

University of Northern Iowa
UNI ScholarWorks

Graduate Research Papers

Graduate College

2004

The impact of a word-study spelling curriculum on spelling instruction and student spelling achievement

Jan Baker
University of Northern Iowa

Copyright ©2004 Jan Baker

Follow this and additional works at: <https://scholarworks.uni.edu/grp>

 Part of the [Language and Literacy Education Commons](#)

Let us know how access to this document benefits you

Recommended Citation

Baker, Jan, "The impact of a word-study spelling curriculum on spelling instruction and student spelling achievement" (2004).
Graduate Research Papers. 296.
<https://scholarworks.uni.edu/grp/296>

This Open Access Graduate Research Paper is brought to you for free and open access by the Graduate College at UNI ScholarWorks. It has been accepted for inclusion in Graduate Research Papers by an authorized administrator of UNI ScholarWorks. For more information, please contact scholarworks@uni.edu.

The impact of a word-study spelling curriculum on spelling instruction and student spelling achievement

Abstract

Word study uses direct instruction at the appropriate developmental level, hands-on activities, the study of orthographic structure, and a philosophy of problem-solving in a positive atmosphere. Pre- and post assessment data suggest that this is an effective instructional approach for improving student spelling achievement.

THE IMPACT OF A WORD-STUDY SPELLING CURRICULUM
ON SPELLING INSTRUCTION AND STUDENT SPELLING ACHIEVEMENT

A Graduate Research Paper

Submitted to the

Department of Curriculum and Instruction

In Partial Fulfillment

Of the Requirements for the Degree

Master of Arts in Education

UNIVERSITY OF NORTHERN IOWA

By

Jan Baker

April, 2004

This Research Paper by: Jan Baker

Titled: The Impact of a Word-study Spelling Curriculum on Spelling Instruction and
Student Spelling Achievement

has been approved as meeting the research requirement for the
Degree of Master of Arts in Education.

4/7/04
Date Approved

Timothy G. Weih
Graduate Faculty Reader

4/7/04
Date Approved

Rick Traw
Graduate Faculty Reader

4/7/04
Date Approved

Rick Traw
Head, Department of Curriculum and Instruction

Abstract

Word study uses direct instruction at the appropriate developmental level, hands-on activities, the study of orthographic structure, and a philosophy of problem-solving in a positive atmosphere.

Pre- and post assessment data suggest that this is an effective instructional approach for improving student spelling achievement.

Spelling has been a thorn in my side for several years. I have tried several methods of spelling instruction: basal spelling workbooks, visualization, memorization, phonics, and individualized lists. The results were disappointing. I had these questions: How can spelling instruction be improved? How can research support such instruction?

Spelling Research

For decades, spelling instruction focused on rote memorization based on the premise that the English language was inconsistent therefore incomprehensible (Templeton, 2002). Basal spelling texts were developed later with weekly lists for one grade level using memorization and phonics rules. It was found that the support for traditional spelling such as memorization was based more on attitudes and practices rather than on theory or research (Heald-Taylor, 1998).

More recently, the developmental spelling theory resulted from the work of Chomsky (1970) and Read (1971). It described spelling as a developmental process as children progress through apparent stages. Research suggested that the most promising organization for instruction is in a developmental approach for studying words (Bear et al., 2000; Chomsky, 1970; Coiner, 1995; Gansky, 2000; Invernizzi, Abouzeid, & Gill, 1994; Read, 1971; Templeton & Morris, 2000; Zutell, 1998).

Recent research leads to a more conceptual approach to teaching spelling, which goes beyond memorization and phonics. English orthography is consistent, rule-based, and patterned. Learning these patterns is at the core of learning to spell (Hanna, Hanna, Hodges, & Rudorf, 1966; Templeton & Morris, 2000). Spelling acquisition should be a process of comprehending how words work. Children can handle approaches that encourage clear analysis and generalization. Many researchers (Angelisi, 2000; Bear, Invernizzi, Templeton, & Johnston, 2000; Brandt, 2000; Coiner, 1995; Ganske, 2000; Gillet & Temple, 1978; Templeton, 2002; Templeton & Morris, 1999,

2000) point to the reconceptualization of spelling as a much more effective way of learning to spell. These authors advocate a broader concept of spelling through word study.

