Measureable Effects of a Read-Aloud Program

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Meaningful reading, to a large extent, depends upon interaction between the reader and the material read. In order to comprehend a given reading passage, the reader must bring his or her prior knowledge to bear on the passage (Otto & Smith, 1980). Because students come to school with such varied experiential backgrounds, teachers must make sure students are equipped with the required fund of experiences needed to tackle any given reading activity. If students are found to lack familiarity with certain kinds of experiences found in their basal reader stories, for example, filling in the experiential gaps usually falls to the teachers to accomplish.

One traditional way to extend students' experiences, albeit vicariously, is through reading aloud to students (Smith & Johnson, 1976). Not only does reading aloud to children enrich experiential backgrounds, but other benefits are said to accrue from the practice. Most often acknowledged is the heightened interest in reading which students receive from having books read aloud to them. Some stated academic contributions of read-aloud programs have included vocabulary growth (Cohen, 1968) and expanded language repertoire (Strickland, 1973). Educators have also been heartened to hear of Chomsky's (1972) finding of a positive relationship between having listened to books read aloud during preschool years and early achievement in reading. Thus, the case for reading to children is persuasive, based upon tangible and intangible findings.

Despite arguments for reading aloud to children, the practice often occupies a secondary position in elementary school curricula, behind math, reading, and other language arts-related concerns. McCormick (1977) believes educators often favor academic activities whose results are more easily measured than the more subjective benefits gained by reading aloud to children. In addition, measuring and recording knowledge gains attributed to a read-aloud program present more of a challenge for teachers of younger children who often can neither read nor write well.

The following report demonstrates that reading aloud to first-grade children impacts not only on their experiential backgrounds but also on their language-appropriate behaviors, in ways which are easy to measure. In the study to be described, both traditional and novel means of measuring program gains are utilized to marshall still more empirical support for reading aloud to children.
Method

Subjects

Twenty-six black first-graders attending an inner-city public school in the Midwest participated in the read-aloud experiment. All children were at least average in academic performance, with eight students above average, as judged by their teacher.

Materials

Thirteen fiction and non-fiction books related to the topic of circuses were drawn from the public library. The topic was chosen because all of the children stated they had neither read about a circus nor seen one. Only one basal reader story in their series (Lippincott) mentioned a circus, and that story never specifically described what a circus was. Use of the topic, it was felt, would allow results to attributed to the read-aloud program.

Procedure

All above-average students were randomly assigned to either the treatment (read-aloud) group or the control group; the same applied to average students. Children in both groups were pretested as follows. Children were asked to draw a picture of a circus, and to put in as many items as they could think of that belonged in a circus. Next, children were individually asked to tell a story about their picture; these stories were tape-recorded, and later transcribed and analyzed.

Treatment. Children in the treatment group were read to twice a week for eight weeks by their classroom teacher (Hooper). Each read-aloud session lasted 40 minutes, and the previously mentioned circus books comprised the materials read. All children in both the treatment and control groups were free to browse and examine all books in their spare time.

Prior to each reading, a purpose for reading was established. During the reading, the teacher accommodated active oral involvement by the students, as recommended by Hoffman (1976). In some instances, children wanted certain words explained. At other times, children expanded upon and attempted to explain some new information related in the books. For instance, one story mentioned that the circus was also referred to as a "mud show"; before the children were told why this was so, they provided their own explanations. During the interactions, children also responded to questions asked by the teacher, such as, "Why was a giraffe part of the circus long ago, but not today?" Teacher questions were asked to clarify points the books brought up.

Control. Children in the control group continued with regular school programs as was the case in the previous studies (Cohen, 1968; McDonald, 1967). While the treatment group was read aloud to, the control group worked on reading skills, watched filmstrips, and twice listened to stories in the library. None of these activities related to circuses.

Following eight weeks of treatment, posttests were administered to both groups in the same manner as the pretests were administered.
Results

Results confirmed that the treatment group expanded their experiential background with regard to the topic of circuses, where the control group did not. Furthermore, as previous researchers have learned, the treatment group utilized more mature language to describe the topic than did the control group.

