of two towns were chosen for study. In the first town direct phonetic approach was encouraged both by the basal reading system and by the supervisory policy. In the second town the word as a unit approach was similarly encouraged."

The children were given the Durrell Analysis of Reading

1. Tate, Harry, "The Influence of Phonics on Silent Reading in Grade One", Elementary School Journal, 37:752-63 (June, 1937)

2. Smith, Esther, Tachistoscopic Studies of Word Perception Abilities, Masters Thesis, Boston University, 1938

Difficulty and the Durrell-Sullivan Reading Capacity and Achievement Tests, Smith states.

"The results were studied statistically with the following findings:

"1. The children in the two towns were approximately equal in Chronological Age and Reading Capacity and had spent equal time in school. "

"2. In Quick Perception of words, the direct phonic group was markedly superior; the mean difference being ten times the probable error."

"3. In Word Analysis the direct phonic group was superior."

"4. The direct phonic group made higher scores in the Reading Vocabulary Tests."

"5. In Reading Achievement Tests the groups showed no significant difference."

In 1940 Tate, Herbert, and Zeman,[2] tried another experiment in non-phonic method. There were three groups of first graders - 1. non-phonic, who were taught to use contextual clues in discovering new words, 2. incidental phonics, who were given phonics incidentally when they seemed to need it in learning new words, 3 formal phonics. Gates Primary Reading Test was given at the end of five months. A significant difference was found in favor of the incidental phonic method over the non-phonic method. Tate states "Therefore, in

2. Tate, Marry, Herbert, I. and Zeman, J. "Non-Phonic Primary Reading", Elementary School Journal, 40:529-37 (1940)

the first five months of the experiment, the incidental phonic method was superior to the non-phonic method in all three reading factors-word recognition, sentence meaning, and paragraph meaning as measured by the test used."

From the studies of Sexton and Harron, and Tate, and Garrison and Heard the writer concludes that the phonic method is superior to the look-and-say method in developing the ability to recognize words.

Intrinsic Phonics Method versus Formal Phonics

In 1923-24 Gates[1] compared phonetic and intrinsic methods. A first grade was divided into paired groups. The non-phonetic group was given silent reading exercises which required careful word discrimination. The phonetic group were taught single sounds and phonograms which were combined in word families. At the close of the experiment the Gates Test of Silent Reading was given. The tendencies were all in favor of the intrinsic method. It seems natural that the group doing silent reading exercises in the experiment would do better on tests of silent reading.

In 1925-26 Gates[2] did a more elaborate investiga tion of the phonetic method versus the intrinsic method in Grade One. Besides two groups of equivalent mental age there was also a bright phonetic group. Gates found that "In three tests

1. Gates, A.I. New Methods in Primary Investigation, Teachers College, Columbia, New York, 1928.

2. Ibid. p.63

of silent reading the intrinsic group exceeds the equivalent phonetic group by appreciable and reliable amounts." The silent reading tests naturally favored the intrinsic group.

However, the intrinsic method may avoid the error of over-analysis of words which takes away meaning. Gates reports that "Much as in the earlier experiment, it was found on the whole, the pupils trained by the new methods were more rapid in their appraisal of new words, more likely to depend on the context, and contrariwise, less likely to sound letters or small combinations, to name letters or to prolong the analytic attack." Depending on contextual clues and not sounding letters could be advantageous or disadventageous depending on the degree to which each was done.

In 1931 Garrison and Heard[1] investigated the merits of phonics teaching versus the intrinsic method of Gates. 111 first grade children were divided into two control and two experimental groups,- bright phonetic, bright non-phonetic, dull phonetic, and dull non-phonetic according to the results of the Pintner Cunningham Primary Mental Test. After carrying on the experiment for several years and testing the children in oral, silent reading, and spelling, they reached the following conclusions:

1."Training in phonetics makes children more independent in the pronunciation of words.

1.Garrison,S.C. and Heard,M.T."An Experimental Study of the Value of Phonetics",Peabody Journal of Education,9:9-14 (July 1931)

2. Children with no phonetic training make smoother and better oral readers in the lower grades.

3. In teaching children to read in the early part of the primary grades, first and perhaps second, bright children seem to be helped more by training in phonetics than are dull. For all children, phonetic training seems to be more effective in the latter part of the primary grades.

