

**Publications Emerging From Research  
Funded through the  
National Center for Education Research  
as of September 30, 2009**

Since 2002, the Institute of Education Sciences (IES) has funded more than 400 research grants through the National Center for Education Research. In this document we list the publications that have resulted from these projects. Publications from IES grantees include articles intended for scientific audiences, as well as articles written for general audiences. The topics span the range from basic translational research to the evaluation of state education policies. As the publishing process is dynamic, and new articles are appearing regularly, we plan to update this list at regular intervals. Please check our website periodically for updated material.

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## **Cognition and Student Learning**

FY 2002

**Institution:** Carnegie Mellon University

**Principal Investigator:** Robert Siegler

**Project Title:** Using Cognitive Analyses to Improve Children's Math and Science Learning

**Grant:** R305H020060

Booth, J.L., and Siegler, R.S. (2006). Developmental and Individual Differences in Pure Numerical Estimation. *Developmental Psychology*, 42(1): 189-201.

Booth, J.L., and Siegler, R.S. (2008). Numerical Magnitude Representations Influence Arithmetic Learning. *Child Development*, 79: 1016-1031.

Laski, E.V., and Siegler, R.S. (2007). Is 27 a Big Number? Correlational and Causal Connections among Numerical Categorization, Number Line Estimation, and Numerical Magnitude Comparison. *Child Development*, 76: 1723-1743.

Opfer, J.E., and Siegler, R.S. (2004). Revisiting Preschoolers' Living Things Concept: A Microgenetic Analysis of Conceptual Change in Basic Biology. *Cognitive Psychology*, 49(4): 301-332.

Opfer, J.E., and Siegler, R.S. (2007). Representational Change and Children's Numerical Estimation. *Cognitive Psychology*, 55: 169-195.

Ramani, G.B., and Siegler, R.S. (2008). Promoting Broad and Stable Improvements in Low-Income Children's Numerical Knowledge through Playing Number Board Games. *Child Development*, 79: 375-394.

Siegler, R.S. (2004). Turning Memory Development Inside Out. *Developmental Review*, 24: 469-475.

Siegler, R.S. (2004). U-Shaped Interest in U-Shaped Development – and What It Means. *Journal of Cognition and Development*, 5(1): 1-10.

Siegler, R.S. (2006). Microgenetic Analyses of Learning. In W. Damon and R.M. Lerner (Series Eds.) and D. Kuhn and R.S. Siegler (Vol. Eds.), *Handbook of Child Psychology: Volume 2: Cognition, Perception, and Language* (6th ed., pp. 464-510). Hoboken, NJ: Wiley.

Siegler, R. S. (in press). Improving the numerical understanding of children from low-income families. *Child Development Perspectives*.

Siegler, R.S., and Araya, R. (2005). A Computational Model of Conscious and Unconscious Strategy Discovery. In R.V. Kail (Ed.), *Advances in Child Development and Behavior* (Vol. 33, pp. 1-42). Oxford, UK: Elsevier.

Siegler, R.S., and Booth, J.L. (2004). Development of Numerical Estimation in Young Children. *Child Development* 75(2): 428-444.

Siegler, R.S., and Booth, J.L. (2005). Development of Numerical Estimation: A Review. In J.I.D. Campbell (Ed.), *Handbook of Mathematical Cognition* (pp. 197-212). Boca Raton, FL: CRC Press.

Siegler, R.S., and Ramani, G.B. (2006). Early Development of Estimation Skills. *APS Observer*, 19: 34-44.

Siegler, R.S., and Ramani, G.B. (2008). Playing Linear Numerical Board Games Promotes Low-Income Children's Numerical Development. *Developmental Science*, 11: 655-661.

Siegler, R.S., and Ramani, G.B. (2009). Playing Linear Board Games – But Not Circular Ones – Improves Low-Income Preschoolers' Numerical Understanding. *Journal of Educational Psychology*, 101(3): 545-560.

**Institution:** Columbia University

**Principal Investigator:** Jennifer Mangels

**Project Title:** The Influence of Students' Intelligence Beliefs on Attention, Information Processing, and Learning: a Neurophysiological Analysis

**Grant:** R305H020031

Mangels, J.A., Butterfield, B., Lamb, J., Good, C.D., and Dweck, C.S. (2006). Why Do Beliefs About Intelligence Influence Learning Success? A Social Cognitive Neuroscience Model. *Social Cognitive and Affective Neuroscience (SCAN)*, 1(2): 75-86.

**Institution:** Northern Illinois University

**Principal Investigator:** M. Anne Britt

**Project Title:** Improving Students' Comprehension and Construction of Arguments

**Grant:** R305H020039

Britt, M.A., and Gabrys, G. (2004). Collecting Responses through Web Page Drag and Drop. *Behavior Research Methods, Instruments, and Computers*, 36(1): 52-68.

Britt, M.A., Wiemer-Hastings, P., Larson, A., and Perfetti, C.A. (2004). Automated Feedback on Source Citation in Essay Writing. *International Journal of Artificial Intelligence in Education*.

Larson, M., Britt, M.A., and Larson, A. (2004). Disfluencies in Comprehending Argumentative Texts. *Reading Psychology*, 25: 205-224.

Wolfe, C.R., and Britt, M.A. (2008). The Locus of the Myside Bias in Written Argumentation. *Thinking and Reasoning*, 14:1-27.

**Institution:** Northwestern University

**Principal Investigator:** David Uttal

**Project Title:** Learning From Symbolic Objects

**Grant:** R305H020088

McNeil, N., Uttal, D.H., Jarvin, L., and Sternberg, R.J. (2009). Should You Show Me the Money? Concrete Objects Both Hurt and Help Performance on Mathematics Problems. *Learning and Instruction*, 19: 171-184.

**Institution:** University of California, Los Angeles

**Principal Investigators:** Robert Bjork and Marcia Linn

**Project Title:** Introducing Desirable Difficulties for Educational Applications in Science

**Grant:** R305H020113

Bjork, R.A., and Bjork, E.L. (2006). Optimizing Treatment and Instruction: Implications of a New Theory of Disuse. In L-G. Nilsson and N. Ohta (Eds.), *Memory and Society: Psychological Perspectives* (pp. 109-133). Psychology Press: Hove and New York.

Bjork, R.A., and Linn, M.C. (2006). The Science of Learning and the Learning of Science: Introducing Desirable Difficulties. *The APS Observer*, 19(3): 29, 39.

Casperson, J.M., and Linn, M.C. (2006). Using Visualizations to Teach Electrostatics. *American Journal of Physics*, 74(4): 316-323.

Kornell, N., and Bjork, R.A. (2007). The Promise and Perils of Self-Regulated Study. *Psychonomic Bulletin and Review*, 6: 219-224.

