

*III. Eng. language
Orthography + Spelling*

EDUCATOR'S GUIDE TO SPELLING RESEARCH AND PRACTICE

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1978

by

BRADLEY M. LOOMER

STATE OF IOWA
DEPARTMENT OF PUBLIC INSTRUCTION

IOWA STATE DEPARTMENT OF PUBLIC INSTRUCTION
AND
PROJECT SPELLING
THE UNIVERSITY OF IOWA

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PREFACE

SPELLING AS A SUBJECT IN THE CURRICULUM HAS RECENTLY RECEIVED NATIONWIDE ATTENTION. THE FOCUS OF THIS ATTENTION HAS BEEN ON IMPROVED WORD LISTS, BETTER MATERIALS, AND MORE SYSTEMATIC INSTRUCTIONAL PROCEDURES.

THE MATERIAL IN THIS MONOGRAPH IS AN ABRIDGEMENT OF THE EARLIER RESEARCH MONOGRAPH TITLED SPELLING RESEARCH AND PRACTICE, (1977) BY ROBERT J. FITZSIMMONS AND BRADLEY M. LOOMER. IT WAS DEVELOPED WHEN THE AUTHOR RECOGNIZED THAT TEACHERS WANTED A HANDY GUIDE TO SPELLING INSTRUCTION.

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WHAT DOES RESEARCH SAY ABOUT SPELLING?

"SHORTCOMINGS IN THE TEACHING OF SPELLING ARE . . . DUE NOT SO MUCH TO THE ABSENCE OF SATISFACTORY EVIDENCE AS TO THE LACK OF KNOWLEDGE OF EXISTING EVIDENCE: TO THE FAILURE TO APPLY IT INTELLIGENTLY, OR TO ERRONEOUS INTERPRETATIONS."

(ERNEST HORN, 1944)

"ALTHOUGH ADDITIONAL INVESTIGATIONS ARE NECESSARY TO SOLVE SOME OF THE MORE COMPLEX PROBLEMS OF SPELLING, MANY OF THE IMMEDIATE SPELLING PROBLEMS CAN BE SOLVED BY THE USE OF AVAILABLE FINDINGS."

(JAMES FITZGERALD, 1951)

". . . THE CHIEF PROBLEM TODAY APPEARS TO BE MORE CRITICAL AND UNIVERSAL APPLICATION OF THE EVIDENCE NOW AVAILABLE."

(ERNEST HORN, 1960)

"IF INSTRUCTION IN SPELLING WERE PLANNED IN A MORE DEFINITE FASHION, UTILIZING PERTINENT RESEARCH FINDINGS: IT COULD BE MADE MORE MEANINGFUL."

(E. A. CAMPANALE, 1962)

"MUCH HAS BEEN LEARNED, BUT THE KNOWLEDGE HAS NOT BEEN USED. THE PROBLEM IN SPELLING REALLY IS THE APPLICATION OF WHAT IS KNOWN."

(WALTER PETTY, 1969)

A SERIOUS GAP APPEARS TO EXIST BETWEEN THE EXISTING RESEARCH IN SPELLING AND ITS APPLICATION IN THE CLASSROOM.

THERE APPEARS TO BE A LACK OF A UNIVERSAL APPLICATION OF THE EVIDENCE NOW AVAILABLE.

* * * ONE CONTRIBUTING FACTOR MAY BE THAT MANY PUBLISHERS OF SPELLING MATERIALS HAVE NOT MADE RESULTS OF THE FIELD TESTED RESEARCH AVAILABLE TO TEACHERS THROUGH THEIR SPELLING SERIES * * *

IMPROVING THE SPELLING PROGRAM

1. USE MULTIPLE SOURCES FOR INDIVIDUAL GROUP WORD MASTERY LISTS.
2. BE SELECTIVE AND FLEXIBLE IN USING THE BASIC SPELLING TEXTBOOK.
3. APPLY THE PRETEST TECHNIQUE.
4. IMPLEMENT THE PUPIL-CORRECTED TEST.
5. HELP EACH CHILD TO DEVELOP A MEANINGFUL APPROACH TO MASTERING THE SPELLING OF NEW WORDS.
6. GROUP WITHIN YOUR CLASS.
7. DEVELOP THE HIGHEST POSSIBLE DEGREE OF SPELLING CONSCIOUSNESS WITHIN YOUR CLASS.

(HAL D. FUNK, 1972)

WORD LISTS

RESEARCH SUPPORTS:

1. USING VOCABULARY LISTS, SUCH AS THOSE DEVELOPED 30-50 YEARS AGO, BECAUSE MOST OF THE WORDS ON THOSE LISTS ARE IN COMMON USE TODAY.
2. LITTLE USE OF SPELLING LISTS DERIVED FROM THE VARIOUS CURRICULAR AREAS.
3. BECAUSE WORD LISTS ARE BASED ON COMMON PUPIL NEEDS, THERE IS LITTLE REASON FOR SCHOOL DISTRICTS TO DEVELOP A LOCALIZED SET OF WORDS.

COMMENTARY:

HOW RELEVANT ARE THESE WORD LISTS TODAY?

*97% OF THE WORDS USED BY BENJAMIN FRANKLIN IN HIS LETTERS APPEAR IN HORN'S A BASIC WRITING VOCABULARY.

*ALL BUT 170 OF HORN'S MOST FREQUENTLY USED 5,000 WORDS APPEAR ON THORNDIKE'S LIST.

*HOLLINGSWORTH IN 1965 COMPARED THE VOCABULARY IN LETTERS TO THE EDITOR IN FOUR LARGE NEWSPAPERS TO HORN'S 1926 10,000 WORDS MOST COMMONLY USED IN WRITING.

*153 WORDS FROM THE LETTERS WERE NOT IN HORN'S LISTS, BUT ONLY 16 WERE USED FREQUENTLY.

*OF THESE 16, EIGHT HAD A HIGH ADULT WORD FREQUENCY BECAUSE OF EXISTING CONDITIONS IN SOCIETY AT THAT TIME.

