Effects of Teachers’ Reading-Aloud Styles on Vocabulary Acquisition and Comprehension of Students in the Early Elementary Grades

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Effects of just reading, performance reading, and interactional reading-aloud styles on learning were assessed for 117 1st graders and 129 3rd graders. Preservice teachers, trained and guided by scripted procedures, read 2 informational storybooks to students using 1 of the styles. Multivariate analyses of variance and univariate tests showed that reading-aloud styles produced statistically significant effects on vocabulary acquisition and comprehension and similar results at each grade level. Differences in comprehension means for reading style treatments were statistically significant for 1 book only. Vocabulary acquisition was facilitated more by interactional reading than performance reading. Both verbally mediated styles resulted in greater vocabulary learning than just reading. Results extend previous findings on reading-aloud styles and are congruent with sociolinguistic and transactional theories.

Reading aloud has been a cornerstone of literacy development and classroom practice for over a century (Huey, 1908; Smith, 1934; Snow, Burns, & Griffin, 1998; Teale, 1984). Listening to stories, children learn about relationships between print and speech (Clay, 1991, 1993), oral and written registers (Feitelson, Goldstein, & Share, 1993), and nonstandard and standard forms of language (Cullinan, Jaggar, & Strickland, 1974). Reading aloud also serves as a primary transmitter of cultural capital and gives students access to cultural literacy regardless of reading ability or exposure to language and books in the home and community (Cazden, 1992).

Read alouds contribute to children’s understanding of literary elements (Sipe, 1998), content information (Leal, 1994), and texts read independently (Cohen, 1968; Cosgrove, 1987; Morrow & Smith, 1990). Students also make significant vocabulary gains from stories read aloud (Brabham, Boyd, & Edgington, 2000; Elley, 1989; Leung, 1992; Nicholson & Whyte, 1992) and may learn more words hearing than reading stories (Stahl, Richek, & Vandevier, 1991). These outcomes strongly recommend read alouds as components of literacy programs and support trends resulting in more teachers reading aloud every day. Empirical evidence indicates, however, that the effectiveness of read alouds depends on how teachers read to students. This study was undertaken to extend research on reading styles and to provide information that teachers can use to make reading aloud a more powerful tool for literacy learning in the elementary grades.

In surveys 30 to 40 years ago, half or less of the elementary teachers reported reading to students, and then just a few times each week (Austin & Morrison, 1963; Hall, 1971). Recent surveys of teachers show that 76% read aloud daily and 100% read aloud several times a week to students in elementary grades (Lickteig & Russell, 1993; Lindholm-Romantschuk, 1990). When asked why, however, 90% of the teachers responded that they read aloud for entertainment and enjoyment, not instruction; only 11%–28% also said they read aloud to stimulate discussion, build comprehension, impart knowledge, or build vocabulary (Lickteig & Russell, 1993).

Hoffman, Roser, and Battle (1993) had preservice teachers record read alouds in 537 classrooms across 24 states during 1 school day. An average of 74% of the teachers read to students at least once, and results ranged from 86% in kindergarten to 65% in sixth grade. Few teachers used read alouds to evoke students’ responses to literature or enhance instruction. Discussions were not noted during reading and occurred for less than 5 min before (77%) or after (47%) reading. Oral readings were followed by written, artistic, or dramatic responses less than 25% of the time and related to units of study in only 34% of the classes. Pointing out that these classrooms served as professional development sites for preservice teachers, the researchers suggested that pedagogical applications of reading aloud could be more limited in standard settings. They concluded that reading aloud is “not an integral part of the instructional day and may not be reaching its fullest potential” (Hoffman et al., 1993, p. 500).

Similarly, Meyer and colleagues (Meyer, Stahl, Linn, & Wardrop, 1994; Meyer, Stahl, Wardrop, & Linn, 1992) reported results they interpreted as indicators that reading aloud displaces more productive instructional activities. Negative correlations between teachers’ oral reading and students’ reading achievement at the end of kindergarten and first grade led them to state that interactions directly related to text improve beginning reading whereas “just listening to stories does not” (Meyer et al., 1992, p. 23). In studies conducted by Allison and Watson (1994), Morrow (1984, 1988), and Morrow, Rand, and Smith (1995), teachers frequently just read stories without capitalizing on them for discussion or instruction. Unlike Meyer et al. (1992, 1994), these researchers and others (Dickinson & Keebler, 1989; Elster & Walker, 1992; Green &
Harker, 1982; Klesius & Griffith, 1996; Martinez & Teale, 1993; Teale & Martinez, 1986) also documented teachers who read with interactional or performance styles that seemed to increase students’ engagements with text, responses to literature, and learning.

