

## References

\* References marked with an asterisk indicates studies included in the research synthesis (see Table 1)

- Aaron, P. G., & Joshi, M. R. (1992). *Reading problems: Consultation and remediation*. New York: Guilford.
- Adams, M. J. (1990). *Beginning to read: Thinking and learning about print*. Cambridge, MA: MIT Press.
- Anderson, R. C., & Pearson, P. D. (1984). A schema-theoretic view of basic processes in reading comprehension. In P. D. Pearson, R. Barr, M. L. Kamil, & P. B. Mosenthal (Eds.), *Handbook of reading research* (Vol. 1, pp. 255–291). New York: Longman.
- Baddeley, A. D., Logie, R. H., Nimmo-Smith, I., & Brereton, N. (1985). Components of fluent reading. *Journal of Memory and Language*, *24*, 119-131.
- Baker, S. K., Simmons, D. C., & Kameenui, E. J. (1995). *Vocabulary acquisition: Synthesis of the research*. Eugene, OR: Technical Report 13. University of Oregon.
- Barker, T.A., Torgesen, J.K., & Wagner, R.K. (1992). The role of orthographic processing skills on five different reading tasks. *Reading Research Quarterly*, *27*, 335–345.
- \*Benson, N. (2008). Cattell–Horn–Carroll Cognitive abilities and reading achievement. *Journal of Psychoeducational Assessment*, *26*(1), 27-41.
- \*Benson, N., & Moseley, B. (under revision). Integrating psychometric and information processing perspectives to clarify the process of mathematical reasoning. *Journal of School Psychology*.
- Berninger, V. W. (1990). Multiple orthographic codes: Key to alternative instructional methodologies for developing the orthographic phonological connections underlying word identification. *School Psychology Review*, *19*, 518–533.

- Berninger, V. W. (2006). Research-supported ideas for implementing reauthorized IDEA with intelligent professional psychological services. *Psychology in the Schools, 43*(7), 781-796.
- Berninger, V. W., Abbott, R., Thomson, J., & Raskind, W. (2001). Language phenotype for reading and writing disability: A family approach. *Scientific Studies in Reading, 5*, 59-105.
- Berninger, V. W., Abbott, R., Thomson, J., Wagner, R., Swanson, H. L., Wijsman, E., & Raskind, W. (2006). Modeling developmental phonological core deficits within a working memory architecture in children and adults with developmental dyslexia. *Scientific Studies in Reading, 10*, 165-198.
- Boyle, G. J. (1991). Does item homogeneity indicate internal consistency of item redundancy in psychometric scales? *Personality and Individual Differences, 12*(3), 291-294).
- Bull, R., Espy, K. A., & Wiebe, S. A. (2008). Short-term memory, working memory, and executive functioning in preschoolers: Longitudinal predictors of mathematical achievement at age 7 years. *Developmental Neuropsychology, 33*(3), 205-228.
- Bull, R., & Johnston, R. S. (1997). Children's arithmetical difficulties: Contributions from processing speed, item identification, and short-term memory. *Journal of Experimental Child Psychology, 65*, 1-24.
- Carey, S. (2004). Bootstrapping and the origin of concepts. *Daedalus, 133*, 59-68.
- Chong, S. L., & Siegel, L. S. (2008). Stability of computational deficits in math learning disability from second through fifth grades. *Developmental Neuropsychology, 33*(3), 300-317.
- Cirino, P. T., Morris, M. K., & Morris, R. D. (2002). Neuropsychological concomitants of