4. In the teaching of reading it seems probable that much of the phonetic training now given should be deferred till the second and third grades. It appears that work in meaningful exercises which are planned to increase comprehension and to teach discrimination of words is more important than phonics.

5. Children who have had training in phonetics have some advantage in learning to spell over children who have had no such training.

6. First grade children with no phonetic training seem to lose less during vacation than do children with such training. ---- With older children, children at the end of the second grade, phonetic training seems to be an aid in retention during vacation."

The studies of Tate, Gates, and Garrison and Heard indicate that exercises in silent reading which require careful word discrimination and comprehension in Grade One teach children to comprehend silent reading better than phonic instruction.

The study of Sexton and Harron indicates that phonics functions very little with first graders the first five months,

a little more the second five months, and much more in the second grade.

Garrison and Heard find that children with no phonetic training make smoother oral readers and are less likely to forget words over vacation that children with phonetic training in Grade One, but children at the end of second grade are aided in retention over vacation by phonics.

The writer concludes that phonics functions some in Grade One but is more valuable in Grade Two.

In 1941 Murphy and Junkins[1] developed sets of exercises in auditory and visual discrimination. Out of 150 children who had made little progress in reading in the first six months of first grade, 50 were given regular instruction, 50 were given the visual discrimination exercises, and 50 were given the auditory discrimination exercises. A test of learning rate was given at the beginning and end of the six weeks experiment. Murphy found "In the initial experiment, all groups retained approximately two words out of eight words taught by a standard procedure. At the end of this experiment the retention of words taught had doubled for the two experimental groups while the control group increased its score only slightly." The writers found that "Three months after the end of this experiment, all groups were tested with the Detroit Word Recognition Test. The auditory and visual discrimination groups had raw scores of 12 and 13 respectively as compared to 7 for the control group. These differences were statistically significant."

In 1943 Murphy[2] did a more extensive study of the effect of visual and auditory discrimination exercises on beginning reading. Tests for learning rate, visual perception, and auditory discrimination were constructed. Groups were equated

1. Murphy, H. and Junkins, K. "Increasing the Rate of Learning in First Grade Reading" Education, 62:35-39 (September, 1941)

2. Murphy, H. "An Evaluation of the Effect of Specific Training in Auditory and Visual Doscrimination on Beginning Reading." Doctorate Dissertation, Boston University, School of Education 1943

for learning rate, mental age, chronological age, visual and auditory scores. Group One had both auditory and visual exercises group two had just auditory exercises, group three had visual exercises, and the control group had regular reading instruction. There were 540 children in 13 first grade rooms in the experiment. Murphy concluded that "1. All experimental groups showed significant increases as compared to the control group in the rate of learning test scores.

"2.The combined and visual groups, both of which had specific visual perception training, made significant gains on the visual test in November. The auditory and control groups showed little change in this skill.

"3.In auditory discriminination the special auditory group showed marked progress, while the other groups made almost no progress.

"4.It appears that sex differences in reading achievement disappear when specific training for auditory and visual discrimination is given in beginning reading. a. The girls of the control group were superior to the boys in reading achievement in November, February, and June. b. There was no significant difference between the girls and boys in any of the experimental groups."

"5.Low groups given special training showed much more increase in reading over matched children in the control group than did children whose auditory and visual test scores were medium or high."

The writer concludes from the studies of Murphy and

Junkins that specific training in auditory and visual discrimination should be given in the beginning of Grade One, especially to boys.

Word Cues

There have been many investigations into the cues which children use in remembering and also the reasons why children confuse words. The following table summarizes the results.

