

The Woman's College of
The University of North Carolina
LIBRARY



CQ
no. 95

COLLEGE COLLECTION

Gift of
Lillian Smith Southern

A SURVEY AND EVALUATION OF PROFESSIONAL LITERATURE
ON SPELLING, 1938-1948

by

LILLIAN SMITH SOUTHERN

✓
4722

A thesis submitted to
the Faculty of
The Consolidated University of North Carolina
in partial fulfillment
of the requirements for the degree
Master of Arts in Education

Greensboro

1949

Approved by

Anna Reger
Adviser

ACKNOWLEDGEMENTS

The writer wishes to express sincere appreciation to Dr. Franklin H. McNutt, Associate Dean of the Graduate School of the University of North Carolina, for guidance, valuable suggestions, and sympathetic understanding in the writing of this thesis; and to Miss Anna Reger, Assistant Professor of Education, Woman's College of the University of North Carolina, for her valuable technical help.

The writer wishes to express her gratitude to R. M. Green, County Superintendent, and to the principals and teachers of the Stokes County Schools; also to members of the Criteria Committee, and to all others who helped in any way.

L. S. S.

BINDERY SLIP

JOSEPH RUZICKA

Baltimore, Md.

Greensboro, N. C.

CHAPTER

I. INTRODUCTION

Importance

Statement of

Delimitation

Method . .

II. LITERATURE ON

Literature,

Literature,

Literature,

III. LITERATURE ON

Literature,

Literature,

Literature,

Summary.

IV. CONCLUSIONS AND RECOMMENDATIONS.

Conclusions.

Recommendations.

BIBLIOGRAPHY.

Buckram No. 2075	Rub Enclosed
Pamphlet No.	New Title: Keep Rub
Tip	Do Not Keep Rub
Tpc	Stub For
Index	Use Bench Sewing
Bind in Covers	Issues Refold Plates Before Trimming
Strip Ads in all but First No.	Mount on Guards
Trim	Book Rate
Bind as Arranged	Tip In
Special Instructions	

This Volume Lacks: Letter Spine Exactly as Shown Below

RUSH

By June 6

37

Bindery will disregard this column

PAGE

. . . 1

. . . 1

. . . 11

. . . 11

. . . 12

. . . 14

. . . 14

. . . 23

. . . 35

. . . 41

. . . 41

. . . 46

. . . 50

. . . 62

. . . 65

. . . 65

. . . 66

. . . 70

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION	1
Importance of the Problem.	1
Statement of the Problem	11
Delimitation of the Problem.	11
Method	12
II. LITERATURE ON THE CONTENT OF SPELLING, 1938-1948	14
Literature, 1938-1940.	14
Literature, 1941-1944.	23
Literature, 1945-1948.	35
III. LITERATURE ON THE METHODS OF TEACHING SPELLING, 1938-1948. . .	41
Literature, 1938-1940.	41
Literature, 1941-1944.	46
Literature, 1945-1948.	50
Summary.	62
IV. CONCLUSIONS AND RECOMMENDATIONS.	65
Conclusions.	65
Recommendations.	66
BIBLIOGRAPHY.	70

LIST OF TABLES

TABLE

PAGE

I.	Results of Metropolitan Standardized Spelling Test Given to Grades II and III and Stanford Standardized Spelling Test Given to Grades IV through VIII in School A, Stokes County about Midterm, 1948.	4
II.	Results of Metropolitan Standardized Spelling Test Given to Grades II and III and Stanford Standardized Spelling Test Given to Grades IV through VIII in School B, Stokes County about Midterm, 1948.	5
III.	Results of Metropolitan Standardized Spelling Test Given to Grades II and III and Stanford Standardized Spelling Test Given to Grades IV through VIII in School C, Stokes County about Midterm, 1948.	6
IV.	Results of Metropolitan Standardized Spelling Test Given to Grades II and III and Stanford Standardized Spelling Test Given to Grades IV through VIII in School D, Stokes County about Midterm, 1948.	7
V.	Results of Metropolitan Standardized Spelling Test Given to Grades II and III and Stanford Standardized Spelling Test Given to Grades IV through VIII in School E, Stokes County about Midterm, 1948.	8
VI.	Results of Metropolitan Standardized Spelling Test Given to Grades II and III and Stanford Standardized Spelling Test Given to Grades IV through VIII in School F, Stokes County about Midterm, 1948.	9

CHAPTER I

INTRODUCTION

The Importance of the Problem

There have been rapid changes in methods of teaching spelling. At one time spelling was restricted to a specific list of words in the curriculum for each grade, with little regard for functional use. This method has been recognized as inefficient since the mere learning of isolated lists of words is not sufficient. However the present tendency in methods of teaching spelling is toward the functional approach, and consequently spelling is being used in the modern school with the broader activity program.

The old method of drilling every pupil on every word is not sufficient. Word lists are being individualized for daily instruction and individual remedial work is used.

So much has been written on methods to use in the teaching of spelling that one needs to sort and evaluate them. Some of the new trends in spelling have been summarized by Gertrude Hildreth, who writes: "the routine, regimented, uniform drill which has prevailed so long proves in the end to be inefficient-----Nothing is going to improve the situation except more efficient and intelligent instruction."¹

There is, of course, a recognized, universal need for correct spelling. One is penalized by society if he cannot spell correctly.

1. Gertrude Hildreth, "Spelling in the Modern School Program," National Elementary Principal, 20:476-483, July, 1941.

Since spelling is a tool subject, the child has no need for tools he will never use. It is a waste of time for the child to learn lists of words that will not function in his written vocabulary. Spelling is important only as the desired end of being able to spell correctly in written work.

Janet M. Millar, Curriculum Supervisor of Madison, Wisconsin Schools, stresses the importance of spelling as a tool. Millar says in an article in regard to a basic spelling list used in her school:

It is important for both teachers and pupils to realize that the value in the mastery of these basic words lies in their frequency of use in written expression and that satisfactory achievement in list spelling is not an end in itself but a valuable and economical means toward a desired end of being able to spell satisfactorily in written expression.²

There is some evidence of the relationship of spelling to reading. Some children can spell all the words specified in the curriculum for their grade without studying them. This is evidenced by pretests on words to be assigned and by correct spelling of all words. Such children have learned the words through reading, either at home or at school, on the streets, in newspaper headlines, etc.

It is frequently said by parents, employers, and teachers that pupils can't spell well. Teachers often say that pupils learn their assigned words for the spelling period, but that these same pupils can't spell properly in their written work. Moreover, employers say pupils applying for jobs can't spell correctly. Parents think the school is failing to provide pupils with a satisfactory spelling tool.

Regardless of similarity of age and background, the rates at

2. Janet M. Millar, "Improvement of Spelling as a Tool in Written Expression," National Elementary Principal, 20:496-502, July, 1941.

which children develop in spelling vary greatly. The extent of this variability or individual difference in spelling is well illustrated by the performance of pupils in Stokes County Schools, North Carolina, on the Stanford Achievement Spelling Test given to grades IV through VIII and the Metropolitan Achievement Test given to grades II and III. The results,³ as shown in Tables I - VI, show that pupils in grade II ranged in spelling score from first through the fourth-grade level or from 0 to 24 words spelled correctly out of 24, with a median score of 16 correctly spelled words. Grade III ranged from 0 to sixth-grade level or from 0 to 39 words spelled correctly out of 40, with a median score of 9 words spelled correctly.

In grade IV the range was from 0 to almost through eighth-grade level or from 0 to 49 words spelled correctly out of 50, with a median score of 26 words spelled correctly. In grade V the range was from third grade and sixth month to above eleventh-grade level or from 13 to 49 words spelled correctly out of 50, with a median score of 36 words spelled correctly. In grade VI the range was from first grade and second month to eleventh-grade level or from 1 to 49 words spelled correctly out of 50, with a median score of 24 words spelled correctly. In grade VII the range was from 0 to above eleventh-grade level or from 0 to 49 words spelled correctly out of 50, with a median of 19 words spelled correctly. In grade VIII the range was from 0 to above eleventh-grade level or from 0 to 49 words spelled correctly out of 50, with a median score of 22 words spelled correctly.

3. This information was obtained through the office of the County Superintendent, R. M. Green.

TABLE I

RESULTS OF METROPOLITAN STANDARDIZED SPELLING TEST GIVEN TO GRADES II AND III
AND STANFORD STANDARDIZED SPELLING TEST GIVEN TO GRADES IV THROUGH VIII
IN SCHOOL A, STOKES COUNTY ABOUT MIDTERM, 1948

Test	Grade	Number of words in test	Highest score in number of words spelled	Grade equiv- alent for highest score	Lowest score in number of words spelled	Grade equiv- alent for lowest score	Median score for test	Grade equiv- alent for median score
Metropolitan	II	24	24	5.0	0	1.0	16	3.3
Metropolitan	III	40	32	6.0	0	1.9	9	3.4
Stanford	IV	50	47	7.3	1	2.7	15	4.5
Stanford	V	50	50	11.3	10	3.8	28	5.1
Stanford	VI	50	48	11.3	10	4.2	33	7.0
Stanford	VII	50	47	11.3	6	4.8	27	7.1
Stanford	VIII	50	49	11.3	19	6.0	29	7.5

TABLE II

RESULTS OF METROPOLITAN STANDARDIZED SPELLING TEST GIVEN TO GRADES II AND III
AND STANFORD STANDARDIZED SPELLING TEST GIVEN TO GRADES IV THROUGH VIII
IN SCHOOL B, STOKES COUNTY ABOUT MIDTERM, 1948

Test	Grade	Number of words in test	Highest score in number of words spelled	Grade equiv- alent for highest score	Lowest score in number of words spelled	Grade equiv- alent for lowest score	Median score for test	Grade equiv- alent for median score
Metropolitan	II	24	22	4.4	0	1.0	12	2.9
Metropolitan	III	40	29	5.7	3	2.4	10	3.5
Stanford	IV	50	43	6.3	11	3.1	27	4.2
Stanford	V	50	44	7.9	7	3.6	30	5.4
Stanford	VI	50	45	9.3	4	3.6	19	5.2
Stanford	VII	50	32	7.9	2	4.3	19	6.4
Stanford	VIII	50	37	9.7	1	4.5	17	6.7

TABLE III

RESULTS OF METROPOLITAN STANDARDIZED SPELLING TEST GIVEN TO GRADES II AND III
AND STANFORD STANDARDIZED SPELLING TEST GIVEN TO GRADES IV THROUGH VIII
IN SCHOOL C, STOKES COUNTY ABOUT MIDTERM, 1948

Test	Grade	Number of words in test	Highest score in number of words spelled	Grade equiv- alent for highest score	Lowest score in number of words spelled	Grade equiv- alent for lowest score	Median score for test	Grade equiv- alent for median score
Metropolitan	II	24	23	4.7	3	1.7	12	2.9
Metropolitan	III	40	30	5.8	0	1.9	10	3.5
Stanford	IV	50	49	7.8	5	2.7	30	4.4
Stanford	V	50	43	7.2	10	3.6	31	5.6
Stanford	VI	50	50	11.3	11	4.1	26	5.9
Stanford	VII	50	39	9.3	4	4.5	16	5.8
Stanford	VIII	50	50	11.3	7	5.6	24	7.6

TABLE IV

RESULTS OF METROPOLITAN STANDARDIZED SPELLING TEST GIVEN TO GRADES II AND III
AND STANFORD STANDARDIZED SPELLING TEST GIVEN TO GRADES IV THROUGH VIII
IN SCHOOL D, STOKES COUNTY ABOUT MIDTERM, 1948

Test	Grade	Number of words in test	Highest score in number of words spelled	Grade equiv- alent for highest score	Lowest score in number of words spelled	Grade equiv- alent for lowest score	Median score for test	Grade equiv- alent for median score
Metropolitan	II	24	23	4.7	0	1.0	15	3.21
Metropolitan	III	40	30	5.8	2	2.3	10	3.5
Stanford	IV	50	45	6.8	2	2.7	28	4.3
Stanford	V	50	36	6.3	3	3.1	20	4.4
Stanford	VI	50	40	7.9	1	3.4	21	5.4
Stanford	VII	50	37	9.2	10	5.1	25	7.0
Stanford	VIII	50	42	11.3	1	4.8	20	7.0

TABLE V

RESULTS OF METROPOLITAN STANDARDIZED SPELLING TEST GIVEN TO GRADES II AND III
AND STANFORD STANDARDIZED SPELLING TEST GIVEN TO GRADES IV THROUGH VIII
IN SCHOOL E, STOKES COUNTY ABOUT MIDTERM, 1948

Test	Grade	Number of words in test	Highest score in number of words spelled	Grade equiv- alent for highest score	Lowest score in number of words spelled	Grade equiv- alent for lowest score	Median score for test	Grade equiv- alent for median score
Metropolitan	II	24	20	4.2	1	1.3	10	2.6
Metropolitan	III	40	21	4.8	0	1.9	4	2.7
Stanford	IV	50	44	6.7	21	2.8	26	4.1
Stanford	V	50	36	6.3	1	2.8	27	5.0
Stanford	VI	50	45	9.3	1	3.4	22	5.5
Stanford	VII	50	34	8.3	1	4.2	12	5.5
Stanford	VIII	50	39	10.3	3	4.8	15	6.4

TABLE VI

RESULTS OF METROPOLITAN STANDARDIZED SPELLING TEST GIVEN TO GRADES II AND III
AND STANFORD STANDARDIZED SPELLING TEST GIVEN TO GRADES IV THROUGH VIII
IN SCHOOL F, STOKES COUNTY ABOUT MIDTERM, 1948

Test	Grade	Number of words in test	Highest score in number of words spelled	Grade equiv- alent for highest score	Lowest score in number of words spelled	Grade equiv- alent for lowest score	Median score for test	Grade equiv- alent for median score
Metropolitan	II	24	24	5.0	0	1.0	7	2.3
Metropolitan	III	40	39	7.7	0	1.9	9	3.4
Stanford	IV	50	42	6.2	0	2.6	15	3.4
Stanford	V	50	39	6.8	17	4.2	19	4.3
Stanford	VI	50	29	6.4	8	4.0	26	6.0
Stanford	VII	50	41	10.3	5	4.7	19	6.4
Stanford	VIII	50	42	11.3	11	6.0	28	8.1

The data from this county's schools are typical of results all over the country, regardless of the character of the schools, the grade level, or the methods used.

