

REBECCA SANDAK

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Education:

- 2001 – Doctor of Philosophy, Cognitive Psychology, *University of Pittsburgh*
Thesis: Investigating the causal relationships among speech (and non-speech auditory) perception, phonemic awareness, and reading skill
- 2001 – Certificate of Completion, Center for the Neural Basis of Cognition Graduate Training Program, *Center for the Neural Basis of Cognition, Pittsburgh*
- 1998 – Master of Science, Cognitive Psychology, *University of Pittsburgh*
Thesis: Do less skilled readers draw causal inferences as effectively as skilled readers?
- 1996 – Bachelor of Arts, Psychology, *Binghamton University, State University of New York*
summa cum laude

Academic Employment History:

- Senior Scientist, Haskins Laboratories, 2003 – present
- Adjunct Professor of Psychology, Marymount Manhattan College, 2005
- Postdoctoral Research Fellow, Haskins Laboratories, 2001 – 2003

Honors and Awards:

- 2003 – Travel Award, Organization for Human Brain Mapping
- 2002 – Individual National Research Service Award (NRSA) Postdoctoral Fellowship Training Grant, National Institute of Child Health & Human Development, National Institutes of Health
- 2000 – Travel Award, Faculty of Arts and Sciences – Graduate Student Organization, University of Pittsburgh
- 2000 – Dobroski-Alumni Travel Fellowship, University of Pittsburgh
- 2000 – Spencer Dissertation Fellowship for Research Related to Education, Spencer Foundation
- 1999 – APA Dissertation Research Award
- 1999 – Tim Post Memorial Award for Research Excellence, University of Pittsburgh
- 1998 – Fellow, Center for the Neural Basis of Cognition
- 1997 – Honorable Mention, NSF Graduate Student Fellowship
- 1996 – Helen Bohmer Daly Memorial Award for Excellence in Undergraduate Research, Binghamton University
- 1995 – Phi Beta Kappa

Publications:

Katz, L., Lee, C. H., Tabor, W., Frost, S. J., Mencl, W. E., **Sandak, R.**, Rueckl, J. G., & Pugh, K. R. (in press). Behavioral and neurobiological effects of printed word repetition in lexical decision and naming. *Neuropsychologia*.

Pugh, K. P., **Sandak, R.**, Frost, S. J., Moore, D., Mencl, W. E. (In press). Examining reading development and reading disability in English Language Learners: Potential contributions from functional neuroimaging. *Learning Disabilities Research & Practice*, 20, 24-30.

Pugh, K. R., **Sandak, R.**, Frost, S. J., Moore, D., Rueckl, J. G., & Mencl, W. E. (In press). Neurobiological studies of skilled and impaired reading: A work in progress. In G. D. Rosen (Ed.). *Developing New Pathways in the Study of the Dyslexic Brain*. Baltimore: York Press.

Pugh, K. R., Frost, S. J., **Sandak, R.**, Gillis, M., Moore, D., Jenner, A. R., & Mencl, W. E. (In press). What does reading have to tell us about writing: Preliminary questions and methodological challenges in examining the neurobiological foundations of writing and writing disabilities. In C. MacArthur, S. Graham, & J. Fitzgerald (Eds.). *Handbook of Writing Research*. New York: Guilford.

Frost, S. J., Mencl, W. E., **Sandak, R.**, Moore, D. L., Rueckl, J., Katz, L., Fulbright, R. K., & Pugh, K. R. (2005). An fMRI study of the trade-off between semantics and phonology in reading aloud. *Neuroreport*, 16, 621-624.

Sandak, R., Mencl, W. E., Frost, S. J., Rueckl, J. G., Katz, L., Moore, D., Mason, S. M., Fulbright, R. K., Constable, R. T., Pugh, K. R. (2004). The neurobiology of adaptive learning in reading: A contrast of different training conditions. *Cognitive, Affective, & Behavioral Neuroscience*, 4, 67-88.

