



The Woodcock-Muñoz Foundation

# **RESEARCH BRIEF**

## **DOCTORAL DISSERTATION ABSTRACT**

### **INTRA-COGNITIVE SCATTER ON THE WOODCOCK- JOHNSON TESTS OF COGNITIVE ABILITIES-THIRD EDITION AND ITS RELATION TO ACADEMIC ACHIEVEMENT**

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## **Abstract**

Expanding on the work of McGrew and Knopik (1996), who examined intracognitive scatter on the *Woodcock-Johnson Psycho-Educational Battery-Revised* (WJ-R), the current researchers investigated the relationship between the total number of significant intracognitive strengths and/or weaknesses (scatter) and achievement on the *Woodcock-Johnson Tests of Cognitive Abilities-Third Edition* (WJ III). The sample included 2,189 participants in grades 1 through 12 from the WJ III standardization sample. Independent samples t-tests and Pearson correlations were computed to compare subjects with high and low total numbers of intracognitive strengths and/or weaknesses on three broad achievement variables (reading, mathematics, and written language) as a function of grade. Scatter was operationally defined in three ways: a cognitive cluster was significantly discrepant from the average of the participant's other six cognitive clusters (McGrew & Knopik, 1996), a significant discrepancy existed between a participant's highest and lowest cluster scores, and a cognitive cluster was significantly discrepant from the average of the participant's other six cognitive clusters and the discrepant cluster was a normative weakness (i.e., had a standard score below 85). Results indicated that the definition of scatter that examined discrepant clusters that were also normative weaknesses was the most logically and empirically related to achievement. However, overall, results do not strongly support a significant relationship between intracognitive scatter and achievement, further substantiating the call for abandoning scatter analysis.

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