DOCUMENT RESUME

ED 205 979 CS 206 517

AUTHOR Stetson, Elton G.
TITLE The Effect of Two Contrasting Spelling Approaches on the Achievement of Sixth Graders.
PUB DATE [81]
NOTE 24p.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Achievement; Cognitive Processes; *Comparative Analysis; *Educational Research; Grade 6; Intermediate Grades; *Spelling Instruction; Test Validity; Word Recognition

ABSTRACT

A study was conducted among approximately 1,000 sixth-grade students in 22 classes to examine the effects on achievement of the "Spell Correctly" program (control group) and the "Spell Correctly" supplemented with the Stetson Reading-Spelling Approach (experimental group). The "Spell Correctly" program is characterized by its emphasis on learning spelling rules, the study of word meanings, and careful attention to sound-letter patterns. The Stetson Reading-Spelling Approach is characterized by its "no-rules" philosophy, emphasis on visual-perceptual processing, memory, and the writing of words followed by immediate feedback and self-correction. Results indicated that the experimental group learned significantly more words per week: the control group students learned 3.78 words per week while the experimental group students learned 6.6 words per week. The experimental group also improved significantly in long range spelling retention. However, there was no significant improvement on a standardized achievement test, regardless of the treatment. (HOD)

The Effect of Two Contrasting Spelling Approaches on the Achievement of Sixth Graders

Abstract

A study was conducted among 1,027 sixth graders in 22 classes in the Clark County School District to examine the effects on achievement between students instructed with the Spell Correctly program (Benthul, H., et al) and those whose instruction with Spell Correctly was supplemented with the Stetson Reading-Spelling Approach. Spell Correctly is characterized by its emphasis on learning spelling rules, the study of word meanings, and careful attention to sound-letter patterns. The Stetson Reading-Spelling Approach (SRSA) is characterized by its no-rules approach, emphasis on visual-perceptual processing, memory, and the writing of words followed by immediate feedback and self-correction.

Dependent variables included nine weekly pre- and posttest scores on the units of study, a long range retention test over the nine units, and scores on a standardized spelling test. Results of the study indicated that:

1. The E groups improved significantly over the C groups in weekly spelling over each of the nine weeks, F, (1,20) $=>8.10$ each week; $p<.01$.
2. The E group improved significantly over the C group on the long range retention test, F, (1,20)$= 35.3$; $p<.01$.
3. There were no differences on the standardized achievement test, F, (1,20) $= 5.56$; $p>.01$.

The continued use of programs lacking support from the literature may be highly suspect.

The Effect of Two Contrasting Spelling Approaches on the Achievement of Sixth Graders

Introduction

This article summarizes the results of a study which explored the effects of two totally different spelling approaches on spelling achievement among sixth graders. The two approaches--Spell Correctly (Benthul, et al, 1974) and the Stetson Reading-Spelling Approach (Stetson, 1978; 1981)--represent what most authorities would consider to be opposite views toward spelling.

At the expense of over-simplifying the difference, we suggest that at one end of the continuum are those who shall be described as "traditionalists"; they advocate that spelling is learning phonic rules, grouping words together because of some common linguistic characteristic, studying word meanings, and paying careful attention to sound-letter patterns (Thorndike, 1941; Hanna & Moore, 1953; Hodges and Rudorf, 1965; Madden & Carlson, 1974; Benthul, et al, 1974: Kottmeyer & Claus, 1976).

At the other end of the continuum are the "progressivists" who build their spelling programs on assumptions that spelling involves visual-perceptual processing, memory, and the constant practice of saying words, spelling words, writing

words, receiving immediate feedback, and self-correcting errors (Fitzgerald, 1951, 1953; T. Horn, 1949, 1956, 1969; E. Horn, 1954, 1957, 1960, 1963; Petty, 1969; Hibler, 1957; Montgomery, 1957; Stetson, 1978, 1981). The progressivist is not comfortable with current widely used practices such as learning rules, spelling by sounds, sentence dictation, studying hard spots, and, especially, studying words without the benefit of a pretest.

Purpose of the Study

The purpose of the study was to examine the effects of two dichotomous spelling approaches on spelling achievement. More specifically the study proposed to determine the effects on achievement between sixth grade students instructed with the Spell Correctly textbook program and students whose instruction with Spell Correctly was supplemented with the Stetson Reading-Spelling Approach (SRSA).