- calculation skills in college students referred for learning difficulties. *Developmental Neuropsychology*, *21*, 201–218.
- Cooper, H. (1998). *Synthesizing research: A guide for literature reviews*. Thousand Oaks, CA: SAGE Publications.
- Cooper, K. L. (2006). *A componential reading comprehension task for children*. Unpublished doctoral thesis, University of New England.
- Coyne, M. D., Simmons, D. C., Kame'enui, E. J., Stoolmiller, M. (2004). Teaching vocabulary during shared storybook readings: An examination of differential effects. *Exceptionality*, *12*, 145-162.
- Cronbach, L. J., & Gleser, G. C. (1957). *Psychological tests and personnel decisions*. Urbana, IL: University of Illinois Press.
- Dehaene, S., Spelke, E., Pinel, P., Stanescu, R., & Tsivkin, S. (1999). Sources of mathematical thinking: Behavioral and brain-imaging evidence. *Science*, *284*, 970–974.
- Ehri, L. C. (1998). Grapheme-phoneme knowledge is essential for learning to read words in English. In J. L. Metsala & L. C. Ehri (Eds.), *Word recognition in beginning literacy* (pp. 3–40). Mahwah, NJ: Lawrence Erlbaum.
- \*Evans, J. J., Floyd, R. G., McGrew, K. S., & Leforgee, M. H. (2002). The relations between measures of Cattell–Horn–Carroll (CHC) cognitive abilities and reading achievement during childhood and adolescence. *School Psychology Review*, *31*, 246–262.
- Fiorello, C. A., & Primerano, D. P. (2005). Research into practice: Cattell-Horn-Carroll cognitive assessment in practice: Eligibility and program development issues. *Psychology in the Schools*, *42*(5), 525–536.
- \*Flanagan, D. P. (2000). Wechsler-based CHC Cross-Battery assessment and reading achievement: Strengthening the validity of interpretations drawn from Wechsler test scores. *School Psychology Quarterly*, *15*, 295–329.

- Flanagan, D. P., Ortiz, S. O., Alfonso, V. C., & Mascolo, J. T. (2006). *The achievement test desk reference, 2nd ed. (ATDR-2)*. New York: Wiley.
- Fletcher, J. M., Foorman, B. R., Boudousquie, A., Barnes, M. A., Schatschneider, C., & Francis, D. J. (2002). Assessment of reading and learning disabilities: A research-based intervention-oriented approach. *Journal of School Psychology, 40*(1), 27-63.
- \*Floyd, R. G., Bergeron, R., & Alfonso, V. C. (2006). Cattell-Horn-Carroll cognitive ability profiles of poor comprehenders. *Reading and Writing, 19*(5), 427-456.
- Floyd, R. G., Bergeron, R., McCormack, A. C., Anderson, J. L., & Hargrove-Owens, G. L. (2005). Are Cattell-Horn-Carroll broad ability composite scores exchangeable across batteries? *School Psychology Review, 34*(3), 329-357.
- \*Floyd, R. G., Evans, J. J., & McGrew, K. S. (2003). Relations between measures of Cattell-Horn-Carroll (CHC) cognitive abilities and mathematics achievement across the school-age years. *Psychology in the Schools, 40*(2), 155-171.
- \*Floyd, R. G., Keith, T. Z., Taub, G. E., & McGrew, K. S. (2007). Cattell-Horn-Carroll cognitive abilities and their effects on reading decoding skills: g has indirect effects, more specific abilities have direct effects. *School Psychology Quarterly, 22*(2), 200-233.
- Fuchs, L. S., Compton, D. L., Fuchs, D., Paulsen, K., Bryant, J. D., & Hamlett, C. L. (2005). The prevention, identification, and cognitive determinants of math difficulty. *Journal of Educational Psychology, 97*, 493-513.
- Fuchs, L. S., Fuchs, D., Compton, D. L., Powell, S. R., Seethaler, P. M., Capizzi, A. M., Schatschneider, C., & Fletcher, J. M. (2006). The cognitive correlates of third-grade skill in arithmetic, algorithmic computation, and arithmetic word problems. *Journal of Educational Psychology, 98*(1), 29-43.