Word study occurs in hands-on activities such as word sorts, games, and word hunts that mimic basic cognitive learning processes: comparing and contrasting categories of word features and discovering similarities and differences within and between categories (Bear, et al., 2000). After assessment to determine the developmental level, students are given direct instruction at the appropriate spelling stage. This includes practice with the words, instruction in transferring the pattern to other words, and a philosophy of spelling as problem-solving in a positive atmosphere of risk-taking. These activities meet the individual needs within the classroom and extend and encourage growth (Fresch & Wheaton, 1992).

Researchers find four major reasons for adopting a word study approach to spelling. First, it is theoretically sound. Word study is based on extensive research of children's development of word knowledge as they learn to read, write, and spell (Templeton & Bear, 1992; Invernizzi, Abouzeid, and Bloodgood, 1997). Word study improves students' spelling compared to more traditional methods (Abbott, 2000; Elliott & Rietschel, 1999). Secondly, word study uses word sorts that imitate the fundamental cognitive learning process of categorization to learn about language form and function as well as to foster comprehension (Bear et al., 2000). Thirdly, word sorts are hands-on, student-centered, developmentally appropriate, and engaging (Invernizzi et al., 1997). Finally, students learn the principles of spelling and understand the orthographic system of their language (Marten, 2003).

After researching the major ways spelling has been taught, I decided to focus on word study as a method of teaching and learning spelling. This article will examine a third grade classroom to see how a word-study spelling curriculum can impact instruction and student achievement.

Word-Study Instruction

This study looks into my classroom of fifteen students in a small Midwestern town. All are Caucasian, twelve boys and three girls. Two students are being served by a multi-categorical resource room and three have Title I reading help.

Five major areas are stressed in the word-study instruction in my room: 1) finding the developmental level of the student, 2) direct instruction at that level, 3) providing the opportunity for the student to practice the spelling generalizations, 4) using learned spelling in daily reading and writing, and 5) having a positive atmosphere to promote spelling development.

Developmental Levels

The first step in word study is to determine each student's developmental level. The work of Henderson (1985) and colleagues suggested that in learning to spell children move through developmental stages of sound, pattern, and meaning. Read (1971) and Henderson (1985) collaborated to find common errors students made and described the characteristics of these stages. Other researchers such as Gentry (1993) gave the stages slightly different names, but they were very similar.

Bear et al. (2000) used a continuum to explain spelling development. The five stages they identified were: 1) Emergent, 2) Letter Name-Alphabetic, 3) Within Word Pattern, 4) Syllables and Affixes, and 5) Derivational Relations. Bear et al. outlined several characteristics for each stage. Students in the Emergent Stage do not match letters to sounds. The students scribble or write numbers, letters, and pictures for words. The teacher cannot read the words, nor can the child. The Letter Name-Alphabetic Stage includes students who have mastered consonants, some consonant blends, and digraphs. An example is *dg* for *dog*. Later in this stage they work more consistently with vowels. For example, a student might spell *fat* as *fet*. Spellers in the Within-Word Pattern

Stage move away from only letter-sound correspondence and work with long vowel patterns. They might spell *toad* as *tode*. Syllables and Affixes Stage spellers have mastered one-syllable words and are beginning to experiment with how syllables combine. For example, *carries* might be spelled *carrys*. In the Derivational Relations Stage, spellers examine how words share common derivations and related roots and bases. They might misspell *criticize* as *critacize*. Appendix A lists characteristics of each level.

I decided to use the Bear et al. continuum in the assessments I gave. In the fall, I administered the Elementary Spelling Inventory located in *Words Their Way: Word Study for Phonics, Vocabulary, and Spelling Instruction* (Bear et al., 2000). The students' scores were calculated on other forms in the book: Error Guide for Elementary Spelling Inventory, Feature Guide for Elementary Spelling Inventory, and Spelling-By-Stage Classroom Organization Chart. These forms helped determine what spelling patterns the student knew, did not know, and how close the student was to the correct spelling. I was then able to find the student's zone of proximal development (Vygotsky, 1978), which is the instructional level.

It is very important that students are taught to spell words at their developmental spelling level. This stage is where the words are neither too easy nor too hard. They can use their prior knowledge and connect new understanding to old. Students in the zone of proximal development often experiment with words and "use but confuse" the patterns (Bear et al., 2000). With teacher support, students will move on to independence at that level. Teachers should become very familiar with the developmental model so they can analyze the student's spelling ability and place them on the developmental continuum.