Sandak, R., Mencl, W. E., Frost, S. J., Mason, S. A., and Pugh, K. R. (2004). The neurobiological basis of skilled and impaired reading: Recent findings and new directions. In R. Sandak & R. A. Poldrack (Eds.), *Scientific Studies of Reading: Special Issue on the Cognitive Neuroscience of Reading*, 8, 273-292.

Poldrack, R. A., & **Sandak, R.** (2004). The cognitive neuroscience of reading: Introduction to the special issue. In R. Sandak & R. A. Poldrack (Eds.), *Scientific Studies of Reading: Special Issue on the Cognitive Neuroscience of Reading*, 8, 199-202.

McCandliss, B., Beck, I. L., **Sandak, R.**, & Perfetti, C. (2003). Focusing attention on decoding for children with poor reading skills: A study of the word building intervention. *Scientific Studies of Reading*, 7, 75-104.

Perfetti, C. A., & **Sandak, R.** (2001). Literacy Education. In N. J. Smelser, & P. B. Baltes (Eds.), *International Encyclopedia of the Social and Behavioral Sciences*. Pergamon, Oxford.

Sandak, R., & Fiez, J. A. (2000). Stuttering: A view from neuroimaging. *The Lancet*, 356, 445-446.

Perfetti, C. A., & **Sandak, R.** (2000). Reading optimally builds on spoken language: Implications for deaf literacy. *Journal of Deaf Studies and Deaf Education*, 5 (1), 31-50.

Voss, J. F., Wiley, J., & **Sandak, R.** (1999). On the use of narrative as argument. In S. R. Goldman, A. C. Graesser, & P. van den Broek (Eds.). *Narrative comprehension, causality, and coherence: Essays in honor of Tom Trabasso*. Mahwah, NJ: Erlbaum.

Britt, M. A., Perfetti, C. A., **Sandak, R.**, & Rouet, J. F. (1999). Content integration and source separation in learning from multiple texts. In S. R. Goldman, A. C. Graesser, & P. van den Broek (Eds.). *Narrative comprehension, causality, and coherence: Essays in honor of Tom Trabasso*. Mahwah, NJ: Erlbaum.

Voss, J. F., Wiley, J., & **Sandak, R.** (1999). Reasoning in the construction of argumentative text. In G. Rijlaarsdam & E. Esperet (Series Eds.) & J. Andriessen & P. Coirier (Vol. Eds.). *Studies in Writing: Vol. 5. Foundations of Argumentative Text Processing*. Amsterdam: Amsterdam University Press.

Manuscripts Submitted or In Preparation:

Mencl, W. E., Frost, S. J., **Sandak, R.**, Lee, J. R., Jenner, A. R., Mason, S. A., Rueckl, J. G., Katz, L., Pugh, K. R. (under review). Effects of orthographic and phonological priming in printed word identification: an fMRI study.

Sandak, R. (in prep). Speech perception, phonemic awareness, and the development of reading skill.

National and International Conference Presentations:

Sandak, R., Frost, S. J., Mencl, W. E., Rueckl, J. G., Pugh, K. R. (2005, June) Learning to read (alphabetic) words: controlled learning studies in English. Talk presented at the 12th annual meeting of the Society for the Scientific Study of Reading, Toronto.

Mencl, W. E., Frost, S. J., **Sandak, R.**, Fang, S. Y., Della Porta, G., Chen, H., Katz, L., Rueckl, J. G., Pugh, K. R. (2005, June). Individual differences in the cortical circuitry for word identification: Establishing brain/behavior links. Poster presented at the 11th annual meeting of the Organization for Human Brain Mapping, Toronto.

Sandak, R., Mencl, W. E., Frost, S. J., Moore, D., Rueckl, J. G., & Pugh, K. R. (2004, November). How learning conditions affect the way that the brain reads words. Poster presented at the 45th annual meeting of the Psychonomic Society, Minneapolis.

Frost, S. J., Mencl, W. E., **Sandak, R.**, Moore, D. L. Rueckl, J. G., Pugh, K. R. (2004, November). Age-related changes in brain activation patterns for semantics and phonology. Poster presented at the 45th annual meeting of the Psychonomic Society, Minneapolis.