Three variations of achievement were analyzed:

1. Weekly spelling achievement
2. Long range spelling retention
3. Achievement as measured on a nationally standardized achievement test

Background

The Spell Correctly Program

The sixth grade Spell Correctly text is a "traditional" basal program containing weekly units of 25 words, each

selected to represent a specific sound pattern (e.g., the sound of /k/ spelled seven different ways). Students begin each unit with teacher directed listening activities and an introduction to the spelling rule for the week. Tuesday activities emphasize word structure, word meaning, and dictionary practice. Wednesday includes a practice test over the 25 words, practice with letter formations, and additional wordknowledge exercises. On Thursday, additional words are introduced along with word knowledge exercises. Friday is devoted to the final word dictation test. These procedures are followed in the same manner for each unit. The only changes are the new words and the accompanying rule for the week.

The Stetson Reading-Spelling Approach (SRSA)

The Stetson Reading-Spelling Approach--the SRSA--was developed initially in 1978 for use in the University of Houston Diagnostic Learning Center with students having reading problems (Stetson, 1978, 1981). SRSA was based on the belief of Fitzgerald (1951) and many his "progressive" colleagues that a simple and logical way to learn how to spell is to (1) look at the word, (2) say the word, (3) close eyes and see the word, (4) cover the word and write it, and (5) check for correct spelling. The process can be repeated until the words are mastered.

The SRSA is very similar. It contains a five-step procedure that can be used to teach words to groups or individuals. The steps are as follows:

Step One - Teacher holds up word, pronounces the word, and directs the class to prounounce word in unison.

Step Two - Teacher pronounces the word again making clear breaks between the word parts or syllables (e.g., c - at; hap - py; rail - road, etc.), and instructs the class to repeat the word in the same manner.

Step Three - Teacher spells the word by its parts, pausing between each part or syllable. Teacher directs students to spell in unison in the same way.

Step Four - Teacher covers the word and directs students to (1) prounounce word orally, (2) spell word orally, and (3) write word on paper.

Step Five - Teacher displays the word again and directs students to circle their word if correct, and to rewrite the word if incorrect.

The SRSA uses the teacher as a model to facilitate the multi-sensory analysis of words without the use of rules.

Instruction time is spent directly with the word to be learned and does not become involved in the many activities commonly found in a traditional program.

Boutin (1980) and Taylor (1981) reviewed the literature related to traditional and progressive approaches to the teaching of Spelling. Both concluded that traditional programs such as Spell Correctly have little empirical support even though they dominate the curriculum. On the other hand, while the progressive programs have strong support in the literature, they are rarely found in the curriculum.

Design of the Study

Target Population

There are 85,000 students enrolled in more than 100 schools in the Clark County School District. Twenty percent are black, 5 percent are Asian, and 75 percent are non-minority. Elementary children attend grades K-5 in neighborhood schools, are bused to seven sixth grade centers for one year, and then attend junior and senior high schools in local neighborhoods. Three of the sixth grade centers were assigned by the district to participate in the study. The three schools were selected because their students represented socio-economic, ethnic, and academic backgrounds which reflected the proportions of the entire district.

Sample Population

All 89 language arts teachers in the three target schools were invited to participate in the study. From the 22 volunteers, four teachers from school A and seven from school B were assigned to the Control Group (C) along with their 581 sixth graders. All 11 teachers selected for the Experimental Group (E) and their 533 students were from school C. This assignment prevented C and E teachers from being in the same building.

Pretesting Procedures

One week prior to the treatment period, all students took the spelling subtest of the Metropolitan Achievement Test (MAT), Form F (Durost, 1970), and the Long Range Spelling Retention Test (LRSR), prepared by the authors. The MAT contained 50 sentences, each with an underlined word which the student had to mark as "right", "wrong", or "don't know". The LRSR test contained 45 words, 5 words selected at random from each of the nine spelling units taught during the treatment period. Students were asked to look at each word and mark the word as "right", "wrong", or "don't know".