In addition to data from the spelling inventories, writing samples were analyzed to find the developmental level. Writing samples provided an authentic look at spelling in the context of

actual writing. Both the inventory data and the writing samples were important to include in my decision for grouping. The groups were flexible so students could be moved depending on test scores and daily spelling. The results of the spelling inventory as well as writing samples placed my students in three groups: Beginning Letter Name, Middle Within-Word Alphabetic, and Beginning Syllables and Affixes.

The next step was finding the appropriate word lists for each group. The process of using developmental lists is extremely important. Students experience success at the correct spelling stage and their attitude of “I can’t spell” becomes “I know how to spell this.” Students working above or below their capabilities may become bored or anxious and could develop a negative attitude toward spelling (Coiner, 1995). This is one of the problems of the “one list fits all” method of traditional spelling. No learning is taking place at the lower or higher levels.

I carefully examined the Bear et al. developmental lists in the appendix of *Words Their Way*. Looking again at daily spelling in writing, I found the middle ground for each group, then backed up and started with a few review lists. These lists contained words that the data indicated should already be known or easily learned by the students. The information from assessment determined the grouping, the groups were given developmentally appropriate word lists, and the students moved progressively through the stages. The lists were used one per week. If a student missed a word or two, the pattern was generally repeated later in another list. I had to keep in mind that students in their zone of proximal development were experimenting with patterns and may misspell a few words. I included any missed words on the next test.

Direct Instruction

A few basic materials are needed for word study. I used the book *Words Their Way* (Bear et al., 2000) for the inventory, grouping forms, word lists, games, and a guide for implementation. Using

a table on a word-processing program, I typed each list into cards and put them into a binder by number. I cut out a word sort (see next paragraph) for each list to use for direct instruction and stored them in baseball card sleeves in a binder. I also typed a written sort form for each list, a take-home list form, and a list of ten words, which would be used for the test. These words were starred on the word cards and the written sort (Appendix B). I asked each student to bring a spiral notebook for word-study activities. I also made a few of the games that are in *Words Their Way* (Bear et al., 2000). After this preliminary organization, the weekly teacher preparation consisted of copying the forms and cards then looking through the words to become familiar with the spelling generalization.

Word sorts are the center of word-study instruction. Students use categorization when they sort pictures or words to find the similarities and differences in the spelling. Certain spelling features stand out and generalizations can be made. Word categorization through word sort activities is one of the most successful ways for students to learn spelling generalizations and to understand how the spelling system works (Invernizzi et al., 1997; Templeton, 2002; Templeton & Morris, 1999, 2000).

I allotted the most time for direct instruction using a closed word sort. I met with each group on the carpet using word cards consisting of the weekly list. Sitting in close proximity to the words allowed the students more opportunity for hands-on involvement. The instructional sequence included reading the cards, identifying key words as the heading for each category, thinking-aloud as I verbalized my thinking, modeling the sort, coaching, and a gradual release of responsibility to the students. An example closed word sort lesson follows:

Modeling

1. I identified the key words as *hat* and *name*.
2. I chose the word card *flag* and separated the phonemes saying /f/, /a/, /g/.
3. I identified the common sound /a/.

4. I said the keyword *hat*, and then read the word card *flag* as I placed *flag* under *hat*.
5. I verbalized the generalization, “*Hat* and *flag* both have a short a.”
6. I repeated the steps with the word *race* and placed it under *name*.

Coaching

1. I asked a student to choose a word card.
2. I asked the student to separate the phonemes.
3. I helped the student identify the commonality with a key word and place the card.
4. I asked the student to read the keyword and the chosen card.
5. I helped the student state the generalization.

Releasing Responsibility to the students

1. After a few coaching examples, the students took several cards each.
2. I asked the students to take turns using the steps I had used when I modeled.
3. All the words were sorted following the generalization.
4. I asked the students to think of challenge words to fit the generalization.

This example used sorting by sounds. Others may use sorting by spelling patterns or meaning.

As the students became more proficient with sorting, I asked the students to provide the generalization as I modeled or even after we had read the word. I preferred this method of instruction since it followed the word-study philosophy “teaching is not telling” (Bear et al., 2000).