- Linn, M.C. (2003). WISE Research: Promoting International Collaboration. In D. Psillos, P. Kariotoglou, V. Tselves, E. Hatzikraniotis, G. Fassoulopoulos, and M. Kallery (Eds.), *Science Education Research in the Knowledge-Based Society* (pp. 297-308). Boston: Kluwer Academic Publishers.
- Linn, M.C. (2005). WISE Design for Lifelong Learning: Pivotal Cases. In P. Gärdenfors and P. Johansson (Eds.), *Cognition, Education and Communication Technology*. Mahwah, NJ: Erlbaum.
- Linn, M.C. (2006). WISE Teachers: Using Technology and Inquiry for Science Instruction. In E.A. Ashburn and R.E. Floden (Eds.), *Meaningful Learning Using Technology: What Educators Need to Know* (pp. 45-69). New York: Teachers College Press.
- Linn, M.C. (2006). The Knowledge Integration Perspective on Learning and Instruction. In R.K. Sawyer (Ed.), *The Cambridge Handbook of the Learning Sciences* (pp. 243-264). New York: Cambridge University Press.
- Linn, M.C., and Eylon, B.S. (2006). Science Education: Integrating Views of Learning and Instruction. In P.A. Alexander and P.H. Winne (Eds.), *Handbook of Educational Psychology* (2nd ed., pp. 511-544). Mahwah, NJ: Erlbaum.
- Linn, M.C., Husic, F., Slotta, J., and Tinker, R. (2006). Technology Enhanced Learning in Science (TELS): Research Programs. *Educational Technology*, 46(3): 54-68.
- Linn, M.C., Lee, H.S., Tinker, R., Husic, F., and Chiu, J.L. (2006). Teaching and Assessing Knowledge Integration in Science. *Science*, 313: 1049-1050.
- Linn, M.C. (2007). Knowing When, Where, and How to Study Student Learning. In J.C. Campione, K.E. Metz, and A.S. Palincsar (Eds.), *Children's Learning in the Laboratory and in the Classroom: Essays in Honor of Ann Brown* (pp. 137-162). Mahwah, NJ: Erlbaum.
- Linn, M.C. (2008). Teaching for Conceptual Change: Distinguish or Extinguish Ideas. In S. Vosniadou (Ed.), *Handbook of Research on Conceptual Change* (pp. 694-718). Mahwah, NJ: Erlbaum.
- Linn, M.C., and Eylon, B.S. (2006). Science Education: Integrating Views of Learning and Instruction. In P.A. Alexander and P.H. Winne (Eds.), *Handbook of Educational Psychology* (2nd ed., pp. 511-544). Mahwah, NJ: Erlbaum.
- Richland, L.E., Bjork, R.A., and Finley, J.R. (forthcoming). Desirable Difficulty in Science Acquisition: Implications for Learning and Retention. *Cognition and Instruction*.
- Richland, L.E., Bjork, R.A., Finley, J.R., and Linn, M.C. (2005). Linking Cognitive Science to Education: Generation and Interleaving Effects. In B.G. Bara, L. Barsalou and M. Bucciarelli (Eds.), *Proceedings of the 27<sup>th</sup> Annual Conference of the Cognitive Science Society* (pp. 1624). Mahwah, NJ: Erlbaum.
- Richland, L.E., Finley, J.R., and Bjork, R.A. (2004). Differentiating the Contextual Interference Effect from the Spacing Effect. In K. Forbus, D. Gentner, and T. Regier (Eds.), *Proceedings of the 26<sup>th</sup> Annual Conference of the Cognitive Science Society* (pp. 1624). Mahwah, NJ: Erlbaum.
- Richland, L.E., Linn, M.C., and Bjork, R.A. (2007). Chapter 21: Instruction. In F. Durso, R. Nickerson, S. Dumais, S. Lewandowsky, and T. Perfect (Eds.), *Handbook of Applied Cognition* (2nd ed., pp. 555-583). West Sussex, England: John Wiley and Sons, Ltd.

**Institution:** University of California, Riverside

**Principal Investigator:** H. Lee Swanson

**Project Title:** Age-Related Changes in Word Problem Solving and Working Memory

**Grant:** R305H020055

- Swanson, H.L. (2004). Working Memory and Phonological Processing as Predictors of Children's Mathematical Problem Solving at Different Ages. *Memory and Cognition*, 32: 648-666.
- Swanson, H.L. (2005). Working Memory, Intelligence and Learning Disabilities. In O. Wilhelm and R.W. Engle (Eds.), *Handbook of Understanding and Measuring Intelligence* (pp.409-429). New York: Sage Publications, Inc.
- Swanson, H.L. (2006). Cognitive Processes that Underlie Mathematical Precociousness in Young Children. *Journal of Experimental Child Psychology*, 93(3): 239-264.
- Swanson, H.L. (2006). Cross Sectional and Incremental Changes in Working Memory and Mathematical Problem Solving in Elementary School Children. *Journal of Educational Psychology*, 98(2): 265-281.
- Swanson, H.L. (2006). Working Memory and Dynamic Testing of Children With Learning Disabilities. In S. Pickering (Ed.), *Working Memory and Education* (pp. 125-156). San Diego: Academic Press.
- Swanson, H.L., and Beebe-Frankenberger, M. (2004). The Relationship Between Working Memory and Mathematical Problem Solving in Children at Risk and Not at Risk for Math Difficulties. *Journal of Educational Psychology*, 96: 471-491.
- Swanson, H.L., and Jerman, O. (2006). Math Disabilities: A Preliminary Meta-Analysis of the Published Literature on Cognitive Processes. In T. Scruggs and M. Mastropieri (Eds.), *Applications of Research Methodology, Volume 1 - Advances in Learning and Behavioral Disabilities* (pp. 285-314). Bristol, Eng: Elsevier Ltd.
- Swanson, H.L., and Jerman, O. (2006). Math Disabilities: A Selective Meta-Analysis of the Literature. *Review of Educational Research*, 76(2): 249-274.
- Swanson, H.L., Howard, C.B., and Saez, L. (2006). Do Different Components of Working Memory Underlie Different Subgroups of Reading Disabilities? *Journal of Learning Disabilities*, 39(3): 252-269.
- Swanson, H.L., Jerman, O., and Zheng, X. (2008). Growth in Working Memory and Mathematical Problem Solving in Children at Risk and Not at Risk for Serious Math Difficulties. *Journal of Educational Psychology*, 100: 343-379.
- Swanson, H.L., Zheng, X., and Jerman, O. (2009). Working Memory, Short-Term Memory, and Reading Disabilities: A Selective Meta-Analysis of the Literature. *Journal of Learning Disabilities*, 42(3): 260-287.

**Institution:** University of California, San Diego

**Principal Investigator:** Hal Pashler

**Project Title:** Optimizing Resistance to Forgetting

**Grant:** R305H020061

- Cepeda, N., Coburn, N., Rohrer, D., Wixted, J., Mozer, M., and Pashler, H. (2009). Optimizing Distributed Practice: Theoretical Analysis and Practical Implications. *Experimental Psychology*, 56(4): 236-246.
- Cepeda, N., Vul, E., Rohrer, D., Wixted, J., and Pashler, H. (2008). Spacing Effect in Learning: A Temporal Ridgeline of Optimal Retention. *Psychological Science*, 19: 1095-1102.
- Cepeda, N.J., Pashler, H., Vul, E., Wixted, J.T., and Rohrer, D. (2006). Distributed Practice: A Review and Quantitative Synthesis. *Psychological Bulletin*, 132(2): 354-380.
- Pashler, H., Cepeda, N.J., Wixted, J.T., and Rohrer, D. (2005). When Does Feedback Facilitate Learning of Words? *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 31(1): 3-8.
- Pashler, H., Zarow, G., and Triplett, B. (2003). Is Temporal Spacing of Tests Helpful Even When It Inflates Error Rates? *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 29(6): 1051-1057
- Rohrer, D. (2009). The Effects of Spacing and Mixing Practice Problems. *Journal for Research in Mathematics Education*, 40: 4-17.

Rohrer, D., and Taylor, K. (2006). The Effects of Overlearning and Distributed Practice on the Retention of Mathematics Knowledge. *Applied Cognitive Psychology*, 20(9): 1209-1224.

Rohrer, D., Taylor, K., Pashler, H., Wixted, J.T., and Cepeda, N.J. (2005). The Effect of Overlearning on Long-Term Retention. *Applied Cognitive Psychology*, 19(3): 361-374.

### FY 2003

**Institution:** Carnegie Mellon University

**Principal Investigator:** David Klahr

**Project Title:** From Cognitive Models of Reasoning to Lesson Plans for Inquiry

**Grant:** R305H030229

Klahr, D., and Li, J. (2005). Cognitive Research and Elementary Science Instruction: From the Laboratory, to the Classroom, and Back. *Journal of Science Education and Technology*, 14(2): 217-238.

Li, J., and Klahr, D. (2006). The Psychology of Scientific Thinking: Implications for Science Teaching and Learning. In J. Rhoton and P. Shane (Eds.), *Teaching Science in the 21st Century*. National Science Teachers Association Press.