CUES

	Level	Letters	Shape
Gates and Boeker[1] 1923	Kindergarten	Minute details such as i,y	Length of word
Meek[2] 1925	Kindergarten	Initial letter more often than final Last two letters more often than first two or middle two letters	
Davidson[3] 1931	Mental Age 4 Chronological Age 3,4,5,6,	First letter Peculiar letters	Geometric shape
Wiley[4] 1928	Grade One	Confusions 1. Similar beginnings 2. Similar endings 3. Similar middles 4. Last letter first letter of another	
Bennett[5] 1942	Remedial pupils	1. Similar beginnings 2. Similar endings 3. Median vowel only difference 4. Reversals of initial consonant or whole word	

1. Gates, A.I. and Boeker, E. "A Study of Initial Stages in Reading by Pre-school Children", Teachers College Record 24 (November, 1923)
2. Meek, L. Learning and Retention in Young Children, Teachers College Contributions to Education, Volume 164, Teachers College, Columbia, 1925
3. Davidson, H.P. An Experimental Study of Bright, Average, and Dull Children at the Four-Year-Old Mental Level
4. Wiley, W. "Difficult Words and the Beginner", Journal of Educational Research 17:278-79 (April, 1928)
5. Bennett, A. "An analysis of Errors Made by Retarded Readers". Journal of Educational Psychology, 33: 25-38 (January, 1942)

The studies of Gates and Boeker, Meek, Davidson, Wiley, Bennett, Wilson and Hester indicate that letters are both cues and sources of confusion. Therefore the writer concludes that the names and shapes of the letters should be taught in beginning reading.

In 1928 Smith[1] studied 120 first graders matching lower case letters and matching lowere case letters with capitals. Here is the order of difficulty from hardest to easiest.

Lower case letters b p q d r h f i j n u e v x y k t z l a c w o m s g

Lower case letters with capitals gG rR gG bB fF aA eE hH lL iI nN tT dD mM jJ yY uU pP wW cC zZ sS vV kK oO xX

Words known in lower case letters were tested with the first letter as a capital. 96 of the words with hard capitals were were missed while 44 of the words with medium hard capitals and only one of the words with an easy capital was missed. Therefore the order of difficulty seems to hold with words too.

Smith's study establishes the order of difficulty of matching lower case and capital letters. Smith also establishes the need for teaching the capital letters, except the ten which are similar to the lower case letters.

1. Smith, N.B. "Matching Ability as a Factor in First Grade Reading", J.Educ.Psych. 19:560571 (October, 1928)

In 1938 Wilson[1] completed a study of reading readiness and reading progress carried on for four years in the Kindergarten and Grades I,II,III, of the Horace Mann School. The investigator states that "Differences in reading progress can be explained mainly in terms of learning. In the learning experiences of these children one set of factors seemed to stand out as of pre-eminent effectiveness in contributing to reading progress, namely, mastery of letter symbols, both form and souns."

In 1942 Hester[2] checked the knowledge of letter names and sounds of 64 remedial cases scoring below Grade III level on the Durrell Analysis of Reading Difficulty. "While 196 errors were made on lower case names, 755 mistakes, or approximately four times as many , were made because the sounds either were given incorrectly or were totally unknown. This fact is indeed significant in the planning of a reading program." This may be due to one of three reasons:1.Sounds may be harder to learn. 2. ounds may not be taught as much as letter names. 3.Sounds are more important than letter names to success in reading. Letter names and sounds are necessary cues.

1.Wilson,F.T.,"Reading Progress in Kindergarten and Primary Grades",Elementary School Journal,38:442-9 (February,1938)

2.Hester,K."A Study of Phonetic Difficulties in Reading",Elementary School Journal,43:171-73 (November,1942)

Word Color

In 1935 Hildreth[1] reports a study of the way one average first grader learned new words. She found the following emotional reaction to words: 1. "Peter showed a decided tendency to project the words representing things he liked to less interesting words.

2. "Familiarity with the meaning of the word was a significant factor in successful learning.

3. "Perceptual confusion seemed less common than meaning confusions or word-association confusions."

In 1936 Carter[2] obtained oral respnses to pictures from 100 children in Grades 6-10 to determine whether pleasant, unpleasant, or indifferent words were more easily learned. Pleasant words were remembered significantly more than unpleasant or indifferent words. Unpleasant words were remembered significantly more than indifferent words. A study of the emotional correlates of errors in Grade One Word Recognition might prove very interesting.

In 1940 Newcomer[3] suggests a multi-sensory approach to the teaching of primary reading.