Usually each sort had a word or two that did not fit the categories. These were termed “oddballs” and were placed in an oddball category. The students enjoyed finding the exceptions and were challenged by them. We also added “challenge” words to the list, which could be added to the test for extra credit. The students then went to their seats and did a written sort (Appendix B). All three groups had direct instruction using word sorts. Using groups requires the students to have “seat work.” The students enjoyed the freedom of doing their spelling, Sustained Silent Reading, and independent writing during this time. Rotating three groups usually took 45 minutes.

Opportunities for Practice

Scheduling for word study was a challenge. I felt I had to be creative with scheduling, making the most of short time allotments. I developed a weekly routine. The main time (45 minutes) was for direct instruction on Monday. The other days had short segments. Tuesday: open sorts, 15 minutes; Wednesday: take-home lists, 10 minutes; Thursday: word hunt and extra instruction, 15

minutes; and Friday: test, 10 minutes. These activities follow a progression where students recognize, recall, judge, and apply their word knowledge.

Open word sorts are student-centered activities where the criteria for sorting are not stated in advance. The learner discerns relationships among the words as they are sorted. The generalization for sorting is then explained by the sorter (Gillet & Temple, 1978). Open sorts have shown to be effective because the students find their own words patterns. Also children with different levels of fluency can work together. Open sorts can be used in a game setting, where students guess the common property of others' word groupings. This is an engaging application activity that challenges students' inductive and deductive thinking as well as aiding them in studying words (Gillet & Temple, 1978; Templeton, 2002). I matched two students of different levels and their task was to cut out the word cards, sort them, and have their partner guess the generalization. The students took their word cards home and sorted them again with parents or siblings as part of their homework.

Take-home lists were merely a form for the students to copy their words to take home and study for the test on Friday. Parents generally expected a list and were accustomed to a test for which their children must study, although I stressed the program emphasizes learning spelling patterns rather than memorization.

Word hunts help students make the connection between reading words and spelling them. Students hunt through material they are currently reading for more examples of the sound, pattern, or meaning unit they are learning to spell. Students can work in pairs, small groups, or individually (Templeton, 2002). They can record their lists in their word-study notebooks. This is an example of integrating spelling with reading and writing which has been supported by researchers such as Bear et al. (2000) and Gansky (2000).

Word games are also engaging word study activities. Students get involved in board games, card games, and other games in which the recognition, recall, and judgment of spelling features can be applied (Bear et al, 2000). The teacher can modify almost any card or board game according to the feature used in the sort (Brandt, 2000). They can be used in any of the spelling stages and involve the student in studying the orthographic features of the words. An example would be the game "War." The students look for matches of the vowel sound they have recently studied. Each spelling level is followed by a chapter in *Words Their Way*, which includes activities for that specific level. My schedule did not permit extensive use of the games, but I see them as another valuable application activity.

The students took a test over ten of the words on their list every Friday. I gave all three tests at one time alternating words from each group. When the ten were finished, I encouraged students to include challenge words with the same pattern as their list words. I also called out the review words that individuals had missed. Since high frequency words were usually "oddballs," they were included in as many lists as possible. I also gave my students a test of the one hundred most frequently used words (Bernard, Fry, & Fountoukidis, 1993) and added the misspelled ones to their weekly tests as review words.

Because these activities differ considerably from traditional spelling drill, it is important to inform parents of the differences and the theory behind word study. I try to include a spelling article in every newsletter as well as activities that can be done at home to aid in spelling development. Explanations of all the sorts and activities like word hunts help parents guide their children at home. I like to encourage finding similar or challenge words for homework, such as listing compound words. The parents were generally enthusiastic about their child's progress.

Grading is required in our school. To grade the students in word study, I averaged the weekly test results with a daily spelling grade. The students generally did very well on the tests since it was at their instructional level.

Using Learned Spelling in Daily Reading and Writing

Making connections between spelling and all subjects is important. The students saw the value of what they were learning in spelling. When decoding words, I urged them to think back to the spelling lessons. Vocabulary or word meaning often overlaps with spelling, especially at the higher levels (Bear, et al., 2000). Derivation of words influences the spelling and meaning.