Li, J., Klahr, D., and Siler, S. (2006). What Lies Beneath the Science Achievement Gap? The Challenges of Aligning Science Education with Standards and Tests. *Science Educator*, 15: 1-12.

**Institution:** Carnegie Mellon University

**Principal Investigator:** John Anderson

**Project Title:** The Neural Markers of Effective Learning

**Grant:** R305H030016

Anderson, J.R. (2007). *How Can the Human Mind Occur in the Physical Universe?* New York: Oxford University Press.

Anderson, J.R., Anderson, J.F., Ferris, J.L., Fincham, J.M., and Jung, K.-J. (2009). Lateral Inferior Prefrontal Cortex and Interior Cingulate Cortex are Engaged at Different Stages in the Solution of Insight Problems. *PNAS Proceedings of the National Academy of Sciences of the United States of America*, 106(26): 10799-10804.

**Institution:** Columbia University

**Principal Investigator:** Janet Metcalfe

**Project Title:** Study Enhancement Based on Principles of Cognitive Science

**Grant:** R305H030175

Metcalfe, J. (2006). Principles of Cognitive Science in Education. *APS Observer*, 19: 27.

Metcalfe, J., and Kornell, N. (2007). Principles of Cognitive Science in Education: The Effects of Generation, Errors and Feedback. *Psychonomic Bulletin and Review*, 14(2): 225-229.

Metcalfe, J., Kornell, N., and Son, L.K. (2007). A Cognitive-Science Based Program to Enhance Study Efficacy in a High and Low-Risk Setting. *European Journal of Cognitive Psychology*, 19(4): 743-768.

**Institution:** George Mason University

**Principal Investigator:** Robert Pasnak

**Project Title:** Increasing Learning by Promoting Early Abstract Thought

**Grant:** R305H030031

Kidd, J.K. Pasnak, R., Gadzichowski, M., Ferral-Like, M., and Gallington, D. (2008). Enhancing Kindergartners' Mathematics Achievement by Promoting Early Abstract Thought. *Journal of Advanced Academics*, 19: 164-200.

Pasnak, R., Cooke, W.D., and Hendricks, C. (2006). Enhancing Academic Performance by Strengthening Class-Inclusion Reasoning. *Journal of Psychology: Interdisciplinary and Applied*, 140: 603-613.

Pasnak, R., Kidd, J., Gadzichowski, M., Gallington, D., Saracina, R., and Addison, K. (in press). Promoting Early Abstraction to Promote Early Literacy and Numeracy. *Journal of Applied Developmental Psychology*.

Pasnak, R., Kidd, J.K., Gadzichowski, M.K., Gallington, D.A., and Saracina, R.P. (2008). Can Emphasizing Cognitive Development Improve Academic Achievement? *Education Research*, 50: 261-276.

Pasnak, R., Maccubbin, E., and Ferral-Like, M. (2007). Using Developmental Principles to Assist At-Risk Preschoolers in Developing Numeracy and Phonemic Awareness. *Perceptual and Motor Skills*, 105:163-176.

Romero, S., Perez, K., and Pasnak, R. (in press.). Selection of Friends in Ethnically Diverse Preschools. *National Head Start Association Journal*.

**Institution:** University of California, Los Angeles

**Principal Investigator:** Keith Holyoak

**Project Title:** a Multidisciplinary Study of Analogical Transfer in Children's Mathematical Learning

**Grant:** R305H030141

Morrison, R.G., Dumas, L.A.A., and Richland, L.E. (2006). The Development of Analogical Reasoning in Children: a Computational Account. In R. Sun and N. Miyake (Eds.), *Proceedings of the 28th Annual Conference of the Cognitive Science Society*. Mahwah, NJ: Erlbaum.

Richland, L.E., Bjork, R.A., and Linn, M.C. (2007). Instruction. In F. Durso, R. Nickerson, S. Dumais, S. Lewandowsky and T. Perfect (Eds.), *Handbook of Applied Cognition*, (2nd ed., pp. 555-583). New Jersey: Wiley and Sons, Ltd.

Richland, L.E., Holyoak, K.J., and Stigler, J.W. (2004). Analogy Generation in Eighth Grade Mathematics Classrooms. *Cognition and Instruction*, 22: 37-60.

Richland, L.E., Morrison, R.G., and Holyoak, K.J. (2004). Developmental Change in Analogical Reasoning: Evidence From a Picture Mapping Task. In K. Forbus, D. Gentner, and T. Regier (Eds.), *Proceedings of the 26th Annual Conference of the Cognitive Science Society* (pp. 1149-1154). Mahwah, NJ: Erlbaum.

Richland, L.E., Morrison, R.G., and Holyoak, K.J. (2006). Children's Development of Analogical Reasoning: Insights From Scene Analogy Problems. *Journal of Experimental Child Psychology*, 94: 249-271.

Richland, L.E., Zur, O., and Holyoak, K.J. (2005). Cross-Cultural Differences in Use of Comparisons: Imagery and Visual Cues. In B.G. Bara, L. Barsalou, M. Bucciarelli (Eds.), *Proceedings of the 27th Annual Conference of the Cognitive Science Society* (pp. 1149-1154). Mahwah, NJ: Erlbaum.

Richland, L.E., Zur, O., and Holyoak, K.J. (2007). Cognitive Supports for Analogy in the Mathematics Classroom. *Science*, 316: 1128-1129.

**Institution:** University of Illinois at Chicago

**Principal Investigators:** Jennifer Wiley and Keith Thiede

**Project Title:** Improving Monitoring Accuracy Improves Learning From Text

**Grant:** R305H030170

Dunlosky, J., and Thiede, K.W. (2004). Causes and Constraints of the Shift-To-Easier-Materials Effect in the Control of Study. *Memory and Cognition*, 32: 779-788.

- Dunlosky, J., Hertzog, C., Kennedy, M., and Thiede, K. (2005). The Self-Monitoring Approach for Effective Learning. *Cognitive Technology, 10*: 4-11.
- Griffin, T.D., Wiley, J., and Thiede, K.W. (2008). Individual Differences, Rereading, and Self-Explanation: Concurrent Processing and Cue Validity as Constraints on Metacomprehension Accuracy. *Memory and Cognition, 36*: 93-103.
- Jee, B., Wiley, J., and Griffin, T.D. (2006). Expertise and the Illusion of Comprehension. In R. Sun and N. Miyake (Eds.), *Proceedings of the 28th Annual Conference of the Cognitive Science Society*. Mahwah, NJ: Erlbaum.
- Thiede, K.W., Dunlosky, J., Griffin, T.D., and Wiley, J. (2005). Understanding the Delayed Keyword Effect on Metacomprehension Accuracy. *Journal of Experimental Psychology: Learning, Memory and Cognition, 31*: 1267-1280.
- Thiede, K.W., Griffin, T.D., Wiley, J., and Anderson, M. (in press). Poor Metacomprehension Accuracy as a Result of Inappropriate Cue Use. *Discourse Processes*.
- Thiede, K.W., Griffin, T.D., Wiley, J., and Redford. (2009). Metacognitive Monitoring During and After Reading. In D.J. Hacker, J. Dunlosky, and A.C. Graesser (Eds.), *Handbook of Metacognition in Education*. Routledge.
- Trabasso, T., and Wiley, J. (2005). What Happens at Reunions? Exploring Causal Connections and Their Role in Reunion Effects. *Discourse Processes, 39*: 129-164.
- Wiley, J., Griffin, T.D., and Thiede, K.W. (2005). Putting the Comprehension in Metacomprehension. *Journal of General Psychology, 132*: 408-428.

**Institution:** University of Maryland

**Principal Investigator:** Thomas Wallsten (Original PI: Thomas Nelson)

**Project Title:** Computer-Assisted Instruction for Learning and Long-Term Retention Based on Recent Cognitive and Metacognitive Findings

**Grant:** R305H030283

Jang, Y., and Nelson, T.O. (2005). How Many Dimensions Underlie Judgments of Learning and Recall? Evidence from State-Trace Methodology. *Journal of Experimental Psychology: General, 134*: 308-326.