1. Hildreth, G.H."An Individual Study in Word Recognition", Elementary School Journal 5:606-11 (April,1935)

2. Carter,H.D."Emotional Correlates of Errors in Learning", Journal of Educational Psychology,27:55-67,1936

3.Newcomer,A."AMilti-sensory Approach to the Teaching of Primary REading", Four Annual Reading and Curriculum Implementation Conference, Claremont College Library, Claremont,California, 1940

Non-Oral Method

In 1935 in Chicago McDade[1] reports "A beginning first grade class was taught for a year by a completely non-oral method." He says "The experiment was planned on the hypothesis that reading taught orally is securing unsatisfactory results for two chief reasons: (1) by centering attention on words and their utterance, meanings are obscured and (2) the reading rate of persons who learn to read by the oral method is slowed to the speed of inner speech." The results of the study show : "Every child reached or exceeded the course of study requirements, and the majority reached or exceeded mental age grade expectancy, for the most part, irrespective of Intelligence Quotient. The mean reading score exceeded the mean mental age grade expectancy, and surpassed the course of study requirement (grade1.9) by 0.75 grades."

In 1945 a ten year study of the non-oral method in Chicago was completed. Buswell[2] reports that 465 carefully matched pairs were in each group studied in Grade Six. The experimental group was taught by a completely non-oral method in Grades One, Two, and Three. The control group was taught by the oral method. McDade concludes:1."Pupils taught by non-oral method had significant advantage in progress through school over oral method.

1. McDade, J.E."Hypothesis for non-oral readings:argument, experiment, and results", Journal of Educational Research, 30:489-503 (March, 1937)

2. Buswell, G.T."Non-oral reading:A Study of Its Use in the Chicago Public Schools", Education Digest, 11:17-19(December, 1945)

2."Non-oral pupils had less lip movement but still had some."

3."There were tendencies in favor of non-oral in reading scores of both high and low Intelligence Quotients."

The significant advantage in progress through school may have been due to (1) more opportunity for individuals to progress at their own rate of speed, (2) more chance for children to make their errors silently in spite of comprehension checks and be promoted without detection of disabilities, (3) more carry-over of silent reading instruction into other school subjects. Non-oral reading should be investigated further.

From the Chicago study of non-oral reading the writer concludes that silent reading can be taught very successfully in Grade One , and at least some of the reading in Grade One should be Individual Progress Silent Reading.

In 1932 Bergman and Vreeland[1] compared the Picture-Story and the Visual Methods of teaching beginning reading. The Picture-Story method utilized individual silent seatwork, mostly pasting objects on a picture according to written directions. The Visual method was oral and used a lantern slide to project teacher-pupil stories for study. Both silent and oral reading tests were given. The Oral test scores were in favor of the oral method and the silent test scores were in favor of the silent test. The authors suggest "It would appear that,of these two comparisons, the superiority of the Picture-Story method over

1.Bergman,W.G.and Vreeland,W."Comparative Achievement in Word Recognition under Two Methods of Teaching Beginning Reading", Elementary School Journal,32:605-16 (April,1932)

the Visual method is more surely of educational importance."

The writer believes that there are so many factors involved in this experiment and its measures that nothing is proven conclusively.

Kinaesthetic Method

In 1921 Fernald and Keller[1] report phenomenal success in teaching seven "non-readers" by a kinaesthetic method. A description of the kinaesthetic method follows:

"Learning first words: The child was asked to tell some word he would like to learn.----

"The child looked at the word, saying it over to himself and tracing it if he wished to do so. The tracing was done with th the first two fingers of the right hand (or of the left hand if the child was left-handed) resting on the copy. It was never done in the air or with Pencil."

"The child attempted to write the word saying the syllables to himself as he wrote them. If he was unable to write the word correctly, the entire process was repeated until the word could be written without the copy. At no stage of the performance was he allowed to copy the word. After a few words had been learned in this way, he was shown the word in print as well as in script."

The rest of the steps were (2)spontaneous sentences, (3)words in context or story selected by the child, (4)apperception of phrases,(5) silent reading for content.

1.Fernald,G.M.and Keller,H.,"The Effect of Kinaesthetic Factors in the Development of Word Recognition in the Case of Non-Readers",Journal of Educational Research, 4:355-77 (December,1921)

In 1947 Fernald[1] reports from the University of California Reading Clinic that

(1)"In our case of extreme disability, 60 to 1 of the cases are males (less than 2 % females).---

(2) These individuals who seem to need the kinaesthetic content in reading use kinaesthetc cues not only in reading but in learning other things, as foreign language, arithmetic, points of the compass, codes, etc. In our experiments with Braille and mazes, they are superior to the control groups in learning rate and accuracy."