In writer's workshop, I used mini-lessons to help students review the spelling of their writing. I taught editing for spelling, using strategies such as sound, visualization, patterns, and using references (Dahl, et al., 2003). For example, for visualizing, picturing what the word looks like, especially in a book, was emphasized. Students could also try picturing the word in their brain, then writing it down. The "Try Five" strategy was used to write the word up to five times until it looked right. Students were expected to spell third grade, high frequency words correctly as well as words from the spelling patterns they had mastered. Examples of growth in students in the Letter Name-Alphabetic stage showed they were spelling short vowels correctly: *bit* instead of *bite*, *mad* instead of *made*, *lit* instead of *late*. Their misspellings now included confusing long vowel patterns such as *maet* for *meat*, *grese* for *grease*, *dide* for *died*. The Within-Word group spelled *bake* as *back*, *board* as *bord*, and *treats* as *treets* in August. In January, their misspellings were with two syllable words or affixes: *taped* for *tapped*, *storys* for *stories*, and *exsept* for *except*. Syllable and Affixes spellers made improvements such as: *gravel* instead of *graval*, *saddle* instead of *sadile*, and *taking* instead of *takeing*.

Fostering a Positive Atmosphere to Promote Spelling Development

In whatever subject we were studying (science, social studies, reading, writer's workshop, or handwriting), I used the opportunity to teach spelling. I did think-alouds as we were writing words, and I tried to constantly challenge the students to spell. For example, in cursive writing instruction, the students were encouraged to think of words beginning with the letter we learned. For the letter *s*, they were asked to think of verbs beginning with *s*. If the word volunteered was *scream*, we not only learned the spelling but the long *e* pattern that it followed. Other words could be written with the same pattern, such as *shear*, *seat*, *sear*, and *spear*. We looked at words to see if they were "oddballs," or if they followed a pattern. The students were curious and enjoyed finding out about words. If the word was an "oddball," we found a good way to remember how to spell it – mnemonics, visualization, or association. Such activities instilled a curiosity about spelling.

The old saying that success breeds success most certainly is true in word study. When a student was attempting to spell a word, I always praised approximations. For example, if the word *explain* was spelled *explane*, I might have said, "You are so close; there is only one pattern that needs to be changed. What is another pattern for long *a*?" Being positive teaches students to believe they can spell, and they will keep trying.

Data Collection and Analysis

In January, I administered the Elementary Spelling Inventory again from *Words Their Way* (Bear, 2001). I used the forms in the appendix to evaluate the developmental level of each student. The Feature Guide for Elementary Spelling Inventory assessed the approximations and the words spelled correctly which are given a point value. This number served as a comparison of August and January results. The Qualitative Spelling Checklist helped determine the spelling stage. Each of the stages is divided into beginning, middle, and late. If a student moves from

Within Word Middle to Within Word Late, it represents a gain of one stage. If the student moved one stage up, they were assigned +1, two stages: +2, etc. (see Table 1).

The results of assessment using the spelling inventory showed that eleven of fifteen students made gains in spelling features represented by a numerical value. One student stayed the same, and three students had negative gains. When analyzing the gains by stage, two students moved up three stages, one student moved up two stages, eight students moved up one stage, two students stayed at the same stage, one student moved down one stage, and one student moved down two stages.

Spelling in daily writing was also analyzed (see Table 1). I used the Spelling Analysis form from *Word Crafting* (Marten, 2003). This form was very easy to use. It was consistent with the Bear et al. (2000) developmental levels. It is very similar to the Error Guide for Elementary Spelling Inventory with similar scoring. The difference was that pre-selected words of the inventory are excluded so that you can use words from the student's writing. I was able to see which features the student used correctly, which features the student used but confused, and which features were missing in the student's spelling. Comparing writing from August to January, I was able to see the developmental growth. I could also see if the developmental stages in writing matched the inventory.

Analysis of the students' spelling during writing revealed the following results: two students moved five stages higher, one student moved four, four students moved three stages up, three students moved up two stages, one student moved up one stage, and four students stayed at the same stage. When comparing the stages using the inventory versus the writing analysis, ten students were at a higher stage according to the inventory than they were in their writing. Three

students were at the same stage in writing and on the inventory, and two students were at a lower stage on the inventory than in their writing.

