A study analyzed whether a word study instruction based on open sorting would allow children to have more conventions or strategies available for spelling words in their written work. Subjects, all 22 third-grade students in a suburb of a large midwestern city, were given the Qualitative Inventory of Word Knowledge as pre- and posttests. Three writing samples were collected over an entire school year to examine the carry over of the word knowledge gained by weekly word sorting tasks. Results indicated that the children: (1) paid more attention to all the sounds when attempting new words; (2) engaged in a good deal of risk-taking in the selection of language they used in their writings; (3) developed an awareness of words and often spontaneously found words in other works that were like a pattern studied; and (4) became increasingly articulate over the year about their understandings of words. Findings suggest that: the children were actively involved in a hands-on task; the instruction provided a way to assess as well as inform; and the instruction shifted the focus from spelling errors to making spelling predictive according to the patterns and meanings studied. (A table listing the spelling stage characteristics and a table presenting an example of word lists used for sorting are included.) (RS)
Open Word Sorts: Helping Third Grade Students Become Strategic Spellers

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Open Word Sorts

This study was a collaborative effort between a third grade teacher and a university lecturer. The purpose of the research was to analyze whether a word study instruction based on open sorting would allow children to have more conventions or strategies available for spelling words in their written work. The study began following a year of experimenting with word sorts to teach spelling in the third grade classroom. The teacher had approached the lecturer for help in devising a program when the spelling series was dropped by the school. It was up to the teacher to tie spelling into the literature based curriculum. She wanted to have a word study program that met the range of abilities in her class, would have the children actively involved in understanding how words are conventionally spelled and would not be isolated from the curriculum. After investigating current theory and research, the teacher felt open word sorts would encourage children to actively seek to expand their knowledge about words. It was decided to collaboratively analyze the usefulness of the sorts during the second year of use.

The questions that guided the research were:
- would the children improve in conventional spelling,
- would the children have more strategies available to them when inventing spellings, and
- would the instruction provide a base for a good word study program?

Theoretical Background

Developmental stages of learning to spell were delineated in the theory and research of Read (1971) and Henderson and Beers
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(1980). This same body of knowledge informed and shaped the instruction while also providing a framework to analyze the children's progress in becoming conventional spellers.

The stages most often seen in third grade range from Letter Name to Within Word to Syllable Juncture (Henderson, 1991). The stages should be thought of as a continuum, with varying degrees of understanding within the same level of development. The stage descriptions used for this study are described in Table 1.

Insert Table 1 Here

Word sorts have been suggested by a number of researchers (Gillet and Kita, 1980; Sulzby, 1980; Henderson; 1991) as a way to explore and experiment with patterns found in the English language. By studying what similarities or differences a group of words possess, children are required to categorize words to provide generalizations about how words are spelled. Open word sorts are open-ended activities that allow children to group words by self designated categories. These activities meet the individual needs within one classroom and extend and encourage growth at all levels.

Methods

Participants

The participants were all the 1991 - 1992 students of the third grade teacher's class. The school was in a suburb of a large midwestern city. Twenty-two students, fourteen boys and eight girls, were followed for the entire school year.
Procedures

To establish what understandings the children of this study held about written language, the Qualitative Inventory of Word Knowledge developed by Schlagal and provided in Henderson's text, Teaching Spelling (1991), was administered to the entire class. Through analysis of the children's spelling attempts, stages of development were determined. At the beginning of the study children were designated to the following stages:

- Letter name - 5
- Within word - 13
- Syllable juncture - 4

This measure was repeated with the same children one year later (at the beginning of the 1992 - 1993 school year).

Each week the students were given fifteen words to sort. The creation of the word lists was an ongoing process based on observation of the students' independent writings. During writer's workshop, the teacher individually and small group conferenced with the students, observing and noting attempts to use their current developmental level of understanding of letter/sound relationships through their inventive spelling. The observations had the most direct effect in selecting the sounds strategies to be focussed on in the upcoming weeks.