Pugh, K. R., Frost, S. J., **Sandak, R.**, Moore, D. L., Mason, S. A., Mencl, W. E. (2004, November). Effects of stimulus type on brain activation patterns in typically developing and reading-disabled cohorts. Poster presented at the 45th annual meeting of the Psychonomic Society, Toronto. Poster to be presented at the 45th annual meeting of the Psychonomic Society, Minneapolis.

Moore, D. L., Frost, S. J., Mencl, W. E., **Sandak, R.**, Rueckl, J. G., Pugh, K. R. (2004, November). An event-related fMRI study of task comparisons for word identification in reading. Poster presented at the 45th annual meeting of the Psychonomic Society, Minneapolis.

Sandak, R., Mencl, W. E., Frost, S. J., Moore, D., Mason, S. A., Rueckl, J. G., Katz, L., Pugh, K. R. (2004, June). How learning conditions affect the way that the brain reads words. Talk presented at the 11th annual meeting of the Society for the Scientific Study of Reading, Amsterdam.

Sandak, R., Mencl, W. E., Frost, S. J., Mason, S. A., Rueckl, J. G., Katz, L., Constable, R. T., Pugh, K. R. (2004, June). How different learning conditions affect the brain's efficiency during word reading. Poster presented at the 10th International Conference on Functional Mapping of the Human Brain, Budapest.

Sandak, R., Mencl, W. E., Frost, Rueckl, J. G., Katz, L., Moore, D., Mason, S. J., & Pugh, K. R. (2003, November). How the reading circuit learns: A contrast of different training conditions. Poster presented at the 44th annual meeting of the Psychonomic Society, Vancouver.

Pugh, K. R., Mencl, W. E., Frost, S. J., **Sandak, R.**, & Moore, D. L. (2003, November). Neuroimaging studies of word reading: A revised neurobiological theory. Talk presented at the 44th annual meeting of the Psychonomic Society, Vancouver.

Frost, S. J., Mencl, W. E., **Sandak, R.**, Moore, D. L., Mason, S. A., Rueckl, J. G., Katz, L., & Pugh, K. R. (2003, November). Semantic constraints on spelling-to-sound consistency effects. Poster presented at the 44th annual meeting of the Psychonomic Society, Vancouver.

Mencl, W. E., Frost, S. J., **Sandak, R.**, Jenner, A. R., Mason, S. A., & Pugh, K. R. (2003, November). Effects of cAsE mIxInG on brain activation patterns. Poster presented at the 44th annual meeting of the Psychonomic Society, Vancouver.

Sandak, R., Mencl, W. E., Frost, S. J., Mason, S. A., Rueckl, J. G., Katz, L., Constable, R. T., & Pugh, K. R. (2003, June). The neurobiology of adaptive learning in reading: A contrast of different training conditions. Invited talk presented at the 9th International Conference on Functional Mapping of the Human Brain, New York.

Frost, S. J., Mencl, W. E., **Sandak, R.**, Moore, D. L., Mason, S. A., Katz, L., Rueckl, J. G., & Pugh, K. R. (2003, June). Semantic constraints on spelling-to-sound consistency effects. Poster presented at the 9th International Conference on Functional Mapping of the Human Brain, New York.

Sandak, R., Mencl, W. E., Frost, S. J., Rueckl, J. G., Katz, L., & Pugh, K. R. (2002, November). Toward a characterization of how the reading-circuit learns: an fMRI study. Poster presented at the 43rd annual meeting of the Psychonomic Society, Kansas City.

Frost, S. J., Mencl, W. E., **Sandak, R.**, Mason, S. A., Katz, L., & Pugh, K. R. (2002, November). An event-related fMRI study of printed word recognition with rapid presentation rates. Poster presented at the 43rd annual meeting of the Psychonomic Society, Kansas City.