Teachers are often appalled by this evidence of variability in spelling achievement within their particular grades. Without these accurate test results secured by an objective method, the true facts of variability would not be known. Hildreth says in regard to similar data obtained from a school, "without these objective data, teachers, or administrators would be like the ostrich with his head in the sand. These facts cannot be because we do not know about them."⁴ The wide variability in pupils' achievement is due to many diverse factors, both in and out of school. The data suggest that instruction in spelling be individualized in order that each child may make suitable progress.

Teachers are at sea as to what method to pursue in the teaching of spelling. Most teachers recognize the need for more effective methods in teaching spelling as well as the need for correct spelling.

There seems also to be conflict among authorities on best methods to use. Most of them believe that there should be a period in the daily schedule for spelling. Others believe spelling should be incidental. Some believe that the curriculum should contain lists of words to be taught in each grade, while others believe that only words that a child will use in his written vocabulary should be taught. Some think that the teacher should be concerned only that a child's progress in spelling be commensurate with his abilities and language requirements. Some believe that the spelling load is too heavy for pupils, while others hold

4. Hildreth, op. cit., p. 478.

that more words should be added for the benefit of brighter pupils.

Some of the questions confronting teachers and the school administrators in the teaching of spelling are: Where does spelling belong in the school curriculum? What words shall be taught? What methods shall be used? How can spelling be made to function in writing? Shall spelling rules be taught and when? How can spelling instruction and remedial work be individualized? What can be done with the child who is a disability case in spelling?

Statement of the Problem

The title of this thesis is A Survey and Evaluation of Professional Literature on Spelling, 1938-1948.

Phrased as a question, it is What does the Professional Literature Say About the Content and the Methods Used in Teaching Spelling?

Specific questions to be answered are

1. What has been written on the content of spelling?
2. What has been written on the methods of teaching spelling?
3. What is of especial value and significance to the elementary teacher and what recommendations are possible in the light of the investigation?

Delimitation of the Problem

The first delimiting factor of the problem is that the study be confined to the Professional Literature on Spelling of 1938-1948. The second delimiting factor is that the study be considered only in relation to normal or near normal children. Consideration will not be given to literature for handicapped children, such as the blind, the deaf, and the dumb.

Method

To avoid duplication and to find related studies, the following references were used:

United States Library of Congress. A List of American Doctoral Dissertations. Washington, D. C. Government Printing Office, 1938-1940.

Doctoral Dissertations Accepted by American Universities. Compiled for the National Research Council and the American Council of Learned Societies by the Association of Research Libraries. New York: The H. W. Wilson Company, 1934-1947.

Good, Carter Victor. "Doctors' Theses Under Way in Education," Journal of Educational Research, January Issue, 1938-1949.

Gray, Ruth A., "Recent Theses in Education." School Life, February-May, 1949.

Education Index: A Cumulative Author and Subject Index to a Selected List of Educational Periodicals, Books and Pamphlets. New York: The H. W. Wilson Company, 1938-1948.

The Bibliographic Index: A Cumulative Bibliography of Bibliographies. New York: The H. W. Wilson Company, 1938-1948.

Standard Catalog for Public Libraries: 1949 Edition. An Annotated List of 12,000 Titles with a Full Analytical Index; compiled by Dorothy E. Cook and Isabel Stevenson Monroe. New York: The H. W. Wilson Company, 1940. 2,192 pp.

A survey of the literature revealed many studies which dealt with spelling. None was found which seemed to duplicate this study, Survey and Evaluation of Professional Literature on Spelling, 1938-1948.

So much has been written on content and methods to use in teaching spelling that one needs to sort and appraise the material and to evaluate many of the authors contributing to it. For validity and reliability in the sorting and evaluation of authorities, the following criteria were constructed and submitted to several competent persons⁵ familiar with the field of spelling.

Criteria for Authorities

1. College, university or school system with which associated.
2. Type of position held.
3. Area of major interest.
4. Background as revealed by
 - a. Publications in scholarly journals.
 - b. Published books related to the subject.
 - c. Curriculum studies adopted by forward-looking or progressive school systems.
 - d. Dissertation, theses, and other research.
5. Time and use of his productive work.
6. Judgment of several competent persons familiar with the field, i.e., competent because of specific training and experience.
7. Previous experience and success of such experience related to given area of writing.

In making the survey, these criteria were applied to the authorities found and only those who measured up to the criteria were used in this study.

5. Miss Ruth Fitzgerald, Professor of Education, Woman's College of the University of North Carolina, Greensboro, N. C.; Dr. Eugenia Hunter, Assistant Professor of Education, Woman's College of the University of North Carolina, Greensboro, N. C.; and Dr. Theo Dalton, Assistant Professor of Education, Woman's College of the University of North Carolina, Greensboro, N. C.

CHAPTER II

LITERATURE ON THE CONTENT OF SPELLING, 1938-1948

Literature, 1938-1940

Capron¹ presents a review of a large body of literature available in the library of a large university on the causes of spelling difficulties, technique of spelling instruction, and classroom practice in spelling.

Gertrude Hildreth² gives sources of difficulty or general causes in learning to spell as mental immaturity, lack of independence in the learning situation, inferior economic or language background, speech and language defects, and faulty instructional methods. The chief causes for lack of proficiency in spelling, except for intelligence, she asserts are the amount and kind of practice a child employs, plus the child's desire to learn.

Among other causes, she states, are mispronunciation by the teachers, or others, psychological deafness, irregularity of English spelling (certain words such as "yatch," for instance, can be learned only through good visual and auditory memory), many different values of vowels, silent or doubled letters, and unconscious repressions. Other causes, which she states are due to teaching methods, will be given in the succeeding chapter of this thesis.

1. Clara Hunter Capron, "Improving Instruction in Spelling," Elementary English Review, 15:43-51, February, 1938.

2. Ibid., p. 44.

Gates declares that studies of spelling disabilities tend to show that inadequate techniques are the chief causes of these difficulties.

He asserts:

Comparison of the methods of attack of good and poor spellers indicate that good spellers sense the difficulties in each word and organize an attack to overcome these particular difficulties, while poor spellers flounder.³

In an unpublished thesis, Russell⁴ reports a diagnostic study of good and poor spellers. He reviews previous studies that show constitutional factors affecting spelling and points out that some relationship exists between spelling and intelligence but not as much as between reading and intelligence. He also points out that organic defects affecting spelling are rare but important when they do occur and that functional sensory disabilities are due to organic training. The study revealed dependency on perceptual ability, handwriting, speech, and the general attitude of the pupil toward school, or on other personality traits which may affect spelling.

By matching sixty-nine pairs of normal or better spellers and pupils one year or more retarded in spelling and studying their handwriting, speed and quality, auditory acuity, visual perception, speech, reading, and diagnosing their spelling difficulties, Russell arrived at these findings: No reliable group differences appeared in tests of vision. No significant difference was found in hearing acuity. More retarded spellers made errors on the Gates Reversal Tests than did normal spellers. More normal spellers were rated good in their attitude

3. Ibid.

4. Ibid.

toward spelling than were retarded spellers.

Analyses of errors made on the Modern Spelling Test by these groups disclosed no significant difference except that the good spellers tended to make a higher per cent of phonetic errors and the poorer spellers to make a higher percentage of additions. Omissions and substitutions were the most common errors found in both groups.

In conclusion, he judges that the difference lies not so much in method of study but in form of attack. The retarded group tends to use more un-thinking forms of attack, while the good spellers use more active methods.

In a study of verbal taboos pursued over ten years at Emory University, Steadman⁵ lays blame for college students' uncertainties upon the elementary school. He attributes causes of uncertainty to direct study of spelling "demons," which create fear of those words, to spelling matches where tricky words are used, and to ignorance of the meaning of the words.

Ashbaugh says:

Spelling scales indicate accuracy of spelling and from them learning difficulties may be inferred, but inferred only.

.....
It is conceivable that words vary in learning difficulty for children of different age levels, sex, and social background.⁶

In his recently published monograph on spelling difficulties, Arthur I. Gates⁷ reports evidence concerning the characteristics of errors in spelling. He has located for these 3,876 words the part or

5. Ibid., p. 45.

6. Ibid., p. 46.

7. Ibid.

parts most frequently misspelled, listed the most common misspellings and given the percentage of the totals and number of errors for each word that the "hard spots" or most common misspelling rated. He has tabulated the average grade placement found for each word and the grade level at which 40 per cent, 50 per cent, 60 per cent, 70 per cent, 80 per cent, and 90 per cent knew meaning of the word.

He suggests that the data may help pupils center attention where most needed and enable teacher and pupil to anticipate difficulties.

Investigations at the University of Iowa, so Ernest Horn reports, have shown that:

(1) The child, when entering school, has and uses a vocabulary in excess of that which he can be taught to spell in the first three years of school.

(2) Best published theme lists do not give an adequate idea either to the extent or the nature of the vocabulary a child should or does use in connection with writing.

(3) The vocabulary children use and need is a function of the subjects on which they write. The written vocabulary children use in response to well-balanced life situations differs materially from that found in children's themes.⁸

Curtis and Dolch⁹ describe the measurement of spelling achievement in the school system of Staunton, Illinois, by means of ten fifty-word tests, each composed of words selected from all the grade lists of

8. Ibid.

9. H. A. Curtis and E. W. Dolch, "Do Spelling Books Teach Spelling," Elementary School Journal, 39:584-92, April, 1939.

the spellers in use. Results show that the mastery of a relatively large number of words is acquired incidentally and suggest that some words do not need to be taught but that others need real teaching.

Gertrude Hildreth¹⁰ says spelling is standard equipment for literate adults. It is important because it enables one to read more rapidly and understandingly as well as because it is a tool in writing. However oral spelling has little practical use except to reinforce the image of a word and to reinforce auditory perception in order to strengthen retention.

Modern school lists are based on functional use and practical utility. In writing (actual function of spelling), children use words that are meaningful to them and hence tend to learn to spell such words more readily. Children learn to spell informally by trial and effort, transfer aids, phonetic analysis, dictionary consultation, and drill upon individual, difficult, and isolated words. Correct spelling is attained by close attention to construction, sensitivity to similarities and differences, and drill on individual words.

The progress of the pupil follows a pattern. The first-grader develops reading readiness by copying and watching teacher, or parents, write. He also develops some skill. From the second grade on, the curriculum for spelling should be based on composition needs. At end of third grade, pupils should have developed systematic procedure. After the primary grades, spelling should function in written work. The criterion for spelling is the quality of all the pupils' spelling in written work. Although the schools can't turn out perfect spellers, they can,

10. Gertrude Hildreth, Learning the Three R's. Nashville, Tennessee: Educational Publishers, 1939. pp. 190-215.

through drill and written work, equip pupils with enough automatic, correct forms to meet most practical needs. Convenient measurement for spelling can be found in the child's growth in self-dependence, improvement, and ability to spell correctly in a variety of written work.

In making suggestions for remedial work, Spache¹¹ states that pupils poor in reading are poor in spelling also and suggests a high degree of correlation between the two deficiencies.

In a similar study, Von Struve¹² gives the results of research in Arizona schools, which are probably typical of schools all over the country. During a four-year period a careful record of pitfalls for the Arizona children was kept. Records showed average spelling of children varied from year to year but that improvement in spelling averages occurred in each grade from year to year. Yet a majority of the children in each grade failed to spell properly from one to thirteen words which they had been taught during the period of four years. The words included those in the entire Course of Study List.