- Fuchs, L. S., Fuchs, D., Hosp, M. K., & Jenkins, J. (2001). Oral reading fluency as an indicator of reading competence: A theoretical, empirical, and historical analysis. *Scientific Studies of Reading, 5*, 239–256.
- Fuchs, L. S., Fuchs, D., Stuebing, K., Fletcher, J. M., Hamlett, C. L., & Lambert, W. (2008). Problem solving and computational skill: Are they shared or distinct aspects of mathematical cognition? *Journal of Educational Psychology, 100*, 30–47.
- Furst, A., & Hitch, G. J. (2000). Separate roles for executive and phonological components in mental arithmetic. *Memory and Cognition, 28*, 774–782.
- Gambrell, L. B., & Jawitz, P. B. (1993). Mental imagery, text illustrations, and children's story comprehension and recall. *Reading Research Quarterly, 28*, 264–276.
- \*Ganci, M. (2004). *The diagnostic validity of a developmental neuropsychological assessment (NEPSY) - Wechsler Intelligence Scale for Children-third edition (WISC-III) based cross battery assessment*. Retrieved from ProQuest UMI Dissertation Publishing (UMI Microform 3150999).
- Gathercole, S. E., & Pickering, S. J. (2000). Working memory deficits in children with low achievements in the national curriculum at 7 years of age. *British Journal of Educational Psychology, 70*, 177–194.
- Geary, D. C. (1990). A componential analysis of an early learning deficit in mathematics. *Journal of Experimental Child Psychology, 49*, 363–383.
- Geary, D. C. (1993). Mathematical disabilities: Cognitive, neuropsychological, and genetic components. *Psychological Bulletin, 114*, 345–362.
- Geary, D. C. (1994). *Children's mathematical development: Research and practical applications*. Washington, DC: American Psychological Association.

- Geary, D. C. (2003). Learning disabilities in arithmetic: Problem solving differences and cognitive deficits. In H. L. Swanson, K. Harris, & S. Graham (Eds.), *Handbook of learning disabilities* (pp. 199–212). New York: Guilford.
- Geary, D. C. (2007). An evolutionary perspective on learning disabilities in mathematics. *Developmental Neuropsychology, 32*(1), 471–519.
- Geary, D. C., & Brown, S. C. (1991). Cognitive addition: Strategy choice and speed-of-processing differences in gifted, normal, and mathematically disabled children. *Developmental Psychology, 27*, 398–406.
- Geary, D. C., Brown, S. C., & Samaranayake, V. A. (1991). Cognitive addition: A short longitudinal study of strategy choice and speed of processing differences in normal and mathematically disabled children. *Developmental Psychology, 27*, 787–797.
- Geary, D. C., Hamson, C. O., & Hoard, M. K. (2000). Numerical and arithmetical cognition: A longitudinal study of process and concept deficits in children with learning disability. *Journal of Experimental Child Psychology, 77*, 236–263.
- Geary, D. C., Hoard, M. K., Byrd-Craven, J., Nugent, L., & Numtee, C. (2007). Cognitive mechanisms underlying achievement deficits in children with mathematical learning disability. *Child Development, 78*, 1343–1359.
- Gelman, R., & Butterworth, B. (2005). Number and language: How are they related? *Trends in Cognitive Sciences, 9*, 6–10.
- Goldman, S. R., Pellegrino, J. W., & Mertz, D. L. (1988). Extended practice of basic addition facts: Strategy changes in learning-disabled students. *Cognition & Instruction, 5*, 223–266.
- \*Hale, J. B., Fiorello, C. A., Dumont, R., Willis, J. O., Rackley, C., & Elliott, C. (2008). Differential Ability Scales-Second Edition (Neuro) psychological predictor of math

- performance for typical children and children with math disabilities. *Psychology in the Schools, 45*(9), 838–858.
- Hale, J. B., Fiorello, C. A., Kavanagh, J. A., Hoepfner, J. B., & Gaither, R. A. (2001). WISC-II predictors of academic achievement for children with learning disabilities: Are global and factor scores comparable? *School Psychology Quarterly, 16*(1), 31–55.
- Hale, J. B., Fiorello, C. A., Kavanagh, J. A., Holdnack, J. A., & Aloe, A. M. (2007). Is the demise of IQ interpretation justified? A response to special issue authors. *Applied Neuropsychology, 14*, 37–51.
- Hale, J. B., Kaufman, A., Naglieri, J. A., & Kavale, K. A. (2006). Implementation of IDEA. Integrating response to intervention and cognitive assessment methods. *Psychology in the Schools, 43*(7), 753-770.
- Hammill, D. (2004). What we know about the correlates of reading. *Exceptional Children, 70*(4), 453–468.
- Hitch, G. J., & McAuley, E. (1991). Working memory in children with specific arithmetical learning difficulties. *British Journal of Psychology, 82*, 375–386.
- Holmes, J., & Adams, J. W. (2006). Working memory and children's mathematical skills: Implications for mathematical development and mathematics curricula. *Educational Psychology, 26*, 339–366.
- Hoover, W., & Gough, P. B. (1990). The simple view of reading. *Reading and Writing: An Interdisciplinary Journal, 2*, 127–160.
- Jenkins, J. R., Fuchs, L. S., Van den Broek, P., Espin, C., & Deno, S. L. (2003). Sources of individual differences in reading comprehension and reading fluency. *Journal of Educational Psychology, 95*, 719–729.