In 1930 Bird[2] reports a study of the kinaesthetc approach which is regularly used at the Henry Barnard School in Providence, R.I.,"Pupils may enter the kindergarten of the Henry Barnard School at the age of three,four,or five. They find the schoolrooms equipped with many attractive incentives to work. Among these are large script letters and word forms made by the teachers by dusting carborundum powder on melted glue applied to cardboard with a brush. These forms and other materials are conspicuously placed within the childrens' reach to invite the children to use them spontaneously. Normal children naturally investigate the rough surface of the letter and word forms and are soon ready to be shown their proper use. The children are

1. Fernald,G.M."Certain points concerning remedial reading as it is taught at the University of California",Education,67: 442-58 (March,1947)

2. Bird,G."A Successful Experiment in Child Education", Elementary School Journal,30:539-46 (March,1930)

then taught how to move the first two fingers lightly over the carborundum letters and words. By this means, they gain a tactual-kinaesthetic- visual-auditory impression of the symbols. They are taught to look intently, trace precisely, and at the same time say the sound distinctly. The one-letter stage is a simple and brief entrance into a procedure which begins almost immediately to deal with larger units. The progressive sounding, seeing, and tracing of word forms carry over to the construction of words and sentences with a large movable alphabet, even before the pupils have learned all the individual sounds. The pupils' attention is not focussed on single letters to the exclusion of words, phrases, and sentences."

Gates battery of reading tests was administered,"The number of points by which the composite grade medians exceeded the composite standard median is as follows: GradeI 51.

The author gave the Stanford Achievement Test to Grade II B and found "C.A. is from two to thirteen months less than the standards, the median of the medians being seven months less than the standard. As might be expected, the median eductional ages of the pupils in the various grades were from four to twenty-one months in advance of the standards,the median of the medians being twelve and one half months above the standard."

Her finding of accelerated progress may be due to (1)The individual progress rate,(2) The early introduction of the children to reading,(3) Superior teaching,(4)The method used.

From the studies of Fernald and Keller, and Bird the writer concludes (1) that the kinaesthetic approach is very successful in beginning reading, and (2) the kinaesthetic approach can be used successfully in the regular classroom even below Grade One.

Words in Isolation versus Words in Phrases

In 1947 Mattola[1] experimented "to determine whether children retain words better by learning them in isolation or in phrases at the beginning of the first grade." 198 children in seven first grades were tested by multiple choice and flash card tests on the first hundred and twenty words in the Scott Foresman Reading series at the beginning and end of the experiment. The variables were carefully controlled.

The conclusions are:1.All the mean scores on both flash card and story test showed differences favoring teaching words in isolation; 2.On the flash card tests the mean score for children with an IQ below 90 showed a significant difference in favor of isolation.

The writer concludes that words should be taught in isolation with children in Grade One,especially with children with an I.Q. below 90.

1. Mattola,M.D.,"Teaching a new word in isolation versus teaching a new word in a phrase in first grade." Masters Thesis, Boston University School of Education, 1947

Enrich ment versus Analysis Method of Presenting Words

In 1940 Thompson[1] completed an experiment to determine whether Word Analysis method or Enrichment Presentation of words fixed words better in Grade One. The words after page 39 in the primer through the first reader in"Child Development Readers" were divided into units. Each unit was taught one year by analysis and the next by enrichment. At the end of two units, the words for the first unit were checked individually by flash cards. At the end of the year each child read a story containing all the words taught to check delayed recall.

Thompson concludes that (1) the enrichment method was significantly better for both groups in immediate recall, and (2) the analysis method was significantly better for delayed recall in both groups. The two different types of checks used for immediate and delayed recall may have influenced the findings.

Lewis[2] did tests of rate of learning as measured from Word Analysis versus Word Meaning Presentation with 87 children in first and second grades. The immediate recall was checked by (1) A word picture identification test, (2) Identification of word pronounced,(3) Tachistoscopic check. She found (1) the

1. Thompson,L.E.,"Enrichment versus Analysis Method of Teaching in First Grade",Unpublished Masters' Thesis, Boston University,1940.

