

Oral and Non-Oral Methods of Teaching Reading¹

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THE present experiment is a replication of an earlier study by McNeil and Keislar (5) in which oral and non-oral methods of teaching reading were investigated utilizing an auto-instructional device. In the present design, the procedures are similar to the earlier study but the conditions and materials are more akin to current classroom instruction; some changes were necessary in the transition from a mechanical instrument for instruction to conventional schoolroom materials.

It was the purpose of the present study to determine whether oral responding during instruction in reading, in contrast to responding without overt speech, facilitates silent reading as measured by recognition and understanding of written words and sentences. This experiment was carried on at the kindergarten level under closely con-

trolled conditions with replicable procedures and materials.

Review of the Literature: Studies, reports, and theories related to teaching reading to young children have led to conflicting opinions regarding the value of the oral method in the teaching of reading. The point of view that saying words aloud is detrimental to learning to read dates back several decades in American education. For example, McDade (4) and Buswell (1) have stated that oral responding interferes with learning, particularly in beginning reading. They performed a number of experiments with groups of young children contrasting non-oral and oral methods of teaching beginning reading and concluded that the non-oral method was superior to the oral method.

More recent research, however, has raised the question as to whether vocalization might be an aid to the reader, especially where the material is unfamiliar or difficult. Edfelt (2) found

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that silent speech, measured by actual muscle movements by means of an electromyograph, increased when the reading material became difficult. He suggested that lip movements in reading were not the cause of inefficient performance but an indication that the reader found the material difficult to read.

In their original study, McNeil and Keislar (5) found the oral method, *i.e.*, speaking the words aloud while learning, to be superior to the silent learning program even though the criterion consisted of a silent reading test. Myresko (6) also had referred to cases where oral reading improved a pupil's silent reading skills.

However, Sheldon and Lashinger (8) reported no differences in achievement when they compared three methods of teaching reading, one of which emphasized vocalization. Rosenbaum (7) found that while peer and expert (the experimenter) verbalization facilitated recognition, self-verbalization in a chorus of four did not. Vocalizing in chorus appeared to interfere with the effect of self-verbalization.

The hypothesis of the present study is, in part, based on the mediation theory advanced by Kendler and others that young children at the age of four and five are beginning to use verbal responses as self-cues. Where language is overtly expressed, the responses are more likely to be learned and, therefore, to function subsequently in a covert self-cueing role. The theory rests in part on evidence that kindergarten children who labeled overtly showed superior inferential behavior compared with those who did not label (3).

If a child says aloud words and

sentences as he is learning to read, he will be better able subsequently to understand these words in new sentences even though he need not continue to say them aloud. These "silent" verbal responses act as mediating or self-cueing responses to lead the child to recognize the correct meaning of the printed words.

Hypothesis: The central problem for this study was focused on testing the hypothesis that kindergarten children who are told to say aloud and to select printed words during two weeks of reading instruction perform better on silent reading than children who only select the words without responding orally.

Subjects: Participating in the study were 127 five- and six-year-old children from two schools in Los Angeles representing two social classes, upper middle and upper lower. In each school the children were randomly assigned to the oral group and the non-oral group. Five children were not included in the final analysis because their high scores on the pretest indicated that they could already read most of the words to be taught. Thirty additional children were also excluded because they were absent three or more times during training. The final data for the experiment were obtained from 92 children, 46 of whom belonged to the oral group and 46 to the non-oral group.

Instructional Materials and Procedures: The instructional program consisted of eight daily lessons administered by tape recording over a two-week period. The materials, except for instructions regarding speaking aloud, were identical for the oral and the non-

oral groups. The instructional goals for both experimental groups were the same, namely, to have each child acquire a basic reading vocabulary of 20 words, derived from lists of the most frequently used vocabulary. Each lesson was incorporated into a booklet of approximately 48 items or frames, one per page. The pages of the booklets were in various colors so that it could be seen at a glance that children were on the right page in accordance with the taped commentary.

All items involved either two or three choices with circles below each choice for marking the correct response. The children were supplied with water-filled, felt-tip pens to mark their answers, and paper in the booklets was specially treated so that the circle denoting the correct answer turned green when marked with the water pen, and all other circles turned red.

The variety of tasks to be performed included: matching a cue word at the top of the page to one of three words at the bottom, finding a printed word from an oral cue with no written cue, matching a picture to the proper word and sequence of printed words, and completing missing word sentences by indicating which word of three would best complete the sentence. While all subjects were required to make a choice on each item, only the children in the oral group were instructed to say the stimulus word or the correct answer aloud.

In each of the two schools, children were instructed in groups of ten to fifteen, two oral and two non-oral groups per school. Lessons were presented to each group in succession in twelve to fifteen minute daily sessions. The func-

tions of the three monitors present during the lessons were restricted to keeping order and seeing that everyone was on the proper page.

Pretest and Post-test: The pretest was used to indicate the extent to which children already could read the words in the program. On the first day, the children were initially given an orientation program in which they learned the lesson procedure including how to respond by marking. The rest of the first day's session involved the pretest which was designed to assess the children's knowledge of reading as demonstrated by their ability to identify pictures and to read words.

The post-test, administered on the tenth day of the experiment, consisted of fifty items pertaining to the twenty-word reading vocabulary which was the objective of the teaching program. Reading knowledge of each word was tested in several ways: matching to sample, sentence completion tasks, and identifying words and sentences from oral cues and picture cues. The criterion, therefore, dealt with the ability to understand the printed material as well as to recognize the difference between printed words and to identify the printed form of the spoken word.

Results: In Table 1 are shown the mean number of correct items earned on the pretest and the post-test along with the respective standard deviations for the experimental and control groups. These data show that the two groups did not differ in their initial ability to perform on the reading task. A *t* test was used to compare the differences between the oral and non-oral groups. The difference, significant at the .05

	Oral Group (N = 46)	Non-oral Group (N = 46)	
Pretest	M = 6.4 SD = 2.2	M = 6.3 SD = 1.7	t = .33 not significant
Post-test	M = 29.4 SD = 8.7	M = 26.1 SD = 8.6	t = 2.06 p < .05

Table 1. Pre- and Post-test Scores for Oral and Non-oral Groups

level, indicates that children in the oral group achieved more success in beginning reading than children who were not given the opportunity to vocalize while learning to read.

Discussion: Support has been shown for the hypothesis that the oral method of teaching beginning reading is significantly superior to the non-oral method. This is so, at least, in the initial stages of learning to read where the criterion is recognition and comprehension of the printed word rather than speed reading. In this study, the oral method of teaching reading was defined as one in which the child was required to say printed words as he selected a choice on each item. In the non-oral method, children were simply instructed to choose an alternative for every item without responding orally; as they read silently, they indicated their comprehension only through the selection of their choices.

Even though the criterion test required only silent reading, the oral group performed significantly better. It is noteworthy that proficiency in silent reading can occur from an instructional procedure that demands vocalization. The findings are consistent with the mediation theory that if young children are given instructions to respond overtly, they subsequently will be able to pro-

duce this response as a covert self-cue to bring about appropriate behavior. The replication study has demonstrated the value of the oral response under modified conditions indicating that the original conclusions are generalizable.

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