Teachers who use interactional styles simultaneously read and discuss stories with students. Performance-style teachers encourage discussion before and after reading but perform the story without interruption. Although many researchers independently documented interactional, performance, and just-reading styles together or separately in classroom settings, most of these naturalistic studies were limited to single, anecdotal observations of six or fewer teachers, and they produced more questions than answers about the effects of reading styles on student learning outcomes.

To address these issues, three studies (Dickinson & Smith, 1994; Lo, 1997; Reese & Cox, 1999) involved more teachers and conducted quantitative analyses to explore the impact of reading-aloud styles on learning.

Dickinson and Smith (1994) examined correlations for 25 preschool teachers’ reading styles and their students’ scores on story retellings and the Peabody Picture Vocabulary Test—Revised (PPVT–R). Analyzing one videotaped read-aloud session from each classroom, these researchers found that 10 teachers used a performance style, limited discussion during reading, and followed up with extended discussion after the reading performance. Fifteen teachers read with interactional styles but exhibited two different approaches. Dickinson and Smith identified 10 of these teachers as “didactic interactional” because they asked children to respond to questions, repeat factual information, and recite parts of the text in chorus during the reading. The other 5 interactional teachers were called “coconstructive interactional” by the researchers because they had children predict, analyze, generate word meanings, and draw conclusions as they read. Students of performance-style teachers “performed significantly better on the PPVT–R than the children who had been in the didactic-interactional classrooms” (Dickinson & Smith, p. 115) but showed no differences for comprehension. In regression analyses of verbal interactions, however, teachers’ use of the coconstructive-interactional style strongly predicted vocabulary development and modestly predicted comprehension scores.

In two experimental investigations, reading-aloud styles similar to those identified by Dickinson and Smith (1994) were treated as independent variables. For 25 kindergarteners, Lo (1997) found that children with memory abilities below the group average developed and applied comprehension skills to a greater degree when exposed to the coconstructive-interactional style rather than to the didactic-interactional or just-reading styles. In another experiment, Reese and Cox (1999) randomly assigned forty-eight 4-year-olds to a performance style or one of two interactional styles in which readers provided either descriptions and labels for pictures or comments and inferential questions about story meanings. Vocabulary and print skills but not comprehension were significantly greater for children with readers who used the descriptive, interactional style.

These qualitative and quantitative studies focused on reading-aloud styles either with preschool or kindergarten students and teachers who read different books. Readers read the same books only in the two experimental studies (Lo, 1997; Reese & Cox, 1999), which combined data from all books and analyzed them as a whole. Even in the experiments, styles, books, treatments, and outcome measures differed so much that results for preschool and kindergarten students cannot be compared. These studies provided evidence, however, that styles influence results of read alouds, and they have prompted calls for systematic investigations at and beyond the preschool and kindergarten levels to examine the impact of reading-aloud styles on children’s learning and responses to readings at different ages and grades (Dickinson & Smith, 1994; Lo, 1997; Martinez & Teale, 1993; McGee & Purcell-Gates, 1997; Meyer et al., 1994; Morrow et al., 1995; Reese & Cox, 1999).

Purpose of the Study

The study reported here extended existing research on reading styles by investigating effects of reading-aloud styles on learning outcomes for children in the early elementary grades. Purposes for this study included (a) examining reading styles with larger groups of readers and students than those in previous studies, (b) manipulating three reading-aloud styles (interactional, performance, and just reading) simultaneously across several storybook readings while controlling for the books selected and read, and (c) executing an experimental design with potential to reveal statistical differences in effects of reading-aloud styles for first and third graders and for vocabulary acquisition and comprehension with two different books. This study addressed practical concerns raised by growing numbers of teachers reading aloud more frequently in elementary classrooms, especially the early grades, and theory-based questions about learning that result from the presence or absence of interactions and transactions during reading and from the stances promoted by different reading-aloud styles.

Theoretical Perspectives and Considerations for Hypotheses

This study drew on sociolinguistic theory as applied to cognition and literacy development in social and cultural contexts and on the reader response theory associated with a transactional view of literacy. These theoretical perspectives suggest several hypotheses about learning outcomes for the reading-aloud styles manipulated in this study. Sociolinguistic theory (Vygotsky, 1986) supports hypotheses favoring the two mediated styles, interactional and performance reading, because both include scaffolding that encourages applications of cognitive operations and internalization of the symbolic functions of written language through social interactions. Rosenblatt’s (1978, 1995) transactional theory, too, suggests that learning may be enhanced by the two mediated styles because they provide a transactional model and a forum for shared reader responses. At the same time, however, Rosenblatt’s emphasis on differences between efferent and aesthetic responses supports a prediction that different learning outcomes may be best achieved by different reading-aloud styles.

