

My eSorts and Digital Extensions of Word Study

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This article describes a technique called My eSorts that helps children learn to read and spell in a socially motivated context. It is based on developmental spelling research and the word study approach to teaching phonics and spelling (Bear, Invernizzi, Templeton, & Johnston, 2008). For almost four decades, teachers have taught beginning readers to examine the orthographic relationships among words by sorting them into categories based on sound and spelling patterns (Henderson, 1990; Stauffer, 1970). At present, word study routines include active manipulation of word cards to sort pictures and words into orthographic categories (Bear et al., 2008). “eSorting” is an extension of these word study routines. It employs digital tools, allowing children to author their own electronic word sorts (see Figure 1) and then share these eSorts with their classmates at the classroom computer center. In what follows, we outline the steps and rationale for using digital extensions of word study; we also describe a formative study that investigated eSorting with a first-grade class in a mid-Atlantic, urban school serving a low- to middle-income population in the United States.

Developing Digital Word Study

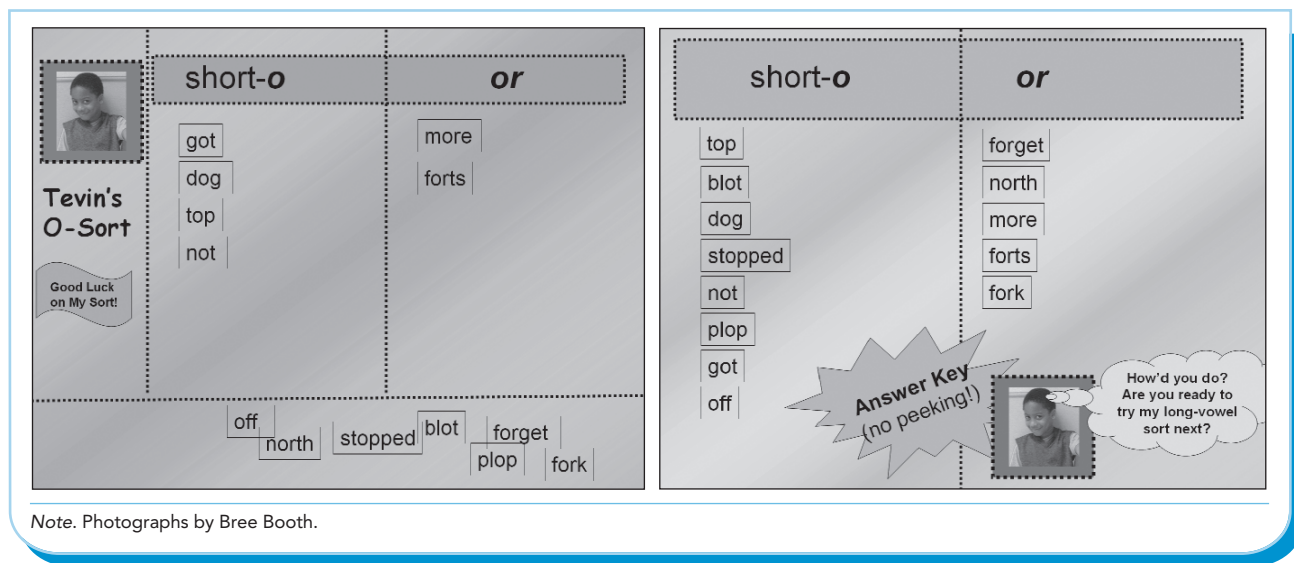
Our interest in exploring digital extensions of word study involved more than a desire to add the bells and whistles of technology to a tried-and-true literacy practice. We believed eSorting could be valuable for two types of readers in this classroom: (1) for students with a poor attitude toward reading, eSorts might promote a positive attitude toward literacy, and (2) for students who had already been taught spelling patterns but were having trouble mastering them, eSorts provided a new context for additional reading and spelling practice. The efficacy of using computerized word sorts to improve decoding and spelling has already been demonstrated (Hanlon & Cantrell, 1999; Weber & Henderson, 1989), and free software is already avail-

able for using premade word sorts on the computer (websites listed in Bear et al., 2008). Therefore, we set out to create a context for word study that was more than a prepared computer game. Our goal was to use technology to personalize learning for these two kinds of readers.