CONCERNING THE 5,000 WORDS OF GREATEST FREQUENCY IN HIS LIST OF 10,000 WORDS: ERNEST HORN FOUND:

"LESS THAN 4 PERCENT OF THESE WORDS HAVE COME INTO THE LANGUAGE SINCE 1849 AND LESS THAN 10 PERCENT HAVE COME IN SINCE 1749. MORE OF THESE WORDS WERE IN THE LANGUAGE BEFORE 1099 THAN HAVE COME INTO THE LANGUAGE SINCE 1749."

WHAT WORDS SHOULD BE TAUGHT?

ERNEST HORN SUGGESTS THE FOLLOWING CRITERIA:

1. FREQUENCY OF USE
2. DIFFICULTY
3. GEOGRAPHIC DISTRIBUTION
4. PERMANENCY
5. SPREAD
6. CRUCIALITY

ERNEST HORN SUGGESTS A BASIC CORE OF 2,800-3,000 WELL SELECTED, USEFUL WORDS TO BE MASTERED BY THE END OF SIXTH GRADE.

1. THE MOST COMMON 1,000 WORDS AND THEIR REPETITIONS COMPRISED 90 PERCENT OF RUNNING WRITING.
2. THE MOST COMMON 2,000 ACCOUNTED FOR 95.3 PERCENT.
3. THE MOST COMMON 3,000 FOR 97.6 PERCENT.
4. THE MOST COMMON 4,000 FOR 98.7 PERCENT.
5. THE MOST COMMON 5,000 FOR 99.2 PERCENT.

"EVIDENCE HAS ALREADY SHOWN THAT THE HIGH FREQUENCY VOCABULARY IN CHILDREN'S AND IN ADULT WRITING IS VERY SIMILAR . . . LOCAL DISTRICTS CAN BETTER EMPLOY STAFF TIME IN OTHER WAYS THAN IN ATTEMPTING TO DEVELOP A LOCAL LIST OF SPELLING WORDS TO BE LEARNED."

(THOMAS HORN, 1969)

SCHOOLS WOULD BE AHEAD IF THEY DEVELOPED A SPELLING PROGRAM AROUND A CORE OF WORDS THE PUPILS WERE MOST LIKELY TO USE OR NEED IN THE FUTURE.

WORD MEANINGS

RESEARCH SUPPORTS:

1. IN ORDER TO LEARN TO SPELL, IT IS NOT NECESSARY FOR CHILDREN TO LEARN THE MEANING OF THE MAJORITY OF THEIR SPELLING WORDS.

COMMENTARY:

MEANING OF WORDS

SHOULD THE CHILDREN SPEND TIME ON THE MEANINGS OF SPELLING WORDS?

STUDY SHOWED VERY LITTLE, IF ANY, CORRELATION BETWEEN SPELLING ABILITY AND KNOWLEDGE OF MEANINGS OF WORDS.

(PAUL MCKEE, 1924)

ERNEST HORN HAS STATED THAT SINCE MOST CHILDREN KNOW THE MEANINGS OF MOST OF THE WORDS (FROM READING OR OTHER AREAS) BEFORE THEY ARE PRESENTED AS SPELLING WORDS, THERE IS LITTLE, IF ANY, VALUE IN SPENDING TIME ON WORD MEANING IN SPELLING CLASS.

LIST FORM OF WORD PRESENTATION

RESEARCH SUPPORTS:

1. INITIAL PRESENTATION OF SPELLING WORDS IN LIST FORM IS A MORE SUCCESSFUL METHOD THAN INITIAL PRESENTATION OF SPELLING WORDS IN A SENTENCE, PHRASE, OR PARAGRAPH FORM.

COMMENTARY:

"THE COLUMN METHOD OF PRESENTATION IS THE MOST EFFICIENT METHOD."
(THOMAS HORN, 1952)

"IT IS MORE EFFICIENT TO PRESENT WORDS IN COLUMNS THAN IN CONTEXT, EXCEPT THAT CONTEXT MAY BE USED OCCASIONALLY TO ENCOURAGE CHILDREN TO DO A CERTAIN TYPE OF WRITING."
(ERNEST HORN, 1963)

IT IS RECOMMENDED THAT SPELLING BE TAUGHT AS SPELLING AND WORDS TO BE LEARNED IN LIST OR COLUMN FASHION.

THE PRESENTING IN LIST FORM HAS THE ADVANTAGE IN THAT IT FOCUSES SPECIFIC ATTENTION UPON EACH AND EVERY WORD AS A SEPARATE PROBLEM.

SYLLABICATION

RESEARCH SUPPORTS:

1. THE PRESENTATION OF WORDS IN SYLLABIFIED FORM HAS NO ADVANTAGE OVER THE METHOD OF WHOLE WORD PRESENTATION.
2. LEARNING WORDS BY THE WHOLE WORD METHOD IS A BETTER TECHNIQUE THAN LEARNING WORDS BY SYLLABLES.

COMMENTARY:

FOUR CONCLUSIONS

1. NO ADVANTAGE IN SYLLABIFICATION.
2. NO GENERALIZED GROUP GIVEN ADVANTAGE BY SYLLABIFICATION.
3. NO ADVANTAGE IN SYLLABIFYING TO EITHER SUPERIOR OR INFERIOR LEARNING.
4. FOR WORDS WHICH, IF SYLLABIFIED, MAY CAUSE SPELLING ERRORS, THERE WAS A DISADVANTAGE IN THE SYLLABIFIED FORM.

CORRECTED TEST PROCEDURE

RESEARCH SUPPORTS:

1. THE CHILD'S CORRECTING HIS OWN SPELLING TEST, UNDER THE DIRECTION OF THE TEACHER, IS THE SINGLE MOST IMPORTANT FACTOR IN LEARNING TO SPELL.

COMMENTARY:

1. THE CORRECTED TEST ALONE CONTRIBUTES 90-95 PERCENT OF THE ACHIEVEMENT THAT COMES FROM PRONUNCIATION, CORRECTED TEST, AND STUDY.
2. THE CORRECTED TEST ALONE IS SUFFICIENT FOR MASTERY OR NEAR-MASTERY OF MOST WORD LISTS BY THE UPPER 1/3 OF THE CLASS.
3. THE CORRECTED TEST APPEARS TO BE THE SINGLE MOST IMPORTANT FACTOR CONTRIBUTING TO SPELLING ACHIEVEMENT.

