ABSTRACT

Systematically incorporated into classroom instruction in word analysis, word sorts provide a sensible alternative to phonics or whole-word approaches and are congruent with the meaning-based direction of today's basal reading programs. A word sort is an activity in which the learner arranges words printed on cards into groups. This technique can be manipulated in many ways to help children draw conclusions about how words are related. The basic activity consists of sorting a deck of word cards and grouping them on the basis of similarities. There are two types of word sorts: open-ended and closed-ended. In the latter the common property of the words to be grouped is stated in advance. These sorts help children develop comparison and convergent reasoning. The common property of the words is not stated in an open-ended sort; the learner discerns relationships among the words while sorting them. In this way, the learner forms tentative rules for including words in that group, and redefines the dimensions of the group by adding and removing words. Few other techniques for word study are so flexible, retain students' interest so long, or engage them in such high-level thinking as word sorts. [FL]
Developing Word Knowledge

Through Word Sorts

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Running Head: Word Sorts
A strange inconsistency has been showing up in basal reading programs lately. The content of the reading books has grown more meaning-rich, with predictable language, more interesting stories and uncontrolled vocabulary. The teacher's manuals have been strengthened with exciting suggestions for helping children discuss, question and interpret what they read. Attempting to provide means for greater individualization in instruction, most current basal programs feature accompanying skills management systems which are primarily aimed at developing word recognition skills. However, the skills systems frequently fall into the same meaningless lock-step sequence of fragmented language operations from which the reading books seem to have freed themselves. And therein lies the inconsistency. For implicit in the skills systems is the assumption that children who are initially taught rules for isolated features of words can somehow combine these bits into an integrated ability to recognize words, sometimes before they can recognize any whole words at all.

The inconsistency between the thrust of the basal readers and the skills management systems is partly explained by the departmentalized nature of textbook development, where one team of authors writes the books and another team the management system. But more importantly, it suggests that we are still locked into the Great Debate: that is, that the alternative to
teaching sequential phonics skills for recognizing words is memorizing whole words, which is no alternative at all.

But there is an alternative to teaching children pre-set letter-sound correspondence rules which we hope they can apply to whole words. And this is to encourage children to develop word knowledge the natural way; to lead children to compare and contrast whole words, and to discern for themselves the features that words have in common and that distinguish one word from another. There is nothing new about this approach; it is the basis of concept formation and discovery learning in general. Children can often figure out for themselves ways to solve a problem, such as how to discriminate among several words, far more quickly than we can come up with language to describe these differences to them. It is just this kind of economy that recommends a concept formation approach to word study over the phonics alternative.

One such concept formation approach utilizes word sorts. A word sort is an activity, or the prototype of many different activities, in which the learner physically arranges words printed on small cards into groups. The inclusion of a word in a group is based on a relationship the child perceives among the words in the group. This simple dynamic can be manipulated in many ways to help children draw conclusions about how words are related.

Sorts can be done individually or in classroom groups. All the student or group needs is a deck of word cards and room to lay them out. The basic activity consists of sorting through the cards and grouping them on bases of shared similarities. The
common property relating the words in a group can be a graphic, phonological, structural, grammatical or semantic feature, or a combination of these.

Closed-Ended Word Sorts

There are two general types of word sorts, open-ended and closed-ended. In closed word sorts, the category or common property of the words to be included in the group is stated in advance of sorting. This statement, by the teacher or the child, provides the basis for inclusion or exclusion of any word in forming the group of words. With the criterion for inclusion stated in advance, closed word sorts help children develop comparison and convergent reasoning. The sorting criterion might be, for example, "words with vowel sounds like in train and trap," "long-a words spelled like came compared to those spelled like tail," or "words with more than one syllable." All words in the deck are examined for the presence of the feature selected, and unused cards are put aside.