When assessing both writing and the inventory results together, thirteen out of fifteen students gained one or more stages. One student stayed the same on both, and one student went down on the inventory and stayed the same on the writing analysis.

TABLE 1
Inventory and Writing Analysis Results

Student	August Writing Stage	January Writing Stage and Stage Movement	August Inventory	January Inventory and Stage Movement	August Points/ January Points
A	Within Word Middle	Syl Affix Beg +3	Syllable Affix Late	Der Rel Early +1	52/62
B	Within Word Middle	Syl Affix Beg +2	Syllable Affix Mid	Syl Affix Late +1	45/58
C	Within Word Middle	Der Rel Early +5	Syllable Affix Mid	Syl Affix Late +1	51/59
D	Within Word Middle	Syl Affix Beg +4	Syllable Affix Mid	Syl Affix Late +1	48/55
E	Within Word Middle	L Name Middle +5	Syllable Affix Ear	Syl Affix Late +1	44/57
F	Within Word Early	W Word End +2	Syllable Affix Mid	Syl Affix Late +1	45/52
G	Letter Name Early	W Word Begin +3	Within Word Late	Syl Affix Mid +2	35/48
H	Letter Name Middle	W Word Early +2	Within Word Mid	W Word Mid +0	43/43
I	Letter Name Middle	W Word Middle +3	Within Word Mid	W Word Early -1	44/37
J	Letter Name Early	L Name Middle +1	Within Word Early	W Word Mid +1	26/34
K	Letter Name Early	L Name Early +0	Letter Name Late	W Word Late +3	22/33
L	Within Word Early	Within W Early +0	Within Word Late	W Word Early -2	34/27
M	Letter Name Early	L Name Early +0	Within Word Mid	W Word Late +1	33/35
N	Letter Name Early	L Name Early +0	Letter Name Early	L Name Early +0	29/28
O	Letter Name Early	W Word Early +3	Letter Name Early	W Word Early +3	11/25

Significance for Instruction

The purpose of this study was to see if word-study spelling instruction improved student achievement. This is measured by a gain on the pre- and post spelling inventory and on analysis of student spelling in writing. The results of the data show that word study does improve spelling achievement in most students. Because there were two students who did not move up in either writing or on the inventory, the question was not answered positively for them. The short time period of one semester limited the amount of growth that could be made. Since spelling ability is on a developmental continuum, there is no set time that a student should move from one stage to another. However, two students performed at a lower stage in January than they did in August on the inventory. This can be interpreted to mean these students were not given instruction in the correct developmental stage. Moving them to another group should give them a chance to learn the spelling patterns. Giving this mid-year assessment will enable me to look closely at their groups to make sure they are at their instructional level as well as to monitor their progress throughout the remainder of the year. I also will be moving two students to a higher group because of their writing assessments. The power of the assessments is that they are used to drive instruction. I have the remaining semester to provide the instruction that is needed.

Reflecting on students with negative gains made me realize I should have done more assessment during the semester, and the assessment should have supported the correct placement in student groups. Although I did give six-week review tests, I did not move any students to other groups. Even though I understood the concept of developmental levels, I did not consider that these students were possibly in the wrong group. I also should have given more weight to writing samples for placement in instructional groups.

Using writing to analyze spelling ability shows there is growth in eleven of fifteen students. The developmental level was generally lower in their writing than in the inventory. This indicates that students focused less on spelling when they wrote. It seemed hard to use comparisons since some students used a well-developed vocabulary and some didn't. However, it indicates that instruction should emphasize spelling strategies during writing.

Is word study the best method of spelling instruction? That question will need to be answered as I continue to use word study in my classroom. Spelling is no longer a thorn in my side, but I can't say it is a rose, either. I can see progress. I will continue to find the developmental level of the student, use direct instruction at that level, give opportunities for the student to practice spelling generalizations, have the student use learned spelling in daily reading and writing, have a positive atmosphere to promote spelling development, and regularly use assessment to drive instruction. I think my students will continue to believe in themselves as spellers and progress through the developmental stages. After researching best practices and reflecting on the implementation of word sorts in my third grade classroom, I see much more success than with other methods. Better word-study instruction and better assessment will help students become better spellers.