(THOMAS HORN, 1946)

TO MAKE THE CORRECTED TEST A VITAL EXPERIENCE

1. EACH PUPIL SHOULD UNDERSTAND THAT THE TEST SHOWS WHICH WORDS NEED TO BE STUDIED.
2. EACH PUPIL SHOULD BE CONVINCED THAT MANY NEW WORDS CAN BE LEARNED IN THE CORRECTION PROCESS.
3. PUPILS SHOULD CORRECT THEIR OWN TESTS.
4. TIME FOR STUDY SHOULD BE ALLOWED AS SOON AS POSSIBLE, PREFERABLY RIGHT AFTER THE CORRECTION.

5. THE TEACHER SHOULD GIVE IMMEDIATE HELP TO THOSE WHO HAVE MISSED MANY WORDS.
6. FINAL TEST SCORES SHOULD BE COMPARED TO FIRST TEST SCORES TO SEE PROGRESS.

(ERNEST HORN, 1963)

THE CORRECTED TEST IS A HAPPY INSTANCE WHERE GROUP INSTRUCTION AND ADJUSTMENTS TO INDIVIDUAL DIFFERENCES ARE COMBINED.

THE TESTS ARE GIVEN AND CORRECTED IN A GROUP, BUT INDIVIDUAL PUPILS ARE CONCERNED ONLY WITH THEIR OWN SPECIAL NEEDS.

(ERNEST HORN, 1963)

IT IS STRONGLY RECOMMENDED THAT SCHOOLS DEVELOP A CLEAR PERCEPTION OF WHAT THE CORRECTED TEST IS, AND ACTIVELY SEEK TO IMPLEMENT THE TECHNIQUE WITHIN THE SPELLING PROGRAM.

WHAT SELF-CORRECTION DOES FOR THE STUDENT

1. IT PROVIDES HIM/HER WITH AN IMMEDIATE OPPORTUNITY TO SEE WHAT WORDS CAUSE HIM/HER DIFFICULTY.
2. IT ALLOWS HIM/HER TO SEE THE PART OF THE WORD THAT CAUSED HIM/HER DIFFICULTY.
3. HE/SHE CAN IMMEDIATELY SET ABOUT TO CORRECT ANY ERRORS HE/SHE MAY HAVE MADE.
4. THE PROCEDURE CALLS THE STUDENT'S ATTENTION TO HOW CRITICAL HIS/HER OWN PERCEPTIONS CONCERNING SELF IMPROVEMENT ARE TO THE LEARNING PROCESS.

TEST-STUDY-TEST PROCEDURE

RESEARCH SUPPORTS:

1. THE TEST-STUDY METHOD IS SUPERIOR TO THE STUDY-TEST METHOD WHEN WORKING WITH MOST SPELLERS.
2. FOR THE MAJORITY OF CHILDREN, STUDYING SPELLING WORDS BEFORE A PRE-TEST IS A QUESTIONABLE PROCEDURE.

COMMENTARY:

1. TEST-STUDY METHOD BEST FOR BRIGHT STUDENTS IN ALL GRADES.
2. TEST-STUDY METHOD BEST FOR AVERAGE STUDENTS FROM THE MIDDLE OF GRADE 3, ON.
3. TEST-STUDY METHOD BEST FOR SLOW STUDENTS FROM THE BEGINNING OF GRADE 5, ON.
4. STUDY-TEST METHOD SHOULD BE USED IN ALL CASES NOT COVERED BY THE ABOVE.

(A. J. GATES, 1931)

BECAUSE SPELLING PROBLEMS ARE INDIVIDUAL TO THE CHILD, TEST-STUDY METHOD SHOULD BE USED, EXCEPT IN VERY EARLY GRADES WHEN CHILDREN ARE ABLE TO SPELL FEW, IF ANY, WORDS.

"THIS LAG BETWEEN WHAT IS KNOWN AND WHAT IS DONE IN SPELLING INSTRUCTION IS DISCOURAGING."

(ERNEST HORN, 1960)

"FINDING OUT WHAT A LEARNER ALREADY KNOWS BEFORE TEACHING IS A TEACHING PRINCIPLE THAT IS MANY YEARS OLD--IN ALL SUBJECT AREAS, NOT JUST SPELLING."

(WALTER PETTY, 1969)

FOR THE MAJORITY OF GRADES IN THE ELEMENTARY SCHOOL, THE TEACHERS ARE ADVISED TO UTILIZE THE TEST-STUDY-TEST APPROACH TO SPELLING INSTRUCTION.

THE PUPIL'S LEARNING SHOULD BE DIRECTED TOWARD THOSE WORDS WITH WHICH HE HAS DEMONSTRATED TROUBLE.

THE STUDY PERIOD SHOULD CONCENTRATE ON EACH CHILD'S DIFFICULT WORDS.

WRITING WORDS MISSED

RESEARCH SUPPORTS:

1. MERELY WRITING WORDS SEVERAL TIMES DOES NOT INSURE SPELLING RETENTION.

COMMENTARY:

"THE PRACTICE OF HAVING A CHILD COPY A WORD FIVE TIMES, OR TEN TIMES, ENCOURAGES POOR HABITS AND ATTITUDES."

(GREENE AND PETTY, 1968)

PLACE LESS RELIANCE ON HAVING THE CHILD WRITE EACH WORD SEVERAL TIMES.

PLACE MORE EMPHASIS ON SYSTEMATIC RECALL OF THE WORDS.

1. LOOK AT THE WORD AND SAY IT.
2. COVER THE WORD WITH YOUR HAND AND TRY TO REPRODUCE IT EXACTLY AS YOU SEE IT IN THE BOOK.
3. UNCOVER THE WORD AND CHECK THE WORD TO SEE IF YOU SPELLED IT CORRECTLY.
4. LOOK AT THE WORD AGAIN AND PRONOUNCE IT CORRECTLY. COVER THE WORD AND WRITE IT AGAIN.
5. LOOK AGAIN TO SEE IF YOU HAVE THE WORD SPELLED CORRECTLY.
6. TRY TO WRITE THE WORD A COUPLE OF TIMES, EACH TIME COVERING THE PREVIOUS SPELLING. IF YOU MAKE NO MISTAKES, GO ON THE NEXT WORD YOU NEED TO STUDY.

