

What's the Deal with the Science of Reading?

Selected References

Andrew P. Johnson, Ph.D.
 Minnesota State University
 andrew.johnson@mnsu.edu

Eye Movement

- Duckett, P. (2008). Seeing the story for the words: The eye movements of beginning readers. In A Flurky, E. Paulson & K Goodman (Eds.) *Scientific Realism in Studies of Reading*, 113-128. New York: LEA.
- Paulson, E.J. (2008). Miscues and eye movements: Functions of comprehension, 247-264.. In A • Flurky, E. Paulson & K Goodman (Eds.) *Scientific Realism in Studies of Reading*, New York: LEA.
- Paulson, E.J. & Goodman, K.S. (2008). Re-reading eye-movement research: Support for transactional models of reading, 25-50. In A Flurky, E. Paulson & K Goodman (Eds.) *Scientific Realism in Studies of Reading*, New York: LEA.
- Paulson, E.J., & Freeman, A.E. (2003). *Insight from the eyes: The science of effective reading instruction*. Heinemann.
- Rayner, K. (2009). Eye movements and attention in reading, scene perception, and visual search. *The Quarterly Journal of Experimental Psychology*, 62, 1457-1506.
- Rayner, K., Juhasz, B., & Pollatsek, A., (2007). Eye movements during reading (79-97). In M. • Snowling and C. Hulme (Eds.). *The science of reading: A handbook*. Blackwell Publishing.
- Strauss, S.L. (2011). Neuroscience and dyslexia (pp 79-90). In A. McGill-Franzen and R.L. Allington (Eds.), *Handbook of reading disability research*. New York: Routledge.

Myth of Literacy Crisis

- Allington, R.L. (2002). *Big brother and the national reading curriculum*. Heinemann.
- Altwerger, B. (2005). *Reading for profit: How the bottom line leaves kids behind*. Heinemann.
- Berliner, D.C., & Biddle, B.J. (1995). *The manufactured crisis: Myths, fraud, and the attack on America's public schools*. Perseus Books.
- Bracey, G. W. (2004). *Setting the record straight: Responses to misconceptions about public education in the U.S.* Heinemann.
- Bracey G. W. (2008). Cut scores, NAEP achievement levels and their discontents. *School Administrator*, 65(6), 20–23. <https://eric.ed.gov/?id=EJ797406>
- Coles, G. (2003). *Reading the naked truth: Literacy, legislation, and lies*. Heinemann.
- Ravitch D. (2012, May 14). What do NAEP scores mean? Diane Ravitch's Blog. <https://dianeravitch.net/2012/05/14/what-do-naep-scores-mean/>
- Reinking, D., Hruby, G. G., & Risko, V. J. (2023). Legislating Phonics: Settled Science or Political Polemics? *Teachers College Record*, 0(0). <https://doi.org/10.1177/01614681231155688>

Reading and the Brain

- Baars, B. J., & Gage, N. M. (2007). *Cognition, brain, and consciousness: Introduction to cognitive neuroscience*. New York, NY: Academic Press.
- Hagoort, P. (2003). Interplay between syntax and semantics during sentence comprehension: ERP Effects of combining syntactic and semantic violations, *Journal of Cognitive Neuroscience*, 15(6), 883–899.
- Hruby, G. G. (2009). Grounding reading comprehension in the neuroscience literatures. In S. E. Israel & G. P. Duffy (Eds.), *Handbook of research on reading comprehension* (pp. 189–223). New York, NY: Routledge.
- Hruby, G. G. & Goswami, U. (2013). Educational neuroscience for reading researchers. In D. Alverman, N. J. Unrau, & R. B. Ruddell (Eds.), *Theoretical models and process of reading* (pp. 558–588). Newark, DE: International Reading Association.
- Kuperberg, G. (2007). Neural mechanisms of language comprehension: Challenges to syntax. *Brain Research*, 1146, 23–49.
- LeDoux, J. (1996). *The emotional brain: The mysterious underpinnings of emotional life*. New York, NY: Simon & Schuster.
- Sherman, S. M., & Guillory, R. W. (2004). The visual relays in the thalamus. In L. M. Chalupa & J. S. Werner (Eds.), *The Visual Neurosciences* (pp. 565–591). Cambridge: Massachusetts Institute of Technology Press.
- Strauss, S. L. (2011). Neuroscience and dyslexia. In A. McGill-Franzen & R. L. Allington (Eds.), *Handbook of reading disability research* (pp. 79–90). New York, NY: Routledge.
- Strauss, S. L., Goodman, K. S., & Paulson, E. J. (2009). Brain research and reading: How emerging concepts in neuroscience support a meaning construction view of the reading process. *Education Research and Review*, 4(2), 21–33.

Reading Volume

- Krashen, S (2004). Free Voluntary Reading: New Research, Applications, and Controversies. RELC Conference Presentation
- ILA (2019). Creating passionate readers through independent reading.

Science of Reading

- Aukerman, M., & Schuldt, L.C. (2021). What matters most? Toward a robust and socially just science of reading. *Reading Research Quarterly*, 56, S85-S103.
- Eisenhart, M., & Towne, L. (2003). Contestation and change in national policy on “scientifically based” education research. *Educational Research*, 32, 5-14.
- Gabriel, R. (2020). The future of the science of reading. *The Reading Teacher*, 74, 11-18. *Reading Research Quarterly*, 56, S85-S103.
- Hoffman, J., Hikida, M., & Sailors, M. (2020). Contesting science that silences: Amplifying equity, agency, and design research in literacy teacher preparation. *Reading Research Quarterly*, 55, S255-S265.
- MacPhee, D., Handsfield, L., & Paugh, P. (2021). Conflict or conversations? Media portrayals of the science of reading. *Reading Research Quarterly*, 56, S145-S155.