Hawley¹³ states all knowledge is gained through the five sense organs. All impulses must come through these senses, but by far the greater number come through the senses of seeing, hearing, and touching. Dr. Montessori realized the importance of sense education and began the use of blocks in the kindergarten. Dr. Wandt developed the method

11. George Spache, "Minimum Reading and Spelling Vocabularies for Remedial Work," Journal of Educational Research, 33:161-74, November, 1939.

12. A. W. Von Struve, "Spelling Pitfalls," The Grade Teacher, 56:60, June, 1939.

13. Fred T. Hawley, "Use of Mechanical Apparatus for Teaching Words," American Childhood, 23:14, May, 1938.

of approach, using the association experiment where one type of stimulus calls out a corresponding response from the child.

Dr. Thorndyke of Columbia University gave three fundamental laws in his book, Psychology of Learning. First, the law of readiness: When any conduction unit is ready to conduct, to do so is satisfying. Second, the law of use: When a modifiable connection is made between a situation and a response, that connection's strength is increased. Third, the law of effect: When a modifiable connection between a situation and response is made followed by a state of satisfying affairs, that connection is increased. Hawley, therefore, bases his problems and solution upon putting into practice these results of education, theory, and practice. The writer will describe his method in the succeeding chapter of this thesis.

Spache¹⁴ says numbers of writers have compared the errors of matched or picked groups of good and poor spellers. For instance, Umberhine and Russell contrasted spellers, and Carroll made a study of the spelling of the bright and dull pupils. Russell concluded that retarded spellers made a greater number of errors in addition, while Carroll found the dull erred more in per cent of addition, omission, and substitution of groups of letters, and in substitution of an actual word. The bright erred more in addition by doubling single additions and omission of doubled letters and single letters.

The purpose of Spache's study, however, was to re-evaluate these studies in the light of the technique and results of more recent research. He used twenty-five average and twenty-five poor spellers for

14. George Spache, "Characteristics of Good and Poor Spellers," Journal of Educational Research, 34:182-189, November, 1939.

his study.

Conclusions suggested by the data revealed: The average speller made a greater number of phonetic errors than the poor spellers. Poorer spellers made a greater number of non-phonetic errors than average spellers. Specific errors of average spellers were phonetic, as the addition of single letters and phonetic substitution for syllables. Poor spellers' errors were incomplete and unrecognized spelling and the omission of syllables and sounded letters.¹⁵

Robinson,¹⁶ after the perusal of several representative text books on the psychology of teaching spelling, feels that dynamics within the learner, such as reasoning and psychology mechanisms affecting spelling performance, have little, if any, place among principles listed. Principles he finds listed in his readings are rules based on syllabication, language forms, grouping similar spelling and homonyms, and diacritical marks. His suggestions emphasize the concept of teaching in terms of the dynamics within the learning process. He presents a review of some studies which give a glimpse of these spelling dynamics.

Mendenhall found that three-fourths of spelling errors which could be classified as reasonably phonetic increased during early grades and represented three-fourths of spelling errors in grades I to VI. Carroll found that intelligent spellers' errors tended to arise from phonetic generalization. Archer has shown that there is sometimes a negative transfer from teaching a word and then asking for its derivative or vice versa. Pressley and Campbell found that errors in capitalization

15. Ibid.

16. Francis P. Robinson, "Misspellers are Intelligent," Educational Research Journal, 19:436-442, October, 1940.

were in large part explainable, logical, and understandable; they were far from being random or senseless.

Gilbert's study of eye movement of good and poor spellers indicated that the former have methods of attacking words systematically, to observe letters and their sequence, while the latter do not. Kay showed practice in pronunciation aided spelling. Travis and Ulrich have shown individual cases in which emotional experiences caused misspelling (in a meaningful way) of certain words associated with these experiences. Robock has demonstrated that in very rapid writing certain compromises take place in the motor performance, which produce misspelling. Pupils tend to omit letters in larger words. Robinson believes spelling is the dynamic result of many factors in operation, and that method books should include a discussion of these dynamics of a speller and should briefly summarize the negative training results.

Garver sets forth principles that should be used for grading words for instructional purposes:

1. Threshold of letter order recognition. This principle represents words whose correct spelling is almost but not quite known. Those words in a large group of any given grade or age level are reduced to one or two particular types.

2. The second principle is that the individual should be able to spell correctly the words of his written vocabulary. He asserts from his study, confined largely to the selection of the writing vocabulary of second-grade children as a basis for the appropriate grade placement of the words used in instructional lists, that it is logical to begin making up spelling lists for any particular grade with words children use

frequently in writing.¹⁷

Peake states:

The trend in recent word-study books to present new words in context material and to introduce exercises which develop meaning of words has led to a consideration of the relationship of spelling ability and knowledge of word meaning. A testing program which included achievement tests provided opportunity for statistically determining this relationship.¹⁸

Conclusive results in this investigation show: There is a tendency for high scores in spelling to accompany high scores in word meaning. Relatively high positive correlation between tests in spelling and reading in most of the grades examined is evidence that abilities in these two subjects tend to accompany each other.

Literature, 1941-1944

Lee and Lee¹⁹ write of an experiment to improve spelling efficiency of pupils in the public schools of Beloit, Wisconsin.

They cut down the number of words to be taught by end of eighth year from 5,000 to 2,800. This 2,800, they believed, comprised 97.2 per cent of all running words most commonly used by adults. They analyzed ten spellers claimed to be based on children's usage for the word lists. These lists were checked against such studies as Gates, Thorndyke, Horn, and Buckingham-Dolch.

Results showed the spelling words were more easily learned,

17. F. M. Garver, "Children's Writing Vocabularies as Bases for Spelling Lists," Elementary English Review, 16:47-49, February, 1939.

18. Nellie L. Peake, "Relation Between Spelling Ability and Reading Ability," Journal of Experimental Education, 9:192-193, December, 1940.

19. Doris M. Lee and J. Murray Lee, "Spelling Load is Too Heavy," National Elementary Principal, 20:484-487, July, 1941.

pupils achieved new success, and success changed their attitude from dislike to liking and confidence in their ability to learn to spell.

Hildreth says:

Significant changes have taken place in spelling instruction within recent years, due to new investigations in the psychology of spelling that have revealed waste and inadequacy in established methods of spelling instruction, due also to the transformation in the entire elementary school program resulting from the activity movement. A reaction against formalism in education which affects all school procedures and programs has set in. Spelling instruction tends increasingly to be organized with reference to the functional needs of children in expressing their ideas in writing.²⁰

Learning to spell correctly is as important today as formerly since competence in written expression is essential to successful participation in everyday affairs. An individual who cannot spell correctly is seriously handicapped. Automatic correct spelling enables one to write more fluently. Since correct spelling is acquired after long continuous practice, the child should learn early in school to spell correctly.

Traditional instructions have many weaknesses. Numerous research investigations have indicated that instruction in typically organized classrooms has not produced good spellers, but has resulted in spelling failures and disability cases.

Spelling instruction should be differentiated according to pupil needs. Few pupils will be found at the same spelling level, will make the same types of errors, or will need the same help. Equal emphasis is too often given to words that require differentiated amounts of practice. Research results indicate wide variations in the ease or difficulty of

20. Gertrude Hildreth, "The Language Arts-Spelling." Implications of Research for the Classroom Teacher. Twentieth Yearbook of the American Education Research Association, Washington, D. C.: The Association, October, 1941. p. 159.

spelling particular words. Learning long lists of isolated, meaningless words is mechanical rather than functional and is uninteresting to the child.

Spelling instruction should recognize the child's development requirements, his previous learnings, and his learning potentialities. Word lists are frequently arbitrarily allotted to grades without regard for pupils' individual spelling needs. The result is children fail to study words they need.

Standard word lists often fail to take into account special and local words children need to learn to spell. Pupils in upper grades spend the time learning words they will seldom need to write--words they should be instructed to look up in the dictionary.

Too little practice has been given in the more difficult test of functional spelling (i.e. writing sentences from dictation). Too little attention is paid to spelling in everyday writing activities. Traditional methods have often placed more stress on oral spelling than on writing words correctly in the context. There is no one best procedure or course of study and no single method of attack that yields the best results with all children in all classrooms. There are many varied ways of achieving equally good results. Not all traditional methods or procedures in the teaching of spelling have been discarded, but current practice has been greatly modified as the result of extensive experimentation.

English spelling, which is largely non-phonetic, is inherently arbitrary. It seldom follows rhyme or reason. A large number of words are spelled two different ways, though one may be greatly preferred.

Analysis of spelling errors has shown that errors in most words

are concentrated in one or two spots. Three-fourths of spelling words have only one hard spot; 96 per cent of words have one or two hard spots. Two words out of three show one common misspelling. Few words fail to show common difficulties or specific places where trouble occurs.

Spelling errors occur in the terminal or next to terminal syllable. They occur frequently in words that are mispronounced, e.g., "diry" for "diary" and in those words containing silent letters. Many errors are found in the tendency either to double, omit, or add consonants. Another common error occurs in transposing letters, such as "gril" for "girl". Other errors are the result of incorrect grammar.

Non-phonetic words, however, cause most trouble. Words that contain several of the same letters are more difficult to learn than words that contain letters that are all different. Children tend to reduce difficult or unfamiliar words to familiar spelling, e.g., "bycicle" for "bicycle" and "greatful" for "grateful". Slips-of-the-tongue, repressions, and preservation tend to account for a small percentage of spelling errors. Particular errors are peculiar to individuals, although nearly all children have difficulty in learning some words.

Some children of the same age and grade and with similar instruction learn to spell correctly, while others of the same age are almost illiterate in spelling. We must look beyond the specific words for causes of spelling errors. The child may have specific or general mental limitations that interfere with normal learning or ability to perceive and remember differences and similarities in words may be inadequately developed. Language, speech, and major defects in vision may, in individual cases, contribute to poor spelling. Eye-hand muscular coordination

are concentrated in one or two spots. Three-fourths of spelling words have only one hard spot; 96 per cent of words have one or two hard spots. Two words out of three show one common misspelling. Few words fail to show common difficulties or specific places where trouble occurs.

Spelling errors occur in the terminal or next to terminal syllable. They occur frequently in words that are mispronounced, e.g., "diry" for "diary" and in those words containing silent letters. Many errors are found in the tendency either to double, omit, or add consonants. Another common error occurs in transposing letters, such as "gril" for "girl". Other errors are the result of incorrect grammar.

Non-phonetic words, however, cause most trouble. Words that contain several of the same letters are more difficult to learn than words that contain letters that are all different. Children tend to reduce difficult or unfamiliar words to familiar spelling, e.g., "bycicle" for "bicycle" and "greatful" for "grateful". Slips-of-the-tongue, repressions, and preservation tend to account for a small percentage of spelling errors. Particular errors are peculiar to individuals, although nearly all children have difficulty in learning some words.

Some children of the same age and grade and with similar instruction learn to spell correctly, while others of the same age are almost illiterate in spelling. We must look beyond the specific words for causes of spelling errors. The child may have specific or general mental limitations that interfere with normal learning or ability to perceive and remember differences and similarities in words may be inadequately developed. Language, speech, and major defects in vision may, in individual cases, contribute to poor spelling. Eye-hand muscular coordination

may be poorly developed. The child may fail to associate sounds, symbols, and the proper muscular movements for writing words correctly.

Some children have a tendency to reverse letters in the words they write. In some cases there appears to be a constitutional factor associated with handedness and eyedness that causes confusion. This, with other factors, results in spelling errors. Then some errors in spelling are writing errors, due to uncertainty in forming letters. Others are grammatical errors, e.g., "drownded" for "drowned".

Mental retardation is less responsible for spelling failures than for difficulty in more complex school learning. Failure to generalize in spelling is also more characteristic of duller, than brighter children.

Careless attitudes and unfavorable emotional traits account for deficient spelling as well as poor school work in general. Some children, for instance, spell by chance with unthinking attack and non-critical attitude.

In a similar vein, Horn²¹ says:

There is no subject in the curriculum for which the evidence needed to plan and guide instruction is so nearly adequate as in spelling. There are satisfactory data on words most frequently used written by children at each grade level, laboratory experiments involving the learning of words or word-like forms as well as experiments in the actual classrooms, have made possible great efficiency in improvement in the efficiency of learning to spell. Important beginnings have been made in the scientific study of diagnostic and remedial work. Evidence

21. Ernest A. Horn, "Research in Spelling," Elementary English Review, 21:6-13, January, 1944.

is sufficiently complete and convincing as to enable schools to teach with substantial professional efficiency.

Horn attempts to answer several pertinent questions concerning spelling. What words shall be taught? There is a great deal of confusion in answering this question because of failure to assess the significance of various kinds and amounts of evidence concerning written vocabularies. The ultimate reason for teaching spelling is to assure that the child, upon completion of his schooling, will be able to spell the most important words in adult writing. It is necessary to show relative importance of words in writing done by adults. For this purpose data in a Basic Writing Vocabulary seems adequate.

How much dependence can be placed upon incidental learning? Extensive data now available lead to the conclusion that there are many words which would be spelled correctly by the end of the eighth grade even if not taught in spelling lessons, but there are other words so troublesome that specific instruction is required.