SPELLING RULES

RESEARCH SUPPORTS:

1. TEACHING PUPILS ONLY THOSE RULES THAT APPLY 80 PERCENT OR MORE OF THE TIME.

COMMENTARY:

"TEACH ONLY RULES THAT APPLY TO A LARGE NUMBER OF WORDS AND HAVE FEW EXCEPTIONS.

- A. ADDING SUFFIXES (CHANGING Y TO I; DROPPING FINAL SILENT E; DOUBLING THE FINAL CONSONANT.
- B. THE LETTER Q IS FOLLOWED BY U IN COMMON ENGLISH WORDS.
- C. ENGLISH WORDS DO NOT END IN V.
- D. PROPER NOUNS AND ADJECTIVES FORMED FROM PROPER NOUNS SHOULD BEGIN WITH A CAPITAL LETTER."

(ERNEST HORN, 1960)

OTHER RULES WITH FEW EXCEPTIONS:

- A. RULES FOR THE USE OF PERIODS IN WRITING ABBREVIATIONS.
- B. THE CORRECT USE OF THE APOSTROPHE TO SHOW POSSESSION.
- C. THE OMISSION OF LETTERS IN CONTRACTIONS.

"ONE MUST SHOW THAT A RULE (CONCERNING SOUND-TO-LETTER RELATIONSHIPS) CAN BE EASILY TAUGHT, THAT IT WILL BE REMEMBERED, AND THAT IT WILL FUNCTION IN THE STRESS OF ACTUAL SPELLING."

(ERNEST HORN, 1919)

"RULES SHOULD BE TREATED WITH CAUTION,"

(SARTORIUS, 1931)

"IT WOULD BE VERY HARD FOR CHILDREN TO LEARN TO APPLY THE MANY, COMPLICATED RULES NECESSARY FOR COMPREHENSIVE SPELLING ABILITY."

(KING, 1932)

PHONICS AND SPELLING

RESEARCH SUPPORTS:

1. THE UTILIZATION OF PHONIC RULES, FOR MOST WORDS, IS A QUESTIONABLE INSTRUCTIONAL PROCEDURE.

COMMENTARY:

"THERE SEEMS NO ESCAPE FROM THE DIRECT TEACHING OF THE LARGE NUMBER OF COMMON WORDS WHICH DO NOT CONFORM IN THEIR SPELLING TO ANY PHONETIC OR ORTHOGRAPHIC RULE."

(ERNEST HORN, 1957)

LIMITATIONS TO PHONETIC GENERALIZATIONS

1. 1/3 OF THE WORDS IN A PRONOUNCING DICTIONARY OF AMERICAN USAGE HAVE MORE THAN ONE ACCEPTABLE PRONUNCIATION.
2. MANY DIFFERENT SPELLINGS CAN BE GIVEN MOST SOUNDS.
3. A MAJORITY OF WORDS CONTAIN SILENT LETTERS. ABOUT 1/6 HAVE DOUBLE LETTERS.
4. RESPONSES BECOME UNCERTAIN WHEN MORE THAN ONE REASONABLE CHOICE IS AVAILABLE.
5. UNSTRESSED SYLLABLES CHARACTERIZED BY THE SCHWA OR SHORT I SOUND ARE VERY HARD TO SPELL BY SOUND.
6. ANY SPELLING RULE CAN BE USED CORRECTLY OR INCORRECTLY.
7. THE VALUE OF RELATING SOUNDS TO SYMBOLS SHOULD BE UTILIZED AS AN AID TO SPELLING RATHER THAN AS A SUBSTITUTE FOR THE DIRECT STUDY OF WORDS.

(ERNEST HORN, 1960)

MORE EVIDENCE IS NEEDED.

"NO EVIDENCE HAS BEEN REPORTED CONCERNING THE EFFECTIVENESS IN ACTUAL CLASSROOM OF WORD SELECTION BASED UPON LINGUISTIC PRINCIPLES."

(THOMAS HORN, 1969)

TIME ALLOTMENT

RESEARCH SUPPORTS:

1. TIME ALLOTTED FOR THE STUDY OF SPELLING SHOULD BE APPROXIMATELY 60 TO 75 MINUTES PER WEEK.
2. IN GENERAL, THE MORE TIME SPENT ON SPELLING ACTIVITIES WILL NOT GUARANTEE MORE LEARNING.
3. TIME ALLOTMENT FOR SPELLING SHOULD NOT VARY ACCORDING TO CHILD'S NEED.

COMMENTARY:

"TIME ALLOTTED FOR THE STUDY OF SPELLING IN EXCESS OF 60 MINUTES PER WEEK MAY BE SPENT MORE ADVANTAGEOUSLY IN OTHER AREAS."

(THOMAS HORN, 1969)

"WHAT IS NEEDED IS NOT MORE TIME, BUT SPIRITED, EFFICIENT USE OF INSTRUCTIONAL PROCEDURES."

(ERNEST HORN, 1960)

INCREASING TIME ALLOTMENT WILL NOT AUTOMATICALLY RAISE SPELLING ACHIEVEMENT. IN MOST SITUATIONS, A WEEKLY SPELLING ALLOTMENT OF 60 TO 75 MINUTES IS SUFFICIENT.

(SPIRITED LESSONS WITH EFFICIENT RECALL TECHNIQUES ARE THE KEYS TO IMPROVED SPELLING.)

MARKING HARD SPOTS

RESEARCH SUPPORTS:

1. IT IS NOT HELPFUL TO HAVE CHILDREN LOOK AT "HARD SPOTS" IN A WORD TO IMPROVE SPELLING ABILITY.

COMMENTARY:

"AFTER A STUDY OF OVER 4,000 PUPILS IN GRADES FOUR, FIVE, AND EIGHT INVOLVING A HALF-MILLION SPELLINGS, ONE IS IMPRESSED WITH THE CONSISTENCY WITH WHICH THE DATA SHOW THAT MARKING HARD SPOTS IS OF LITTLE OR NO VALUE."

"PEOPLE WHO ADVOCATE MARKING THE HARD SPOTS ARE NOT ONLY SUGGESTING A USELESS DEVICE, BUT POSSIBLY A HARMFUL ONE."
(L. S. TIREMAN, 1927)

OTHER STUDIES SUPPORT THIS CONCLUSION:

MASTERS - 1927
MENDENHALL - 1930
ROSEMEIER - 1965

RESEARCH HAS CONSISTENTLY SHOWN THE PRACTICE OF CALLING ATTENTION TO "HARD SPOTS" WITHIN WORDS TO BE OF LITTLE VALUE.