2. Lewis,V.M. "Rate of Learning in Grades One and Two as Measured from Word Analysis versus Word Meaning Presentation," Unpublished Masters' Thesis, Boston University,1942

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differences between learning by word analysis and word meanings in Grades One and Two were not statistically significant. (2) The difference between the word picture check and the identification of word pronounced was statistically significant. (3) The difference between identification of word pronounced and tachistoscopic check is statistically significant.

The writer concludes that Word Analysis Presentation of words is more effective.

Activity versus Systematic Approach

In 1926 Gates, Bachelder, and Betzner[1] compared the results of a systematic versus an opportunistic method of teaching 50 first graders paired for physical, mental, social, emotional, and educational maturity. Gates States "The comparison is not between the extreme traditional daily lesson-in-th-book-plus-recitation method and an extreme do-as-you-like procedure, but between what, for want of better terms, may be called modern systematic teaching, with considerable emphasis on pupils initiative and considerably less systematic procedure in which pupils control the amount, kind, and order of learning, with the teacher taking advantage of opportunity for instruction as they are afforded." They discovered that "Modern Systematic teaching resulted in considerably greater average achievement --- in arithmetic, spelling, silent and oral reading."

1. Gates, A.I., Bachelder, M. and Betzner, J. "A Modern Systematic versus Opportunistic Method of Teaching," Teachers College Record, 27: 679-701 (April, 1926)

In 1933 Lee[1] completed a survey of reading achievement of children in rooms having varying amounts of activity. 3,822 pupils were given the Lee-Clark Reading Test Form A. The teachers gave subjective evaluation of the amount of activity in their respective rooms. Lee found "The schools reporting a great deal of activity are definitely (from one to seven months) lower, in silent-reading achievement than are those reporting some, very little, or no activity work." Teachers subjective evaluation of such a touchy subject as "the amount of activity" in her room "is not necessarily reliable.

In 1943 Dice[2] contrasted two methods of teaching beginning reading "to determine whether emphasis in first grade reading should be on meaning or development of skills." The experimental group was taught to read stories and later individual words. The control group after a general reading readiness program of sic to eight weeks were given word drills before reading each story.

Both groups were given group tests on (1) recognition of words contained in vocabulary taught quarterly; (2) Gates Primary Reading Test Form B in June; (3) test on comprehension

1. Lee, J.M. "Reading Achievement in First Grade Activity Program," Elementary School Journal, 33:447-51 (February, 1933)

2. Dice, L.K. "An Experimental Study of Bright, Average, and Dull Children at the Four Year Mental Level", Clark University Prees (March, 1943)

of unknown second grade material in June.

Dice found (1) With the slow learning groups emphasis on meaning first was found statistically more successful in developing word recognition; (2) One method was not significantly superior to the other with the average and the accelerated groups; (3) More spontaneous reading in free time was developed in the method emphasizing meaning.

On the basis of achievement the meaning-first method was superior with slow-learning groups. However, the method emphasizing development of reading skills was undoubtedly handcapped by a delay of six to eight weeks for "general reading readiness." Therefore the writer finds the evidence of this study inconclusive.

The writer concludes from the study of Gates, Bachelder, and Betzner that modern systematic teaching results in more learning than incidental teaching. The study of Lee indicates that silent reading achievement is handicapped by too much activity in the classroom.

In 1938 Wilson and Sister Richardinse[1] took a vocabulary count of a diary dictated to the teacher by children. 173 words appeared four times or more.

In 1947 Smith[2] reports "Evidence gathered from the first

1. Sister Richardine and Wilson, F. "A Reading Activity in Grade One," Elementary English Review, 15:170-178 (1938)

2. Smith, C.A. "Experience Method in Beginning Reading," Elementary School Journal, 38: 96-106 (October, 1937)

grades of a small city system indicates that, in so far as testable drill materials are concerned, the experience method actually provides as much repetition as does the drill method."

The studies of Sister Richardine and Wilson and Smith indicate that the experience method provides as much repetition as drill materials. It does not provide systematic review, however.