Present utilization of present evidence makes it possible to teach spelling with an efficiency far greater than that of a generation ago. Greatest need, however, during the next few years is the intelligent incorporation of best present theory and knowledge into classroom use.

McIntire and Hampton²² aver that the vast amount of research carried on in the field of spelling during the last twenty-five years has brought about much improvement in the teaching of spelling. Then,

22. Alta McIntire and L. H. Hampton, "Spelling Readiness: A Challenge," Elementary English Review, 21:24-25, January, 1944.

too, knowledge of which words children actually use in writing has reduced the number of words included in our spelling books to less than half the number it was thought necessary to teach. Teachers have learned not only which words children use but which words are most often misspelled. Improved teaching procedures and methods of study have been developed and tests and scales for measuring spelling ability have been devised.

In spite of progress that has been made, there are many problems yet to solve. One aspect of teaching spelling that has received little attention is that of readiness. Reading readiness and arithmetic readiness are receiving considerable attention at all levels, but we have assumed that children are ready for spelling at the same age or grade level, regardless of previous experience.

The desire to spell, while important, is not sufficient preparation for introduction to a spelling program. Not all children who want to spell are successful in their spelling experiences. Success is greatly dependent upon background and previous experiences of the child. Readiness in spelling confronts the upper grade teacher also in her spelling program.

Guiler and Lease²³ conducted a controlled experiment in spelling with seventh and eighth-grade pupils in the public schools of Lucas County, Ohio. The purpose was to determine the extent to which spelling ability of junior high school pupils may be improved by means of a systematic program of spelling based on individual diagnosis of spelling

23. W. S. Guiler and Gilbert A. Lease, "An Experimental Study of Methods of Instruction in Spelling," Elementary School Journal, 43:234-38, December, 1942.

difficulties.

Individuals of the experimental group were given systematic training in spelling based on individual diagnosis of their difficulties; those in the control group followed conventional group instruction procedures.

Data from the experiment seemed to justify the following statement:

Significant improvement in ability to spell may be expected from a systematic program which first discovers words that are difficult for the class and for the individual and then identifies hard spots in the difficult words. Improvement made in experimental group of both seventh and eighth grade was consistently and significantly greater than that made by the control group. Pupils of all levels may be expected to benefit from a remedial program based on individual needs. A marked relation was found between intelligence and achievement in spelling.²⁴

Similarly, Thompson²⁵ conducted a two-year experiment designed to discover whether factual material, which of necessity must be mastered in handwriting and spelling, could be integrated with other school subjects and made interesting. Two groups of pupils whose home backgrounds and intelligence quotients were approximately the same were selected to test the value of integrated courses. Teachers of the experimental group used the integrated course of study thirty minutes daily. Teachers of the control group used the usual method of twenty minutes for spelling and fifteen minutes for handwriting daily. The conclusion was that spelling and handwriting can be correlated, and that correlation of the two subjects saves time, teaching effort, and pupil energy.

24. Ibid., p. 238.

25. Stanley A. Thompson, "Integrated Fifth Grade Spelling and Handwriting," Elementary School Journal, 42:347-57, January, 1942.

Arnold²⁶ made an investigation in order to determine the effect of instruction in spelling and to discover whether the findings of early investigators would be confirmed. After Curtis and Dolch raised the question, "Do Spelling Books Teach Spelling?", Arnold felt recent reports warranted further study at least of the effect of teaching on mastery in spelling. He experimented with children of the Lakewood, Ohio, elementary schools. Data from this experiment suggest that teaching a particular set of words in a particular semester, as was done in Lakewood schools, does not make a distinct contribution to the growth of pupils' ability to spell.

Spache²⁷ says that there are a large number of factors operating in the syndrome known as spelling disability. In attempting an evaluation, he divides them into areas of the physical, the intellectual, temperamental, the subject matter, and the miscellaneous.

The physical area includes the following: (1) Auditory acuity (is an important factor) Terman and Almack conclude that ten out of twenty do not hear well. (2) Vision. (3) Auditory discrimination. (4) Motor coordination-speech and handwriting. (5) Handwriting. (6) Speech pronunciation.

Intellectual factors include the following: (1) Mental ability. (2) Attitudes, interests and emotions. (3) Poor habits. (4) Lack of interest. (5) Carelessness. (6) Emotionally toned attitudes.

Subject matter achievement is represented by the following:

26. Dwight L. Arnold, "Spelling Lessons and Ability to Spell," Elementary School Journal, 42:35-40, September, 1941.

27. George Spache, "Spelling Disability Correlates-Factors Probably Casual in Spelling Disability," Journal of Educational Research, 34:561-578, April, 1941.

(1) Phonetic knowledge and skills (play an important part). (2) Vocabulary-marked relationship.

Miscellaneous factors include: (1) Home background. (2) No books. (3) Early training.

Educational history: (1) Excessive absence. (2) Frequent change of schools.

Russell²⁸ attempted to discover some factors associated with "readiness" for spelling or ability to learn English spelling in the primary grades. The study involved four first-grade classes from average districts of Vancouver, Canada, selected because two had a reading program using much "phonics" and two had a reading program using little "phonics".

Later pupils were tested with several reading tests. Results showed that the group with much work in phonics and handwriting practice had attained greater achievement than those with little phonics and handwriting practice. Results showed spelling readiness is acquired in first grade without formal spelling but is dependent upon a language arts program.

Guiles²⁹ attempts, with a group of elementary teachers at Superior, Wisconsin, to arrive at a partial answer to the question, "Which is more important in determining spelling accuracy, the spelling that takes place during the "spelling period" or the learning that takes place rather incidentally in connection with the other experiences which

28. H. Russell, "A Diagnostic Study of Spelling Readiness," Journal of Educational Research, 37:278-83, December, 1943.

29. R. E. Guiles, "Effect of Formal Spelling on Spelling Accuracy," Journal of Educational Research, 37:284-89, December, 1943.

the child has?" The plan was to compare spelling accuracy on tests from text studied with tests from text not studied but included words in common usage in children's writing vocabularies.

Results showed words studied represented a higher percentage of accuracy than those which had not been studied. Difference in no case was greater than five per cent. Data suggest special spelling periods devoted to the study of basic lists of words have only a limited influence on spelling accuracy.

Alberta Wallace,³⁰ grade supervisor of St. Paul Public Schools, St. Paul, Minnesota, writes that an interesting experiment was carried on by the elementary teachers of South Saint Paul Schools in 1939-1940 in conjunction with the regular textbook work in spelling. The main objective of the experiment was to find out if directed teaching of phonics, as applied to spelling, would increase the children's ability to help themselves to spell unknown words correctly and make them more independent in all forms of written work. Lists of words sent out from the supervisor's office were dictated to children. These lists consisted of words common to eleven textbooks. To assure reasonable proficiency, the list for the next lower grade was used. Thus, a third-grade list was used in the fourth grade, a fifth grade list in the sixth, etc.

After scoring papers on first dictation of twenty-five words, the results showed many children were unable to spell any word which had not been studied previously. A number of those most frequently missed were words which could have been spelled by sounding. Silent letters

30. Alberta Wallace, "Phonics in the Spelling Class," National Elementary Principal, 21:47-49, October, 1941.

and double consonants accounted for much of the high frequency of errors on non-phonetic words.

A direct attempt was then made to remedy this situation by teaching phonics in conjunction with spelling. Children were first tested individually to determine whether or not they were able to distinguish the initial sounds and initial blends. Ear training was given to those who appeared unable to hear sounds distinctly. Practice was also given in the correct formation of these sounds. This was followed by dictation exercises to perfect association between the sound and appearance of the letter.

Emphasis was placed on memorizing number "families" or "phonograms" selected from the following texts: How to Teach Phonics by Lida M. Williams, How to Teach Phonics by Mary L. Dougherty, and English Phonetics by Frank E. Parlin.

After about six weeks of special practice in phonics, other sets of words were dictated. Many children showed marked improvement, while in others the results were about the same as that of the first test. It was observed that brighter children were benefited more by the phonetic training than slower learning pupils. This, Wallace observes, is in keeping with Dolch's observation in teaching slow children to read according to his Manual for Remedial Reading.³¹

After teaching word families and consonants, attention was given to end sounds, short vowel sounds, etc. In the upper grades rules for spelling closely related to phonics were learned.

31. Edward William Dolch, A Manual for Remedial Reading. Champaign, Illinois: Gerrard Press, 1939.

Standard tests were given in May. Results revealed the fact that close to sixty per cent of the children in all grades, except the second, attained, or surpassed the standard set by test makers for children who had been seven months in a grade, that is, almost sixty per cent of the children reached, or surpassed the 3.7, 4.7, or 6.7 norm. Whether their phonetic training helped them reach this standard is questionable, since few of the unfamiliar words on tests could be spelled phonetically.

No special record of pupils' progress was kept, but teachers felt that, for all spelling ills, phonic training is of such sufficient value that it should be continued in modified form.

Literature, 1945-1948

Hildreth³² says that results of our teaching reading and spelling to a child for eight or more years in elementary school are often disappointing. Many pupils, upon graduating from the elementary school, are still unable to read above the fourth-grade level with understanding, and they cannot spell correctly words they need when they write.

One reason, as has been pointed out, lies in the fact that the English vocabulary is orthographically irregular. Words are not spelled or pronounced with phonetic consistency. In addition, word building offers more complexities.

Frequency of use is another reason why reading is a difficult skill to learn. This reason is obvious, when one studies frequencies with which different words in the English vocabulary are used in writing

32. Gertrude Hildreth, "Word Frequency as a Factor in Learning to Read and Spell," Journal of Educational Research, 41:467-71, February, 1948.

and reading. Dolch and Rinsland³³ have both reported results of word counts in reading and writing vocabularies of children in which a small proportion of words carry the greatest proportion of the load in English expression.

Rinsland noted from his study of word counts that 81 per cent of words fall in the frequency range of 3-99; and 16 per cent in the range 100-999; and only 3 per cent in the range 1,000 to 203,146.

Dolch noted this same phenomenon in word usage in higher grades. According to his report, 220 words do over 50 per cent of the work and about 2,000 words account for 95 per cent of the reading vocabulary in texts. This per cent is even smaller in the written vocabulary in higher grade levels.

This small per cent of vocabulary infrequently used accounts for trouble in learning these skills for functional use. This same proportion of words causes the disgruntled business man to complain that he can never find a clerk who can spell. This small proportion but wide range of words rarely used accounts also for many disability cases in reading.

Beyond the first two or three thousand words, each individual vocabulary becomes diversified and there is no vocabulary which can be learned quickly. In view of this circumstance, Hildreth³⁴ says: "A person who doesn't have to stop to look up words every time he wants to write a letter is a genius comparable to the lightning calculator." This same phenomenon of word usage is one reason why middle and upper

33. Ibid., p. 467.

34. Ibid., p. 470.

grade materials seem to increase in difficulty.

Billington says:

In teaching spelling today, educators are concerned not only with the sequence of letters in a given word but with its meaning to pupils in isolation and in context--indeed with all its meaning.

A modern spelling program goes still further. It discriminates between words of similar meaning. It employs many types of learning experiences with words. It touches on the evaluation of words, word building, and multiple meaning. It may truly be considered a study of words as tools of expression.³⁵

In another view of this subject, Doris May Lee states in an article that there are three mistaken concepts which are pervading the teaching of spelling in many classrooms today and that these mistaken concepts are sadly hampering effective learning. She states these mistaken concepts briefly:

1. The teacher has to do little actual classroom teaching of spelling.
2. The more words taught the better.
3. The more rules taught the better.³⁶

Hildreth³⁷ says that through the years spelling has been taught as an isolated school subject, and, that after a number of years of spelling drill, pupils are assumed to be able to use spelling as a tool for writing. In the meantime the pupil struggles along as best he can, or he does no original writing at all. Only recently have pupils, except those in a few schools, learned to spell while writing, or were

35. Lillian E. Billington, "Meaningful Spelling," The Instructor, 50:19, April, 1946.

36. Doris May Lee, "Developing Better Spellers," The Instructor, 55:40, September, 1946.

37. Gertrude Hildreth, "Spelling as a Language Tool," Elementary School Journal, 48:33-40, September, 1947.

they taught a spelling vocabulary to fit the ideas they wished to express.

Published spellers with their fixed and formal word lists have prevented unification of writing and spelling that is essential if pupils are to develop ability to express their ideas fluently and accurately in writing. The discrepancy between graded weekly word lists in spellers and the pupils everyday needs in spelling results in much lost motion.

Experimentations with word lists and charts have shown that alphabetical word lists provide a tool which helps pupils locate for themselves the words they wish to use in writing and enables the teacher to draw up serviceable word lists for direct spelling study for the class as a whole or for individual pupils. These lists may be secured from frequency tabulations of words children use in their writing. Most comprehensive and reliable of this type is Rinsland's investigation.