Taking an aesthetic stance, the reader strives to place listeners inside the literature, to enable them to live through experiences described in the text. From an efferent stance, the reader presents text as a source of information, and voice is used to emphasize and clarify meanings of words, deeds, concepts, and structural elements. Readers and listeners shift from one stance to the other depending on purposes and the nature of text (Rosenblatt, 1978, 1995); thus, reading styles may affect stances, transactions, and...
responses for texts. If, for example, uninterrupted readings promote aesthetic stances and appreciation of the story as a whole, a performance style or even just reading may facilitate comprehension more than interactive styles. Vocabulary acquisition, however, may be enhanced by interactive styles if examinations of words in context are as important to word learning as some research suggests (Elley, 1989; Stahl, 1983).

In addition, reading styles may have different effects on learning for children at different levels of cognitive, language, and literacy development. Although interactions related to readings appear to promote comprehension and vocabulary acquisition for younger children, positive effects of verbal mediation in the performance and interactional reading styles may diminish over the early elementary grades. With experience in school settings, students become more adept at comprehending texts read aloud (Brabham et al., 2000) and learning vocabulary incidentally (Swanborn & de Glopper, 1999) so verbally mediated styles may be no more effective than just reading by third grade. Other factors to consider in forming hypotheses are changes in how students want teachers to read. A survey by Mendoza (1985) reported increases across primary and intermediate grades in numbers of students who said they preferred to talk about books before or after, but not during, read-aloud sessions. These changes in children’s preferences may also affect engagement and outcomes for reading-aloud styles.

Method

Subjects and Setting

From a pool of children with permission to participate in the study, 15 groups of 12 students were randomly selected from 12 first-grade and 12 third-grade classrooms. The 24 classrooms were distributed across five schools in a large, countywide system in the southeastern United States. Schools were professional development sites for preservice teachers’ field experiences and served a broad ethnic distribution of families ranging from low to upper-middle income levels and living in rural, urban, and suburban neighborhoods. At both grade levels, 5 groups (60 students) were randomly selected for each of the three reading-aloud styles designated as treatment conditions (180 per grade). From the total of 360 subjects, 114 were absent for at least one reading session or test so data for these students were not used. Of the remaining 246 subjects, 117 were in first grade and 129 were in third grade. Across the two grade levels, there were 87 in just-read-aloud, 79 in performance-reading, and 80 in interactional-reading groups. The narrative format is familiar and reading styles may have different effects on learning for children at different levels of cognitive, language, and literacy development. Although interactions related to readings appear to promote comprehension and vocabulary acquisition for younger children, positive effects of verbal mediation in the performance and interactional reading styles may diminish over the early elementary grades. With experience in school settings, students become more adept at comprehending texts read aloud (Brabham et al., 2000) and learning vocabulary incidentally (Swanborn & de Glopper, 1999) so verbally mediated styles may be no more effective than just reading by third grade. Other factors to consider in forming hypotheses are changes in how students want teachers to read. A survey by Mendoza (1985) reported increases across primary and intermediate grades in numbers of students who said they preferred to talk about books before or after, but not during, read-aloud sessions. These changes in children’s preferences may also affect engagement and outcomes for reading-aloud styles.

Materials

Books. The two informational storybooks used in this study present factual information in a narrative story. The narrative format is familiar and appealing to children, and informational storybooks have become popular for presenting subject area information to elementary students (Lynch-Brown & Tomlinson, 1999; Zarnowski, 1995). Storybooks with factual content in fictional narratives were selected because they allowed teachers and children to take either or both stances along Rosenblatt’s effronté-aesthetic continuum (Brabham et al., 2000; Leal, 1993, 1995) and had the potential to yield results that confirm or disconfirm hypotheses based on considerations that include transactional theory (Rosenblatt, 1978, 1995). Call Me Ahnighito by Pam Conrad (1995) and Everglades by Jean Craighead George (1995) were chosen for their rich vocabulary, interesting information, and challenging concepts that first and third graders were not likely to have learned previously. Authors and illustrators of both books received numerous honors for their contributions to children’s literature. The books were the same length and required the same amount of time for uninterrupted oral reading. Both were produced by the same company and recommended as read alouds for age ranges that include first and third grades. Publisher’s notes suggest Everglades for children from ages 6 years to 9 years and Call Me Ahnighito from 5 years to 9 years.