Katz, L., Frost, S. J., Mencl, W. E., **Sandak, R.**, Mason, S. A., & Pugh, K. R. (2002, November). Brain imaging in lexical decision and naming. Talk presented at the 43rd annual meeting of the Psychonomic Society, Kansas City.

Sandak, R., Mencl, W. E., Frost, S. J., Bates, J., Jenner, A. R., Mason, S. M., Rueckl, J. G., Pugh, K. R., Katz, L. (2002, June). The neurobiology of adaptive learning in reading: the effects of repetition and differential encoding of word stimuli. Talk presented at the 9th annual meeting of the Society for the Scientific Study of Reading, Chicago.

Sandak, R., Mencl, W. E., Frost, S. J., Bates, J., Jenner, A. R., Mason, S. M., Rueckl, J. G., Katz, L., Pugh, K. R. (2002, June). Effects of differential encoding during word reading on cortical activation patterns: an fMRI study. Poster presented at the 8th International Conference on Functional Mapping of the Human Brain, Sendai.

Mencl, W. E., Frost, S. J., **Sandak, R.**, Mason, S., Lee, J. R., Rueckl, J., Constable, T., Katz, L., Pugh, K., & Gore, J. C. (2002, June). Effects of orthographic and phonologic priming during lexical decision: An fMRI study. Poster presented at the 8th International Conference on Functional Mapping of the Human Brain, Sendai.

Frost, S. J., Mencl, W. E., **Sandak, R.**, Mason, S. A., Katz, L., Lacadie, C., Skudlarski, P., & Pugh, K. (2002, June). An event-related study of printed word recognition with rapid presentation rates. Poster presented at the 8th International Conference on Functional Mapping of the Human Brain, Sendai.

Sandak, R. (2001, November). Causal relationships among speech and non-speech auditory perception, phonemic awareness and reading skill. Poster presented at the 42nd annual meeting of the Psychonomic Society, Orlando.

Pugh, K. R., **Sandak, R.**, Mencl, E., Jenner, A. R., Frost, S. J., Rueckl, J. G., Katz, L. (2001, November). Effects of stimulus repetition during word reading on cortical activation patterns: An fMRI study. Poster presented at the 42nd annual meeting of the Psychonomic Society, Orlando.

McCandliss, B., **Sandak, R.**, Martinez, A., Beck, I., Perfetti, C., & Schneider, W. (2001, March). Imaging the impact of reading intervention in children. Poster presented at the 8th annual meeting of the Cognitive Neuroscience Society, New York.

Sandak, R. (2000, July). Relationships among speech (and non-speech auditory) perception, phonemic awareness, and reading skill: A longitudinal study. Poster presented at the 7th annual meeting of the Society for the Scientific Study of Reading, Stockholm.

McCandliss, B., **Sandak, R.**, Beck, I., Perfetti, C., & Schneider, W. (1999, April). Inroads into reading acquisition failures: Relating alphabetic decoding instruction to changes in behavioral and fMRI measures. Invited Symposium presented at the 6th annual meeting of the Society for the Scientific Study of Reading, Montreal.

Britt, M.A., **Sandak, R.**, Perfetti, C., & Rouet, J. F. (1998, July). Content integration and source separation in learning from multiple texts. Talk presented at the 8th annual meeting of the Society for Text and Discourse, Madison.

Voss, J., Wiley, J., & **Sandak, R.** (1998, July). On the use of narrative as argument. Talk presented at the 8th annual meeting of the Society for Text and Discourse, Madison.

Sandak, R., & Perfetti, C. A. (1998, April). Reading ability differences in causal inferencing?? Poster presented at the 5th annual meeting of the Society for the Scientific Study of Reading, San Diego.

Invited Presentations:

Sandak, R. (2005, July). How learning conditions affect the way that the brain reads words. International Dyslexia Association Special Focus Conference entitled "Research to Practice: Advances in Reading and Literacy", Washington D. C.

Sandak, R. (2005, June). Cognitive and neurobiological mechanisms in reading development. Guest lecture, graduate seminar entitled *Reading and the Brain*, Johns Hopkins University.