- Jordan, N. C., Hanich, L. B., & Kaplan, D. (2003). Arithmetic fact mastery in young children: A longitudinal investigation. *Journal of Experimental Child Psychology, 85*, 103–119.
- Joshi, R. M., & Aaron, P. G. (2000). The component model of reading: Simple view of reading made a little more complex. *Reading Psychology, 21*, 85-97.
- Kaufman, A. (1979). *Intelligent testing with the WISC-R*. New York: Wiley.
- Keith, T. Z. (1994). Intelligence *is* important, intelligence *is* complex. *School Psychology Quarterly, 9*(3), 209-221.
- \*Keith, T. Z. (1999). Effects of general and specific abilities on student achievement: Similarities and differences across ethnic groups. *School Psychology Quarterly, 14*, 239–262.
- Keith, T. Z. (2006). *Multiple regression and beyond*. Boston: Allyn & Bacon.
- Kintsch, W., & Rawson, K. A. (2005). Comprehension. In M. J. Snowling & C. Hulme (Eds.), *The science of reading: A handbook* (pp. 209–226). Oxford, England: Blackwell Publishing.
- Koontz, K. L., & Berch, D. B. (1996). Identifying simple numerical stimuli: Processing inefficiencies exhibited by arithmetic learning disabled children. *Mathematical Cognition, 2*, 1–23.
- Kyttala, M., Aunio, P., Lehto, J. E., Van Luit, J., & Hautamaki, J. (2003). Visuospatial working memory and early numeracy. *Educational and Child Psychology, 20*, 65–76.
- Leather, C. V., & Henry, L. A. (1994). Working memory span and phonological awareness tasks as predictors of early reading ability. *Journal of Experimental Child Psychology, 58*, 88–111.

- Logie, R. H., & Baddeley, A. D. (1987). Cognitive processes in counting. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *13*, 310–326.
- Loevinger, J. (1954). The attenuation paradox in test theory. *Psychological Bulletin*, *51*(5), 493–504.
- Mazzocco, M. M. M., & Thompson, R. E. (2005). Kindergarten predictors of math learning disability. *Learning Disabilities Research & Practice*, *20*, 142–155.
- McBride-Chang, C., Chang, L., & Wagner, R. K. (1997). Growth modeling of phonological awareness. *Journal of Educational Psychology*, *89*(4), 621–630.
- \*McGrew, K. S. (1993). The relationship between the WJ-R Gf-Gc cognitive clusters and reading achievement across the lifespan. *Journal of Psychoeducational Assessment*, *Monograph Series: WJ R Monograph*, 39–53.
- \*McGrew, K. (2007, January). *Prediction of WJ III reading and math achievement by WJ III cognitive and language tests*. [Retrieved January, 11, 2008]  
<http://intelligencetesting.blogspot.com/2008/01/prediction-of-wj-iii-readingmath-ach-by.html>.
- \*McGrew, K. (2008). *WISC-III/WJ III cross-battery g+specific abilities findings*. [Retrieved October, 21, 2008] <http://intelligencetesting.blogspot.com/2008/10/wisc-iiiwj-iii-cross-battery-gspecific.html>.
- McGrew, K. (2009, Feb). *CHC cognitive and achievement relations research synthesis: What we've learned from 20 years of research*. Mini-skills workshop presented at the 40<sup>th</sup> annual convention of the National Association of School Psychologists, Boston, MA.