Nelson, T.O., Narens, L., and Dunlosky, J. (2004). A Revised Methodology for Research on Metamemory: Pre-Judgment Recall and Monitoring (PRAM). *Psychological Methods, 9* (1): 53-69.

Richards, R.M., and Nelson, T.O. (2004). Effect of the Difficulty of Prior Items on the Magnitude of Judgments of Learning for Subsequent Items. *American Journal of Psychology, 117*(1): 81-91.

Scheck, P., and Nelson, T.O. (2005). Lack of Pervasiveness of the Underconfidence-With-Practice Effect: Boundary Conditions and an Explanation via Anchoring. *Journal of Experimental Psychology: General, 134*(1): 124-128.

Scheck, P., Meeter, M., and Nelson, T.O. (2004). Anchoring Effects in the Absolute Accuracy of Immediate Versus Delayed Judgments of Learning. *Journal of Memory and Language, 51*: 71-79.

Van Overschelde, J.P., and Nelson, T.O. (2006). Delayed Judgments of Learning Cause Both a Decrease in Absolute Accuracy (Calibration) and an Increase in Relative Accuracy (Resolution). *Memory and Cognition, 34*: 1527-1538.

**Institution:** Carnegie Mellon University

**Principal Investigators:** Erik Reichle and Jonathan Schooler

**Project Title:** Lapses in Meta-Cognition during Reading: Understanding Comprehension Failure

**Grant:** R305H030235

- Pollatsek, A., Reichle, E.D., and Rayner, K. (2006). Serial Processing Is Consistent With the Time Course of Linguistic Information Extraction From Consecutive Words During Eye Fixations in Reading: A Response to Inhoff, Eiter, and Radach (2005). *Journal of Experimental Psychology: Human Perception and Performance*, 32: 1485-1489.
- Pollatsek, A., Reichle, E.D., and Rayner, K. (2006). Tests of the E-Z Reader Model: Exploring the Interface Between Cognition and Eye-Movement Control. *Cognitive Psychology*, 52: 1-56.
- Reichle, E.D., Pollatsek, A., and Rayner, K. (2007). Modeling the Effects of Lexical Ambiguity on Eye Movements During Reading. In R.P.G. Van Gompel, M.F. Fischer, W.S. Murray, and R.L. Hill (Eds.), *Eye Movements: A Window on Mind and Brain* (pp. 271-292). Oxford: Elsevier.
- Schooler, J.W., Reichle, E.D., and Halpern, D.V. (2004). Zoning Out While Reading: Evidence for Dissociations Between Experience and Metacognition. In D.T. Levin (Ed.), *Thinking and Seeing: Visual Metacognition in Adults and Children* (pp. 203-226). Cambridge, MA.
- Smallwood, J., and Schooler, J.W. (2006). The Restless Mind. *Psychological Bulletin*, 132: 946-958.
- Smallwood, J., Beech, E.M., Schooler, J.W., and Handy, T.C. (2008). Going AWOL in the Brain—Mind Wandering Reduces Cortical Analysis of the Task Environment. *Journal of Cognitive Neuroscience*, 20 (3): 458-469.
- Smallwood, J., Fishman, D.J., and Schooler, J.W. (2007). Counting the Cost of an Absent Mind: Mind-Wandering as an Unrecognized Influence on Educational Performance. *Psychonomic Bulletin and Review*, 14: 230-236.
- Smallwood, J., McSpadden, M., and Schooler, J.W. (2007). The Lights Are on But No One's Home: Meta-Awareness and the Decoupling of Attention When the Mind Wanders. *Psychonomic Bulletin and Review*, 14: 527-533.
- Smallwood, J., McSpadden, M., Luus, B., and Schooler, J.W. (2008). Segmenting the Stream of Consciousness—The Psychological Correlates of Temporal Structures in the Times Series Data of a Continuous Performance Task. *Brain and Cognition*, 66(1): 50-56.
- Smith, R., Keramatian, K., Smallwood, J., Schooler, J.W., Luus, B., and Christoff, K. (2006). Mind-Wandering With and Without Awareness: An fMRI Study of Spontaneous Thought Processes. In R. Sun and N. Miyake, *Proceedings of the Twenty-Eighth Annual Meeting of the Cognitive Science Society* (p. 804).

**Institution:** University of Wisconsin, Madison

**Principal Investigator:** Arthur Glenberg

**Project Title:** Training Indexing to Enhance Meaning Extraction in Young Readers

**Grant:** R305H030266

Glenberg, A.M., Brown, M., and Levin, J.R. (2007). Enhancing Comprehension in Small Reading Groups Using a Manipulation Strategy. *Contemporary Educational Psychology*, 32: 389-399.

Glenberg, A.M., Gutierrez, T., Levin, J.R., Japuntich, S., and Kaschak, M.P. (2004). Activity and Imagined Activity Can Enhance Young Children's Reading Comprehension. *Journal of Educational Psychology*, 96: 424-436.

Glenberg, A.M., Jaworski, B., Rischal, M., and Levin, J.R. (2007). What Brains Are For: Action, Meaning, and Reading Comprehension. In D. McNamara (Ed.), *Reading Comprehension Strategies: Theories, Interventions, and Technologies* (pp. 221-240). Mahwah, NJ: Erlbaum.

Marley, S.C., and Levin, J.R. (2006). Pictorial Illustrations, Visual Imagery, and Motor Activity: Their Instructional Implications for Native American Children with Learning Disabilities. In R.J. Morris (Ed.), *Disability Research and Policy: Current Perspectives* (pp. 103-123). Mahwah, NJ: Erlbaum.

Marley, S.C., Levin, J.R., and Glenberg, A.M. (2007). Improving Native American Children's Listening Comprehension through Concrete Representations. *Contemporary Educational Psychology*, 32: 537-550.

**Institution:** Washington University, St. Louis  
**Principal Investigator:** Henry L. Roediger, III  
**Project Title:** Test-Enhanced Learning  
**Grant:** R305H030339

- Butler, A.C., and Roediger, H.L. (2007). Testing Improves Long-Term Retention in a Simulated Classroom Setting. *European Journal of Cognitive Psychology, 19*(4/5): 514 - 527.
- Butler, A.C., and Roediger, H.L. (2008). Feedback Enhances the Positive Effects and Reduces the Negative Effects of Multiple-Choice Testing. *Memory and Cognition, 36*: 604-616.
- Butler, A.C., Karpicke, J.D., and Roediger, H.L., III. (2007). The Effect of Type and Timing of Feedback on Learning From Multiple-Choice Tests. *Journal of Experimental Psychology: Applied, 13*: 273-281.
- Butler, A.C., Karpicke, J.D., and Roediger, H.L., III. (2008). Correcting a Metacognitive Error: Feedback Increases Retention of Low-Confidence Correct Responses. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 34*: 918-928.
- Chan, C.K., McDermott, K.B., and Roediger, H.L. (2006). Retrieval Induced Facilitation: Initially Nontested Material Can Benefit From Prior Testing. *Journal of Experimental Psychology: General, 135*: 533-571.
- Kang, S.H.K., McDermott, K.B., and Roediger, H.L. (2007). Test Format and Corrective Feedback Modify the Effect of Testing on Long-Term Retention. *European Journal of Cognitive Psychology, 19*(4/5): 528-558.
- Karpicke, J.D., and Roediger, H.L. (2007). Expanding Retrieval Practice Promotes Short-Term Retention, But Equally Spaced Retrieval Enhances Long-Term Retention. *Journal of Experimental Psychology: Learning, Memory and Cognition, 33*: 704-719.
- Karpicke, J.D., and Roediger, H.L. (2007). Repeated Retrieval during Learning is the Key to Long-Term Retention. *Journal of Memory and Language, 57*: 151-162.
- McDaniel, M.A., Anderson, J.L., Derbish, M.H., and Morrisette, N. (2007). Testing the Testing Effect in the Classroom. *European Journal of Cognitive Psychology, 19*(4/5): 494-513.
- McDaniel, M.A., Roediger, H.L., and McDermott, K.B. (2007). Generalizing Test-Enhanced Learning from the Laboratory to the Classroom. *Psychonomic Bulletin and Review, 14*: 200-206.
- Roediger, H.L., and Karpicke, J.D. (2006). The Power of Testing Memory: Basic Research and Implications for Educational Practice. *Perspectives on Psychological Science, 1*: 181-210.
- Roediger, H.L., and Karpicke, J.D. (2006). Test-Enhanced Learning: Taking Memory Tests Improves Long-Term Retention. *Psychological Science, 17*: 249-255.
- Roediger, H.L., McDaniel, M.A., and McDermott, K.B. (2006). Test Enhanced Learning. *American Psychological Society Observer, 19*: 28.