For example, let's look at some sorts young readers might construct. A simple, closed, sound-based sort is to sort words with long vowel sounds and with short vowel sounds for purposes of comparison. Two groups like these might result:

<table>
<thead>
<tr>
<th>Long Vowel Sounds</th>
<th>Short Vowel Sounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>train</td>
<td>trap</td>
</tr>
<tr>
<td>mailed</td>
<td>sad</td>
</tr>
<tr>
<td>way</td>
<td>black</td>
</tr>
<tr>
<td>sale</td>
<td>hand</td>
</tr>
<tr>
<td>baby</td>
<td>flag</td>
</tr>
<tr>
<td>cake</td>
<td></td>
</tr>
</tbody>
</table>
Word Sorts

Words which the students decide don't fit the pattern are set aside, and a "not sure" pile can be included as well.

Examining the long-vowel group above, we can see that several familiar spelling patterns represent these vowel sounds: The vowel digraph -ai-, the open syllable in baby, and the vowel-consonant-silent e pattern. After the children can do sound sorts with ease, some basic spelling patterns can be studied by showing them words which represent the patterns and having them find others which fit the spelling patterns. Here, for instance, are example words which represent two common long vowel spellings. Underneath are placed words the children might find which fit the patterns:

<table>
<thead>
<tr>
<th>TRAIN</th>
<th>BAKE</th>
</tr>
</thead>
<tbody>
<tr>
<td>hair</td>
<td>made</td>
</tr>
<tr>
<td>rain</td>
<td>skate</td>
</tr>
<tr>
<td>fail</td>
<td>brave</td>
</tr>
<tr>
<td>braid</td>
<td>same</td>
</tr>
</tbody>
</table>

In the same way, many spelling patterns can be selected, studied and compared, and children can begin to draw generalizations about general categories of words and the common ways they are spelled. In conjunction with frequent writing experiences, spelling will develop in scope as well as flexibility when it is approached in this discovery-and-generalization framework.

Sorts based on structural criteria might include, for example, exploration of affixes. A child might construct a sort based on "endings" containing these words:
Further comparison and discussion would probably result in the breaking down of this group into three sub-categories:

We have seen sorts like this become the basis for the learner's first independent generalizations about verbs and verb endings, plural nouns, and modifiers. These groups could expand, then break down again into additional spelling and grammatical form groups, yielding for the learner powerful insights into the regularities of syntactic forms.

Beyond the levels of letter patterns, letter sounds, spelling and syntax lie the meaning relations among words. Sorts based on meaning relations help children discover the richness and precision of our language. Meaning sorts can be of the simplest kind, where youngsters classify words representing major categories of things in the environment, like foods, vehicles and living things, just as they classify pictures in most readiness programs. These sorts can progress to groups of words bound by relationships of great subtlety and complexity. Also, meaning sorts can help students perceive relationships that are reflected
in English spelling but are not apparent in pronunciation. For example, a child sorting by vowel sounds would place \textit{sign} and \textit{signal} in different groups. In another type of sort, these words could be grouped together, as both derived from the same source. Students sorting these together have discovered their underlying lexical relationship. They could then go on to find more words to add to the group, such as \textit{signet} and \textit{signature}. Discussion of the Latin base \textit{signum} and the relationship to be inferred, "to mark something," would then aid them in recognizing and understanding other related forms like \textit{signify}, \textit{significant}, \textit{resign}, and \textit{resignation}. This is "vocabulary development" that lives, that crackles with the student's excitement and that serves as a natural springboard for study of etymology and word changes across history. Even spelling is helped, again; a young writer who associates \textit{sign} and \textit{signal} as variants of the same word is more likely to remember that troublesome silent \textit{g} in \textit{sign} than the one who, with only letter sounds to go on, overgeneralizes \textit{sign} to \textit{SINE}. A student who has learned to associate words related by meaning has reached a powerful level of insight about how words work.