- \*McGrew, K. S., Flanagan, D. P., Keith, T. Z., & Vanderwood, M. (1997). Beyond g: The impact of *Gf-Gc* specific cognitive abilities research on the future use and interpretation of intelligence tests in the schools. *School Psychology Review*, *26*, 189–210.
- \*McGrew, K. S., & Hessler, G. L. (1995). The relationship between the WJ-R *Gf-Gc* cognitive clusters and mathematics achievement across the life-span. *Journal of Psychoeducational Assessment*, *13*, 21–38.
- McLean, J. F., & Hitch, G. J. (1999). Working memory impairments in children with specific arithmetic learning difficulties. *Journal of Experimental Child Psychology*, *74*, 240–260.
- \*Miller, B. D. (2001). *Using Cattell-Horn-Carroll cross-battery assessment to predict reading achievement in learning disabled middle school students*. Retrieved from ProQuest UMI Dissertation Publishing (UMI Microform 9997281).
- Morris, R. D., Shaywitz, S. E., Shankweiler, D. P., Katz, L., Stuebing, K. K., Fletcher, J. M., et al. (1998). Subtypes of reading disability: Variability around a phonological core. *Journal of Educational Psychology*, *90*, 347–373.
- Nation, K. (2005). Children's reading comprehension difficulties. In M. J. Snowling & C. Hulme, (Eds.), *The science of reading: A handbook* (pp. 248–265). Oxford, England: Blackwell Publishing.
- Nation, K., Clarke, P., & Snowling, M. J. (2002). General cognitive ability in children with reading comprehension difficulties. *British Journal of Educational Psychology*, *72*, 549–560.
- Nation, K., Marshall, C. M., & Snowling, M. J. (2001). Phonological and semantic contributions to children's picture naming skill: Evidence from children with developmental reading disorders. *Language and Cognitive Processes*, *16*, 241–259.

- Osmon, D. C., Smertz, J. M., Braun, M. M., & Plambeck, E. (2006). Processing abilities associated with math skills in adult learning disability. *Journal of Clinical and Experimental Neuropsychology, 28*, 84–95.
- Passolunghi, M. C. (2006). Working memory and mathematical disability. In T. Packiam Alloway & S. Gathercole (Eds.), *Working memory and neurodevelopmental condition* (pp. 113–138). Hove, UK: Psychology Press.
- Passolunghi, M. C., Cornoldi, C., & Di Liberto, S. (1999). Working memory and intrusions of irrelevant information in a group of specific poor problem solvers. *Memory and Cognition, 27*, 779–790
- Passolunghi, M. C., Mammarella, I. C., & Altoè, G. (2008). Cognitive abilities as precursors of the early acquisition of mathematical skills during first through second grades. *Developmental Neuropsychology, 33*, 229–250.
- Passolunghi, M. C., & Siegel, L. S. (2001). Short term memory, working memory, and inhibitory control in children with specific arithmetic learning disabilities. *Journal of Experimental Child Psychology, 80*, 44–57.
- Passolunghi, M. C., Vercelloni, B., & Schadee, H. (2007). The precursors of mathematics learning: Working memory, phonological ability and numerical competence. *Cognitive Development, 22*, 165–184.
- Pedhazur, E. J. (1997). *Multiple regression in behavioral research*. New York: Wadsworth.
- Perfetti, C. (2007). Reading ability: Lexical quality to comprehension. *Scientific Studies of Reading, 11* (4), 357–383.

- Phelps, L., McGrew, K. S., Knopik, S. N., & Ford, L. A. (2005). The general (g), broad, and narrow CHC stratum characteristics of the WJ III and WISC-III tests: A confirmatory cross-battery investigation. *School Psychology Quarterly, 20*, 66–88.
- Pillemer, D. B., & Light, R. J. (1980). Synthesizing outcomes: How to use research evidence from many studies. *Harvard Educational Review, 50*(2), 176–194.
- Pinel, P., Piazza, D., Le Bihan, D., & Dehaene, S. (2004). Distributed and overlapping cerebral representations of number, size, and luminance during comparative judgments. *Neuron, 41*, 1–20.
- Poock, M. A. J. (2005). *Validation of the attention battery of the Woodcock Johnson-Third Edition Tests of Cognitive Abilities (WJ III, COG) for children with attention deficit hyperactivity disorder*. Retrieved from ProQuest UMI Dissertation Publishing (UMI Microform 3199438).
- \*Proctor, B. E., Floyd, R. G., & Shaver, R. B. (2005). Cattell-Horn-Carroll broad cognitive ability profiles of low math achievers. *Psychology in the Schools, 42*(1), 1-12.
- Rasmussen, C., & Bisanz, J. (2005). Representation and working memory in early arithmetic. *Journal Experimental Child Psychology, 91*, 137–157.
- Reschly, D. J. (1997). Utility of individual ability measures and public policy choices for the 21st century. *School Psychology Review, 26*, 234–241.
- Rourke, B. P. (1993). Arithmetic disabilities, specific and otherwise: A neuropsychological perspective. *Journal of Learning Disabilities, 26*, 214–226.