Sandak, R. (2004, July). Cognitive and neurobiological mechanisms in reading development. Guest lecture, graduate seminar entitled *Reading and the Brain*, Johns Hopkins University.

Sandak, R. (2003, October). Using functional neuroimaging to study learning in reading. OELA/OSERS/NICHD National Symposium on Learning Disabilities in English Language Learners, Washington D. C.

Sandak, R. (2003, September). Cognitive and neurobiological mechanisms in reading development. Early Reading Success Fellows Symposium, New Haven.

Sandak, R. (2002, November). Toward a characterization of how the reading-circuit learns: an fMRI study. Haskins Board of Directors Annual Meeting, New Haven.

Sandak, R. (2001, November). The role of speech and non-speech auditory perception in the development of reading skill: Insights from a longitudinal study. Psychology Department Colloquium, Binghamton University.

Local Presentations:

Sandak, R. (2005, March). How learning conditions affect the way that the brain reads words. Yale fMRI Seminar.

Sandak, R. (2004, October). Studying adolescent literacy. Seminar presented at the Haskins Reading Discussion Group.

Sandak, R. (2003, September). The neurobiology of adaptive learning in reading: A contrast of different training conditions. Talk presented to the Haskins Reading Discussion Group.

Sandak, R. (2000, August). Relationships among speech (and non-speech auditory) perception, phonemic awareness, and reading skill: A longitudinal study. Talk presented at the 18th annual Pitt-CMU Graduate Student Conference, Pittsburgh.

Sandak, R. (1998, July). Do less skilled readers draw causal inferences as effectively as skilled readers? Talk presented at the 16th annual Pitt-CMU Graduate Student Conference, Pittsburgh.

Sandak, R. (1997, December). Do less skilled readers draw causal inferences as effectively as skilled readers? Talk presented at the Cognitive Psychology Brown Bag, University of Pittsburgh.

Teaching Experience:

Instructor, *Cognitive Psychology*, Spring 2005, Marymount Manhattan College

Instructor, *Human Cognition and Learning*, Fall 2000, University of Pittsburgh

Instructor, *Directed Study in Reading & Reading Disabilities*, Fall 1998, Summer 1999, University of Pittsburgh

Teaching Assistant, *Psychology as a Natural Science, Recitation*, Fall 1998, University of Pittsburgh

Co-instructor, *Directed Study in Reading & Reading Disabilities*, Summer 1998, University of Pittsburgh

Supervisor, *Directed Study in Reading Research*, Fall 1997, Spring 2000, University of Pittsburgh

Teaching Assistant, *Human Cognition and Learning Laboratory*, Spring 1997, University of Pittsburgh

Teaching Assistant, *Research Methods Laboratory*, Fall 1996, University of Pittsburgh

Professional Affiliations:

American Psychological Association
Center for the Neural Basis of Cognition
Cognitive Neuroscience Society
Organization for Human Brain Mapping
Psychonomic Society, Associate Member
Society for the Scientific Study of Reading

Professional Service:

Member, National Panel of Experts on Adolescent Literacy, *Center for Literacy, Philadelphia, PA*
Guest Editor, *Scientific Studies of Reading: Special Issue on the Cognitive Neuroscience of Reading*

Ad hoc reviewer for:

Journal of Educational Psychology

Journal of Experimental Psychology: Human Perception and Performance

NeuroImage

Reading and Writing

Graduate Student Representative, *Search Committee for joint faculty positions in the Learning Research and Development Center and the Department of Psychology, University of Pittsburgh, Fall 2000*

Graduate Student Representative, *Cognitive Psychology Program, Fall 1996 – Summer 2000*

Coordinator, *Graduate Student Recruiting, Cognitive Psychology Program, 1996 – 2000*

Co-Director, *Learning Research Development Center's Reading Institute, Spring 1998 – Fall 1999*

Coordinator, *Cognitive Psychology Brown Bag Series, Fall 1997*