Scripts for the three reading-aloud styles. Scripts were developed for all three reading-aloud styles and both books by using a directed, listening–thinking activity format with a three-phase sequence of activities for prereading, oral reading, and postreading. This guided format for reading aloud was chosen because it maximizes listening comprehension for stories and informational books (Manzo & Manzo, 1995; Morrow, 1984). For each 20-min read-aloud session, scripts required preservice teacher–readers to record actual reading aloud and total session times and to check off each step for discussions, responses, and independent writing or drawing activities.

Readers in all treatment groups used scripts to present identical introductions and similar purpose statements to guide reading. Scripts for Everglades, for example, directed readers to do and say the following before the first reading:

After the title–author–illustrator information is given, announce the purpose, “I am going to read this book so you can take a trip through the Everglades. Along the way you will hear and learn words describing animals that are no longer common here or in the Everglades.”

For Call Me Ahnighito, scripts included the same directions and this purpose:

I am going to read this book so you can learn about the travels of an unusual character named Ahnighito. Along the way you will hear and learn words describing places that are very different from the place where we live.

For rereadings, scripts had readers repeat title–author–illustrator information and state the purpose, “I am going to read this book again so you can learn more about the pictures and words in this story.” All readers were directed to read the Author’s Notes and stories exactly as they were printed in the books.

For the just-reading group, scripts prompted readers to ask no questions and to read the story with no comments. Readers were instructed to provide paper and markers after reading, ask children to respond independently and silently by writing or making a picture related to the story, and discourage all talk and questions. Scripts for the mediated reading styles, however, included identical didactic and coconstructive questions (Dickinson & Smith, 1994) to stimulate discussions of story structure, facts, inferences, story concepts, and word meanings.

Scripts listed all words on vocabulary tests (distributed across three reading sessions with six or seven items for each) and statements that asked students to speculate about meanings. The scripts directed readers to listen to all responses without providing feedback that might verify or disconfirm predictions. Scripts also included questions about words and concepts that were not on vocabulary or comprehension tests. The script for Everglades, for instance, directed readers to ask, “How did the orchids turn island trees into cathedral windows?” Orchids and cathedral were not words included in items on vocabulary tests. Scripts also structured timing of mediation to occur before and after reading for the performance style and during reading for the interactional style.

Scripts for the performance style asked readers to present an interrupted performance of the story by following the instructions:...
Give these directions, “You may ask questions and make comments about the story before and after, but not during, the reading, but remember that we can hear only one person at a time.” If students make comments during reading, suggest they wait until the story is finished. Discourage interruptions. After the reading, answer questions students pose, encourage discussion of words and questions listed above, and invite conversations about details, sequences of events, and other story-related student knowledge.

Scripts for the instructional style required readers to interact with students as the story was read:

Give these directions, “I will ask you questions and explain the meanings of words as I read. You may ask questions and make comments about the story anytime you’d like, but remember that we can hear only one person at a time.” Begin reading the story verbatim and stop to discuss story-related comments interjected by students. Answer questions students pose, encourage discussion of the words and questions listed above, and invite conversations about details, sequences of events, and other story-related student knowledge.

**Pretests and Posttests**

A vocabulary pretest with 40 multiple-choice items based on 20 vocabulary words from each of the two informational storybooks was developed and given to all subjects. Separate vocabulary posttests for each book were made up of the same 20 vocabulary items that appeared in the pretest. Each vocabulary item included the target word and three phrases or words from which students chose one as the meaning. Target words in item stems were selected for their potential to measure vocabulary learned incidentally from hearing the books read aloud. Each target word was defined or used in a meaningful context in one of the books, and all were low-frequency terms that elementary students would not likely know because they occur 15.8 times or less per million words of print (Carroll, Davies, & Richman, 1971). Vocabulary items included words such as *abandoned*, and the three choices for this word were as follows: *(a) left all alone;* *(b) put in a band;* and *(c) made off limits.* All vocabulary pre- and posttest items used in this study have been described completely in a previously published report on research with different students that examined second, third, and fourth graders’ abilities to learn vocabulary, comprehend, and sort fact from fiction when informational storybooks are read aloud (Brabham et al., 2000).

The comprehension test for each book had 17 multiple-choice questions, and each item had four choices. All comprehension items were constructed by adapting (to four choices rather than three) items selected from previously published tests (Brabham et al., 2000). Test items in this study assessed literal and inferential comprehension of information from the stories. One of the literal comprehension questions for *Everglades* was “How were the Everglades formed?” Choices were as follows: *(a) Water from a flooding river washed away the land;* *(b) Water from a full lake spilled across the land;* *(c) Water never drained from a large swamp;* and *(d) Water from hurricanes washed away the land.* An inferential question for this book asked, “Why do the children want another story?” Students could select from the following: *(a) Because they liked the first Everglades story so much;* *(b) Because they wanted to hear a happy story about the Everglades;* *(c) Because they were bored on a trip through the Everglades;* and *(d) Because they did not understand the Everglades.”