Reddo

In 1938 Wheeler[1] investigated the merits of Read-O a reading game like Beano except that words are used instead of numbers. 227 first grade children from six schools in Johnson, Tennesee played the game. The teacher said the word in a sentence as it was shown.

Wheeler reports "At the end of twenty days the Devault Primary Reading Test was given to both groups." He found "a median score of 16.53 for the experimental group and 10.5 for the control group; a significant statistical difference of 6.03 in favor of the experimental group."

In 1938 Jardine[2] experimented with the use of teacher-pupil stories on lantern slides versus a regular method with

1. Wheeler,L.R. "An Experimental Study of the Value of Informal Method in Teaching Primary Reading," Journal of Educational Research,31:335-46 (January,1938)

2. Jardine,A.,"The Experimental Use of Visual Aids in Teaching Beginning Reading," Educational Screen,17:220-22,(September, 1938)

books. 180 first graders participated. On the Metropolitan Achievement Test, Jardine found "The average improvement of the experimental over the control group at both the upper quartile and median was approximately one month. Most interesting, however, was the difference in achievement at the lower quartile. There the experimental group made an average of two and one-half months improvement over the control group."

The writer concludes from Jardine's study that children with low I.Q.'s benefit more from reading teacher-pupils stories on lantern slides than regular books in beginning Grade One.

Flash Cards

In 1925 Gates[1] tested the influence of flash card drills on the ability to recognize words and various other types of reading. In Grade One Gates concluded "the month of intensive training with flash cards produced no apparent effect on speed and accuracy in perception of printed words and digits --- In three tests of reading, the flash-card drill again fails to effect any perceptibly beneficial results over and above those produces by practice in the silent reading of material of somewhat unsatisfactory difficulty."

1. Gates, A.I. "Functions of Flash Card Exercises in Reading: An Experimental Study," Teachers College Record, 27:311-27, (December, 1925)

Quick Perception

In 1941 Smith[1] tried reviewing words by a quick perception method. Words to be reviewed were exposed on a screen by a lantern at 1/5 to 1/25 second flash with oral contextual clues. Two groups of 50 each from Grade One groups were "equated for similar educational experience, home background, and equivalent mentality." 158 words were reviewed with contextual clues at different flash speeds.

Smith's results were:

1. In a test of Visual Perception, "At the close of the experiment the children receiving the systematic review had made a mean gain of 16.8 words, while those in the control group had a mean gain of only 1.8 words."
2. In a test of Word Recognition,"The difference between the means in the final test was 4.56, denoting a significant gain in favor of the experimental group."
3. In Oral Reading Rate,"The difference between the means was 14.5 words in favor of the experimental group, which indicated a significant gain."
4. In Errors in Oral Reading ----"Comparing the difference of mean scores appearing in the final test, the experimental group showed a decrease of 11.90 errors over the control group."

1. Smith, G. "Development and Evaluation of a Quick Perception Method in Beginning Reading," Unpublished Masters' Thesis, Boston University, 1941.

In 1945 Maiorano[1] did another experiment in reviewing primer vocabulary by quick perception with contextual clues. The data was analyzed for (1) size of vocabulary, (2) time required for word recognition, (3) silent word recognition. She finds "In general in all cases at the beginning of the experiment the Control group was superior and at the end the Experimental group was superior."

In 1945 Prario[2] tried a quick perception technique in teaching new words to Grade One. She found no statistically significant differences between the quick perception group and the basic method. A general trend favored the basic method.

In 1946 Nugent[3] used a quick perception technique with a large tachistiscope. She found "that graded contextual exercises accompanying a quick perception technique increase the child's sight vocabulary." The time was slightly in favor of the control but not significant because of the unwieldy tachistoscope.

1. Maiorano,D."An Evaluation of a Quick Perception Method for Systematic Review on Primer Vocabulary," Unpublished Master's Thesis,Boston University,1945

2. Prario,V.S.,"An Evaluation of Qui ck Perception Method in Teaching a Reading Vocabulary to Grade One." Master's Thesis, Boston University,1945.