IT IS IMPORTANT TO REALIZE THAT CHILDREN LEARN WORDS AS WHOLE UNITS AND NOT AS INDIVIDUAL PARTS.

SPELLING GAMES

RESEARCH SUPPORTS:

1. THE MAJOR CONTRIBUTION OF SPELLING GAMES IS THE STIMULATION OF PUPIL INTEREST.

COMMENTARY:

SPELLING GAMES MAY BE OF SOME BENEFIT. THEY SHOULD SUPPLEMENT RATHER THAN SUPLANT SYSTEMATIC INSTRUCTION.

SUPPLEMENTARY PRACTICES SHOULD BE MEANINGFUL. TOO OFTEN THEY ARE NOT.

(JAMES FITZGERALD, 1951)

(ERNEST HORN, 1960)

(THOMAS HORN, 1969)

WHAT ABOUT CONTEMPORARY SPELLING PROGRAMS AND WORKBOOKS?

RESEARCH SUPPORTS:

1. TO BE USED TO THE BEST ADVANTAGE TO THE CHILDREN, PRESENT SPELLING WORKBOOKS SHOULD NOT BE FOLLOWED EXACTLY AS THEY ARE SET UP.
2. PROVISION SHOULD BE MADE WITHIN A SPELLING PROGRAM FOR THE SYSTEMATIC REVIEW OF SPELLING WORDS.

COMMENTARY:

- A. RECOGNIZE THAT CONTEMPORARY SPELLING PROGRAMS GENERALLY FOLLOW ONE OF TWO APPROACHES.
 1. USE OF A PREDETERMINED LIST OF FREQUENTLY WRITTEN WORDS; STRESSES THE FORMATION OF PERCEPTUAL IMAGES, ALONG WITH POSITIVE REINFORCEMENT AND PROPER STUDY HABITS.
 2. MUCH MORE PRIORITY ON SOUND AND LETTER ASSOCIATIONS; GREATER EMPHASIS ON PHONICS AND PHONETICS; UTILIZATION OF SOUND-LETTER RULES; GROUPING WORDS IN PHONEMIC FAMILIES; STRESSES WORDS WHICH EXHIBIT ACCURATE PHONEME-GRAPHEME RELATIONSHIPS.
- B. RECOGNIZE THAT TREMENDOUS VARIABILITY EXISTS BETWEEN THE POPULAR SERIES AVAILABLE TO SCHOOLS. (THESE DIFFERENCES ARE DUE CHIEFLY TO THE FAILURE OF PUBLISHERS TO INSIST THAT AVAILABLE EVIDENCE BE FOLLOWED.)

SOME OF THE MORE COMMON DIFFERENCES CENTER AROUND THE FOLLOWING:

1. METHOD OF PRESENTING WORDS
2. PROCEDURES SUGGESTED FOR WORD STUDY
3. EMPHASIS UPON PHONICS
4. RELATIONSHIP OF SPELLING TO READING AND HANDWRITING.
5. USE OF RULES FOR SPELLING.
6. SELECTION OF WORDS TO BE LEARNED.

7. GRADING OF WORDS (LEVEL OR GRADE)
8. INDICATION OF WORD DIFFICULTY
9. PLACEMENT OR GROUPING OF WORDS FOR INSTRUCTION
10. METHOD OF SHOWING SPELLING GROWTH
11. PROCEDURES FOR DIAGNOSING SPELLING DEFICIENCIES
12. STANDARDIZED NORMS FOR EVALUATION
13. SENSORY MODES EMPLOYED (ORAL, VISUAL, HAPTIC, KINESTHETIC)
14. QUALITY OF TEACHER MANUAL WHICH ACCOMPANIES THE SERIES

A GOOD SPELLING PROGRAM

COMMENTARY:

- A. EDUCATORS CAN PROFIT BY ASSESSING THEIR PROCEDURES, PRACTICES, AND METHODS.

THE FOLLOWING SHOULD BE INCLUDED IN EVERY GOOD SPELLING PROGRAM:

1. THE WORDS STUDIED SHOULD BE SELECTED FOR FREQUENCY OF USE AND SOCIAL UTILITY.
 - * IMMEDIATE AND PERMANENT VALUE
 - * FOR MOST SCHOOLS, 3,000-5,000 WORDS
 - * HIGH ABILITY SCHOOLS MIGHT CONCENTRATE ON THE HIGH FREQUENCY WORDS WITH DEMONSTRATED PERSISTENT DIFFICULTIES
 - * CONSULT WORD LISTS SUCH AS HORN, RINSLAND, FITZGERALD, NEW IOWA SPELLING SCALE
2. WHERE SHOULD A WORD BE PLACED?
 - * NEED
 - * DIFFICULTY OF THE WORD

- * PHONETIC DIFFICULTY WITHIN THE WORD
 - * CONSULT THE NEW IOWA SPELLING SCALE
 - * THE DEVELOPED PROGRAM OF SPELLING MUST RELATE TO TWO MAJOR CONCERNS:
 1. MAINTAINANCE OF SPELLING ABILITY
 2. GROWTH OF SPELLING ABILITY
3. THE SELF-CORRECTED TEST HAS BEEN FOUND TO BE THE SINGLE MOST WORTHWHILE LEARNING ACTIVITY (PER UNIT OF TIME) YET TO BE DEvised. IT IS CLEARLY APPROPRIATE FOR ALL AGES AND ABILITIES.
 4. A SYSTEMATIC APPROACH TO THE STUDY OF EACH WORD IS PARAMOUNT FOR GOOD LEARNING. THIS INVOLVES:
 - * PRONUNCIATION AND VISUAL IMAGERY
 - * IMMEDIATE REPRODUCTION OF WORD
 - * REINFORCEMENT BY IMMEDIATE SELF CORRECTION
 - * SYSTEMATIC RECALL OF WORDS
 (FREQUENT OPPORTUNITY TO USE SPELLING WORDS IN WORK CONTRIBUTES GREATLY TO THE MAINTAINANCE OF SPELLING ABILITY.)
 5. A GOOD CRISP SPELLING PROGRAM OF BETWEEN 60 AND 75 MINUTES PER WEEK SHOULD BE SUFFICIENT TO BOTH MAINTAIN AND IMPROVE SPELLING ABILITY.
 6. UTILIZATION OF A PRE-TEST IS A MUST. (THE PRE-TEST COUPLED WITH THE CHILD'S CORRECTING HIS OWN SPELLING TEST IS THE SINGLE MOST IMPORTANT FACTOR LEADING TO SPELLING GROWTH.)
 7. THE CHILD'S ATTENTION SHOULD BE DIRECTED TO EACH WORD AS A TOTAL WORD. LITTLE GAIN OCCURS BY BREAKING IT INTO SYLLABLES.
 8. THERE ARE VERY FEW RULES THAT WILL PROVIDE THE STUDENT WITH CONCRETE SPELLING DIRECTION. EMPHASIS MUST BE ON TEACHING THE CHILD TO LEARN THE WAYS THAT WORDS ARE SPELLED AND NOT DEPEND UPON ANY ONE APPROACH OR WAY TO SPELL A SPEECH SOUND.
 9. SCHOOLS SHOULD SYSTEMATICALLY AND PERIODICALLY ESTABLISH INVENTORY LISTS TO MEASURE BOTH GROUP AND INDIVIDUAL IMPROVEMENT.