Prior to the study, pre- and posttests and tasks were field tested with 10 first graders and 10 third graders from a different school system. Test-retest reliability coefficients (Tuckman, 1999) were .84 for vocabulary pre- and posttests and .74 for comprehension tests. Test–retest procedures with and without intervening treatment were used to establish content validity for tests and to assess testing effects that might result from using the same items for vocabulary pre- and posttests (Tuckman, 1999). Children were tested and retested on both books, but half heard one book and the other half heard the other book read once between tests. When field-test students had heard the book, the average increase from test to retest was 7.0 comprehension items and 4.5 vocabulary items. For the book children did not hear read aloud, test–retest gains averaged from −0.2 to 1.0 item for both comprehension and vocabulary and provided evidence for a negligible testing effect from taking pre- and posttests with identical items.

Answer keys were used to score multiple-choice items on all tests. Reliability and validity for scoring with keys were established by having two fluent readers act as independent evaluators who read the books and took the tests. Even for questions that required inferences, answers were consistent across evaluators and the key, probably because test items were based as directly as possible on the books and answers were constrained to three or four choices.

**Procedures**

Thirty preservice teachers enrolled in an undergraduate elementary education program participated in this study by reading the two informational storybooks and administering vocabulary and comprehension tests. Reading aloud to students and assessing learning was a regular requirement for laboratory experiences associated with the children’s literature course in this program of study, and preservice teachers who participated in this research project agreed to conduct those assignments using the scripts, procedures, and materials described in this report. At each grade level, five preservice teachers were randomly assigned to each of the three reading-aloud styles treatment conditions.

Prior to the study, preservice teacher–readers received 4 hr of training (conducted by Edna Greene Brabham) over a 2-week period. Training for implementation of treatments included work with scripts for the assigned style, administration of tests, instruction on how to hold books and show illustrations, and feedback that encouraged expressive reading with consistent speed that voiced texts exactly as written. Preservice teachers viewed videotaped models demonstrating the assigned style, identified style characteristics, and practiced reading both stories three times using the scripted procedures for the assigned style.

When the study began, preservice teachers gave vocabulary pretests on the school day before they read the first book. Test directions and items were read orally. Third graders recorded answers independently. First graders marked their own answers, but preservice teachers monitored tests and helped students make sure they circled the answer they wanted by pointing out numbers and rereading items if needed. For all treatment conditions, read-aloud sessions followed the same scripted prereading activities. For the oral and postreading phases of sessions, scripted procedures diverged and produced different styles for treatment conditions.

Preservice teacher–readers using the just-reading style asked subjects to listen carefully to the story without asking questions or making comments and produced verbatim readings that took 9–10 min. During the postreading phase of just reading, readers discouraged questions or comments and asked subjects to spend the rest of the 20-min session responding silently and independently by writing or drawing. To implement the performance style, readers followed the purpose statement with scripted comments and questions that targeted specific words and concepts and invited discussion for approximately 5 min. Then, they asked subjects to listen carefully and wait until the story was over to talk. Nine to 10 min were devoted to a verbatim oral performance of the text. In the postreading phase, scripted questions guided discussion for the remainder of the 20 min. Scripted questions about words and concepts were the same for interactional and performance style readers, but interactional readers used the questions to encourage story-related interactions during all three phases of reading. Students were asked to discuss words and concepts before, during, and after parts of the text were read so these readings were interspersed with interactions that lasted the full 20 min.

Readers used scripts to guide three readings for each book, a procedure based on research showing that oral rereadings improve vocabulary acqui-
sition (Eller, Pappas, & Brown, 1988; Leung, 1992; Leung & Pikalski, 1990) and comprehension (Martinez & Roser, 1985; Morrow, 1988; Yadon, 1988). Rereads over 3 consecutive days were carried out to maximize vocabulary gains and comprehension so differences in effects of reading-aloud styles might be as apparent as possible. Immediately after the third reading, preservice teachers gave vocabulary posttest and comprehension tests for that story. Directions and items were read orally. Students marked answers, but preservice teachers helped first graders by checking numbers and rereading items. The following week, the same students marked answers, but preservice teachers helped first graders by checking numbers and rereading items. The following week, the same students marked answers, but preservice teachers helped first graders by checking numbers and rereading items. The following week, the same students marked answers, but preservice teachers helped first graders by checking numbers and rereading items. The following week, the same...