3. Nugent, M.J."An Evaluation of Word Recognition Exercises for Grade One," Unpublished Master's Thesis,Boston University,1946

From the studies of Smith, Nugent, and Maiorano, the writer concludes that graded contextual clues accompanying a quick perception technique is an effective method of reviewing sight vocabulary in Grade One.

Influence of Manuscript Writing on Beginning Reading

In 1931 Voorhis[1] studied the merits of cursive and manuscript. He found that "that children taught manuscript were distinctly superior in ability to read."

In 1936 Cutright[2] reports a study of scrip-print and beginning reading. The results of teaching script-print were favorable to reading achievement.

In 1938 Houston[3] tried an experiment with two equivalent groups of 31 first graders. At the end of the year the manuscript group could write four more words a minute and had a reading age three months ahead of the cursive group.

1. Voorhis,T.,"Merits of Cursive and Manuscript Writing," Lincoln School Research Studies,Teachers College,Columbia University, 1931.

2. Cutright,P.B.,"Scrip-print and Beginning Reading and Spelling" Elementary English Review, 13:139-41 (April,1936)

3. Houston,H.,"Manuscript Writing and Progress in Reading," Elementary School Journal, 39: 116-18 (October,1938)

Influence of Typewriting on Beginning Reading

In 1934 Unzicker[1] let one group of 113 children use typewriters in connection with beginning reading. On their reading scores at the end he found "slight but consistent differences in favor of children who used the typewriter."

From the studies of Voorhis, Cutright, and Houston the writer concludes that teaching children manuscrip writing in Grade One helps them in learning to read.

From the study of Unzicker it seems probable that using the typewriter is an aid to learning to read in Grade One.

CHAPTER THREE

CONCLUSIONS

The purpose of this study is (1) to summarize the research concerning methods of teaching word recognition in Grade One and (2) to reach conclusions on the implications for teaching.

The following conclusions have been drawn from a summary of research:

1. The Alphabetical-oral method is relatively ineffective in teaching children to read.
2. The Phonic method is superior to the look-and-say method in developing the ability to recognize words.
3. Silent reading exercises are more effective in teaching comprehansion to children than is phonic training.
4. Phonics function some in Grade One but are more valuable in Grade Two.
5. Specific training in auditory and visual discrimination should be given to children in beginning Grade One. It appears to be more necessary for boys than for girls.
6. The names and shapes of letters should be taught in beginning Grade One.
7. The order of difficulty in matching letters follows:

b p q d r h f i j n u e v x y k t z l a c w o m s g

Capital letters to lower base letters: qQ rR gG bB fF aA eE hH

lL iI nN tT dD mM jJ yY uU pP wW cC zZ sS vV kK oO xX

8. The kinaesthetic approach is successful in teaching beginning reading to some children.

9. The kinaesthetic approach can be used successfully in the regular classroom, even below Grade One.

10. Silent reading can be taught successfully in Grade One.

11. At least some of the reading in Grade One should be individual silent seat work.

12. Children with Intelligence Quotients below 90 seem to achieve more if taught isolated words rather than words in phrases.

13, Systematic teaching results in more learning than incidental teaching.

14. Children with low I.Q.'s benefit more from reading teacher-pupils stories than reading books in beginning Grade One.

15. Graded contextual clues accompanying a quick perception technique is an effective method of reviewing sight vocabulary in Grade One.

16. Teaching manuscript writing to children in Grade One aids their progress in reading.

CHAPTER IV

SUGGESTIONS FOR FURTHER RESEARCH

1. Phonic method versus auditory discrimination.

2. Non-oral versus kinaesthetic methid in Grade One.

3. Phonics started in Grade Two versus phonics started in Grade One.

4. More studies on Quick Perception as a method of teaching beginning reading in Grade One.

5. Studies of Quick Perception Review in other grades.

6. More studies of kinaesthetic approach in regular classroom

7. Effect of emotional color of words on difficulty in Grade One Recognition.

8. Experiments with auditory exercises to follow Building Word Power.

9. Learning rates to discover best method of teaching individual children.

10. Effect of non-oral reading on achievement in other subjects in intermediary grades.

SUGGESTED SERVICE PAPERS

1. Silent reading exercises for Grade One with a controlled vocabulary taught by exercises.

2. Review of the research in intermediate grades on the different types of reading.

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