- Rourke, B. P., & Conway, J. A. (1997). Disabilities of arithmetic and mathematical reasoning: Perspectives from neurology and neuropsychology. *Journal of Learning Disabilities, 30*, 34–46.
- Schrank, F. A. (2006). *Specification of the cognitive processes involved in the performance on the Woodcock-Johnson III* (Assessment Service Bulletin No. 7). Rolling Meadows, IL: Riverside Publishing.
- Shaywitz, S. E., Morris, R., & Shaywitz, B. A. (2008). The education of dyslexic children from childhood to young adulthood. *Annual Review of Psychology, 59*, 451–475.
- Stanovich, K., & Siegel, L. (1994). Phenotypic profile of children with reading disabilities: A regression-based test of the phonological-core variable-difference model. *Journal of Educational Psychology, 86*(1), 24–53.
- Swanson, H. L. (1993). Executive processing in learning disabled readers. *Intelligence, 17*, 117–149.
- Swanson, H. L., & Beebe-Frankenberger, M. (2004). The relationship between working memory and mathematical problem solving in children at risk and not at risk for serious math difficulties. *Journal of Educational Psychology, 96*, 471–491.
- Swanson, H. L., & Berninger, V. (1995). The role of working memory in skilled and less skilled readers' comprehension. *Intelligence, 21*, 83–108
- Swanson, H. L., & Jerman, O. (2006). Math disabilities: A selective meta-analysis of the literature. *Review of Educational Research, 76*, 249–274.
- Swanson, H. L., & Sachse-Lee, C. (2001). Mathematical problem solving and working memory

- in children with learning disabilities: Both executive and phonological processes are important. *Journal of Experimental Child Psychology*, 79, 294–321.
- \*Taub, G. E., Floyd, R. G., Keith, T. Z., & McGrew, K. S. (2008). Effects of general and broad cognitive abilities on mathematics achievement. *School Psychology Quarterly*, 23(2), 187-198.
- Torgesen, J. K. (2002). The prevention of reading difficulties. *Journal of School Psychology*, 40(1), 7–26.
- Urso, A. (2008). *Processing speed as a predictor of poor reading*. Unpublished Dissertation, University of Arizona, Tucson.
- \*Vanderwood, M., McGrew, K. S., Flanagan, D. P., & Keith, T. Z. (2002). The contribution of general and specific cognitive abilities to reading achievement. *Learning and Individual Differences*, 13, 159–188.
- Wagner, R. K., Torgesen, J. K., Rashotte, C. A., Hecht, S. A., Barker, T. A., Burgess, S. R., et al. (1997). Changing relations between phonological processing abilities and word-level reading as children develop from beginning to skilled readers: A 5-year longitudinal study. *Developmental Psychology*, 33, 468–479.
- Windfuhr, K. L., & Snowling, M. J. (2001). The relationship between paired associate learning and phonological skills in normally developing readers. *Journal of Experimental Child Psychology*, 80, 160–173.
- Wolf, M., & Bowers, P. G. (1999). The double-deficit hypothesis for the developmental dyslexia. *Journal of Educational Psychology*, 91(3), 415-438.
- Wolf, M., Bowers, P. G., & Biddle, K. (2000). Naming-speed processes, timing, and reading: A conceptual review. *Journal of Learning Disabilities*, 33, 387–407.
- Zorzi, M., Priftis, K., & Umiltá, C. (2002). Neglect disrupts the mental number line. *Nature*, 417, 138–139.