Results

Preservice teacher-readers’ adherence to the reading-aloud styles assigned and manipulated as three levels of the primary task, independent variable was monitored in observations and recorded on tape. Each preservice teacher–reader produced audiotapes and one videotape of read-aloud sessions. Fifteen videotapes were randomly selected from sets representing all three reading styles and both books at both grade levels. As a manipulation check, two independent judges used scripts and style definitions to evaluate readers’ and students’ behaviors and to identify the style actually implemented during videotaped sessions. Correlations based on their judgments yielded a reliability coefficient of .96. With grade level as a second independent variable and vocabulary acquisition and comprehension scores for the two books as dependent variables, this study allowed statistical tests for effects of reading-aloud style treatments, grade level, and Grade × Style interactions (Huck, Cromier, & Bounds, 1974).

Preliminary analyses showed that effects of gender and ethnicity on test scores for the 246 subjects were not substantial and were associated with no significant differences. Additional analyses of vocabulary pretest scores indicated that there were statistically significant differences ($\alpha = .05$) between grade levels and among reading-aloud style treatments. Means and standard deviations for vocabulary pretests are displayed in Table 1. Grade-level differences were consistent across both books, with mean performance on vocabulary pretests greater for third graders than for first graders. Pairwise comparisons of pretest means for reading styles treatment groups revealed that third graders selected for the inter-

Table 1

Means and Standard Deviations for Performance on Vocabulary Pretests (Pre) and Posttests (Post)

<table>
<thead>
<tr>
<th>Reading-aloud style</th>
<th>Just reading&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Performance&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Interactional&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
</tr>
<tr>
<td>Grade and book</td>
<td>M  SD</td>
<td>M  SD</td>
<td>M  SD</td>
</tr>
<tr>
<td>First grade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMA</td>
<td>5.62 2.49</td>
<td>6.41 3.16</td>
<td>6.44 2.50</td>
</tr>
<tr>
<td>EG</td>
<td>5.79 2.00</td>
<td>7.13 2.05</td>
<td>6.62 2.25</td>
</tr>
<tr>
<td>Third grade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMA</td>
<td>9.00 3.02</td>
<td>11.13 4.05</td>
<td>9.12 2.89</td>
</tr>
<tr>
<td>EG</td>
<td>7.13 2.81</td>
<td>9.77 3.29</td>
<td>8.05 2.33</td>
</tr>
</tbody>
</table>

Note. Scores reflect mean correct on tests with 20 items for each book, Call Me Ahnighito (CMA) and Everglades (EG).  
<sup>a</sup>n = 87: 39 first graders, 48 third graders.  
<sup>b</sup>n = 79: 39 first graders, 40 third graders.  
<sup>c</sup>n = 80: 39 first graders, 41 third graders.
Table 2
Means and Standard Deviations for Performance on Comprehension Tests

<table>
<thead>
<tr>
<th>Reading-aloud style</th>
<th>Just reading⁴</th>
<th>Performance⁵</th>
<th>Interactional⁶</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade and book</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>First grade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMA</td>
<td>8.10</td>
<td>3.50</td>
<td>10.62</td>
</tr>
<tr>
<td>EG</td>
<td>6.92</td>
<td>2.52</td>
<td>8.41</td>
</tr>
<tr>
<td>Third grade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMA</td>
<td>11.33</td>
<td>3.02</td>
<td>12.45</td>
</tr>
<tr>
<td>EG</td>
<td>10.44</td>
<td>2.47</td>
<td>10.90</td>
</tr>
</tbody>
</table>


Univariate tests of between-subjects effects showed a similar pattern of results. There were no significant Grade x Style interactions for any of the four dependent measures. Effects of grade level were statistically significant for all dependent variables (p = .00). Reading-aloud styles had statistically significant effects on measures of vocabulary acquisition. Vocabulary scores revealed greater effect sizes for reading-aloud styles than grade level. That pattern was reversed for comprehension. For third graders, statistically significant differences in comprehension means produced by reading-aloud styles were nonexistent for one book and limited for the other, however. Vocabulary scores revealed greater effect sizes for reading-aloud styles than grade level.

Discussion

Effects of reading-aloud styles were statistically significant and consistent for vocabulary acquisition scores for both informational storybooks and grade levels. Just reading produced the smallest vocabulary gains with greater gains for performance reading and the greatest gains for interactional reading. Vocabulary acquisition was facilitated most by interactional reading aloud even for third graders although these older subjects knew more meanings of pretest words and had more experience listening to stories in school settings than first graders. Statistically significant differences in comprehension means produced by reading-aloud styles were nonexistent for one book and limited for the other, however. Vocabulary scores revealed greater effect sizes for reading-aloud styles than grade level. That pattern was reversed for comprehension, with effect sizes for grade level greater than those for reading-aloud styles. Effect sizes associated with reading-aloud styles treatments for first and third graders were considerably larger—from two to six times greater—for vocabulary acquisition than for comprehension.