Once the need to explore a specific letter/sound pattern had been determined, the teacher explored the texts of current thematic units, glossaries, old spelling book series word lists and Teaching Spelling (Henderson, 1991) to create fifteen high frequency spelling words which were grade appropriate. These words were used to pretest the students' understandings of the
pattern. The list contained no less than two but no more than four different spellings for a common sound pattern. Table 2 is an example of such a list.

Insert Table 2 about here

Fifteen additional words, which used the same letter/sound pattern were "banked" and available as a choice should the student prove mastery on the pretest of any of the high frequency words.

After the students applied their current understanding of the conventional spelling pattern(s) through the pretest setting, they chose fifteen words for their individualized spelling lists. High frequency words that were invented on the pretest were their first choice. If needed, they also selected words from the "banked" words for a total of fifteen words. The students copied their list three times, with parental proofreading. One list remained at home, a second copy was attached to their student planbooks at school for future reference and the final copy was cut into word cards for the sorting activity.

The word sorting initially took place individually or in small cooperative groups. The students sorted and categorized their word cards based on common sounds. Once the common sounds were identified, the students looked within the words for the spelling patterns which have created the sounds. No teacher instruction was given during this activity. The teacher was responsible for coaching and encouraging exploration or manipulation of the word cards.
After the students had initially sorted their word cards and discovered the common sounds and conventional spelling patterns, the class met as a large group to verbally share their discoveries. At this time the teacher sorted all thirty words (fifteen high frequency and fifteen "banked" words) based on the class discoveries. This was done on the chalkboard with the words on sticky notes that could be moved around. After agreement on the letter/sound patterns, the children wrote a description of their discoveries and glued their fifteen word cards into the appropriate categories.

During the week several activities were used to reinforce their discoveries. One common activity was for the children to use their list of fifteen words to create a text. The text could be an advertisement, poem, story or simply fifteen sentences. This familiar text was later used as a basis for their final spelling test using the "buddy system".

A second activity was the open word search. The children worked in small teams and searched all available printed text to identify and list as many other words as possible which used the same sound and spelling patterns as their list. Some weeks the students chose to create ongoing word lists which recorded the common sounds. Other weeks an agreed amount of time was set to search and list as quickly as possible all words that fit the pattern(s). At the conclusion of the time, all the students met together to share their lists. The word searches were the children's favorite activity over the year.
Data Collection and Analysis

Writing samples were collected during the school year to examine the carry over of the word knowledge gained by the sorting task. Three common samples, spaced over the year, were analyzed for each student. Two types of changes were tracked:
- first, the development of conventional spellings, and
- second, changes in strategies when inventing, particularly in conjunction with the patterns studied.

Changes were also noted in the results of the pre- and posttest of the Qualitative Inventory of Knowledge.

The students were interviewed at the time of the posttest to assess what they thought of the open sorts. They were asked if they liked the sorting and also how they know when a word is spelled conventionally. Their answers provided some interesting insights into their thinking as they sorted words for spelling.

Results

There was considerable movement in the children's understandings about spelling. The posttest of the Qualitative Inventory of Word Knowledge placed seven children at the Within word stage. Only two children remained at this level all year. This does not mean their learning was stagnant, rather, these two children developed further understandings within this particular stage. Fifteen children were identified at the Syllable Juncture stage. The active exploration appeared to contribute to the developmental moves the children made.

The changes found in the children's work fell into four areas. First, the children paid more attention to all the sounds
when attempting new words. At the beginning of the year not only sounds, but entire syllables were left out when inventing. By January, the invented spellings were much closer to convention. There were attempts such as "pedritisian" (pediatrician), "confushen" (confusion), "intamoligist" (entomologist) and "turmdendes" (tremendous).