References:

- Angelisi, M. A. (2000). Teaching spelling: Which strategies work best. (ERIC Document Reproduction Service No. ED440395).
- Abbott, M. (2000). Effects of traditional versus extended word-study spelling instruction on students' orthographic knowledge. *Reading Online*. Retrieved October 12, 2001 from <http://www.readingonline.org/articles/abbott/index.html>
- Bear, D. R., & Barone, D. (1989). Using children's spellings to group for word study and directed reading in the primary classroom. *Reading Psychology: An International Quarterly*, 10, 275-292.
- Bear, D. R., Invernizzi, M., Templeton, S., & Johnston, F. (2000). *Words their way: Word study for phonics, vocabulary, and spelling instruction*. Upper Saddle River, NJ: Merrill.
- Beers, C. S., & Beers, J. W. (1981). Three assumptions about learning to spell. *Language Arts*, 58, pp. 573-580.
- Bernard, E., Kress, J., & Fountoukidis, D. (1993). *The reading teacher's book of lists*. Indianapolis, IN: Jossey-Bass.
- Brandt, T. (2000, October). *Word study and spelling achievement*. Paper presented at the annual meeting of the Mid-Western Educational Research Association, Chicago, Illinois.
- Chomsky, C. (1970). Invented spelling in the open classroom. *Word*, 27, 499-518.
- Coiner, J. M. (1995). Is word study the best approach to spelling instruction? A study in the effectiveness of word study vs. a traditional approach to spelling instruction. (ERIC Document Reproduction Service No. ED382939).

Dahl, K.L., Barto, A., Bonfils, A., Carasello, M., Christopher, J., Davis, R. et al. (2003).

Connecting developmental word study with classroom writing: Children's descriptions of spelling strategies. *The Reading Teacher*, 57(4), 310-319.

Elliott, J. & Rietschel, K. (1999). The effects of word study on students' application of spelling and phonics in their independent writing. (ERIC Document Reproduction Service No. ED429301).

Fresch, M. J. (2000). What we learned from Josh: Sorting out word sorting. *Language Arts*, 77, 232-240.

Fresch, M. J. & Wheaton, A. (1992). Open word sorts: Helping third grade students become strategic spellers. Paper presented at the annual meeting of the National Reading Conference, San Antonio, TX. (ERIC Document Reproduction Service No. ED353554).

Ganske, K. (2000). *Word journeys: Assessment-guided phonics, spelling, and vocabulary instruction*. New York: NY: Guilford Press.

Gentry, J. R., & Gillet, J. W. (1993). *Teaching Kids to Spell*. Portsmouth, NH: Heinemann.

Gillet, J. W., & Temple, C. (1978, May). Developing word knowledge through word sorts. Paper presented at the annual meeting of the International Reading Association, Houston, Texas.

Hammill, D.D., Larsen, S., & McNutt, G. (1977). The effects of spelling instruction: A preliminary study. *Elementary School Journal*, 78, 67-72.

Hanna, P. R., Hanna, J. S., Hodges, R. E., & Rudorf, E. H. (1966). Phoneme-grapheme correspondences as cues to spelling improvement. Washington: U.S. Government Printing Office.

Heald-Taylor, B. G. (1998). Three paradigms of spelling instruction in grades 3-6. *The Reading Teacher*, 51, 404-413.

- Henderson, E. (1985). *Teaching Spelling*. Boston, MA: Houghton Mifflin.
- Invernizzi, M., Abouzeid, M., & Gill, J. T. (1994). Using students' invented spellings as a guide for spelling instruction that emphasizes word study. *The Elementary School Journal*, 95, 155-167.
- Invernizzi, M., Abouzeid, M., & Bloodgood, J. (1997). Integrated word study: Spelling, grammar, and meaning in the language arts classroom. *Language Arts*, 74, 185-191.
- Martin, C. (2003). *Word Crafting: Teaching Spelling, Grades K-6*. Portsmouth, NH: Heinemann.
- Read, C. (1971). Pre-school children's knowledge of English phonology. *Harvard Educational Review*, 41(1), 1-34.
- Templeton, S. (2002). Effective spelling instruction in the middle grades: It's a lot more than memorization. *Voices from the Middle*, 9 (3), 8-14.
- Templeton, S. & Bear, D. R. (Eds.) (1992). *Development of orthographic knowledge and the foundations of literacy: a memorial festschrift for Edmund H. Henderson*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Templeton, S. & Morris, D. (1999). Questions teachers ask about spelling. *Reading Research Quarterly*, 34, 102-112.
- Templeton, S. & Morris, D. (2000). Reconceptualizing spelling development and instruction. *Reading Online*. Retrieved October 12, 2001 from <http://www.readingonline.org/articles/handbook/templeton/index.html>
- Templeton, S. & Morris, D. (2000). Spelling. In M. Kamil, P.B. Mosenthal, P.D. Pearson, & R. Barr, (Eds.), *Handbook of Reading Research, Volume III* (pp. 525-543). Mahwah, NJ: Erlbaum.
- Vygotsky, L. (1978). *Mind in Society*. Cambridge, MA: Harvard University Press.