Limitations to reliability and validity and generalizations for this study might include a pretest influence on dependent measures. Although vocabulary pre- and posttest procedures had no measurable effect on vocabulary gains for field-test subjects who did not hear tested words in a story context, the pre- and posttest format might have alerted subjects to attend to particular words during readings (Swanborn & de Glopper, 1999). Statistically greater performance on vocabulary pretests for Call Me Ahnighito by third graders in the interactional treatment group might indicate that these students were better equipped to acquire vocabulary and demonstrate comprehension, at least from this book, than were comprehension scores for reading-aloud styles were noted for Everglades. For Call Me Ahnighito, comprehension scores for performance and interactional reading-aloud styles were not statistically different, but these two mediated styles produced significantly greater comprehension than the just-reading style (ps = .00).

Table 3
Significant Differences Between Means for Vocabulary Gains and Comprehension Scores

<table>
<thead>
<tr>
<th>Score and book</th>
<th>Just reading⁴</th>
<th>Performance⁵</th>
<th>Interactional⁶</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocabulary gains</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>CMA</td>
<td>1.46</td>
<td>3.62</td>
<td>3.66</td>
</tr>
<tr>
<td>EG</td>
<td>1.99</td>
<td>2.88</td>
<td>3.15</td>
</tr>
<tr>
<td>Comprehension</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMA</td>
<td>9.72</td>
<td>3.61</td>
<td>11.54</td>
</tr>
<tr>
<td>EG</td>
<td>8.68</td>
<td>3.04</td>
<td>9.66</td>
</tr>
</tbody>
</table>

Note. Means reflect both first- and third-grade students’ gains on vocabulary pre- and posttests with 20 items and performance on comprehension tests with 17 items for each book. Call Me Ahnighito (CMA) and Everglades (EG). Means in the same row with different subscripts differ significantly at p < .05 by the Student Newman–Keuls least significant difference comparisons.

⁴n = 87. ⁵n = 79. ⁶n = 80.
students in performance and just-reading groups. The inequality in treatment groups suggests that one should make cautious interpretations of statistically significant effects of reading-aloud styles, particularly for comprehension, which showed statistically significant differences for different styles only among means for *Call Me Ablnighito*.

Other possible limitations were procedures in which subjects in just-reading groups drew or wrote independently after they heard the story each time. Many children produced story-related responses that might have strengthened comprehension and diminished differences between just reading and the verbally mediated styles for this variable. In addition, pretests, repeated readings, and book type might have predisposed subjects to take stances that were more efferent than aesthetic as they listened to the informational storybooks that were read, and if stance is an important factor affecting learning outcomes, these features may have accentuated differences in reading-aloud styles for vocabulary acquisition and comprehension.

In spite of these limitations, this study expanded on earlier, naturalistic studies and provided experimental, controlled comparisons showing that three commonly observed reading-aloud styles produced different learning outcomes. There is considerable convergence of evidence on the effect of reading-aloud styles from this study with elementary students and research with younger children. Lo (1997), for example, found that comprehension for kindergartners with lower memory abilities was facilitated more by interactional styles than by just reading, findings that correspond to results produced in this study. Findings from this study more closely paralleled comparisons of vocabulary and comprehension outcomes for preschoolers documented by Dickinson and Smith (1994) and by Reese and Cox (1999). They, too, found less evidence for significant effects of teachers’ reading-aloud styles for comprehension than for vocabulary. In the study conducted by Dickinson and Smith, however, students whose teachers used a performance style did better on vocabulary tests than students whose teachers used interactional styles, a result that was contrary to the superior effect of interactional over performance reading on vocabulary acquisition scores for first and third graders in this experiment and in the one conducted by Reese and Cox.

Effects of reading-aloud styles for first and third graders in this study replicated Elley’s (1989) research on read alouds with second graders. His control group heard teachers read books without explanations of word meanings, a condition similar to this study’s just-reading condition. For his experimental group, teachers discussed word meanings as they occurred in the texts they read, a presentation format similar to the interactional style. Compared with the control group, the experimental group’s vocabulary learning increased by 25.0% for one book and 12.0% for another, an average of 18.5%. In the study reported here, vocabulary acquisition averaged 18.0% more for interactional reading than for just reading (5.24 compared with 1.73 items out of 20) and was inside the range of gains Elley reported for explanations of words during reading.

