



The Woodcock-Muñoz Foundation

# RESEARCH BRIEF

## DOCTORAL DISSERTATION ABSTRACT

### **“REACTION TIME SPEED” AS A FACTOR IN CATTELL-HORN-CARROLL THEORY OF COGNITIVE ABILITIES: EVIDENCE FOR OR AGAINST**

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## **Abstract**

This dissertation will initially give a review of the literature regarding the study of intelligence and reaction time (RT). This review will cover the current theories of intelligence and how they address RT. The only well researched theory of intelligence, the CHC theory of cognitive ability, will be further explored with regard to "RT speed." 111 undergraduates from the University of California at Berkeley, University of Wisconsin-Madison, and Beloit College-Wisconsin who participated as part of the normative data sampling of selected sub-tests of the latest edition of the Woodcock-Johnson (WJ III: Woodcock, McGrew, & Mather, 2001) also were administered 6 different RT tests. Questions that will be addressed from this data are: 1) Do various measures of "RT speed" best fit the CHC theory of cognitive ability on a single *Gt* factor irrespective of ECT paradigm and content? 2) Do various measures of "RT speed" best fit the CHC theory of cognitive ability on the same factor as other measures of *Gs*? 3) Do various measures of "RT speed" best fit the CHC theory of cognitive ability on similar broad factor content areas? Results show clear support for the CHC theory and that "RT speed" measures loading on a single *Gt* factor account for no more than 1% of the total variance for the model for this highly restricted population. Dissertation concludes with discussion of finding and implications for future research.

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