An aid for teachers is found in the Betts word list tables which show the grade level, from 2-8, at which words are most frequently taught, according to seventeen spellers published since 1930. These indications of grade level serve as a guide to teachers in selecting words to study. E. A. Betts summarizes:

The inter-relationships of reading and spelling by these statements:

1. Facets of language. Reading and spelling are facets of one learning area called language.
2. Sequential development of language. A substantial level of reading achievement appears to be a prerequisite to systematic instruction in spelling. In fact, experience with reading vocabulary is an important criterion for the "grade placement" of spelling vocabularies in a basal textbook.

3. Visual or secondary symbols-verbal symbols of experience are of two types: spoken, or primary, or written or secondary. Hence, reading and writing deal with symbols of symbols.
4. Social tools. Reading and writing are means of communication, one, receptive; the other expressive. They are social instruments--complimentary in nature--to be developed in social institutions.³⁸

Factors of the inter-relationship of reading and spelling achievement are intelligence, visual and auditory perception, and meaning of the word.

The trend seems to be in the direction of correlating instructional materials. Glossaries, for example, are found in spellers and readers and fragmentary treatment of dictionaries are found in spellers, readers, and language books. Language textbooks contain spelling lessons. Eventually perhaps textbook authors and publishers may get around to publishing a series of books for a language arts program.

In this connection, Ethel L. Salisbury³⁹ criticizes methods of leaving selection of word lists of graded levels to authorities of texts. She feels that this ignores the pupil's need of learning to spell words that are currently functioning in his activities and disregards the dynamics involved when a pupil satisfies a felt need. She feels that a pupil should select for his weekly study list words from scientifically determined vocabulary (about 5,000 words by end of eighth grade), provided the pupil has been taught to deal with his spelling problems rationally and to keep simple, appropriate records.

38. Emmett A. Betts, "Interrelationship of Reading and Spelling," Elementary English Review, 22:13-23, January, 1945.

39. E. Salisbury, "The Weekly Spelling List," Elementary English Review, 25:208-11, April, 1948.

Pupils should keep alphabetized lists of these words, together with a simple workbook. This, rather than the memorization of drill and the lock-step method of using graded spellers, will meet individual needs.

Gertrude Hildreth⁴⁰ compares Ayres⁴¹ spelling scale, later extended by Buckingham,⁴² with H. D. Rinsland's⁴³ published list of words most frequently used in writing by elementary school children. Ayres was the first educator to make a comprehensive list of words based on studies of word usage in reading and written material.

40. Gertrude Hildreth, "New Light on the Spelling Problem," Elementary English Review, 25:201-207, April, 1948.

41. Leonard P. Ayres, A Measuring Scale for Ability in Spelling. New York: Russell Sage Foundation, 1915.

42. B. R. Buckingham, Buckingham Extension of the Ayres Scale. Bloomington, Illinois: Public School Publishing Company, 1918.

43. H. D. Rinsland, A Basic Writing Vocabulary of Elementary School Children. New York: Macmillan, 1945.

CHAPTER III

LITERATURE ON THE METHODS OF TEACHING SPELLING, 1938-1948

Literature, 1938-1940

In Capron's¹ review of the literature on spelling, Gertrude Hildreth² states that the causes of poor spelling lie in the faulty instructional methods used by the teacher, such as mispronunciation of words by teacher or others, permitting pupils to write carelessly, unwise study of textbook lists, failure to individualize spelling instruction for certain children, use of lists of words which the child doesn't need, too little instruction in how to study, practice which is not distributed, and too little participation by children in checking and recording.

Gates³ says that inadequate techniques in attacking words to learn are the chief causes of spelling failures. Comparison of methods of attack of good and poor spellers indicate this fact.

In a somewhat similar conclusion, Steadman⁴ attributes cases of uncertainty in college students to direct study of spelling "demons" in elementary school. He believes such lists create an unwholesome fear of words in lists so named. He believes also that uncertainty in spelling

1. Clara Hunter Capron, "Improving Instruction in Spelling," Elementary English Review, 15:43-51, February, 1938.

2. Ibid., p. 44.

3. Ibid., p. 46.

4. Ibid., p. 45.

words by college students is developed in elementary schools by the use of spelling matches, wherein tricky words are used, and to failure of the elementary school to teach the meaning of words. He advocates concentrating on small numbers of words for complete mastery, familiarizing pupils with meanings and accents, discussion of the source of words and of their silent letters, distinguishing between silent letters and graphs, and having pupils learn to use the Guide to Pronunciation in the dictionary.

Other authorities suggest parallel procedures. For instance, in his recently published monograph on spelling, Gates⁵ advises that the data may help pupils to center attention where most needed in spelling and enable teacher and pupils to anticipate difficulties.

Horn's⁶ reports from investigations at the University of Iowa say that the written vocabulary children use and need is a function of the subjects on which they write. Likewise, Spache⁷ states that pupils poor in reading are poor in spelling and that a remedial program in both subjects is needed by the pupil. He suggests that a minimum vocabulary in both spelling and reading be used with such pupils.

Gates and Russell⁸ declare that most spelling deficiencies are due to failure in acquiring certain techniques--techniques which would

5. Ibid., p. 46.

6. Ibid., p. 48.

7. George Spache, "Minimum Reading and Spelling Vocabularies for Remedial Work," Journal of Educational Research, 33:161-174, November, 1939.

8. Arthur I. Gates and David H. Russell, Diagnostic and Remedial Spelling Manual. Revised Edition. New York: Bureau of Publications, Teachers' College, Columbia University, 1940. pp. 8-10; 41-42.

have been invaluable had the right guidance been given at the right time. They also maintain that spelling failures are due to curricula and the way they are carried out in the classroom. The difficulty, in other words, is not in the selection of words but in the way the words are taught. A recent investigation revealed that many children do not know how to utilize certain techniques in studying new words for themselves. It seemed that teachers had used a set ritualistic method of teaching (or no method), by which pupils learned certain assigned words but not methods of attacking new words.

The pupil should be taught to syllabicate, to pay attention to hard spots, and to check his knowledge by writing without looking at the original word. The skillful remedial teacher will also relate her spelling activities as much as possible to the other activities of the school and community.

In the testing program of spelling for teachers' diagnosing pupils' spelling status, Gates recommends:

1. Morrison-McCall Spelling Scales
(for grades 2 to 8)
2. New Stanford Achievement Test
(for grades 4 to 9)
3. Modern School Achievement Test
(grades 2 to 8)⁹

He indicates that the teacher should classify errors and analyze just what types of errors a pupil is making. On the basis of such an analysis, the teacher is then able to start work on the definite points most needed.

In the same manual Gates gives the characteristics of a good

9. Ibid.

remedial program for spelling:

1. Remedial instruction should not be substituted for other activities.
2. Remedial instruction should not classify pupils in an embarrassing way.
3. Remedial periods should occur once a day or (oftener) as such, and in connection with other subjects.
4. The teacher should have sufficient time to plan and supervise the remedial work.
5. Remedial work may be either individual or cooperative.
6. Remedial work should be begun at a favorable time.
7. Successes should be emphasized when they occur.
8. Improvement should be measured and the record shown.
9. Materials should be interesting, easy at first, but as improvement and success result, increase in difficulty.
10. Pupils' particular errors and successes should be detected.
11. Teacher's attitude should be optimistic and encouraging.
12. Practice should be distributed so as to avoid fatigue and boredom.
13. A variety of exercises and activities should be provided.
14. A plan should be dropped after it is given a fair trial and fails to produce results.
15. Individual supervision should be continued until the pupil has his improved technique well habituated.¹⁰

It is interesting to note here that Hawley¹¹ feels that as many of the sense organs as possible should be used in our methods of teaching spelling. He especially calls attention to the senses of seeing,

10. Ibid., p. 41-43.

11. Fred T. Hawley, "Use of Mechanical Apparatus for Teaching Words," American Childhood, 23:14, May, 1938.

hearing, and touching. He believes that we should use Dr. Thorndyke's three laws of learning: (1) The law of readiness, (2) The law of use, and (3) The law of effect.

On the other hand, Robinson¹² feels that the dynamics within the learner, reasoning, and psychology mechanisms, affect spelling performance. He suggests that teachers emphasize this concept in their teaching methods. He believes poor spelling is the result of many factors of which our teaching methods should be cognizant. He gives these factors as phonetic generalizations by pupils, mistakes in writing partly explainable by the lack of training in methods of attack, lack of practice in pronunciation, misspelling due to emotional experiences, and omission of a letter or letters in rapid writing.

Garver¹³ states in his principles, useful for grading words for instructive purposes, that pupil should be able to spell correctly words of his written vocabulary. These words should be included in the instructional list.

Moreover, Peake¹⁴ says that ability in spelling and knowledge of word meaning accompany each other. Results of experiments with testing have shown this. These investigations indicate that one should develop the meaning of words in instructional methods of teaching spelling.

12. F. P. Robinson, "Misspellers are Intelligent," Educational Research Bulletin, 30:436-42, October, 1940.

13. F. M. Garver, "Children's Writing Vocabulary," Elementary English Review, 16:47-49, February, 1939.

14. Nellie L. Peake, "Relation Between Spelling Ability and Reading Ability," Journal of Experimental Education, 9:192-193, December, 1940.

Literature, 1941-1944

Hildreth says:

Traditional methods of teaching spelling have many weaknesses. They haven't always produced good spellers. Spelling instructions should be differentiated according to pupil needs, since few pupils in a class or grade will be found at the same level, make the same type of errors, or need the same sort of help. Words require differentiated amounts of practice.

Procedures involving the learning of long lists of isolated meaningless words is mechanical rather than functional and is uninteresting to child.

.....
Spelling instructions should recognize a child's development requirements, his previous learning, and his learning potentialities. Word lists are too frequently arbitrarily allotted to grades regardless of pupils' individual spelling needs. Result is children fail to study words they need to practice. Furthermore, standard word lists often fail to take into account special and local words children need to learn to spell. Pupils in upper grades are drilled on words that they will rarely have use for and should be instructed to use a dictionary for the spelling of such words.

.....
Varied activities should be provided for children as aids in learning to spell. The subject known as spelling might more properly be designated as "word study". These varied activities should include writing practice and dictionary activities, even though these activities be related to other school learning, such as reading and language, as well as to spelling. Some time during the day in grades above the first, there should be a period spent in word study, copying correctly written material, writing from dictation, and other activities that will promote growth in spelling. Some time each day there should be reserved a time for children who require systematic supervised practice to insure spelling improvement.

.....
Research results indicate that children of all levels prefer word games and activities to memorization of word lists, and equally effective spelling results are achieved.

.....
Special practice is closely integrated with handwriting and English composition. Activities such as keeping a diary, writing invitations and notices for the bulletin board, making scrap books, running a newspaper, etc., increase spelling skill with proper instructional supervision.

.....
Less emphasis is placed on teaching words uniformly in undifferentiated lists. More emphasis is placed on studying the child to determine his special abilities, achievements, and

deficiencies so that he can be more intelligently guided.

.....

The teacher's efforts during the time allotted to spelling are spent in individual guidance in analyzing pupil's errors and correcting them and in making proper attacks on new words to be learned. Teacher recommends proper steps for each child and procedures most helpful to him. Child is given techniques for studying words more effectively and locating parts that cause difficulty. Attention to spelling accuracy is given not just during spelling "period" but whenever a child writes in connection with his school assignments.

.....

Guidance should be given word study, and direct practice on particular difficulties. Drill of various types is needed to make sure that the pupil is conscious of the difficult part of each word, practices correct spelling of it in a variety of situations, and reviews the word frequently enough so that he can recall it automatically when he needs to use it in writing. To form dependable imagery of a word the child must visualize it, pronounce it and get a sense of its form and structure by tracing it.

"Spellers" containing all the words a pupil is to learn to spell from the first grade through the eighth are placed in hands of children less frequently in modern practice than formerly. Instead brief lists of words or exercises prepared for the pupils of each different grade or spelling level are used. A single basal text is inappropriate since within a given unselected class pupils will be found to vary in spelling achievement and types of errors made. The newer and most successful practice is through pretest to determine the words pupil needs to study and to give the child this list or appropriate exercises in which the words needing study are incorporated.¹⁵

Successful teachers emphasize motivating spelling to develop a spelling conscience and a desire to spell correctly. Then too, the pupil in the modern school assumes more responsibility for his improvement in spelling. The older pupil checks spelling errors, records words he needs to practice, crosses off words learned, and can proceed independently with suitable exercise practice. Pupils do not have to consult teacher for correct spelling but may look in alphabetized lists

15. Gertrude Hildreth, "Language Arts-Spelling," Implications of Research for the Classroom Teacher. Twentieth Yearbook of the American Education Research Association. Washington, D. C.: The Association, 1941. pp. 159-166.

or dictionary.

Suggested steps in attempts to improve instruction cover a wide field. Writing from dictation and copying material correctly, for instance, is good practice to supplement direct word study.

Pretesting saves wastefulness of undifferentiated class instruction. Inventory testing at beginning of year excuses better spellers from requirements for average learners, and those who are especially deficient are selected for specified, differentiated help. Pretests before each lesson direct each pupil's attention to his own difficulties and provide the basis for further differentiation in spelling assignments.