To attain these objectives, we explored a method we called My eSorts because students used their *own* words and stories as the basis for designing electronic word sorts. We hoped to create positive, motivating literacy experiences during eSorting because several of these first graders already demonstrated a poor attitude toward reading on the Elementary Reading Attitude Survey (ERAS; McKenna & Kear, 1990). For example, Katie’s (all student names are pseudonyms) ERAS score for recreational reading attitude was below the first percentile for first graders. Her attitude toward academic reading (34th percentile) was somewhat higher. Nonetheless, we were concerned about her distaste for reading at this young age. Another student, Tevin, had a positive attitude toward literacy but was having particular difficulty spelling *r*-controlled vowel patterns despite explicit instruction.

Knowing that technology-based instructional techniques often require reworking to get them right, we decided to explore eSorting with a formative research process. Simply put, a formative research design employs an iterative, reflective process in which the researchers and participants collaborate to make changes to, and improve, the digital application under study (e.g., Reinking & Watkins, 2000). We were also aware that converging research indicates that phonics and spelling should be taught explicitly and systematically (e.g., Mesmer & Griffith, 2006; National Institute of Child Health and Human Development, 2000). Therefore, we relied on developmental spelling research to provide a systematic sequence for instruction (e.g., Henderson & Templeton, 1986; Invernizzi & Hayes, 2004; Read, 1971). The classroom teacher was a reading specialist who had used word study for several years and understood the importance of systematic and explicit instruction.

Figure 1
Tevin's eSort Comparing Short-o with r-Controlled o



Note. Photographs by Bree Booth.

She met daily with three flexible word study groups and used the following routine: Mondays—teacher introduces new sort to compare and contrast orthographic features; Tuesdays—students repeat sort with partner; Wednesdays—they repeat sort and hunt for spelling patterns in connected texts; Thursdays—they repeat sort and “speed sort”; Fridays—they do word study games and spelling assessments and glue words in word study notebook. The teacher assessed students’ progress in two ways: (1) with brief 10-word spelling assessments called spell checks that were used regularly to determine if students mastered the spelling patterns studied that week and (2) with a detailed 25-word qualitative spelling inventory, the Developmental Spelling Analysis (DSA; Ganske, 1999), that was used every nine weeks to monitor students’ spelling levels. eSorting provided a rich extension to this word study instruction students received in differentiated groups.

Five-Day eSorting Process

The process of authoring My eSorts required five days of one-on-one assistance with a tutor plus the regular word study routines described. The following steps summarize how tutoring extended word study at the computer center:

Day 1: Student dictates digital experience story and tutor types. Tutor adds digital photograph(s) of student.

Day 2: Tutor and student review previous word sort and create first draft of the student’s personalized eSort.

Day 3: They both finalize eSort by adding words from word hunts in student’s experience story and other texts.

Day 4: They review and practice eSort until automatic. They personalize the eSort and experience story with clip art and other multimedia.

Day 5: They share digital experience story and My eSort at the Author’s Computer Chair (Labbo, 2004). Student invites friends to “play” their eSort and read their experience story during centers.

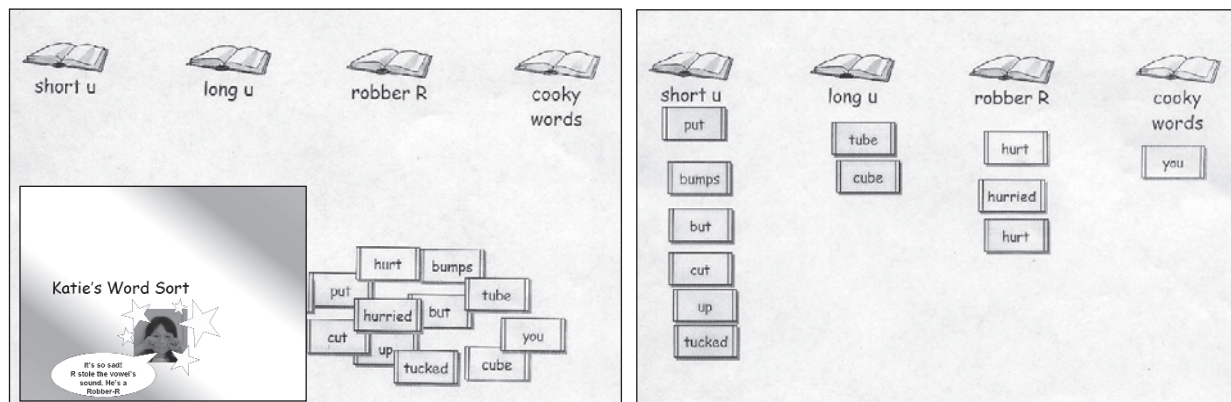
We trained one graduate and one undergraduate university student to work with nine students for 15 minutes each. Parents and classroom volunteers could also serve as eSorting tutors (eSort templates and tutor lesson plans available upon request from the first author).