**Institution:** Yale University  
**Principal Investigator:** Robert Sternberg  
**Project Title:** Understanding Students' Mathematical Competencies: An Exploration of the Impact of Contextualizing Mathematical Problems  
**Grant:** R305H030282

- McNeil, N., Uttal, D.H., Jarvin, L., and Sternberg, R.J. (2009). Should You Show Me the Money? Concrete Objects Both Hurt and Help Performance on Mathematics Problems. *Learning and Instruction, 19*: 171-184.

Sternberg, R. (2008). Applying Psychological Theories to Educational Practice. *American Educational Research Journal*, 45: 150-165.

### FY 2004

**Institution:** Florida State University

**Principal Investigators:** Carol M. Connor and Fred Morrison

**Project Title:** Child Instruction Interactions in Early Reading: Examining Causal Effects of Individualized Instruction

**Grant:** R305H040013

Cameron, C.E., Connor, C.M., Morrison, F.J., and Jewkes, A.M. (2008). Effects of Classroom Organization on Letter-Word Reading in First Grade. *Journal of School Psychology*, 46: 173-192

Connor, C.M., Piasta, S.B., Glasney, S., Schatschneider, C., Fishman, B., Underwood, P. (2009). Individualizing Student Instruction Precisely: Effects of Child X Instruction Interactions on First Graders' Literacy Development. *Child Development*, 80: 77-100.

Connor, C.M., Morrison, F.J., Fishman, B.J., Schatschneider, C., and Underwood, P. (2007). The EARLY YEARS: Algorithm-Guided Individualized Reading Instruction. *Science*, 315(5811): 464-465.

Connor, C.M., Morrison, F.J., and Underwood, P. (2007). A Second Chance in Second Grade? The Cumulative Impact of First and Second Grade Reading Instruction on Students' Letter-Word Reading Skills. *Scientific Studies of Reading*, 11(3): 199-233.

Morrison, F.J., and Connor, C.M. (2009). The Transition to School: Child-Instruction Transactions in Learning to Read. In A. Sameroff (Ed.), *The Transactional Model of Development: How Children and Contexts Shape Each Other* (pp. 183-201). Washington, DC: American Psychological Association.

Piasta, S.B., Connor, C.M., Fishman, B.J., and Morrison, F.J. (2009). Teachers' Knowledge of Literacy Concepts, Classroom Practices, and Student Reading Growth. *Scientific Studies of Reading*, 13(3): 224-248.

**Institution:** University of California, San Diego

**Principal Investigator:** Hal Pashler

**Project Title:** Optimizing Resistance to Forgetting

**Grant:** R305H040108

Carpenter, S., and Pashler, H. (2007). Testing Beyond Words: Using Tests to Enhance Visuospatial Map Learning. *Psychonomic Bulletin and Review*, 14: 474-478.

Carpenter, S., Pashler, H., and Cepeda, N. J. (in press). Using Tests to Enhance 8<sup>th</sup> Grade Students' Retention of U.S. History Facts. *Applied Cognitive Psychology*.

Carpenter, S., Pashler, H., and Vul, E. (2007). What Types of Learning Are Enhanced by a Cued Recall Test? *Psychonomic Bulletin and Review*, 13: 826-830.

Carpenter, S. K., Pashler, H., Cepeda, N. J., and Alvarez, D. (2007). Applying the Principles of Testing and Spacing to Classroom Learning. In D. S. McNamara and J. G. Trafton (Eds.), *Proceedings of the 29<sup>th</sup> Annual Cognitive Science Society* (p. 19). Nashville, TN: Cognitive Science Society.

Carpenter, S., Pashler, H., Wixted, J., and Vul, E. (2008). The Effects of Tests on Learning and Forgetting. *Memory and Cognition*, 36: 438-448.

Cepeda, N., Coburn, N., Rohrer, D., Wixted, J., Mozer, M., and Pashler, H. (2009). Optimizing Distributed Practice: Theoretical Analysis and Practical Implications. *Experimental Psychology*, 56(4), 236-246.

- Cepeda, N., Vul, E., Rohrer, D., Wixted, J., and Pashler, H. (2008). Spacing Effect in Learning: A Temporal Ridgeline of Optimal Retention. *Psychological Science*, 19: 1095-1102.
- Cepeda, N.J., Pashler, H., Vul, E., Wixted, J.T., and Rohrer, D. (2006). Distributed Practice in Verbal Recall Tasks: A Review and Quantitative Synthesis. *Psychological Bulletin*, 132(2): 354-380.
- Jones, J. and Pashler, H. (2007). Is the Mind Inherently Forward Looking? Comparing Predication and Retrodiction. *Psychonomic Bulletin and Review*, 14: 295-300.
- Mozer, M., C., Pashler, H., and Homaei, H. (2003). Optimal Predictions in Everyday Cognition: The Wisdom of Individuals or Crowds? *Cognitive Science: A Multidisciplinary Journal*, 32: 1133-1147.
- Pashler, H., Rohrer, D., and Cepeda, N. J. (2006). Temporal Spacing and Learning. *APS Observer*, 19: 30, 38.
- Pashler, H., Rohrer, D., Cepeda, N., and Carpenter, S. (2007). Enhancing Learning and Retarding Forgetting: Choices and Consequences. *Psychonomic Bulletin and Review*, 14: 187-193.
- Rickard, T., Lau, J., and Pashler, H. (2008). Spacing and the Transition From Calculation to Retrieval. *Psychonomic Bulletin and Review*, 15: 656-661.
- Rohrer, D. (2009). The Effects of Spacing and Mixing Practice Problems. *Journal for Research in Mathematics Education*, 40: 4-17.
- Rohrer, D. (in press). Avoidance of Overlearning Characterizes the Spacing Effect. *European Journal of Cognitive Psychology*.
- Rohrer, D., and Pashler, H. (2007). Increasing Retention Without Increasing Study Time. *Current Directions in Psychology Science*, 16: 183-186.
- Rohrer, D., and Taylor, K. (2006). The Effects of Overlearning and Distributed Practice on the Retention of Mathematics Knowledge. *Applied Cognitive Psychology*, 20(9): 1209-1224
- Rohrer, D., and Taylor, K. (2007). The Shuffling of Mathematics Problems Improves Learning. *Instructional Science*, 35(6): 481-498.
- Rohrer, D., Taylor, K., Pashler, H., Wixted, J.T., and Cepeda, N.J. (2005). The Effect of Overlearning on Long-Term Retention. *Applied Cognitive Psychology*, 19: 361-374.
- Vul, E., and Pashler, H. (2008). Measuring the Crowd within: Probabilistic Representations within Individuals. *Psychological Sciences*, 19(7): 645-647.
- Vul, E., Harris, C., Winkielman, P., and Pashler, H. (2009). Puzzlingly High Correlations in fMRI Studies of Emotion, Personality, and Social Cognition. *Perspectives on Psychological Science*, 4(3): 274-290.

## FY 2005

**Institution:** Carnegie Mellon University  
**Principal Investigator:** Robert Siegler  
**Project Title:** Improving Children's Pure Numerical Estimation  
**Grant:** R305H050035

Booth, J.L., and Siegler, R.S. (2006). Developmental and Individual Differences in Pure Numerical Estimation. *Developmental Psychology*, 41: 189-201.