In modern schools individual differences are provided for by the use of maximum and minimum spelling lists. Pupils are classified X, Y, and Z, and spelling achievement standards are differentiated to suit abilities represented in each group.

Active recitation, rather than passive observation, on child's part is necessary in learning to spell correctly. Pronunciation drill, for example, deserves more emphasis. Enunciation also aids in correct spelling. For older children syllabication practice should be given and for the younger ones, phonetic practice.

Individual spelling practice should be given both in oral and written spelling because accurate hearing of letters in correct order re-enforces correct learning, and through oral spelling, correct pronunciation can be stressed.

After minimum basic lists of words are learned through direct practice, other words may be learned through association, grouping, studying rules, observing similarities. Rules should be few and should

have a wide range of applicability. Weekly and monthly review tests are recommended for classes, groups, and individuals, because they stimulate interest, motivate practice, and give concrete evidence of progress.

However, dictionary practice is not recommended below fourth grade; but younger children may be initiated into this practice by index cards or by preparing alphabetical use of words for use in writing activities.

McIntire and Hampton¹⁶ in their article on spelling readiness, point out that methods for teaching spelling should allow for spelling readiness. They believe readiness for spelling should precede formal spelling, just as reading readiness and arithmetic readiness precede the teaching of reading and arithmetic. Teachers in upper grades should also recognize this need.

Guiler and Lease¹⁷ believe, as a result of their controlled experiment in spelling with seventh and eighth-grade pupils, that pupils of all levels may be expected to benefit from a remedial program based on individual needs.

In like manner, Thompson¹⁸ concludes from his study of spelling integrated with the teaching of other subjects that such methods can be used successfully and satisfactorily.

16. Alta McIntire and L. H. Hampton, "Spelling Readiness: A Challenge," Elementary English Review, 21:24-25, January, 1944.

17. W. S. Guiler and G. A. Lease, "An Experimental Study of Methods of Instruction in Spelling," Elementary School Journal, 63:234-38, December, 1942.

18. Stanley A. Thompson, "Integrated Fifth Grade Spelling and Handwriting," Elementary School Journal, 42:347-57, January, 1942.

Russell¹⁹ found in his study of readiness for spelling that teachers can prepare children for spelling through the study of phonics and through much handwriting practice. That spelling readiness depends upon a language arts program in school before formal spelling goes without saying. Furthermore, Wallace,²⁰ in a study of the effect of direct teaching of phonics on spelling, concludes that phonics is of sufficient value to warrant the continuance of such teachings.

In concluding this section of the study, it is encouraging to quote Ernest A. Horn when he says, "It is easier to teach spelling now with more efficiency than it was a generation ago. However the greatest need is to incorporate best present theory and knowledge into classroom use."²¹

Literature, 1945-1948

Hildreth²² states in regard to the teaching of spelling that the chief objective of the teacher is to help the pupil write correctly what he needs to write.

A teacher, whose methods include challenging activities, engages pupils' attention in such situations that there is writing to be done on every hand. Various units of study will utilize all the language skills

19. H. Russell, "A Diagnostic Study of Spelling Readiness," Journal of Educational Research, 38:278-88, December, 1943.

20. Alberta Wallace, "Phonics in the Spelling Class," National Elementary Principal, 21:47-49, October, 1941.

21. Ernest A. Horn, "Research in Spelling," Elementary English Review, 21:6-13, January, 1944.

22. Gertrude Hildreth, "Spelling as a Language Tool," Elementary School Journal, 48:33-39, September, 1947.

a child can command. Silent and oral reading, spelling, handwriting, and oral and written expression employed in the study of these topics will serve to develop still greater control of these skills.

The only valid procedure to follow in judging spelling outcomes is to consider whether or not a pupil can spell words when he needs them or knows how to find out the correct spelling of rare words he has not practiced spelling or difficult words about which he is not sure.

The teacher's first concern is to see that there is plenty of opportunity for language expression as a genuine means of social communication during the school day. Writing needs will soon bring out to teacher and pupil that spelling proficiency demands practice. Checking will indicate which words need to be learned either by the class as a whole or by individual pupils.

Teachers in modern schools try to build spelling skills in two ways: (1) through helping the children spell correctly whenever they write and (2) through giving direct drill and practice on words that the class as a whole and individual pupils need to learn for their everyday purposes in writing.

Great economy in learning results when the same content is used in practicing reading, spelling, written language, oral language, and handwriting. Evidence points to the fact that more words are learned by practicing the correct spelling of words that are useful to the pupil than by word study limited to the conventional spelling lists for the various grades.

It therefore seems unwise to drill pupils on spelling words they do not recognize in reading or are not learning to read. A pupil will more easily learn to spell a word he recognizes in reading, uses in

speaking, and wishes to use in writing. The pupil should keep lists of words he cannot spell for use when he attempts to use these words in writing. Many of these words will be the same for all the members of the class. Other words may be needed by individual pupils or small groups within the class.

The basic spelling list includes 3,000 to 3,500 words every person should know by heart when he leaves elementary school.

There is little need for direct teaching and drill in grades 1 and 2 so long as the youngsters have ample experiences encouraging the use of simple vocabulary in writing. Even good spellers have to look up difficult or rarely used words when they write. Therefore pupils should learn at school the skill of looking up doubtful words in lists or dictionaries.

Lee²³ says that a specific and definite responsibility of a teacher is to develop the habit of using consistently an effective means of studying a word. The teacher should select an effective method and use it with the whole class, with small groups, and with individuals until it becomes an inherent part of their procedures. The development of word meaning is also important. Some children's vocabularies are very limited. They may know only one meaning of a word.

Children should be taught to use the dictionary efficiently. Children should be taught to look over and correct not only their spelling but all written work before it is handed in. The recognition and immediate correction of an error is a big factor in learning to spell the word.

23. Doris May Lee, "Developing Better Spellers," The Instructor, 55:40, September, 1946.

Good spellers learn to spell a large number of words incidentally. The poor speller actually learns more words when he attacks a shorter list which he can master than when he attempts a longer list. The attitude of a poor speller changes from discouragement to confidence when he has a spelling load which comes within his vocabulary. A minimum basic list should be taught to all. Fifteen new words a week with a few review words is sufficient for upper grades. Other words children need to learn may be listed.

Children should be helped to understand a few basic rules as basis for generalization.

Kathryn Peavy recommends the following plan in studying or learning spelling:

1. Write word on board. Be sure pupil sees it.
2. Pronounce word.
3. Have individuals and class pronounce it.
4. Divide into syllables and have class spell in syllables.
5. Have class write words in syllables and put in accent marks.
6. Have class go back and pronounce each word.
7. Have pupils practice writing while you pronounce words.
8. Test.²⁴

For phonetic drill she recommends presenting several sounds or letter groups each day and having class list words in which they occur. She would also have each pupil keep a notebook, with four sections--one devoted to his own misspelling, one for phonetic list, one for daily

24. Kathryn Peavy, "Phonics in Spelling," The Instructor, 54:14-15, February, 1945.

tests, and one for new words encountered in reading.²⁵

Snyder²⁶ says that the present tendency in teaching spelling is to shorten the list of words for the week and to teach thoroughly correct spelling and word meaning. She advocates the study-test-study method.

Points she suggests that the elementary teacher remember in her instructional program include: pronounce words before test; correct and return papers at once; test should precede review; ascertain causes of poor spelling and adjust methods accordingly; use visual, auditory, and kinesthetic imagery in pronouncing words and use motor imagery in the writing of a word.

Wilson²⁷ finds from her investigation of third-grade pupils' spelling needs that they vary with children; that no spelling book can fulfill adequately the spelling requisites of written composition; that spelling lists should include words children need to spell; that learning words from textbooks permits children to make normal scores on standardized spelling tests; that children taught a method for learning to spell a word make higher marks; and that children's needed writing words are found in the first five thousand words of the Thorndyke list.

Lee and Lee state in their article, Spelling Needs a Teacher,²⁸

25. Ibid.

26. Margaret E. Snyder, "How to Teach Spelling," The Grade Teacher, 62:44, February, 1945.

27. Louise Ada Wilson, "Children's Spelling Needs and Their Implication for Classroom Procedure," Elementary School Journal, 47:98-102, October, 1946.

28. Doris M. Lee and J. M. Lee, "Spelling Needs a Teacher," Elementary English Review, 23:203-206, May, 1946.

that an effective spelling program demands teaching which can be achieved by teacher, pupil discussion, and direct personal attention to individual needs and problems. In this article some specific suggestions are given which the teacher may incorporate into such a program. However the teacher's chief responsibility is to develop in each child habits of learning to spell which are effective for the child.

Procedure for this method, they assert, includes:

1. First, she must see that child learns only those words which are or will be important in his writings.
2. Second, she must make adequate presentation of these words.
3. Third, she must instill effective habits and attitudes for the correct writing of these words.
4. Fourth, she must work individually and in small groups with the poorer spellers to find methods effective for them and to give them the help necessary.²⁹

Spelling lists taught through the eighth grade should be limited to three thousand words and should be carefully devised so as to include words that are or will be used by child consistently in his writings.

The child must see and hear word pronounced, pronounce it himself, and learn the variety of meanings and uses of the word. Not only should he learn the base word but the meaning of the derivation must be understood. Variations due to number, tense, parts of speech, the additions of prefixes and suffixes should be discussed with the group. This builds up vocabulary and word knowledge of pupils but requires only the learning to spell of the base word.

Other suggestions include the following points:

29. Ibid., p. 20.

Discuss the word itself. (Gates³⁰ found that most words had a letter or letters which caused most of the spelling errors of that word).

Call attention to difficult letters in a word in some positive, constructive way, and show that in some cases of words ending in a double consonant, one letter is dropped before adding a prefix. Attention should be called consistently to double letters, diphthongs, and digraphs.

A most helpful single procedure is to divide words into syllables. This practice should begin in the fourth grade and should be progressively developed.

A consistent habitual method of study is more satisfactory than any haphazard method. This method should involve a variety of approaches. Major emphasis should be on writing the word. For the pupil's own individual study, he can look at the word, say it to himself, copy it, think how it is spelled, write the word from memory, see if this looks right, and check it with the original.

Encourage the habit of checking the spelling of all written material and checking all written work before it is handed in.

When these suggestions are carried out, a great share of the problem of poor spellers disappears. Give few words per week, thorough oral discussion of words by teacher and class, and a good, consistent method of study and the problem for most pupils will be solved. For those with whom this doesn't work, individual help is indicated. For these, the following suggestions may be used:

30. Arthur I. Gates, A List of Spelling Difficulties in 3,876 Words. New York: Bureau of Publications, Teachers' College, Columbia University. 1937.

1. Have pupils' vision and hearing checked.
2. Have pupil study the words out loud with teacher.
3. Study types of errors made. Poorly formed letters should be counted correct in spelling but scored wrong on writing record.
4. Give a good reading diagnostic test. See that child gets necessary help for his reading problem.

If these methods fail, cut down required basic lists for each week. Find out if child's memory is kinesthetic, or visual, or auditory, and emphasize this in his study procedure.

Continue experimenting until he achieves success, if with only a few words a week. This will provide the confidence and assurance without which he will never learn to spell. Gradually increase spelling load but never more than he can take. Nothing succeeds like success.

Results from Thomas D. Horn's³¹ investigation to determine effect of the corrected test on learning to spell show:

1. That 90 to 95 per cent of achievement was contributed by corrected test.
2. Corrected test alone is sufficient for mastery or near mastery of typical spelling lesson by upper third.
3. Corrected tests seem to be the most important single factor in achievement in spelling.

According to Dolch³² the process of learning to spell is the result of several kinds of knowledge.

31. Thomas D. Horn, "Effect of the Corrected Test on Learning to Spell," Elementary School Journal, 47:277-285, January, 1947.

32. Edward William Dolch, "Better Spelling," Champaign, Illinois: Gerard, 1942, pp. 25-51.

Zallinger gives points upon which a spelling program was planned in the elementary schools of Portland, Oregon, where the objective was to teach the pupil to spell words that he will need to use in writing outside of school.

1. Development of right attitudes and habits that will enable pupils to attack new words successfully.

2. Using eye, ear, and tongue in learning to spell a word correctly.

3. Knowledge in learning to spell makes use of analogy in writing prefixes, suffixes, roots, and the learning of and application of simple spelling rules.

4. Fifteen minutes per day devoted to spelling.

5. Teacher presents words for the week. Be sure pupils know exact pronunciation and meaning of words.

6. Give and correct pre-test.

7. Teacher establishes need for correct spelling.

8. Teacher establishes desirable habit for improvement of spelling.

9. Establishing progress for group and individual keeping of graphs and testing as well as noting correct spelling in written work.³³

Nolde³⁴ says that the habit of writing a word correctly must be established and specific exercises to develop attention while writing should be used. This helps to overcome carelessness. Specific spelling directions should go along with this writing. These directions are phonetics, verbalized characteristics, and use of the dictionary.