Day 1: Digital Experience Story

Because our chief aim was to design a word study extension that was motivating, we believed that eSorting should begin with a personal literacy event that was likely to be meaningful (Stauffer, 1970). Therefore, Day 1 started with the student dictating a story of his or her choosing for the tutor to type. Much like the Digital

TEACHING TIPS

Figure 3
Katie's eSort Comparing Short-*u*, Long-*u*, and *r*-Controlled Vowels



Note. Photographs by Bree Booth.

Day 3: Add to the eSort

Day 3's task provided practice reading and spelling these orthographic patterns using word hunts in connected texts. Therefore, the tutor and student started by returning to the dictated experience story to see if any of the student's own words contained the spelling features. On this day, Katie and her tutor returned to a story she had told on Day 1 about breaking her leg and going to the hospital (Figure 2). As Katie scanned her story for short- and long-*u* patterns she found the word *hurt*, which did not match either pattern but did contain the letter *u*. Although Katie had not been taught *r*-controlled vowel patterns at this point, she observed that the *r* influenced the vowel. Accordingly, she called this "robber *r*" because the *r* robbed the vowel of its sound. Next, Katie and the tutor skimmed several texts at her independent reading level and added words containing the spelling features. Each child had a book box filled with texts at their independent reading level. The eSort now contained words from Katie's lexicon, from her experience of breaking her leg, and from her own book box.

Day 3's activities proved to be difficult for some children, like Tevin, who were having difficulty grasping particular spelling patterns. Tevin was creating a sort comparing short-*o* versus *r*-controlled vowels (see Figure 1), but while doing a word hunt in his experience story about a roller coaster he came across the word *roller*. He thought this long-*o* pattern fit his sort.

The tutor used questioning and modeling to help Tevin hear and see the difference between the vowel in *roller* and the vowels he was studying. When the tutor provided this one-on-one support and asked Tevin to articulate why this word did not match his sort, it appeared to improve his understanding of *r*-controlled vowels. On his next DSA test, Tevin went from 60% for this spelling feature to 100% mastery. We cannot suggest that eSorting caused this improvement, but it is possible that this instructional technique might improve spelling knowledge.

Day 4: Review and Personalize

The fourth day was a time for gaining automaticity in reading and spelling the featured patterns and for adding some digital flourishes to the student's work by repeating the eSort or using speed sorts. The tutor helped add some embellishments to Katie's eSort and a recording of Katie reading her experience story to these files. Anything from clip art and digital photography to sound, music, voice recordings, and animation were used to personalize these materials in ways that the children found interesting.

Day 5: Share at Author's Computer Chair

The fifth day was for sharing My eSorts and digital experience stories at the Author's Computer Chair (Labbo,

2004). Decades ago, Stauffer (1970) described the experience of sharing your work with peers as a “priceless” reward that reinforces motivation for literacy. We found that by setting aside time for students to share their digital creations at the Author’s Computer Chair students learned to give and receive appropriate feedback. This time fostered discussion about the author’s organizational system for the eSort and the multimedia design choices. Again, collaboration between the researcher and teacher led us to try using an interactive whiteboard, or SMART Board (SMART Technologies), for students to present and manipulate their eSorts for the classroom audience. The classroom teacher stated that these digital extensions of word study effectively engaged students because they “can then produce something for an audience of their peers, and they love reading each other’s pieces.”

Supporting Word Knowledge and Positive Literacy Attitudes

Overall, creating My eSorts and experience stories appeared to engage students in applying knowledge of word features while fostering a positive attitude toward literacy. Not only did the eSorts fill the classroom computer center with useful activities, but also these “student-authored eSorts stimulated rich among between learners about their increasing knowledge of orthography. We plan to continue studying the efficacy of using eSorts to advance students’ spelling knowledge. Children appeared particularly engaged and motivated to use their experience story as a springboard for word study. Even students like Katie, who demonstrated a poor attitude toward reading, reported very positive feelings about reading activities at the computer. While these findings are preliminary, it appears that digital extensions of word study are promising and warrant further exploration and research.

Note: Many thanks to the classroom teacher, Virginia, for her reflective collaboration.

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Lesson Link

For related lesson plans visit ReadWriteThink.org and click Lessons to find

- ▶ [Word Sorts for Beginning and Struggling Readers](#)
- ▶ [Sort, Hunt, Write: A Weekly Spelling Program](#)
- ▶ [Getting the ig in Pig: Helping Children Discover Onset and Rime](#)

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