

## RELATION OF READING RATE AND RAPID AUTOMATIC NAMING AMONG THIRD GRADERS'

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*Summary.*—The relation of reading rate and rapid automatic naming (RAN) for pictures was investigated for 31 third graders. Reading rate was measured as the number of seconds required for reading aloud a third-grade passage. Rapid automatic naming was assessed with the RAN portion of the Woodcock Johnson III Tests of Cognitive Abilities. A moderate correlation of  $-.61$  between the sets of scores suggests RAN assessment may be useful in screening for reading deficits in third-grade children.

The National Assessment of Educational Progress is an ongoing research project on students' academic skills in Grades 4, 8, and 12. Performance is categorized into three levels of achievement: basic, proficient, and advanced. Basic achievement represents partial mastery; the proficient level indicates solid academic performance; and the advanced level characterizes superior performance. The National Assessment Governing Board indicated that **all** students should perform at the proficient academic level or above (2). In 2000, the project staff administered their reading assessment, which is primarily a measure of what students **know** and can do, to approximately 9,000 fourth graders in the nation (2). Analysis indicated that approximately 60% of the fourth graders did not perform at or above the proficient level. Also this poor performance has been consistent over the past decade and has not improved in later grades.

While these data provide a basis for comparison, few studies have identified reading deficits in the school-age population. Shaywitz, et al. (3) found that reading rate was clinically useful in differentiating average from poor readers among **445** at Grade 9 and word finding was the best predictor for reading comprehension. Swan and Goswami (5) examined picture naming scores for children having dyslexia with scores of chronological age and reading-age-matched controls ( $n = 16$ ). Analysis showed picture naming in the children with dyslexia was significantly poorer than both control groups. Murphy, Pollatsek, and Well (1) also reported word-finding deficits in a group of children with dyslexia. Lastly, Wing (6) suggested a relation between reading rate and rapid automatic naming after examining a phonological and a semantic treatment program for increasing fluency of word retrieval. The present study examined the relation of reading rate and rapid automatic naming for third graders.

*Method.*—Students, 14 boys and 17 girls ( $M = 8.4$  yr.,  $SD = 3.2$ ) from two third-grade classrooms participated. Children with fluency deficits identified by their primary teacher or children who failed a hearing screening were excluded. The rapid automatic naming portion of the

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Woodcock Johnson III Tests of Cognitive Abilities (7), which has a median reliability of .97 for the 5- to 19-year age group, was administered. Children were instructed to look at 120 pictures over four pages and to name each picture as fast as possible over 2 min. Each correct response was scored 1 and each incorrect response 0. The total number of pictures named correctly was then compared to the subject's reading rate for a 101-word, third-grade passage entitled *Bears* (4). Children were instructed to read the paragraph as quickly as possible without making too many mistakes. If a child was unable to read a word within 5 sec. of completing the previous word, the investigator provided the word. Reading was timed with a stopwatch started when the first word was read and stopped after the last read word. The total time (sec.) for reading the paragraph was noted for each child.

*Results.*—The average number of pictures named on the rapid automatic naming task was 91.7 ( $SD=15.2$ , range 50 to 120). The average time for reading the 101-word paragraph was 82.4 sec. ( $SD=59.0$ , range 29 to 297 sec.). The Pearson product-moment correlation between rapid automatic naming and reading rate was  $-.61$  (one-tailed test,  $p \leq .01$ ). This moderate value suggests that reading rate and rapid automatic naming for pictures covary. Since reading rate has been clinically useful in differentiating average from poor school-age readers (3) and RAN significantly poorer for school-age children with reading deficits (1, 5), the correlation of  $-.61$  provides some support for rapid automatic naming as a screening tool for reading deficits in school-age children. Researchers should examine whether rapid automatic naming of pictures differentiates average from poor readers.

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