- * BEGINNING OF YEAR, MIDDLE OF YEAR, AND END OF YEAR INVENTORIES
- * STUDENT PROGRESS THOROUGHLY CHARTED
- * EMPHASIS ON TESTING DIRECTED TOWARD PROPER TESTING
- * INVENTORY TESTS SHOULD BE ESTABLISHED OVER THE SPECIFICALLY STATED SPELLING PROGRAM -- STANDARDIZED TESTS THEN GIVE ADDITIONAL INFORMATION
- * THE DEVELOPED TESTING PROGRAM SHOULD ANSWER TWO QUESTIONS:
 1. HOW WELL IS OUR SPELLING PROGRAM MAINTAINING SPELLING ABILITY?
 2. HOW WELL IS OUR SPELLING PROGRAM PROVIDING FOR ADDITIONAL SPELLING GROWTH?

B. PUPIL INTEREST IS CRUCIAL TO SPELLING IMPROVEMENT. THE DEVELOPMENT OF A POSITIVE ATTITUDE TOWARD SPELLING IMPROVEMENT IS THE KEY TO IMPROVEMENT.

- * THE REPLACEMENT OF A POSITIVE ATTITUDE BY LETTER GRADES OR COMPETITION WITH OTHERS DETRACTS FROM GENUINE SPELLING GROWTH.

THE ROLE OF LEARNING IN A SPELLING PROGRAM

RESEARCH SUPPORTS:

1. A CHILD'S INTEREST IN LEARNING TO SPELL IS FAR MORE IMPORTANT THAN REWARDS HE MIGHT RECEIVE FOR ACHIEVEMENT IN SPELLING.
2. CHILDREN SHOULD NOT BE ALLOWED AS MUCH TIME AS THEY REQUIRE TO WRITE A WORD DURING SPELLING LIST DICTATION.

COMMENTARY:

A. THE ROLE OF LEARNING HAS NOT BEEN TOTALLY ESTABLISHED IN MOST SPELLING PROGRAMS.

IN VIEW OF THIS, RESEARCH SUPPORTS THE FOLLOWING RECOMMENDATIONS:

1. UTILIZE WORDS THAT ARE FREQUENTLY NEEDED BY PUPILS.
 2. PROVIDE PROPER VISUAL AND ORAL OPPORTUNITIES TO SEE AND HEAR THE WORD.
 3. IMMEDIATE REINFORCEMENT OF THE WORD THROUGH SELF-CORRECTION IS ESSENTIAL.
 4. PROVIDE SYSTEMATIC REINFORCEMENT OF THE WORDS STUDIED, PREFERABLY IN MANY DIFFERENT SITUATIONS.
 5. PROVIDE MEANINGFUL OPPORTUNITIES FOR SYSTEMATIC RECALL OF THE WORD, MAINLY THROUGH PERIODIC ASSESSMENT AND FUNCTIONAL WRITING.
 6. ACCURATE SPELLING ABILITY IS MOST LIKELY THE RESULT OF "OVER-LEARNING" WHICH FIXES THE WORD IMAGE IN THE PUPIL'S MIND.
- B. ORAL SPELLING LESSONS SHOULD NOT OCCUR VERY OFTEN.
- SPELLING ABILITY IS DEFINED AS THE ABILITY TO WRITE THE WORD RATHER THAN TO SPELL IT ALOUD.

TESTING

A SCHOOL'S TESTING PROGRAM SHOULD BE COMPREHENSIVE. THE PROGRAM SHOULD INCLUDE

TEACHER-MADE TESTS

INVENTORY TESTS

STANDARDIZED TESTS

USE OF INVENTORY TESTS IS DEFINITELY RECOMMENDED.

- * DURING 1ST OR 2ND WEEK OF SCHOOL
- * INVENTORY TEST OF ABOUT 50 WORDS

- * WORDS SAMPLED FROM THOSE TO BE STUDIED FIRST SEMESTER
- * WILL BE INDICATOR OF GROWTH
- * WILL PROVIDE BASIS FOR SPECIAL PROGRAMS FOR HIGH- OR LOW-ACHIEVERS.
- * ALLOWS PUPILS TO SEE GROWTH
- * REPEAT PROCESS FOR 2ND SEMESTER

CONSTANT ATTENTION TO REVIEWING THOSE WORDS WITH KNOWN DIFFICULTY WILL ENHANCE SPELLING ABILITY.

- * INVENTORY TESTS
- * STANDARDIZED TESTS
- * NEW IOWA SPELLING SCALE

STUDENT RECORD KEEPING AND HELPING THE POOR SPELLER

A STUDENT-KEPT RECORD OF WORDS MOST LIKELY TO BE MISSPELLED IS HELPFUL.

- * REINFORCER OF OWN SPELLING NEEDS
- * HIGHLIGHTS DEVELOPMENT OF RESPONSIBILITY TOWARD GROWTH

HELPING STUDENTS WHO APPEAR TO BE LOW IN SPELLING ABILITY DESERVES SPECIAL RECOGNITION.