Wilde, S. (1990). A Proposal for a New Spelling Curriculum. *The Elementary School Journal*, 90(3), 275-289.

Zutell, J. (1998). Word sorting: A developmental spelling approach to word study for delayed readers. *Reading & Writing Quarterly: Overcoming Learning Difficulties*, 14(7), 219-238

Appendix A
Characteristics of Spelling Developmental Levels

Emergent Stage

Characteristics:

- Scribbles
- Draws
- No sound-symbol relationship
- Lacks concept of word

Linguistic Areas Stressed:

- Concept of word
- Letters

Letter Name-Alphabetic Stage

Characteristics:

- Knows letter names
- Experiments with sounds of letters
- Beginning and ending sounds are represented

Linguistic Areas Stressed:

- Initial consonants
- Final consonants
- Short vowels, CVC word family
- Diagraphs
- S, R, L blends
- Easy contractions & homophones
- Final y
- Plural s

Within-Word Pattern Stage

Characteristics:

- Uses patterns and word families
- Spells most single-syllable short-vowel words correctly
- Explores long vowel patterns
- Spells most beginning consonant digraphs and consonant blends

Linguistic Areas Stressed:

- Long a
a_e(save), ai(train), ay(tray)
- Long e
ee(seen), ea(steam), e_e(eve)
- Long i
i_e(ride), igh(tight), _y(try)
- Long o
o_e(rode), oa(boat), ow(mow)
- Long u
u_e(mule), oo(soon), ew(flew)
- r-controlled vowels
- Diphthongs and vowel digraphs
oy, oi, ou, ow, etc.

Syllables and Affixes Stage

Characteristics: <ul style="list-style-type: none"> • Initial blends and digraphs correctly spelled • Long vowel patterns mostly correct • Makes errors in syllable juncture and unaccented syllable 	Linguistic Features Stressed: <ul style="list-style-type: none"> • <u>Single-syllable homophones</u> <i>meet/meat, rode/road</i> • <u>Plural endings</u> Add s and add es, change y to i • <u>Compound words</u> <i>aircraft, airplane</i> • <u>Simple inflectional endings</u> VCC – ask: <i>asked, asking</i> VVC – aim: <i>aimed, aiming</i> • <u>Consonant doubling</u> • <u>Stress and accent</u> • <u>Prefixes and suffixes</u>
--	---

Derivational Patterns Stage

Characteristics: <ul style="list-style-type: none"> • Most words spelled correctly • Misspellings indicate an error in morphology and etymology 	Linguistic Features Stressed: <ul style="list-style-type: none"> • <u>Consonant changes</u> • <u>Vowel changes</u> • <u>Greek and Latin word elements</u> • <u>Origins of words</u> • <u>Unusual plurals</u>
--	--

Appendix B
Written Word Sorts

99

Written Sort

- Directions:** 1. Read the words aloud. 2. Write a ? by the hard words.
3. Write the words from the bottom under the guide words at the top.
4. Find other words to fit each category. 5. Oddballs go in the last column.

Name _____ Date _____

Sort for words that are alike in this way:

preschool *	explode *	triangle*	subway*	?

subset	trio	exile	prefix
preheat	explore*	tripod	subtract*
subsoil	triad	expose	prevent*
preview	exceed	tricycle*	submarine*
prepare	predict*		

*Words on the test

Appendix C
Word Sort

doctor	circular	thinner
conductor	rectangular	cleaner
agitator	lunar	smarter
inspector	solar	happier
refrigerator	similar	sorrier
instigator	particular	dirtier
incubator	spectacular	sleepier