Booth, J.L., and Siegler, R.S. (2008). Numerical Magnitude Representations Influence Arithmetic Learning. *Child Development*, 79: 1016-1031.

Laski, E.V., and Siegler, R.S. (2007). Is 27 a Big Number? Correlational and Causal Connections among Numerical Categorization, Number Line Estimation, and Numerical Magnitude Comparison. *Child Development*, 76: 1723-1743.

Opfer, J., and Siegler, R.S. (2007). Representational Change and Children's Numerical Estimation. *Cognitive Psychology*, 55: 169-195.

Ramani, G.B., and Siegler, R.S. (2008). Promoting Broad and Stable Improvements in Low-Income Children's Numerical Knowledge through Playing Number Board Games. *Child Development*, 79: 375-394.

Siegler, R.S. (in press). Improving the Numerical Understanding of Children From Low-Income Families. *Child Development Perspectives*.

Siegler, R.S., and Mu, Y. (2008). Chinese Children Excel on Novel Mathematics Problems Even Before Elementary School. *Psychological Science*, 19: 759-763.

Siegler, R.S., and Ramani, G.B. (2006). Early Development of Estimation Skills. *APS Observer*, 19: 34-44.

Siegler, R.S., and Ramani, G.B. (2008). Playing Linear Numerical Board Games Promotes Low-Income Children's Numerical Development. *Developmental Science, Special Issue on Mathematical Cognition*, 11: 655-661.

Siegler, R.S., and Ramani, G.B. (2009). Playing Linear Number Board Games -- But Not Circular Ones -- Improves Low-Income Preschoolers' Numerical Understanding. *Journal of Educational Psychology*, 101(3): 545-560.

**Institution:** Harvard University

**Principal Investigator:** Jon Star

**Project Title:** Using Contrasting Examples to Support Procedural Flexibility and Conceptual Understanding in Mathematics

**Grant:** R305H050179

Rittle-Johnson, B., and Star, J.R. (2009). Compared with What? The Effects of Different Comparisons on Flexible Knowledge and Procedural Flexibility for Equation Solving. *Journal of Educational Psychology*, 101(3): 529-544.

Rittle-Johnson, B., and Star, J.R. (2007). Does Comparing Solution Methods Facilitate Conceptual and Procedural Knowledge? An Experimental Study on Learning to Solve Equations. *Journal of Educational Psychology*, 99(3): 561-574.

Star, J.R., and Rittle-Johnson, B. (2008). Flexibility in Problem Solving: The Case of Equation Solving. *Learning and Instruction*, 18: 565-579.

Star, J.R., and Rittle-Johnson, B. (2009). It Pays to Compare: An Experimental Study on Computational Estimation. *Journal of Experimental Child Psychology*, 102(4): 408-426.

**Institution:** Indiana University

**Principal Investigator:** Robert Goldstone

**Project Title:** Grounded and Transferable Knowledge of Complex Systems Using Computer Simulations

**Grant:** R305H050116

Barab, S., Scott, B., Siyahhan, S. Goldstone, R. L., Ingram-Goble, A., Zuiker, S., & Warren, S. (in press). Transformational Play as a Curricular Scaffold: Using Videogames to Support Science Education. *Journal of Science Education and Technology*.

- Corneille, O., Goldstone, R.L., Queller, S., and Potter, T. (2006). Asymmetries in Categorization, Perceptual Discrimination, and Visual Search for Reference and Non-Reference Exemplars. *Memory & Cognition*, 34: 556-567.
- Feng, Y., Goldstone, R. L., and Menkov, V. (2005). A Graph Matching Algorithm and its Application to Conceptual System Translation. *International Journal on Artificial Intelligence Tools*, 14: 77-100.
- Gerganov, A., Grinberg, M., & Goldstone, R. L. (2009). Partial Position Transfer in Categorical Perception Learning. In N. Taatgen, H. van Rijn, L. Schomaker and J. Nerbonne (Eds.), *Proceedings of the 31<sup>st</sup> Annual Conference of the Cognitive Science Society*. Amsterdam: Cognitive Science Society.
- Goldstone, R.L, and Son, J.Y. (2005). Similarity. In K. Holyoak & R. Morrison (Eds.), *Cambridge Handbook of Thinking and Reasoning* (pp. 13-36). Cambridge: Cambridge University Press.
- Goldstone, R.L. (2006). The Complex Systems See-Change in Education. *Journal of the Learning Sciences*, 15: 35-43.
- Goldstone, R.L., and Janssen, M.A. (2005). Computational Models of Collective Behavior. *Trends in Cognitive Science*, 9: 424-430.
- Goldstone, R.L., and Son, J.Y. (2005). The Transfer of Scientific Principles Using Concrete and Idealized Simulations. *Journal of the Learning Sciences*, 14: 69-110.
- Goldstone, R.L., and Wilensky, U. (2008). Promoting Transfer through Complex Systems Principles. *Journal of the Learning Sciences*, 17: 465-516.
- Goldstone, R.L., Ashpole, B.C., and Roberts, M.E., (2005). Knowledge of Resources and Competitors in Human Foraging. *Psychonomic Bulletin & Review*, 12: 81-87.
- Goldstone, R.L., Day, S., and Son, J.Y. (in press). Comparison. In B. Glatzeder, V. Goel, and A. Von Müller (Eds.), *On Thinking: Volume II, Towards a Theory of Thinking*. The Parmenides Foundation
- Goldstone, R.L., Feng, Y., and Rogosky, B. (2005). Connecting Concepts to the World and Each Other. In D. Pecher and R. Zwaan (Eds.), *Grounding Cognition: The Role Of Perception And Action In Memory, Language, And Thinking* (pp. 292-314). Cambridge: Cambridge University Press.
- Goldstone, R.L., Gerganov, A., Landy, D., and Roberts, M.E. (2008). Learning to See and Conceive. In L. Tommasi, M. Peterson, and L. Nadel (Eds.), *The New Cognitive Sciences* (pp. 163-188). Cambridge, MA: MIT Press.
- Goldstone, R.L., Jones, A., and Roberts, M. E. (2006). Group Path Formation. *IEEE Transactions on System, Man, and Cybernetics, Part A*, 36: 611-620.
- Goldstone, R.L., Landy, D., and Son, J.Y. (2008). A Well Grounded Education: The Role of Perception in Science and Mathematics. In M. De Vega, A. Glenberg, and A. Graesser (Eds.), *Symbols, Embodiment, and Meaning* (pp. 327-355). Oxford Press.
- Goldstone, R.L., Roberts, M.E., and Gureckis, T.M. (2008). Emergent Processes in Group Behavior. *Current Directions in Psychological Science*, 17: 10-15.
- Goldstone, R.L., Roberts, M.E., Mason, W., and Gureckis, T. (2008). Collective Search in Concrete and Abstract Spaces. In T. Kugler, C. Smith, and T. Connelly (Eds.), *Decision Modeling and Behavior in Uncertain and Complex Environments* (pp. 277-308). New York: Springer Press.
- Gureckis, T.M., and Goldstone, R.L. (2006). Thinking in Groups. *Pragmatics and Cognition*, 14: 293-311.
- Hockema, S. A., Blair, M.R., and Goldstone, R.L. (2005). Differentiation for Novel Dimensions. In B. G. Bara, L. Barsalou, and M. Bucciarelli (Eds.), *Proceedings of the 27<sup>th</sup> Annual Conference of the Cognitive Science Society*. Hillsdale, New Jersey: Erlbaum.

Landy, D.H., and Goldstone, R.L. (2009). How Much of Symbolic Manipulation is Just Symbol Pushing? *Proceedings of the 31st Annual Conference of the Cognitive Science Society*. Amsterdam: Cognitive Science Society.

Landy, D.H., and Goldstone, R.L. (2005a). How We Learn About Things We Don't Already Understand. *Journal of Experimental and Theoretical Artificial Intelligence*, 17: 343-369.