Second, a good deal of risk taking was observed in the selection of language the children used in their writings. The word study program encouraged the children to use language of their choice, whether or not it was conventionally spelled. The children were exploring a wide range of words and this was reflected in their writing. For example, one child had inventions in September such as "sture" (straw) and "ercuse" (circus). In a February sample his inventions were "funrul" (funeral), "arangmets" (arrangements), "pirsed" (pierced), "schoulder" (shoulder) and "eclisp" (eclipse). These inventions were not only closer, but a good example of the language selected by the child in writing.

Third, the children developed an awareness of words and often spontaneously found words in other work that were like a pattern studied. This heightened awareness provided integration of the word study with other reading and writing the children did.

Finally, the children became increasingly articulate over the year about their understandings of words. They became conscious of the need for someone else to read their written work and verbalized their attempts to write words closer to the conventional spellings. They learned from each other as
discussions took place concerning attempted spellings in their work.

The experimentation with instruction had three features that appeared as important over the school year. First, the children were actively involved in a hands-on task. This provided a way for the children to discover important understandings about the English language. It respected the point of development the children brought to the task and encouraged growth for all levels of learners.

Second, the instruction provided a way to assess as well as inform. By moving around the room when the children were sorting, the teacher could see on which features each child focused their attention. This showed what they understood about various patterns and gave her an indication of other support to provide. The writing samples provided further feedback as to what patterns needed to be presented or reviewed. The invented spellings were also a signal to the influence of dialect, mispronunciations or misunderstandings about language. This was important to consider in helping the children move toward conventional spellings. For example, Yolanda's dialect influenced her inventions of "flice water" (fly swatter) and "King around the roselis" (ring around the rosie). Justin's misunderstanding was apparent in "hardi tak" (heart attack). Travis used definition to make his point when he wrote, "What's eclipse? Does it mean somethings going to fall like the sky. No thats claps." (collapse). All these invented spellings provided a starting point for discussing definitions, word usage and conventional spelling.
Finally, the instruction shifted the focus from spelling errors to making spelling predictions according to the pattern and meanings studied. The guiding ideas to the instruction were to provide experiences for the children that would allow them to develop their own understandings about language, have ways to think about words and have strategies available during independent work that broadened their use of the English language.

The student interviews suggested that they did indeed think about the words. One child liked to "sort the words to see how many different ways I can do it". Another child indicated the kind of thinking process used by stating "you need to look or the part of the word that is making it sound the same as the other words in its group".

A particularly interesting statement made by one student renewed for the classroom teacher the debate of manuscript versus cursive word lists. The child said, "What used to confuse me when I was first learning cursive and I was writing cursive. Then I'd read printing and I couldn't tell if a word looked right or if my cursive was wrong." While the child was thinking about the spelling of words, he also had to consider letter formation. This reaffirmed to the teacher the soundness of her decision to have the children do all the spelling activities in manuscript.

Conclusions

Providing opportunities for children to experiment with language is an important responsibility for teachers. The word sorts respect the developmental needs of individuals learning how to be conventional spellers. The word study also provided
strategies for invented spellings to allow the children to express themselves through the written word. The children were empowered through their experimentation and growing understanding of the English language.
References


Table 1

**Spelling Stage Characteristics**

**Letter Name**
- sight vocabulary informs invented spellings
- uses obvious strategies to invent
- often exchanges short vowel for closest long (a for short e)
- common errors are affrications (jriv - drive), nasal
  \[ \text{bop} - \text{bump} \] and exaggerated sounding

**Within Word**
- correct use of short vowels and blends
- marks long vowels (sometimes incorrectly)
- understands words have 2 elements
  - beginning consonant pattern
  - a vowel + ending
- begins to internalize rules - "concrete operational thinking"
  considers units (patterns) rather than just letters
- may overgeneralize

**Syllable juncture**
- begins to double consonant before adding ending to maintain
  short vowel
- invents at the juncture or schwa position
- uses knowledge of meanings and patterns
Table 2.

Example of Word List Used for Sorting

dune
pew
duel
cruise
blue
New York
duke
bruise
chew
cruel
dude
hue
volume
cube
plume