IMMEDIATE AND CAREFUL REMEDIATION OF THE PROBLEM IS IMPERATIVE.

FIRST ISOLATE THE CAUSE:

- * LACK OF INTEREST
- * POOR PROOFREADING SKILLS
- * LITTLE WRITING ABILITY

- * NO DIRECTION CONCERNING WHAT WORDS NEED ADDITIONAL STUDY
- * DAWDLING
- * NO METHOD OF ATTACKING A WORD
- * IMPROPER USE OF THE SELF-CORRECTION TECHNIQUE

FACTORS IMPORTANT TO STUDENT ATTITUDE

- * THE TEACHER'S POSITIVE ATTITUDE TOWARD SPELLING
- * SPELLING'S BEING PROPERLY EMPHASIZED IN THE TOTAL CURRICULUM
- * SPECIFIC STANDARDS FOR PROOFREADING, NEATNESS, AND SPELLING APPLICATION
- * SPELLING KEPT IN PROPER PERSPECTIVE IN THE TOTAL COMPOSITION PROGRAM, ESPECIALLY IN THE CREATIVE WRITING EXPERIENCES
- * PROVISION MADE FOR DAILY SPELLING INSTRUCTION

METHOD OF WORD STUDY

RESEARCH SUPPORTS:

1. WHATEVER THE METHOD OF STUDY EMPLOYED, A SYSTEMATIC APPROACH TO STUDYING SPELLING WORDS IS PREFERABLE TO THE LACK OF A DEFINITE METHOD OF STUDY.
2. CHILDREN SHOULD NOT DEVISE THEIR OWN INDIVIDUAL METHOD BY WHICH THEY STUDY EACH WORD.

COMMENTARY:

"IN ANY PLAN OF STUDY, IT IS NECESSARY TO TEACH A VALID AND EFFICIENT METHOD OF LEARNING TO SPELL A WORD."

(SR. M.G. BLANCHARD, 1944)

"MANY CHILDREN HAVE TROUBLE WITH SPELLING BECAUSE THEY HAVE NEVER DEVELOPED A SYSTEMATIC TECHNIQUE FOR APPROACHING THE MASTERY OF NEW WORDS. POOR SPELLERS OFTEN TRY SOMETHING DIFFERENT EACH TIME THEY ARE CALLED ON TO TRY TO MASTER A NEW LIST."

(HAL D. FUNK, 1972)

THE BEST PROCEDURE IS THE SPELLING PROGRAM WHICH PROVIDES THE CHILD WITH A SYSTEMATIC APPROACH (STEPS) TO SPELLING IMPROVEMENT.

THE FOLLOWING IS RECOMMENDED:

SUGGESTED PROCEDURE FOR WORD STUDY

1. LOOK AT THE MODEL.
2. COVER THE MODEL AND WRITE THE WORD.
3. CHECK THE WORD AGAINST THE MODEL.
4. IF NOT CORRECT, REPEAT 1, 2, AND 3.
5. IF CORRECT, COVER THE WORD AND THE MODEL AND WRITE THE WORD AGAIN.
6. REPEAT THIS PROCEDURE FOUR OR FIVE TIMES FOR EACH WORD TO BE STUDIED.

TEACHER'S GUIDE TO CLASSROOM PRACTICE

AS AN ELEMENTARY TEACHER I:

, , , SCHEDULE MY SPELLING PERIODS SO THAT THE CHILDREN RECEIVE 60 TO 75 MINUTES OF INSTRUCTION PER WEEK,

, , , DO NOT HAVE PUPILS STUDY THEIR SPELLING WORDS IN SENTENCE OR PARAGRAPH FORM

, , , REFRAIN FROM HAVING CHILDREN LEARN MANY PHONIC RULES

, , , HAVE EACH CHILD CORRECT HIS OWN SPELLING TEST

, , , DO NOT TEACH SPELLING WORDS IN SYLLABIFIED FORM AS OPPOSED TO THE WHOLE WORD METHOD

, , , REFRAIN FROM TEACHING THE MEANINGS OF MOST WEEKLY SPELLING WORDS

, , , USE SPELLING GAMES TO SUPPLEMENT DIRECT INSTRUCTION IN LEARNING TO SPELL

, , , DO NOT HAVE CHILDREN LEARN MANY PHONIC RULES IN ORDER TO BECOME BETTER SPELLERS

, , , TEACH THE WORDS OF GREATEST-FREQUENCY IN CHILD AND ADULT WRITING

, , , DO NOT CALL THE CHILDREN'S ATTENTION TO "HARD SPOTS" IN SPELLING WORDS

, , , MAKE PROVISION FOR REVIEW WORDS, EVEN IN AN INDIVIDUALIZED APPROACH TO SPELLING

, , , EXPECT MY BEST READERS TO BE MY BEST SPELLERS

, , , DO NOT ALLOW MY STUDENTS ALL THE TIME THEY NEED FOR COMPLETING THE SPELLING EXERCISES

- . . . DO NOT STRESS EXTRINSIC INCENTIVES IN LEARNING TO SPELL
- . . . DO NOT HAVE THE MAJORITY OF PUPILS STUDY THE SPELLING WORDS BEFORE TAKING THEIR FIRST WEEKLY SPELLING TESTS
- . . . HAVE PUPILS STUDY THEIR SPELLING WORDS IN A LIST OR COLUMN FORM
- . . . DO NOT SCHEDULE MY SPELLING PERIODS ACCORDING TO THE CHILD'S NEEDS
- . . . DO NOT EXPECT MOST CHILDREN TO COMPLETE ALL THE EXERCISES IN THE SPELLING BOOK
- . . . DO NOT GIVE EACH CHILD AS MUCH TIME AS HE REQUIRES TO WRITE EACH WORD IN THE SPELLING TEST
- . . . STRESS ONE METHOD OF STUDYING WORDS
- . . . ALLOW MY STUDENTS TO ADD WORDS TO THEIR OWN SPELLING LISTS, BUT EXPECT THEM TO KNOW A CERTAIN CORE OF WORDS
- . . . ADMINISTER A SPELLING PRE-TEST BEFORE THE MAJORITY OF PUPILS HAVE HAD AN OPPORTUNITY TO STUDY THE WORDS FOR THE WEEK
- . . . REFRAIN FROM USING SPELLING WORDS DERIVED FROM OTHER CURRICULAR AREAS
- . . . DO NOT HAVE CHILDREN CORRECT MISSPELLED WORDS BY WRITING THEM SEVERAL TIMES EACH
- . . . DO NOT HAVE CHILDREN WRITE SPELLING WORDS IN THE AIR AS A MEANS OF STUDYING A WORD
- . . . TEACH THE SPELLING WORDS BY THE WHOLE WORD METHOD AS OPPOSED TO THE METHOD OF LEARNING WORDS BY SYLLABLES
- . . . DO NOT HAVE EACH CHILD DEVELOP HIS OWN METHOD BY WHICH HE LEARNS TO SPELL WORDS