The extent of gains from the read-aloud program was measured by two more or less traditional and one novel means. First, gains in knowledge were measured by analyzing children's drawings. Although some (e.g., Cohen, 1968; Esgar, 1978) have advocated looking at artwork to find out what children comprehend, details of how this might be accomplished still needed to be worked out. We devised a special rating system by having undergraduate education majors list items thought to constitute a circus; from these lists, a scoring sheet comprised of the 20 most frequently-appearing items was developed. Next, children's drawings were independently rated by three judges: an art teacher, a reading specialist, and a reading teacher with an art background. If a rater felt a drawing contained a lion, for example, which was listed on the scoring sheet, then the drawing was given a point for a lion. Drawings were not given points for items which were not on the scoring sheet. Raters had no idea which was the pre- or post-test, or which drawings belonged to what student. The average of the three raters' scores for each drawing was used for analysis.

Next, gains in maturity of language used to describe a circus were measured by looking at the language of the children's stories. In this case, the mean length of response (MLR), long judged to be a reliable measure of linguistic maturity (Shriver, 1974), was calculated for each pretest and posttest story. To obtain the MLR, one simply calculates the average number of words constituting a response, in this case, any unit marked off from the preceding and succeeding remarks by pauses.

Third, gains in diversity of language used to describe a circus were also measured by looking at the language of the children's stories. For this purpose, the type-token ratio (TTR), the ratio of different words (type) to the total number of words (token) in a language sample, can easily be calculated (Loban, 1963).

Across all three measures, analysis of pretest results demonstrated that both groups were comparable at the beginning of the read-aloud program, i.e., no significant differences between the groups were demonstrated. Table 1 (following page) presents the pretest and posttest results for the read-aloud and control groups.

Following treatment, differences between the two groups were evident. Students in the read-aloud program significantly increased their knowledge with regard to circuses over students in the control group. Furthermore, students in the read-aloud program displayed significantly greater maturity in the language they used to describe their circus picture story. Students in the two groups showed no differences in linguistic diversity, however, following the treatment. Table 1 documents these findings as well.

It occurred to us after the fact that the TTR was an inappro-
Table 1
Pretest and Posttest Results for the Read-Aloud & Control Groups

Pretest:

<table>
<thead>
<tr>
<th>Measure</th>
<th>Treatment</th>
<th>Control</th>
<th>t^a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art</td>
<td>5.85</td>
<td>5.31</td>
<td>.49</td>
</tr>
<tr>
<td>MLR</td>
<td>5.83</td>
<td>5.07</td>
<td>2.05</td>
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<tr>
<td>TTR</td>
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Posttest:

<table>
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<tr>
<th>Measure</th>
<th>Treatment</th>
<th>Control</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art</td>
<td>8.38</td>
<td>4.69</td>
<td>3.14**</td>
</tr>
<tr>
<td>MLR</td>
<td>6.50</td>
<td>4.76</td>
<td>2.55*</td>
</tr>
<tr>
<td>TTR</td>
<td>.58</td>
<td>.56</td>
<td>.56</td>
</tr>
</tbody>
</table>

^df = 24  *p < .05.  **p < .01.

appropriate measure of vocabulary growth in this experiment, for what the read-aloud group actually did was to narrow their choices of words to circus-appropriate vocabulary, not expand their vocabulary overall. The control group, on the other hand, behaved on the posttest as they did on the pretest; they exhibited great diversity in their word choices, including many words which were not circus-appropriate. To see if this observation was accurate, another test was devised, whereby another undergraduate class in education was asked to prepare a glossary of circus terms. From these glossaries, the 25 most frequently-mentioned words were selected for one scoring glossary. Pretest and posttest stories were reevaluated according to this glossary. Where no significant difference between treatment and control pretests appeared, t (24) = 1.05, p > .05, a significant difference between posttests, favoring the treatment group, did appear, t (24) = 4.48, p < .001.

Discussion

Both the preceding account and the enthusiastic reports of the children in the treatment group suggest the experiment was successful. First-grade children in the treatment group widened their knowledge base measurably vis-à-vis the topic of circuses, by their
participation in the read-aloud program.

We thought a treatment of this sort might be particularly valuable for keeping below-average students or non-readers knowledgeable about science, social studies, and other curricular content, while such students master basic reading skills. Students might certainly be able to extend their knowledge in ways not heretofore open to them, while enjoying the more subjective but quite apparent pleasures of listening to books read aloud.

REFERENCES