Landy, D.H., and Goldstone, R.L. (2005b). Relational Reasoning is in the Eyes of the Beholder: How Global Perceptual Groups Aid and Impair Algebraic Evaluations. In B. G. Bara, L. Barsalou, and M. Bucciarelli (Eds.), *Proceedings of the 27<sup>th</sup> Annual Conference of the Cognitive Science Society*. Hillsdale, New Jersey: Erlbaum.

Landy, D., and Goldstone, R.L. (2007). How Abstract is Symbolic Thought? *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 33: 720-733.

Landy, D., and Goldstone, R.L. (2007). Formal Notations are Diagrams: Evidence from a Production Task. *Memory and Cognition*, 35: 2033-2040.

Landy, D.H., Jones, M.N., and Goldstone, R.L. (2008). How The Appearance of an Operator Affects its Formal Precedence. In B. C. Love, K. McRae, & V. M. Sloutsky (Eds.), *Proceedings of the 30<sup>th</sup> Annual Conference of the Cognitive Science Society* (pp. 2109-2114). Washington, D.C.: Cognitive Science Society

Mason, W.A., Jones, A., and Goldstone, R.L. (2005). Propagation of Innovations in Networked Groups. In B. G. Bara, L. Barsalou, and M. Bucciarelli (Eds.), *Proceedings of the 27<sup>th</sup> Annual Conference of the Cognitive Science Society*. Hillsdale, New Jersey: Erlbaum.

Mason, W.A., Jones, A., and Goldstone, R.L. (2008). Propagation of Innovations in Networked Groups. *Journal of Experimental Psychology: General*, 137: 422-433.

Roberts, M.E., & Goldstone, R.L. (2009a). Sub-Optimalities in Group Foraging and Resource Competition. In N. Taatgen, H. van Rijn, L. Schomaker and J. Nerbonne (Eds.), *Proceedings of the 31<sup>st</sup> Annual Conference of the Cognitive Science Society*. Amsterdam: Cognitive Science Society.

Roberts, M.E., and Goldstone, R.L. (2005). Explaining Resource Undermatching with Agent-Based Models. In B.G. Bara, L. Barsalou, and M. Bucciarelli (Eds.), *Proceedings of the 27<sup>th</sup> Annual Conference of the Cognitive Science Society*. Hillsdale, New Jersey: Erlbaum.

Roberts, M.E., and Goldstone, R.L. (2009b). Adaptive Group Coordination. In N. Taatgen, H. van Rijn, L. Schomaker and J. Nerbonne (Eds.), *Proceedings of the 31<sup>st</sup> Annual Conference of the Cognitive Science Society*. Amsterdam: Cognitive Science Society.

Rogosky, B.J., and Goldstone, R.L. (2005). Adaptation of Perceptual and Semantic Features. In L.A. Carlson and E. van der Zee (Eds.), *Functional Features In Language and Space: Insights from Perception, Categorization And Development* (pp. 257-273). Oxford, UK: Oxford University Press.

Son, J.Y., and Goldstone, R.L. (2005). Relational Words As Handles: They Bring Along Baggage. In B.G. Bara, L. Barsalou, and M. Bucciarelli (Eds.), *Proceedings of the 27<sup>th</sup> Annual Conference of the Cognitive Science Society*. Hillsdale, New Jersey: Erlbaum.

Son, J.Y., and Goldstone, R.L. (2009). Contextualization in Perspective. *Cognition and Instruction*, 27(1): 51-89.

Son, J.Y., Smith, L.B., and Goldstone, R.L. (2008). Simplicity and Generalization: Short-Cutting Abstraction in Children's Object Categorizations. *Cognition*, 108: 626-638.

**Institution:** Kent State University

**Principal Investigator:** John Dunlosky

**Project Title:** Supporting Efficient and Durable Student Learning

**Grant:** R305H050038

Dunlosky, J., Bottiroli, S., and Hartwig, M. (2009). Sins Committed in the Name of Ecological Validity: A Call for Representative Design in Education Research. In D. Hacker, J. Dunlosky, and A. Graesser (Eds.), *Handbook of Metacognition in Education*. New York: Taylor and Francis.

Dunlosky, J., and Lipko, A.R. (2007). Metacomprehension: A Brief History and How to Improve Its Accuracy. *Current Directions in Psychological Science*, 16(4): 228-232.

Pyc, M.A., and Rawson, K.A. (2007). Examining the Efficiency of Schedules of Distributed Retrieval Practice. *Memory and Cognition*, 35(8): 1917-1927.

Rawson, K.A., and Dunlosky, J. (2007). Improving Students' Self-Evaluation of Learning for Key Concepts in Textbook Materials. *European Journal of Cognitive Psychology*, 19 (4/5): 559-579.

**Institution:** Northern Illinois University

**Principal Investigator:** Anne Britt

**Project Title:** Creating a Usable Environment to Teach Argument Comprehension and Production Skills

**Grant:** R305H050133

Britt, M.A., and Gabrys, G. (2004). Collecting Responses through Web Page Drag and Drop. *Behavior Research Methods, Instruments, and Computers*, 36(1): 52-68.

Britt, M.A., Kurby, C.A., Dandotkar, S., and Wolfe, C.R. (2008). I Agreed With What? Memory for Simple Argument Claims. *Discourse Processes*, 45(1): 52-84.

Durik, A.M., Britt, M.A., Reynolds, R., and Storey, J.K. (2008). The Effects of Hedges in Persuasive Arguments: A Nuanced Analysis of Language. *Journal of Language and Social Psychology*.

Larson, A.A., Britt, M.A., and Kurby, C. (in press). Improving Students' Evaluation of Informal Arguments. *Journal of Experimental Education*.

Larson, M., Britt, M.A., and Larson, A. (2004). Disfluencies in Comprehending Argumentative Texts. *Reading Psychology*, 25(3): 205-224.

Wolfe, C.R., and Britt, M.A. (2008). The Locus of the Myside Bias in Written Argumentation. *Thinking and Reasoning*, 14(1): 1-27.

Wolfe, C.R., Britt, M.A., and Butler, J.A. (2009). Argumentation Schema and the Myside Bias in Written Argumentation. *Written Communication*, 26: 183-209.

Wolfe, C.R., Britt, M.A., Petrovic, M., Albrecht, M., and Kopp, K. (2009). The Efficacy of a Web-Based Counterargument Tutor. *Behavior Research Methods*, 41: 691-698.

**Institution:** Northwestern University

**Principal Investigator:** David Uttal

**Project Title:** Understanding and Facilitating Symbolic Learning

**Grant:** R305H050059

Deloache, J.S. (2005). The Pygmalion Problem in Early Symbol Use. In L. Namy (Ed.), *Symbol Use and Symbolic Representation: Developmental and Comparative Perspectives* (pp. 47-67). Mahwah, NJ: Erlbaum

Deloache, J.S. (2006). Mindful of Symbols. *Scientific American Mind*, 17(1): 71-75.

Deloache, J.S., and Bloom, M.E. (in press). Of Chimps and Children: Use of Spatial Symbols by Two Species. In F. Dolins and R. Mitchell (Eds.), *Spatial Perception, Spatial Cognition*. New York: Cambridge University Press.

Deloache, J.S., and Ganea, P.A. (2007). The Early Growth of Symbolic Understanding and Use: A Tribute to Ann Brown. In J.C. Campione, K.E. Metz and A.S. Palincsar (Eds.), *Children's Learning in the Laboratory and Classroom Contexts: Essays in Honor of Ann Brown*. Mahwah, NJ: Erlbaum.

Uttal, D.H., and Deloache, J.S. (2006). Learning From Symbolic Objects. *APS Observer*, 19(5).

Uttal, D.H., Liu, L.S., and Deloache, J.S. (2005). Concreteness and Symbolic Development. In L. Balter and C.S. Tamis-Lemonda (Eds.), *Child Psychology: A Handbook of Contemporary Issues*, (2nd ed., pp. 167-184). New York: Psychology Press.