This study added to Elley’s (1989) findings by including the performance style in which teachers explained word meanings before and after the story. Compared with just reading (with an average gain of 1.73 items out of 20), performance reading increased word learning (to 3.40 items) but was much less effective for vocabulary acquisition than the interactional style (5.24 items). These results corroborated Elley’s evidence that word explanations increase vocabulary acquisition from stories read aloud. In addition, this study showed that the simple presence of word discussions before and after reading is not sufficient to produce maximum gains in vocabulary; timing interactions to occur during reading, as in this and Elley’s study, is the key to facilitating word acquisition from read alouds in the early elementary grades.

Although just-reading and performance reading styles produced less word learning than interactional reading, all three reading-aloud styles yielded pre-to-posttest gains that were similar to the incidental vocabulary learning reported for students reading words in meaningful print contexts. Research shows that readers, reading to themselves, acquire meanings of unfamiliar words at rates that vary from 5% (Nagy, Anderson, & Herman, 1987) to about 20% (Konopak, 1988). A recent meta-analysis of 20 studies pointed out that incidental word learning from independent reading increased with students’ age, grade level, and reading ability, but the analysis yielded an average word gain of 15% for the results considered (Swanborn & de Grolper, 1999). In this study of reading-aloud styles, pre-to-posttest vocabulary gains (averaged for the two books) were as follows: 5.3% for first graders and 12.0% for third graders in just reading; 12.7% for first graders and 21.0% for third graders in performance reading; and 25.0% for first graders and 27.0% for third graders in interactional reading groups. These findings show that even just reading produced vocabulary learning within the ranges reported for students’ incidental learning of words read independently, and they are consistent with results indicating that students may learn more words from hearing texts read aloud than from reading stories themselves (Stahl et al., 1991).

Conclusion

Results from this experimental comparison of reading-aloud styles support hypotheses that verbally mediated, interactional and performance reading-aloud styles are more effective for vocabulary acquisition than is just reading aloud with no discussion. Findings confirm teacher explanations and student discussions as critical factors that benefit students’ learning of words and concepts and construction of meaning from texts read aloud in the early grades of elementary school. Significant effects of reading-aloud styles with verbal mediation on vocabulary gains validated sociolinguistic theory’s emphasis on the roles of adults in helping children construct meaning from written texts and the importance of social interaction and scaffolding in language and literacy development and education (Hart & Risley, 1995; Ninio & Bruner, 1978; Vygotsky, 1986). Morrow, O’Connor, and Smith (1990) summed up differences between just reading and socially mediated reading by explaining, “Reading to a child is not sufficient for maximum literacy growth. It is the talk about books that surrounds the reading that seems to be the key” (p. 268).

Stronger effect sizes produced by reading-aloud styles for vocabulary acquisition than for comprehension suggest that these two literacy outcomes may be supported by different purposes and processes and facilitated by different stances along the efferent-aesthetic continuum associated with the transactional theory of reading (Rosenblatt, 1978, 1995). If learning goals are aimed at efferent purposes such as promoting vocabulary acquisition, an interactional style in which teachers and students discuss meanings...
of words in the context of the story is most effective. Results in this study indicated that using an interactional style does not interfere with comprehension in spite of frequent interruptions that may produce discontinuities in the flow of the story. If comprehension based on aesthetically experiencing the text as a whole is the goal for the read-aloud experience, however, an uninterrupted performance style or even just reading may produce the desired result.

This study confirms Reese and Cox’s (1999) prediction that research will never “uncover one ‘best’ style of reading to children” (p. 27). These results provide insights and information teachers can use to make informed choices as they select read-aloud styles to best meet their own instructional purposes and to establish goals for learning that best meet the needs of students. In addition, this study establishes departure points for further investigations of reading-aloud styles. Additional research is needed to (a) determine whether the significant but inconsistent effects of styles on comprehension were procedural or statistical anomalies unique to this study and these books; (b) examine purposes and stances promoted by styles and their influence on comprehension; (c) see whether the pattern of effectiveness for different styles maintain and can be manipulated and applied to facilitate vocabulary acquisition across the elementary and secondary grades; and (d) explore qualities of interactions and discussions related to text and how they affect learning for students of different ability levels, for a variety of text types, and for different instructional purposes across subject areas and grades. Addressing these and other research questions will enable researchers and teachers to take better advantage of reading aloud as an effective use of instructional time and as a powerful tool for enhancing students’ language development and literacy learning.

References


EFFECTS OF TEACHERS’ READING-ALOUD STYLES


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