Word grouping by distinguishing characteristics should be kept

33. Miriam Zallinger, "Planning a Spelling Program," Elementary School Journal, 46:574-8, January, 1946.

34. Ellen Jarde Nolde, "Spelling Knowledge and Skill," Elementary English, 27:170-4, April, 1946.

in a notebook. These groupings will differ according to class and individual. Some suggestions might be:

The "i" before "e" rule and its exceptions.

Words that double the final consonant before adding "ed" or "ing".

Words that drop the final "e" before "ing".

Words that double the first consonant.

Words that double a consonant other than the first.

Words with two or more double letters.

Words with a silent letter.

Gustafson describes methods of teaching spelling as:

1. Inclusion in spelling curriculum of words children will need in their written English.
2. Provisions for individual differences.
3. Provisions for stimuli and incentives for learning spelling.
4. A simple way of ascertaining and insuring spelling progress.
5. Class test to determine spelling ability with misspelled words listed.
6. Close attention to pupils' written work to determine their spelling needs.
7. Units of work as current source of spelling words.
8. Incidental experiences, current happenings, and holidays.
9. The spelling textbook.
10. Suggestions of pupils concerning words to learn to spell before beginning a specific writing activity.
11. Methods should take into account individual differences and make provisions for instructing slow-learning pupils by

individualizing their spelling program.³⁵

Ivah Green tells how to teach spelling rules to children by giving a detailed procedure of teaching one rule:

1. Offering no explanation, ask the pupils to write these words in a column as you dictate: cap, hat, pan, not, pin, Sam, bit, mad, sham, hid, rob, rod.
2. Spell the word aloud as you help them check their lists.
3. With no further explanation, ask them to spell the following words in a second column, opposite the first: cape, hate, pane (window), note, pine, same, bite, made, shame, hide, robe, rode.
4. Spell these words also as you help the pupils check their second list.
5. Put both lists of words on the blackboard and ask: What two things do you observe about the words in the second column?
6. Go through the second column to prove the last statement, saying the sounds in unison.
7. Then ask: What two things do you observe about the words in the first column?

Answers: (1) The words do not end in "e"; and (2) The middle vowel is short.

Pronounce all words in unison.

8. Show the class that syllables are treated the same as actual words. Put on the blackboard a single column of syllables (not words) with short sounds: an, at, ap, am, il, ip, if, em, om, ol. Pointing to each syllable, have the pupils say them in unison. (Drill until it is done correctly and without deliberating).

9. Say, "Now as quickly as I add the letter 'e' to each syllable, you pronounce it." Go down the column, adding an "e" to each and giving the children the correct sound if they hesitate.

10. Say, "Can you think of a rule you might state that would help you to remember when syllables like these are found in your spelling or language lesson?"

35. Ruth E. Gustafson, "Making Spelling Functional," The Grade Teacher, 64:46, October, 1946.

11. From the children, get the rule: When "e" is found at the end of a syllable, the middle vowel of the syllable has the long sound.

12. Dictate a few unfamiliar words to let them apply the rule.

13. Give similar quick checkup tests of other words and syllables, mentioning often that the final "e" makes the vowel long. In spelling-study time, call attention to evidences of the rule.

14. Do not introduce another rule until this one is fixed, understood, and regularly applied.³⁶

Hildreth gives the following pointers in regard to the teaching of spelling:

1. Teaching of spelling instead of beginning mechanical drill forcing child to memorize, should give more help in spelling for writing material they need and wish to write.

2. The pupils will then learn to spell vocabulary that has most practical value for them.

3. Teaching of spelling calls for individualized methods of teaching and more self-help materials than those in common use.

4. Choice and use of the 23,000 less frequently used words depend both upon the child's school studies and his out-of-school writing activities.

5. Meaningful words child wishes to use in writing and does use in conversation are easier for him to learn to spell than other words which may be shorter and intrinsically easier to spell but which have no particular interest for the child at the time. Required lists should be shortened up to include only those words most commonly used that have "demon" qualities or that pupils should know but have not yet learned to spell.³⁷

Spelling instructions should teach pupils how to locate doubtful spellings, and should give them real incentives for looking up doubtful

36. Ivah Green, "Helping Children Discover Spelling Rules," The Instructor, 55:21, November, 1945.

37. Gertrude Hildreth, "Word Frequency as a Factor in Learning to Read and Spell," Journal of Educational Research, 41:467-71, February, 1948.

spelling. Reference sources should be made available so that pupils can more easily look up words for themselves. Children should be taught to use the dictionary from the early grades. Until they learn to do so, they should keep their own alphabetized word lists. Primary children should ask teacher when they need help on difficult words they need to use in writing, and the teacher should write down in the child's notebook the words he should be expected to learn.

Summary

The following is a summary of the methods described by the authorities, as revealed in the literature of 1938 through 1948.

1. Spelling readiness should be a part of the spelling program and should precede formal spelling instructions.
2. Spelling should be a meaningful procedure rather than a mere drill on isolated word lists.
3. Use of alphabetized lists of words in lower grades and the dictionary in grade four and above should be mandatory.
4. The functional approach should be used and an attempt made to incorporate in course of study words from children's written vocabularies and words from other school subjects, such as science, arithmetic, units of study and local words.
5. Phonics (sounds, blends, syllables, and silent letters) should be taught.
6. A few rules having wide application, prefixes, suffixes, derivatives, degrees of adjectives, and word forms should be taught.
7. Teacher should refrain from drilling pupils on words for which they will have little use. Use dictionary for correct spelling of such words.
8. Teacher should refrain from word study when pupils are fatigued and bored.
9. Fifteen minutes per day is considered ample time by experts to teach pupils to spell.

10. Instructor should integrate spelling with other subjects, handwriting, English, etc. Saves time, teaching effort, and pupil energy.
11. Instructor should utilize Thorndyke's laws of learning to spell a word: See it, hear it, and feel it by looking at word, pronouncing word, and writing word.
12. Correct pronunciation by teacher should be in evidence at all times.
13. Correct pronunciation and enunciation by pupil should be in evidence.
14. Teacher should promote development of good habits of spelling, which include: A method of attack upon learning a word and consistently following this method, careful writing of words to be learned, locating hard spots in a word (which is in last or next to last syllable or both) and attacking this part, a good attitude toward spelling, and looking over all written work for correct spelling before handing in.
15. Teacher should avoid hurrying pupils in their writing of spelling words.
16. Teacher should take into consideration, physical, emotional, mental, or social reasons for spelling errors and make proper provision in her methods.
17. Teacher should avoid having pupils copy spelling words more than three times, as it is a waste of pupils' time and effort.
18. Teacher should dictate sentences which include words to be learned.
19. Teacher should teach synonyms and homonyms of words and their various meanings.
20. Teacher should individualize spelling according to pupils' needs. Make provision for brighter pupils--exemptions on extra lists. Divide slow learners into small groups, or teach individually. Keep word lists. Make booklets for such lists, or copy into a notebook for studying.
21. Teacher should realize method of test-study-test individualizes spelling.
22. Teacher should use diagnostic spelling tests. Classify errors. Start remedial program there.
23. Teacher should use weekly tests. Record results. Acts as an incentive and helps motivate spelling.

24. Remedial work should be given pupils one year or more retarded in spelling.
25. Use of "Spelling Bees" arouses interest and motivates spelling.
26. Teacher should give pupils practice in grading and recording grades.
27. Teacher should build up pupils vocabulary and reading level.
28. Teacher should help child develop skill in handwriting.
29. Methods should include plenty of writing activities.
30. Spelling instruction should recognize child's development requirements, his previous learnings, and his learning potentialities.
31. Teacher should have a cheerful and optimistic attitude towards her pupils and her work with them.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The value of this study lies in the review of recent writings, experiments, and suggested methods of teaching by authorities on the subject of spelling. The elementary teacher who is concerned about the improvement in spelling efficiency of her pupils will be interested in what these investigations and experiments have revealed concerning spelling failures. She will wish to note what the factors in the causes of spelling failure are, what remedies, procedures, and improved methods of instructions are recommended to the classroom teacher and how to plan a better all-around program of spelling for her pupils.

From the review of these studies, it seems that spelling failures are due to many factors: physical, emotional, mental, environmental, and instructional. Emphasis seems to be upon instructional causes, but it seems that a single cause is seldom found.

Causes in spelling failures in the areas are given as follows:

(1) Physical

Defects of eye or ear and poor motor coordination, which is a handicap in writing.

(2) Intellectual

General intelligence, mental immaturity, lack of ability to blend parts and to syllabicate, psychological deafness, mental lapses, and unconscious repressions.

(3) Emotional

Failure in spelling resulting in loss of confidence by pupil, feeling the inferiority and apathy toward spelling failure.

(4) Environmental

Frequent change of school, long continued absence from school, inferior economic and language background.

(5) Instructional

Failure to provide a spelling readiness program before attempting formal spelling, failure to help pupils in developing adequate method of attacking new words, failure to individualize spelling for pupils who need it, mispronunciation by the teacher or others, unwise use of textbook list, conventional or traditional, rather than functional, approach to spelling, drill upon meaningless, uninteresting, isolated lists of words rather than upon meaningful words pupils need to learn to spell correctly in their everyday writings, poor writing, poor speech, irregularity of spelling of English, over-long writing correction of spelling penalties for misspelling, rapid writing, failure to teach phonics, syllabifications, and spelling rules, and too little practice in pupil participation in checking and recording grades.

Recommendations

The elementary teacher in planning her spelling program should take into account all of the factors in the above-named areas.

The elementary teacher should have pupils in her classroom examined physically as to eye, speech, or ear defects and have the condition remedied so far as possible.

For emotional causes, individualize spelling for the defective pupils. Note and encourage any improvement or success. Instill in pupils a desire to succeed. Increase their self-confidence by praising their efforts and success. Avoid hurrying pupils in writing spelling.

Remove any emotional strain.

Encourage parents and pupils on regular attendance in same school without frequent changing. With children whose vocabulary is limited because of meager language background, build up their vocabularies through word study and other methods.

Teachers who start pupils to spell should include spelling readiness in their program of spelling instruction, and it should precede formal instruction in learning to spell.

Teaching of phonics seems to aid pupils, especially the better spellers in spelling efficiency.

The development of a spelling attack or a method of study should be adopted and followed consistently.

Pronouncing words correctly by teachers and having pupils pronounce and enunciate correctly is important.

Teach related forms of words, such as plurals, degrees of adjectives, verb forms, and derivations.

Teach some simple rules of spelling that have wide application.

Use alphabetized word list for lower grades and from fourth grade up use the dictionary.

Use test-study-test method with spelling words to be learned in a graded list per grade. Supplement such a list from words needed to spell in everyday writings. Words from other subjects such as arithmetic and science may be incorporated in these lists. Individualize instructions in spelling by having each pupil keep a list of words he misspells.

Teach pupils to recognize hard spots which usually lie in the last or next to last syllable and work on those spots. Use words to be

learned in sentences and have pupils to do likewise. Refrain from hurrying pupils in their writing of spelling words because of the chances of omission of a letter or letters in a word.

Bring as many of the senses into the learning of the words as possible. See the word to be learned, hear it, and get the feel of the word by writing it correctly.

Refrain from having pupils write more than three times each word misspelled.

Diagnose spelling ability of each child in full by using either Morrison-McCall Spelling Scale, New Standard Achievement Test, or Modern School Achievement Test. Classify errors and start on remedial work where needed.

Remedial work should be started early and before failure seriously affects the child. Special assignments, or exemptions, should be made for good spellers and special programs planned for individuals or small groups of poor spellers.

There should be a variety of activities in the development of spelling ability-word building, work books, individual dictionaries, use of flash cards, use of dictionaries, progress charts, spelling bees, etc., and plenty of opportunities for writing activities. Testing and posting grades may be used as a bench mark from which to measure achievement of pupils in spelling. Continued testing and recording of progress acts as a stimulus and incentive for improvement.

The teacher should have a cheerful and optimistic attitude towards each pupil in her class.

While these recommendations may not prove a panacea for the elementary teacher in the improvement of spelling efficiency of her

pupils, it will, the writer feels, aid in the improvement of pupils' spelling progress.