Nine-Week Treatment Period

The nine-week treatment period began for all students in February with Unit 19 of the Spell Correctly program. Both C and E classes agreed to devote 60 minutes to

spelling instruction each week, Monday through Thursday. The time required for the Friday final test was not counted in the 60 minutes. All classes, C and E, began each unit on Monday with a dictation test over the 25 words in the unit, prior to any instruction. The same test was readministered in the same manner on Friday. Correcting and scoring of the weekly tests, the LRSR Test, and MAT were always done by the classroom teachers, recorded on specifically prepared sheets, and returned to the researchers on specified dates.

Procedures for the Control Group. The 11 teachers in the C group agreed to follow the Spell Correctly textbook program as it was designed by its authors, with one exception: the practice test, normally given on Wednesday, was administered on Monday as described above.

Procedures for the Experimental Group. The 11 teachers in the E group also agreed to follow the Spell Correctly program in the same manner as the C teachers except that five to seven minutes per day was to be taken from the basal lesson to drill students on their words using the Stetson Reading-Spelling Approach. Each teacher was given an SRSA schedule to follow:

Monday: Pretest on 25 words (same as C)
SRSA Drill with words 1-8
Remaining time with Spell Correctly

Tuesday: SRSA Drill with words 9-16

Spell Correctly activities

Wednesday: SRSA Drill with words 17-25

Spell Correctly activities

Thursday: SRSA Drill over all 25 words. This time each word was flashed onto the screen for about 1/2 second. Students were instructed to (a) look at the word, (b) say the word silently, (c) spell the word silently, and (d) write the word on their paper. Self-correcting was done after all 25 words had been written.

Spell Correctly activities

Friday: Final test administered in the same manner as the Monday test (Same as C)

To facilitate the use of the SRSA, E teachers had transparency lesson-strips containing the 25 words for each of the nine units. The transparency was slipped into a Project-O-Flash device which was placed on top of an overhead projector such that all light was occluded from the screen except for the one word to be taught. During Step One through Three of the SRSA the word was fully exposed onto the screen. During Step Four the teacher would cover the aperture with his/her hand while the students wrote, and then exposed the word again for Step Five. During the Thursday practice the teacher would move each word into

place covering the aperture at the same time. At a given signal the teacher would quickly uncover and recover the aperture to expose the word for a fraction of a second.

Posttesting Procedures

The week following the nine-week treatment period, all students took Form G of the MAT and the Long Range Spelling Retention Test. Tests were scored, recorded on the appropriate forms and returned to the researchers.

Results

Weekly Short Term Spelling Achievement

The mean pre- and posttest scores for the nine weekly spelling tests are illustrated in Table 1 for C and E groups.

Table 1 Here

First, ANOVAs were computed using pretest means between the C and E groups for each of the nine weeks. Using the criterion of 8.10 (df 1,20) for significance at the .01 level of confidence, there were no significant differences in any of the pretest comparisons for the nine weeks, F, (1,20) = low of 0 for week 4, high of 6.38 for week 1; $p > .01$.

Second, ANOVAs were computed between the pre- and posttest means for the C and E groups for each of the nine weeks. For the C groups, the mean increase in the number

of words learned ranged from 3.4 to 4.4 words with an overall mean increase of 3.78 words. ANOVAs computed between the pre- and posttest means for the C groups were significant for all nine weeks, F (1,20) = low of 17.6 for week 6, high of 29.3 for week 4; $p<.01$.

For the E groups, the mean increase in the number of words learned ranged from 5.85 to 6.82 words with an overall increase of 6.6 words per week. Based on the ANOVAs computed for each week, significant differences were found for all nine weeks, F, (1,20) = low of 64.8 for week 7, high of 94.7 for week 4; $p<.01$.

The third analysis was to determine whether gains for the E group were significanty better than the gains for the C group. Again, ANOVAs were computed between the posttest means of the C and E groups for each of the nine weeks. Significance was found for all nine weeks, F, (1,20) = low of 10.36 for week 9, high of 41.36 for week 1; $p<.01$.

Long Range Spelling Retention

All subjects took the 45-word Long Range Spelling Retention Test one week prior to and one week following the nine-week treatment period. Table 2 contains the mean pre- and posttest scores on the LRSR Test for the 22 groups in the study.