CITED REFERENCES

- BLANCHARD, SR. M. GERVASE, "AN EXPERIMENTAL COMPARISON OF THE TEST-STUDY AND THE STUDY-TEST METHODS OF TEACHING SPELLING IN THE EIGHTH GRADE." UNPUBLISHED MASTER'S THESIS, FORDHAM UNIVERSITY, NEW YORK, 1944.
- CAMPANALE, E.A., "SURVEY OF METHODS IN THE TEACHING OF SPELLING." ELEMENTARY ENGLISH, VOL. 39, MAY, 1962.
- FITZGERALD, J.A., THE TEACHING OF SPELLING. MILWAUKEE: BRUCE PUBLISHING COMPANY, 1951.
- FUNK, HAL D., "IMPROVING THE SPELLING PROGRAM." PEABODY JOURNAL OF EDUCATION, VOL. 49, NO. 4, JULY, 1972, PP. 285-289.
- GATES, A.I., "AN EXPERIMENTAL COMPARISON OF THE STUDY-TEST AND TEST-STUDY METHODS IN SPELLING." JOURNAL OF EDUCATIONAL PSYCHOLOGY, VOL. 22, NO. 1, JUNE, 1931.
- HORN, E., "PRINCIPLES OF METHODS IN TEACHING SPELLING AS DERIVED FROM SCIENTIFIC INVESTIGATION." EIGHTEENTH YEARBOOK OF NATIONAL SOCIETY FOR THE STUDY OF EDUCATION, PART II, BLOOMINGTON, ILLINOIS, FEBRUARY, 1919.
- HORN, E., "RESEARCH IN SPELLING." THE ELEMENTARY ENGLISH REVIEW, VOL. 21, JANUARY, 1944.
- HORN, E., "PHONETICS AND SPELLING." ELEMENTARY SCHOOL JOURNAL, VOL. 57, MAY, 1957.
- HORN, E., "SPELLING." ENCYCLOPEDIA OF EDUCATIONAL RESEARCH, (3RD ED.) NEW YORK: MACMILLAN, 1960.
- HORN, E., TEACHING SPELLING: WHAT RESEARCH SAYS TO THE TEACHER, DEPARTMENT OF CLASSROOM TEACHERS, AMERICAN EDUCATIONAL RESEARCH ASSOCIATION OF THE NATIONAL EDUCATION ASSOCIATION, NOVEMBER, 1963.

- HORN, E., TEACHING SPELLING: WHAT RESEARCH SAYS TO THE TEACHER. DEPARTMENT OF CLASSROOM TEACHERS, AMERICAN EDUCATIONAL RESEARCH ASSOCIATION OF THE NATIONAL EDUCATION ASSOCIATION, NOVEMBER, 1967.
- HORN, T., "THE EFFECT OF THE CORRECTED TEST ON LEARNING TO SPELL." UNPUBLISHED MASTER'S THESIS, UNIVERSITY OF IOWA, IOWA CITY, 1946.
- HORN, T., "THAT STRAW MAN: THE SPELLING LIST." ELEMENTARY ENGLISH, VOL. 29, MAY, 1952.
- HORN, T., "RESEARCH CRITIQUES." ELEMENTARY ENGLISH, VOL. 46, FEBRUARY, 1969. (A)
- HORN, T., "SPELLING." ENCYCLOPEDIA OF EDUCATIONAL RESEARCH. (4TH ED.) NEW YORK: MACMILLAN, 1969. (B)
- KING, L.M., "LEARNING AND APPLYING SPELLING RULES IN GRADES THREE TO EIGHT." TEACHERS COLLEGE, COLUMBIA UNIVERSITY, NEW YORK, 1923.
- MASTERS, H., "A STUDY OF SPELLING ERRORS." UNPUBLISHED MASTER'S THESIS, UNIVERSITY OF IOWA, IOWA CITY, 1927.
- McKEE, P., "TEACHING AND TESTING SPELLING BY COLUMN AND CONTEXT FORMS." UNPUBLISHED DOCTORAL DISSERTATION, UNIVERSITY OF IOWA, IOWA CITY, 1924.
- MENDENHALL, J.E., "AN ANALYSIS OF SPELLING ERRORS: A STUDY OF FACTORS ASSOCIATED WITH WORD DIFFICULTY." TEACHERS COLLEGE, COLUMBIA UNIVERSITY, NEW YORK, 1930.
- PETTY, W. & GREENE, H., DEVELOPING LANGUAGE SKILLS IN THE ELEMENTARY SCHOOLS. (3RD ED.) BOSTON: ALLYN AND BACON, 1968.
- PETTY, W., "THE TEACHING OF SPELLING." BULLETIN OF THE SCHOOL OF EDUCATION, INDIANA UNIVERSITY, BLOOMINGTON, VOL. 45, No. 6, NOVEMBER, 1969.
- ROSEMEIER, R.A., "EFFECTIVENESS OF FOREWARNING ABOUT ERRORS IN RESPONSE--SELECTIVE LEARNING." JOURNAL OF EDUCATIONAL PSYCHOLOGY, VOL. 56, 1965.

SARTORIUS, I.C., "GENERALIZATIONS IN SPELLING," NEW YORK BUREAU OF PUBLICATIONS: TEACHERS COLLEGE, COLUMBIA UNIVERSITY, NEW YORK, 1931.

TIREMAN, L.S., "THE VALUE OF MARKING HARD SPOTS IN SPELLING." UNPUBLISHED MASTER'S THESIS, UNIVERSITY OF IOWA, IOWA CITY, 1927.

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