



The Woodcock-Muñoz Foundation

RESEARCH BRIEF

DOCTORAL DISSERTATION ABSTRACT

USING CATTELL-HORN-CARROLL CROSS-BATTERY ASSESSMENT TO PREDICT READING ACHIEVEMENT IN LEARNING DISABLED MIDDLE SCHOOL STUDENTS

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Abstract

Recent research has pointed out the theoretical basis and predictive utility of Cattell-Horn-Carroll (CHC) theory in cognitive assessment. Guidelines have also been presented for conducting cross-battery assessments using CHC theory as a basis. The general purpose of the present study was to utilize CHC-based Cross-Battery Assessment to predict reading achievement as measured by traditional or alternative forms of assessment, such as Curriculum-Based Measurement (CBM). Hypotheses formulated for the present study included auditory processing crystallized intelligence, short term memory, long term retrieval, processing speed, and fluid intelligence being important predictors of basic reading skills and reading comprehension in learning disabled middle school students. The present study was conducted through a records review. All students received psychological evaluations and were assessed through CHC Cross-Battery Assessment. In addition, educational evaluations consisting of the Woodcock-Johnson Tests of Achievement—Revised and three CBM oral reading fluency probes were also administered to the students. Stepwise multiple regressions were performed for each of three dependent variables (word identification, passage comprehension, and oral reading fluency) using six independent variables (fluid intelligence, crystallized intelligence, short term memory, auditory processing, long term retrieval, and processing speed). Results at least partially substantiated the hypotheses that crystallized intelligence, processing speed, auditory processing, and short term memory would be significant predictors of basic reading skills and reading comprehension in learning disabled middle school students. However, hypotheses that long term retrieval and fluid intelligence would be significant predictors of basic reading skills and reading comprehension in learning disabled middle school students were not substantiated. Implications for future research and school psychology practice were also discussed.

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