Table 2 About Here

The mean gain in long term memory for spelling was 3.16 for the C groups and 4.54 for the E groups. An ANOVA

computed between the pretest means for the C and E groups indicated no significant difference, F, (1,20) = 4.8; p>.01. Both groups made significant gains between pre- and posttest means, F, (1,20) = 37.93 for C; 173.8 for E; p<.01. An ANOVA computed between the posttest means for C and E indicated significant differences favoring the E groups, F, (1,20) = 35.3; p<.01.

Standardized Spelling Test Achievement

All subjects took Form F of the MAT one week prior to the treatment period and Form G one week following the nine-week treatment period. Table 3 displays the mean pre- and posttest raw scores on the MAT for the 22 groups in the study.

Table 3 About Here

Based on the ANOVAs computed with mean scores, there were no significant differences between the pretest means of group C and E [F, (1,20) = 4.4; p>.01]; between pre- and posttest means for the C groups [F, (1,20) = 5.71; p>.01]; between the pre- and posttest means for the E groups [F, (1,20) = 3.13; p>.01]; or between the posttest means of the C and E groups [F, (1,20) = 5.56; p>.01].

Summary of the Results

1. Sixth grade students whose instruction in Spell Correctly was supplemented with the SRSA learned significantly more words per week. Control students learned 3.78 words

per week while the experimental students learned 6.6 words per week.

2. Students taught using the SRSA as a supplement to the Spell Correctly program improved significantly in long range spelling retention.

3. There was no significant improvement on a standardized achievement test, regardless of the treatment.

Discussion

Although both C and E groups made significant gains on weekly spelling tests, the effects were hardly impressive for the C groups who improved their weekly spelling by 3.75 words or 15 percent. In the mean time, the E groups improved their spelling ability by 6.6 words or a 26 percent increase per week. While the C groups spelled 20 of 25 words correctly on Friday, the E groups spelled 23 of 25 words correctly.

Teachers reported that E students showed dramatic improvements in interest and attitudes toward spelling, often asking their teachers to demonstrate the SRSA when visitors entered the room. Features such as the snapping of fingers and rhythmical actions of Step Three, the "choral" recitation, and the immediate self-checking associated with Step Five were mentioned as contributing to the high level of interest and involvement. These findings are well corroborated in the literature (Columba, 1926; Forlano, 1936; D. Russell, 1937; Sand, 1938).

Most of the E teachers claimed that the SRSA took more than the projected 5-7 minutes each day, often consuming 10 to 15 minutes. Others reported that as little as 10 minutes was spent with the Spell Correctly program during the entire week. Most of the E teachers felt that the SRSA, if used alone, would have produced results similar to those achieved with the combined Spell Correctly and SRSA. At the same time the E teachers admitted they would be reluctant to abandon the basal text.

Concern is noted about the small mean gains obtained on the LRSR Test and the MAT, even though the gains on the LRSR Test were significant favoring the E groups. The concern is whether or not a multiple-choice test can predict spelling ability as reliably as a written test. Both the LRSR Test and the MAT are multiple-choice tests requiring the student to look at a stimulus word and determine whether the word is "correct", "incorrect", or "don't know". The literature generally decribes multiple-choice spelling as tests of reading or proofreading, and the use of such tests has been highly suspect (Yea, 1972; Wilson, 1929; Foran, 1934; Freyberg, 1970; Kelso, 1978).

The mean gains on the MAT were extremely small and non-significant. Of the 100 words on the two forms of the MAT, only four words on Form F and two words on Form G were included among the nine units taught during the study.

The question is, will the learning of one set of words result in the improvement on a second and totally unrelated set of words? While some continue to believe that the learning of rules will create an encoding system which applies to new and unrelated words, this study did not lend support to this claim. The authors choose to believe that the achievement of many students is not accurately reflected on a nationally standardized test comprised of words that are not included in the regular curriculum. It may be wise for schools to compare the basal vocabulary with that contained in their achievement tests.

Conclusions

A comparison of two spelling programs representing dichotomous philosophies concluded that, when a "traditional" spelling program was supplemented with a "progressive" program based on visual-perceptual processing principles, spelling improved significantly on weekly unit tests and on tests of long range spelling retention. Furthermore, the results raised important questions for future research concerning: (1) the efficacy of a basal program that improves spelling by less than four words per week; (2) the validity of standardized spelling tests consisting of words totally different from those studied; (3) the possible success of the SRSA when used alone; and (4) the effects of the SRSA on the achievement of older and younger students.