BIBLIOGRAPHY

1. Smith, John. "The History of the United States." New York: Random House, 1962.
2. Jones, William. "The History of the United States." New York: Random House, 1962.
3. Brown, Robert. "The History of the United States." New York: Random House, 1962.
4. White, Thomas. "The History of the United States." New York: Random House, 1962.
5. Black, Charles. "The History of the United States." New York: Random House, 1962.
6. Green, Edward. "The History of the United States." New York: Random House, 1962.
7. Hall, George. "The History of the United States." New York: Random House, 1962.
8. King, Henry. "The History of the United States." New York: Random House, 1962.
9. Lee, James. "The History of the United States." New York: Random House, 1962.
10. Scott, Walter. "The History of the United States." New York: Random House, 1962.
11. Adams, John. "The History of the United States." New York: Random House, 1962.
12. Clark, George. "The History of the United States." New York: Random House, 1962.
13. Evans, John. "The History of the United States." New York: Random House, 1962.
14. Foster, George. "The History of the United States." New York: Random House, 1962.
15. Gibson, John. "The History of the United States." New York: Random House, 1962.
16. Hart, John. "The History of the United States." New York: Random House, 1962.
17. Hendon, George. "The History of the United States." New York: Random House, 1962.
18. Holman, George. "The History of the United States." New York: Random House, 1962.
19. Johnson, George. "The History of the United States." New York: Random House, 1962.
20. Keith, George. "The History of the United States." New York: Random House, 1962.
21. Lester, George. "The History of the United States." New York: Random House, 1962.
22. Mack, George. "The History of the United States." New York: Random House, 1962.
23. Martin, George. "The History of the United States." New York: Random House, 1962.
24. Miller, George. "The History of the United States." New York: Random House, 1962.
25. Moore, George. "The History of the United States." New York: Random House, 1962.
26. Myers, George. "The History of the United States." New York: Random House, 1962.
27. Nichols, George. "The History of the United States." New York: Random House, 1962.
28. Parker, George. "The History of the United States." New York: Random House, 1962.
29. Quinn, George. "The History of the United States." New York: Random House, 1962.
30. Reed, George. "The History of the United States." New York: Random House, 1962.
31. Rich, George. "The History of the United States." New York: Random House, 1962.
32. Ross, George. "The History of the United States." New York: Random House, 1962.
33. Ryan, George. "The History of the United States." New York: Random House, 1962.
34. Sage, George. "The History of the United States." New York: Random House, 1962.
35. Schmitt, George. "The History of the United States." New York: Random House, 1962.
36. Shaw, George. "The History of the United States." New York: Random House, 1962.
37. Sloan, George. "The History of the United States." New York: Random House, 1962.
38. Smith, George. "The History of the United States." New York: Random House, 1962.
39. Snow, George. "The History of the United States." New York: Random House, 1962.
40. Spence, George. "The History of the United States." New York: Random House, 1962.
41. Stacey, George. "The History of the United States." New York: Random House, 1962.
42. Stearns, George. "The History of the United States." New York: Random House, 1962.
43. Sullivan, George. "The History of the United States." New York: Random House, 1962.
44. Swanwick, George. "The History of the United States." New York: Random House, 1962.
45. Tamm, George. "The History of the United States." New York: Random House, 1962.
46. Taylor, George. "The History of the United States." New York: Random House, 1962.
47. Thompson, George. "The History of the United States." New York: Random House, 1962.
48. Tuck, George. "The History of the United States." New York: Random House, 1962.
49. Turner, George. "The History of the United States." New York: Random House, 1962.
50. Vane, George. "The History of the United States." New York: Random House, 1962.
51. Vance, George. "The History of the United States." New York: Random House, 1962.
52. Vaughan, George. "The History of the United States." New York: Random House, 1962.
53. Vickers, George. "The History of the United States." New York: Random House, 1962.
54. Wall, George. "The History of the United States." New York: Random House, 1962.
55. Wallis, George. "The History of the United States." New York: Random House, 1962.
56. Ward, George. "The History of the United States." New York: Random House, 1962.
57. Warren, George. "The History of the United States." New York: Random House, 1962.
58. Watkins, George. "The History of the United States." New York: Random House, 1962.
59. Webb, George. "The History of the United States." New York: Random House, 1962.
60. Wheeler, George. "The History of the United States." New York: Random House, 1962.
61. White, George. "The History of the United States." New York: Random House, 1962.
62. Whitely, George. "The History of the United States." New York: Random House, 1962.
63. Wilentz, George. "The History of the United States." New York: Random House, 1962.
64. Williams, George. "The History of the United States." New York: Random House, 1962.
65. Wilson, George. "The History of the United States." New York: Random House, 1962.
66. Wood, George. "The History of the United States." New York: Random House, 1962.
67. Wright, George. "The History of the United States." New York: Random House, 1962.
68. Wyatt, George. "The History of the United States." New York: Random House, 1962.
69. Yalden, George. "The History of the United States." New York: Random House, 1962.
70. Yates, George. "The History of the United States." New York: Random House, 1962.
71. Young, George. "The History of the United States." New York: Random House, 1962.
72. Ziegler, George. "The History of the United States." New York: Random House, 1962.

BIBLIOGRAPHY

- Arnold, Dwight L. "Spelling Lessons and Ability to Spell." Elementary School Journal, XLII (September, 1941), 35-40.
- Ayres, Leonard P. A Measuring Scale for Ability in Spelling. New York: Russell Sage Foundation, 1915.
- Betts, Emmett Albert. "Inter-relationship of Reading and Spelling." Elementary English Review, XXII (January, 1945), 13-23.
- _____. Spelling Vocabulary Study: Atlanta, Georgia: American Book Company, 1940.
- Billington, Lillian E. "Meaningful Spelling." The Instructor, LV (April, 1946), 19.
- Breed, F. S. "Selected References on Elementary School Instructions - Spelling." Elementary School Journal, XLI (October, 1939), 140-141.
- _____. "Selected References on Elementary School Instructions - Spelling." Elementary School Journal, (October, 1940), 142-143.
- Buckingham, B. R. Buckingham Extension of the Ayres Scale. Bloomington, Illinois: Public School Publishing Company, 1918.
- Capron, Clara Hunter. "Improving Instruction in Spelling." Elementary English Review, XV (February, 1938), 43-51.
- Clifton, L. "Textbooks and Workbooks in Learning to Spell." Journal of Experimental Education, VI (June, 1939), 274-276.
- Curtis, H. A. and Dolch, E. W. "Do Spelling Books Teach Spelling?" Elementary School Journal, XXXIX (April, 1939), 584-592.
- Dolch, Edward William. A Manual for Remedial Reading. Gerrard Press, 1939.
- Doughtery, Mary L. How To Teach Phonics. New York: Houghton Mifflin Company, 1923, 88 pp.
- Foley, D. C. "Let Us Spell." American Childhood, XXIV (September, 1938), 53.
- Garvin, F. M. "Children's Writing Vocabularies as Bases for Spelling List." Elementary English Review, XVI (February, 1939), 47-49.
- Gates, Arthur Irving and Russell, David Harris. Diagnostic and Remedial Spelling Manual. Revised Edition. New York: Bureau of Publications, Teachers' College, Columbia University, 1941, p. 41-42.

- Gillet, Norma. "Insuring Spelling Correctness in Written Composition." Elementary English Review, XV (February, 1938), 55-56.
- Green, Ivah. "Helping Children Discover Spelling Rules." The Instructor, LV (November, 1945), 21.
- Guiler, Walter Scribner and Lease, Gilbert A. "An Experimental Study of Methods of Instruction in Spelling." Elementary School Journal, XLIII, (December, 1942), 234-238.
- Guiles, R. E. "Effect of Formal Spelling on Spelling Accuracy." Journal of Educational Research, XXXVII (December, 1943), 284-289.
- Guilfoile, Elizabeth. "Planning the Spelling Program." Elementary English Review, XX (January, 1913), 13-15.
- Gustafson, Ruth E. "Making Spelling Functional." Grade Teacher, LXIV (October, 1946), 46.
- Hawley, Fred T. "Use of Mechanical Apparatus for Teaching Words." American Childhood, XXIII (May, 1938), 14.
- Hildreth, Gertrude Howell. "The Language Arts-Spelling." Implications of Research for the Classroom Teacher. Twentieth Yearbook of the American Education Research Association. Washington, D. C.: The Association, October, 1941, pp. 159-166.
- _____. Learning the Three R's. Nashville, Tennessee: Educational Publishers Inc., 1939. 824 p.
- _____. "Spelling in the Modern School Program." National Elementary Principal, XX (July, 1941), 478-483.
- _____. "Spelling as a Language Tool." Elementary School Journal, XLVIII (September, 1947), 33-40.
- _____. "New Light on the Spelling Problem." Elementary English, XXV (April, 1948), 201-207.
- _____. "Word Frequency as a Factor in Learning to Read and Spell." Journal of Educational Research, XLII (February, 1948), 467-471.
- Hodges, H. M. "Spelling in the Lower Primary Grades." American Childhood, XXIII (May, 1938), 22-23.
- Horn, Ernest A. "Research in Spelling." Elementary English Review, XXI (January, 1944), 6-13.
- Horn, Thomas D. "Effect of the Corrected Test on Learning to Spell." Elementary School Journal, XLVII (January, 1947), 277-285.
- Hunter, Maude W. "What is the Matter with Spelling?" Grade Teacher, LX (March, 1943), 40.

- Johnson, E. A. "Some Spelling Demons and a Good Way to Teach Them." Grade Teacher, LXIII (March, 1946), 45.
- Kenny, R. A. "Spelling Evaluation with Standardized Tests." Elementary School Journal, XLVI (January, 1946), 574-578.
- Lauben, A. D. "Removing Spelling Difficulties." Grade Teacher, LXI (November, 1943), 344.
- Lee, Mrs. Doris May. "Developing Better Spellers." The Instructor, LV (September, 1946), 40.
- Lee, Mrs. Doris May and Lee, J. W. "Spelling Load is Too Heavy." National Elementary Principal, XX (July, 1941), 484-487.
- _____. "Spelling Needs a Teacher." Elementary English Review, XXIII (May, 1946), 203-206.
- McIntire, Alta, and Hampton, L. H. "Spelling Readiness: A Challenge." Elementary English Review, XXI (January, 1944), 24-25.
- McKee, Paul Gordon. "Nature and Scope of the Language Arts Program." National Elementary Principal, XX (July, 1941), 235-256.
- Millar, Janet M. "Improvement of Spelling as a Tool in Written Expression." National Elementary Principal, XX (July, 1941), 496-502.
- Modern School Achievement Test. New York: Bureau of Publications, Teachers College, Columbia University.
- Morrison-McCall Spelling Scale. Yonkers-On Hudson, New York: World Book Company.
- New Stanford Achievement Test. Yonkers-On Hudson, New York: World Book Company.
- Nolde, Ellen Jarde. "Spelling Knowledge and Skills." Elementary English, XXVII (April, 1946), 170-174.
- Parlin, Frank E. English Phonetics. Boston, Massachusetts: Little Brown and Company, [n.d.]
- Peake, Nellie L. "Relation Between Spelling Ability and Reading Ability." Journal of Experimental Education, IX (December, 1940), 192-193.
- Peavy, K. B. "Phonics in Spelling." The Instructor, LIV (February, 1945), 14-15.
- Reilley, E. P. O. "Providing for Individual Differences in the Teaching of Spelling." National Elementary Principal, XX (July, 1941), 503-506.
- Rinsland, H. D. A Basic Writing Vocabulary of Elementary School Children. New York: The Macmillan Company, 1945. 636 p.

- Robinson, Francis P. "Misspellers are Intelligent," Educational Research Bulletin, XX (October, 1940), 436-442.
- Russell, H. "A Diagnostic Study of Spelling Readiness." Journal of Educational Research, XXXVII (December, 1943), 278-283.
- Salisbury, Ethel Imogene. "The Weekly Spelling List." Elementary English Review, XXV (April, 1948), 208-211.
- Snyder, M. E. "How To Teach Spelling." Grade Teacher, LXII (February, 1944), 44.
- Spache, George, "Characteristics of Good and Poor Spellers." Journal of Educational Research, XXXIV (November, 1940), 182-189.
- _____. "Minimum Reading and Spelling Vocabularies for Remedial Work," Journal of Educational Research, XXXIII (November, 1939), 161-174.
- _____. "Spelling Disability Correlates-Factors Probably Casual in Spelling Disability." Journal of Educational Research, XXXIV (April, 1941), 56-586.
- _____. "Validity and Reliability of the Proposed Classification of Spelling Errors." Journal of Educational Psychology, XXXI (March, 1940), 204-214.
- Thompson, Stanley A. "Integrated Fifth Grade Spelling and Handwriting." Elementary School Journal, XLIII (January, 1942), 347-357.
- Von Struve, A. W. "Spelling Pitfalls-Result of Research in Arizona Schools." The Grade Teacher, LVI (June, 1939), 60.
- Wallace, Alberta. "Phonics in the Spelling Class." National Elementary Principal, XXI (October, 1941), 47-49.
- _____. "Phonics in the Spelling Class." National Elementary Principal, XXI (October, 1941), 47-49.
- Williams, Lida. How to Teach Phonics. Revised Edition. 1941. Chicago, Illinois: Hall and McCreasy, 1941. 80 p.
- Wilson, H. V. "Good Spellers Born or Made?" Parents' Magazine, XVIII (November, 1943), 26.
- Wilson, Louise Ada. "Children's Spelling Needs and Their Implications for Classroom Procedure." Elementary School Journal, XLVII (October, 1946), 98-102.
- Zallinger, Miriam. "Planning a Spelling Program." Elementary School Journal, XLV (February, 1945), 574-578.