- Reinking, D., Hruby, G., & Rasko, V. (2023). Legislating Phonics: Settled science or political polemics? *Teachers College Record*, 1-28.
- Terry, N. (2021). Delivering on the promise of the science of reading for all children. *The Reading Teacher*, 75, 83-90
- Yaden, D., Reinking, D., & Smagorinsky, P. (2021). The trouble with binaries: A perspective on the science of reading. *Reading Research Quarterly*, 56, S119-S129.

Word Reading Accuracy

- Goodman, K., & Gollasch, F. (1980). Word omissions: Deliberate and non-deliberate. *Reading Research Quarterly*, 16, 6-31.
- Kucer, S. (2009). Examining the relationship between text processing and text comprehension in fourth grade readers. *Reading Psychology*, 30, 340-358.
- Kucer, S. (2011) Processing expository discourse: What factors predict comprehension?, *Reading Psychology*, 32, 567-583
- Kucer, S (2016) Accuracy, Miscues, and the Comprehension of Complex Literary and Scientific Texts, *Reading Psychology*, 37:7, 1076-1095, DOI: 10.1080/02702711.2016.1159632
- Kucer, S., Tuten, J., & Treacy, K. (2008). Examining the relationship between reader miscues and text recall in adult proficient readers. *Literacy Research and Instruction*, 47, 38-53.

Word Recognition and Identification

- Alitto, H. J., & Usrey, W. M. (2003). Corticothalamic feedback and sensory processing. *Current Opinion in Neurobiology*, 13, 440–445.
- Binder, K. S., Duffy, S. A., & Rayner, K. (2001). The effects of thematic fit and discourse context on syntactic ambiguity resolution. *Journal of Memory and Language*, 44, 297–324.
- Chernove, G. V. (1979). Semantic aspects of psycholinguistic research in simultaneous interpretation. *Language and Speech*, 22, 277–295.
- Destexhe, A. (2000). Modeling corticothalamic feedback and the gating of the thalamus by the cerebral cortex. *Journal of Physiology*, 94, 394–410.
- Engel, A. K., Fries, P., & Singer, W. (2001). Dynamic predictions: Oscillations and synchrony in top-down processing. *Nature Reviews Neuroscience*, 2, 704–716.
- Friederici, A. D., & Kotz, S. A. (2003). The brain basis of syntactic processes: Functional imaging and lesion studies. *NeuroImage*, 20, 8–17.
- Friederici, A. D., & Weissenborn, J. (2007). Mapping sentence form onto meaning: The syntax-semantic interface. *Brain Research*, 1146, 50–58.
- Gilbert, C. D., & Sigman, M. (2007). Brain states: Top-down influences in sensory processing. *Neuron*, 54, 677–696.
- Goodman, Y. M., & Goodman, K. S. (2013). To err is human: Learning about language processes by analyzing miscues. In D. Alverman, N. J. Unrau, & R. B. Ruddell (Eds), *Theoretical models and process of reading* (pp. 523–543). Newark, DE: International Reading Association.
- Isakson, R. L., & Miller, J. W. (1976). Sensitivity to syntactic and semantic cues in good and poor comprehenders. *Journal of Educational Psychology*, 68, 787–792.
- Kennedy, D., & Weener, P. (1974). Visual and auditory training with the cloze procedure to improve reading and listening comprehension. *Reading Research Quarterly*, 8, 524–541.

- Lim, J., Reiser, R., & Z. Olina. (2009) The effects of part-task and whole-task instructional approaches on acquisition and transfer of a complex cognitive skill. *Educational Technology Research & Development*, 57, 61–77.
- Machazo, G. M., & Motz, L. L. (2005). Brain research: Implications to diverse learners. *Science Educator*, 14, 56–60.
- Münte, T., Heinze, H., & Mangun, G. (1993) Dissociation of brain activity related to syntactic and semantic aspects of language. *Journal of Cognitive Neuroscience*, 5, 335–344.
- Osterhout, L., & Holcomb, P. J. (1992). Event-related brain potentials elicited by syntactic anomaly. *Journal of Memory and Language*, 31, 785–806.
- Poldrack, R. A., Wagner, A. D., Prull, M. W., Desmond, J. E., Glover, G. H., & Gabrieli, D. E. (1999). Functional specialization for semantic and phonological processing in the left inferior prefrontal cortex. *NeuroImage*, 10, 15–35.
- Sakai, K. L., Noguchi, Y., Takeuchi, T., & Watanabe, E. (2002). Selective priming of syntactic processing by event-related transcranial magnetic stimulation of Broca's areas. *Neuron*, 35, 1177–1182.
- Schulz, E., Maurer, U., van der Mark, S., Bucher, K., Brem, S., Martain, E., & Brandeis, D., (2008). Impaired semantic processing during sentence reading in children with dyslexia: Combined fMRI and ERP evidence. *NeuroImage*, 41, 153–168.
- Van Berkum, J., Hagoort, P., & Brown, C. (1999) Semantic integration in sentences and discourse: Evidence from the N400. *Journal of Cognitive Neuroscience*, 11, 657–671.
- Xu J., Kemeny, S., Park, G., Frattali, C., & Bran, A. (2005). Language in context: Emergent features of word, sentence, and narrative comprehension. *Neuroimage*, 25, 1002–1015.
- Zeelenberg, R., Pecher, D., Shiffrin, R. M., & Raaijmakers, J. (2003). Semantic context effects and priming in word association. *Psychonomic Bulletin & Review*, 10, 653–660.