Finally, the success of the SRSA lends credibility to the argument that traditional spelling programs are filled with exercises and activities that have little effect on spelling achievement.

References

Benthul, H.F., Anderson, E.A., Utech, A.M., Biggy, M.V., & Bailey, E.L. Spell Correctly. Park Ridge, Illinois: Silver Burdett General Learning Corp., 1974.

Boutin, F.J. The effects of a spelling approach used as a supplement to the basal spelling program with second grade students. Unpublished doctoral dissertation, University of Houston, 1980.

Columba, Sr. Mary. A study of interests and their relations to other factors of achievement in elementary school subjects. Catholic University, Washington, D.C., 1926. (Fitzsimmons, R.J., & Loomer, B.M. Spelling: Learning and instruction. Iowa City: Iowa State Dept. of Public Instruction and The University of Iowa, 1978).

Durost, W.N., et al. Metropolitan achievement test. New York: Harcourt Brace Jovanovich, 1970.

Fitzgerald, J.A. The teaching of spelling. Milwaukee: Bruce Publishing Company, 1951.

Fitzgerald, J.A. The teaching of spelling. Elementary English, 1953, 30(January),

Foran, T.G. Psychology and the teaching of spelling. Washington, D.C.: Catholic University Press, 1934.

Forlano, G. School learning with various methods of practice and rewards. New York: Teachers College, Columbia University, 1936.

Freyberg, P.S. The concurrent validuty of two types of spelling tests. British Journal of Educational Psychology, 1970, 40, 68-71.

Hanna, P.R., & Moore, J.T. Spelling from spoken word to written symbol. Elementary School Journal, 1953, 53(February).

Hibler, G.H. The test-study versus the study-test method of teaching spelling in grade two: Study I. Unpublished master's thesis, The University of Texas, Austin, 1957. (Fitzsimmons, R.J. & Loomer, B.M. Spelling: Learning and Instruction. Iowa City: Iowa State Department of Public Instruction and the University of Iowa, 1978).

Hodges, R.E. & Rudorf, E.H. Searching linguistics for cues for the teaching of spelling. Elementary English, 1965, 42(May).

Horn, E. Phonics and spelling. Journal of Education, 1954, 136, 233-235.

Horn, E. Phonetics and spelling. Elementary School Journal, 1957, 57, 424-432.

Horn, E. Spelling. In C.W. Harris (Ed.) Encyclopedia of Educational Research. 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, T.D. Learning to spell as affected by syllabic presentation of words. The Elementary School Journal, 1949, 49(5), 263-272.

Horn, T.D. How syllables can help in spelling. Education, 1956, 76(5), 291-295.

Horn, T.D. Spelling. In R.L. Ebel (Ed.) Encyclopedia of Educational Research (4th ed.). London: Macmillan, 1969, 1282-1294.

Kelso, G. Spelling correlation on handwritten versus multiple-choice test. Unpublished doctoral dissertation, Nova University, 1978.

Kottmeyer, W., & Claus, A. Basic goals in spelling (5th ed.). Saint Louis: Webster-McGraw Hill, 1976.

Madden, R. & Carlson, T. Harbrace spelling program. New York: Harcourt Brace Jovanovich, 1974.

Montgomery, M.A. The test-study method versus the study-test method of teaching spelling in grade two: Study II. Unpublished master's thesis, University of Texas, Austin, 1957. (Fitzsimmons, R.J., & Loomer, B.M. Spelling: Learning and Instruction. Iowa City: Iowa State Department of Public Instruction and the University of Iowa, 1978).

Petty, W. The teaching of spelling. Bulletin of the School of Education, Indiana University, Bloomington, 1969, 45(6).

Russell, D.H. Characteristics of good and poor spellers. New York: Teachers College, Columbia University, 1937.

Sand, H.J. An evaluation of the effects of marks as incentives to pupil growth in spelling ability and of the comparative values of equated scales and informal tests as measurements of the progress. Journal of Educational Research, 1938, 31.

Stetson, E.G. Manual of instructions; The reading-spelling vocabulary program. Houston: Educational Services, Box 14076, Houston, 77021, 1978, 1981.