\textbf{Open-Ended Sorts}

An open word sort differs from a closed sort in that the criteria for a word's inclusion in a group are not stated in advance of sorting. The learner discerns relationships, whether graphemic, phonological, structural, syntactic or semantic, among
the words as the deck is sorted. Examining the words and finding that some go together, the learner forms tentative rules for including subsequent words in that group, and redefines the dimensions of the group by adding and removing words. All words in the deck are examined though not all are classified, and usually numerous groups are formed. These sorts tend to be fluid, because words frequently "surface" from the deck that call for reclassification of other words. Usually, reclassification tends to make the groups more specific and mutually exclusive. Multiple relationships can be examined and discussed, resulting in the formation of sets and subsets of words within a class. For example, an open meaning sort might result in these two general groups:

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"HOUSEHOLD WORDS"   "PEOPLE WORDS"
  gas             queen
  dust            themselves
  dessert         girl
  cut             aunt
  upstairs        he
  cleaned         us
  cake            officer
  chopped
```

Studying the first group, a further grouping could suggest itself to the sorter: "cooking words": gas (for the stove), cake, dessert, cut and chopped; and "cleaning words": cleaned, dust, and upstairs. "People words" would almost sort themselves into specific nouns and pronouns, and send the sorter hunting again for other pronouns and from there into possessives.
Open sorts have two important advantages for instruction. First, new word patterns emerge which students perceive but which the teacher may not have consciously noted. Second, students can work on open sorts on several different levels of word relationships simultaneously. And students with different levels of fluency in word study can productively work together on open sorts.

We often use open sorts in a game setting, where groups of children examine each other's word groups, try to infer the common property the words share, and add to and modify each other's groups. This is an exciting activity that challenges students' inductive and deductive thinking as well as aiding them in studying words for as many distinctive features as are available. The basic aspects of this activity have also been incorporated into simple teacher-made board games and card games for classroom use.

**Words for Sorts**

Words used in sorts must be sight words, because word study like this which is based on generalization and comparison must proceed from what is known. Any instruction which is based on too much "unknown", including sorts using words which must be puzzled over to identify, results in frustration which blocks the development of new knowledge.

We are sometimes asked how word sorts help children develop word recognition abilities if only known words are used in the sorts. All learning proceeds from a base of the familiar. New knowledge much be related to that which is previously known. The goal of word sorts is to help children produce and test
generalizations about the ways words are related. The products
of a systematic word study effort based on word sorts are in-
creased word understanding and greater ability to bring these
understandings to bear on new words. As new sight words are ac-
quired, they should be integrated into the store of words avail-
able for sorts. It is important that the store of available
words reflect the current state of the student's sight vocab-
ulary development.

In beginning reading, the child's dictated stories provide
the richest source of sight words, as well as sight words from
basal stories and other sources. Children who have no words at
sight are unready for word study. But, of course, when this is
the case they are also unready for phonics instruction and other
methods which require them to focus on such abstract concepts as
letter sounds and word parts.

When children have developed word recognition strategies
based on this multi-leveled word knowledge fostered through
category building, they often grow rapidly in sight vocabulary,
versatile word recognition strategies and ability to read con-
nceted text for meaning. And word knowledge of this kind has
powerful effects on the growth of spelling, writing fluency
and vocabulary.

As teaching techniques, word sorts are highly individualized,
yet they allow the teacher to bring children together in the
classroom for group instruction which is focused and substantive.
Word sorts possess almost unlimited possibilities for variation, as they can reflect any of the almost limitless ways English words can be related to each other. In their basic form, they require no materials other than word cards bearing sight words, which students can easily make up themselves; additional game activities adapted from the sorts are quickly and easily made up with poster paper. As students grow in word facility, as well as in age, the sorts are perfectly adaptable to all levels of word knowledge from the most primary to adult fluency, because what changes is not the activity but the features or common properties being examined. Sorting activities can be used with individual students, groups or whole classes, conducted independently or during direct instruction.

Few other techniques for substantive word study are so flexible, retain students' long-term interest, or engage students in real reflection and high-level thinking. Probably most important, word study of this type is based upon the principle that students can economically derive for themselves the features that distinguish one word from others. Systematically incorporated into classroom instruction in word analysis, word sorts provide a sensible alternative to phonics or whole-word approaches which is congruent with the meaning-based direction of today's basal systems.