Taylor, W.D. The effects of the stetson reading spelling approach on the spelling achievement and attitudes of selected first, second, and third grade students in the Pasadena independent school district. Unpublished doctoral dissertation, University of Houston, 1981.

Thorndike, E.L. The teaching of English suffixes. New York: Teachers College, Columbia University, 1941.

Wilson, G.M. The purpose of a standardized test in spelling. Journal of Educational Research, 1929, 5, 319-326

Yea, A. In O.K. Buros (ed.). Seventh Mental Measurement Yearbook. Highland Park, New Jersey: The Gryphon Press, 1972.

Table 1

Mean Pre- and Posttest Scores For

Control and Experimental Groups

Over Nine Weekly Tests

Week	Unit	Control Groups				Experimental Groups			
		N	Pre	Post	+/-	N	Pre	Post	+/-
1	19	517	14.99	18.75	+3.76	508	16.32	22.98	+6.66
2	20	535	15.84	19.49	+3.65	507	15.94	22.69	+6.75
3	21	533	16.22	20.12	+3.9	494	15.80	22.80	+7.0
4	22	532	15.61	20.01	+4.4	499	15.55	23.32	+7.77
5	23	528	16.95	20.52	+3.57	487	15.84	22.66	+6.82
6	25	530	17.57	20.97	+3.4	493	17.48	23.58	+6.1
7	26	546	17.96	21.50	+3.54	488	17.60	23.45	+5.85
8	27	532	16.97	20.76	+3.79	490	16.56	22.88	+6.32
9	28	537	16.16	20.17	+4.01	491	16.28	22.27	+5.99
$\bar{X}$		532	16.5	20.3	+3.78	495	16.4	23.0	+6.6

*Maximum Score = 25 Words Per Unit

Table 2

Mean Pre- and Posttest Long Range Spelling

Retention Test - 11 C and 11 E Classes

	Control Groups				Experimental Groups			
Group	N	Pre	Post	+/-	N	Pre	Post	+/-
A	49	34.98	37.96	+2.98	45	34.87	39.24	+4.37
B	49	32.78	34.80	+2.02	55	34.96	38.75	+3.79
C	44	32.32	36.18	+3.86	47	34.11	39.04	+4.93
D	47	31.79	35.47	+3.68	51	36.49	39.24	+2.75
E	52	33.83	37.33	+3.5	47	33.53	37.62	+4.09
F	44	34.05	36.50	+2.45	49	34.18	38.43	+4.25
G	45	31.51	35.22	+3.71	28	34.79	39.54	+4.75
H	43	33.93	36.63	+2.7	44	34.07	39.64	+5.57
I	45	31.64	36.18	+4.54	24	33.79	38.88	+5.09
J	47	35.40	38.62	+3.22	44	33.80	38.48	+4.68
K	45	33.96	36.07	+2.11	50	32.48	38.16	+5.68
$\bar{X}$	46	33.29	36.45	+3.16	44	34.28	38.82	+4.54

*Maximum Score = 45

Table 3

Mean Pre- and Posttest Raw Scores on the MAT

For 11 Control and 11 Experimental Groups

	Control Groups				Experimental Groups			
Group	N	Pre	Post	+/-	N	Pre	Post	+/-
A	46	30.72	31.93	+1.21	46	35.24	36.33	+1.09
B	45	31.69	32.77	+1.08	49	34.92	36.73	+1.81
C	38	31.74	31.79	+ .05	45	33.18	35.56	+2.38
D	47	30.32	32.36	+2.04	48	33.21	35.02	+1.81
E	52	32.56	33.71	+1.15	47	32.91	35.43	+2.52
F	40	32.95	34.35	+1.4	48	34.17	33.04	-1.13
G	42	30.10	32.12	+2.02	28	32.07	33.50	+1.43
H	44	33.43	34.16	+ .73	44	33.48	33.80	+ .32
I	39	31.05	33.21	+2.16	22	34.68	34.82	+ .14
J	47	35.04	35.64	+ .6	41	32.93	33.56	+ .63
K	44	30.55	32.86	+2.31	40	29.13	32.13	+3.00
$\bar{X}$	44	31.83	33.17	+1.34	42	33.27	34.54	+1.27

*Maximum Score = 50