Uttal, D.H., and O'Doherty, K. (in press). Understanding Visualizations: A Developmental Approach With Implications for Science Education. In J. Gilbert, M. Reiner and M. Nakhleh (Eds.), *Visualization: Theory and Practice in Science Education*. New York: Springer.

**Institution:** Ohio State University

**Principal Investigator:** Andrew Heckler

**Project Title:** Scientific Misconceptions: From Cognitive Underpinning to Educational Treatment

**Grant:** R305H050125

Heckler, A.F., Kaminski, J.A., and Sloutsky, V.M. (2006). Differential Cue Salience, Blocking and Learned Inattention. In R. Sun and N. Miyake (Eds.), *Proceedings of the 28<sup>th</sup> Annual Conference of the Cognitive Science Society*.

Heckler, A.F., Kaminski, J.A., and Sloutsky, V.M. (2008). Learning Associations that Run Counter to Biases in Learning: Overcoming Overshadowing and Learned Inattention. In B. C. Love, K. McRae, & V. M. Sloutsky (Eds.), *Proceedings of the 30<sup>th</sup> Annual Conference of the Cognitive Science Society* (pp. 511-516). Austin, TX: Cognitive Science Society.

Kaminski, J.A., Heckler, A.F., and Sloutsky, V.M. (2008). Blocking Effects on Dimensions: How Intentional Focus on Values Can Spill Over to the Dimension Level. In B. C. Love, K. McRae, & V. M. Sloutsky (Eds.), *Proceedings of the 30<sup>th</sup> Annual Conference of the Cognitive Science Society* (pp. 1075-1080). Austin, TX: Cognitive Science Society.

Kaminski, K.A., Sloutsky, V.M., and Heckler, A.F. (2008). The Advantage of Learning Abstract Examples in Learning Math. *Science*, 320: 454-455.

Rosenblatt, R., Sayre, E.C., and Heckler, A.F. (2008). Toward a Comprehensive Picture of Student Understanding of Force, Velocity and Acceleration. In *Proceedings of 2008 Physics Education Research Conference*. Melville, New York: AIP Conference Proceedings.

Sayre, E.C., and Heckler, A.F. (2008). Evolution of Student Knowledge in a Traditional Introductory Physics Classroom. In *Proceedings of 2008 Physics Education Research Conference*. Melville, New York: AIP Conference Proceedings.

Sayre, E.C., and Heckler, A.F. (2009). Peaks and Decays of Student Knowledge in an Introductory E& M Course. *Physical Review Special Topics - Physics Education Research*, 5.

Scaife, T.M., and Heckler, A.F. (2007). The Effect of Field Representation on Student Responses to Magnetic Field Questions. In *Proceedings of 2007 Physics Education Research Conference*. Melville, New York: AIP Conference Proceedings.

**Institution:** University of Chicago

**Principal Investigator:** Sian Beilock

**Project Title:** Improving the Assessment Capability of Standardized Tests: How High-Stakes Testing Environments Compromise Performance

**Grant:** R305H050004

Beilock, S.L. (2008). Math Performance in Stressful Situations. *Current Directions in Psychological Science*, 17(5): 339-343.

Beilock, S.L. (2007). Choking Under Pressure. In R. Baumeister and K. Vohs (Eds.), *Encyclopedia of Social Psychology*. Sage Publications.

Beilock, S.L., and Decaro, M.S. (2007). From Poor Performance to Success Under Stress: Working Memory, Strategy Selection, and Mathematical Problem Solving Under Pressure. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 33: 983-998.

Beilock, S.L., Jellison, W.A., Rydell, R.J., McConnell, A.R., and Carr, T.H. (in press). On the Causal Mechanisms of Stereotype Threat: Can Skills that Don't Rely Heavily on Working Memory Still Be Threatened? *Personality and Social Psychology Bulletin*.

Beilock, S.L., Rydell, R.J., and McConnell, A.R. (2007). Stereotype Threat and Working Memory: Mechanisms, Alleviation, and Spill Over. *Journal of Experimental Psychology: General*, 136: 256-276.

Decaro, M.S., Thomas, R., and Beilock, S.L. (2008). Working Memory Capacity and Category Learning: Sometimes Less Is More. *Cognition*, 107: 284-294.

Decaro, M.S., and Wieth, M., and Beilock, S.L. (2007). Methodologies for Examining Problem Solving Success and Failure. *Methods*, 42: 58-67.

**Institution:** University of Memphis

**Principal Investigator:** Barry Gholson

**Project Title:** An Implementation of Vicarious Learning With Deep-Level Reasoning Questions in Middle School and High School Classrooms

**Grant:** R305H050169

Craig, S.D., Brittingham, J., Williams, J., Martindale, T., Graesser, A., and Gholson, B. (in press). The Impact of Domain Knowledge on the Portability of Vicarious Learning to the Classroom. *2009 Annual International Conference for the National Association for Research in Science Teaching*.

Craig, S.D., Graesser, A., Brittingham J., Williams J., Martindale, T., Williams, G., Gray R., Darby, A., and Gholson, B. (2008). An Implementation of Vicarious Learning Environments in Middle School Classrooms. In K. McFerrin, R. Weber, R. Weber, R. Carlsen, and D.A. Willis (Eds.), *The Proceedings of the 19th International Conference for the Society for Information Technology and Teacher Education* (pp. 1060-1064). Chesapeake, VA: AACE.

Craig, S.D., Sullins, J., Witherspoon, A., and Gholson, B. (2006). Deep-Level Reasoning Questions Effect: The Role of Dialog and Deep-Level Reasoning Questions During Vicarious Learning. *Cognition and Instruction*, 24: 565-591.

Craig, S.D., VanLehn, K., and Chi, M.T.H. (in press). Improving Classroom Learning by Collaboratively Observing Human Tutoring Videos While Problem Solving. *Journal of Educational Psychology*.

Craig, S.D., VanLehn, K., and Chi, M.T.H. (2008). Promoting Learning by Observing Deep-Level Reasoning Questions on Quantitative Physics Problem Solving With Andes. In K. McFerrin, R. Weber, R. Weber, R. Carlsen, and D.A. Willis (Eds.), *The Proceedings of the 19th International Conference for the Society for Information Technology and Teacher Education* (pp. 1065-1068). Chesapeake, VA: AACE.

Gholson, B., and Craig, S.D. (2006). Promoting Constructive Activities that Support Vicarious Learning During Computer-Based Instruction. *Educational Psychology Review*, 18: 119-139.

Gholson, B., Graesser, A.C., and Craig, S.D. (2008). An Implementation of Vicarious Learning With Deep-Level Reasoning Questions in Middle School and High School Classrooms. In B.C. Love, K. Mcrae, and V.M. Sloutsky (Eds.), *Proceedings of the 30th Annual Conference of the Cognitive Science Society* (pp. 695-696). Washington, DC.

Gholson, B., Witherspoon, A., Morgan, B., Brittingham, J., Coles, R., Graesser, A.C., Sullins, J., and Craig, S.D. (in press). Exploring the Deep-Level Reasoning Questions Effect during Vicarious Learning Among Eighth to Eleventh Graders in the Domains of Computer Literacy and Newtonian Physics. *Instructional Science*.

Graesser, A.C., Franceschetti, D., Gholson, B., and Craig, S. (in press). Learning Newtonian Physics With Conversational Agents and Interactive Simulation. In N. Stein (Ed.). *Developmental and Learning Sciences Go to School*.

Graesser, A.C., Chipman, P., and King, B.G. (2008). Computer-Mediated Technologies. In J.M. Spector, M.D. Merrill, J.J.G. Van Merriënboer, and M.P. Driscoll (Eds.), *Handbook of Research on Educational Communications and Technology* (3rd ed., pp. 211–224). London: Taylor and Francis.

Graesser, A.C., D'Mello, S., and Person, N.K. (2009). Metaknowledge in Tutoring. In D. Hacker, J. Donlosky, and A.C. Graesser (Eds.), *Handbook of Metacognition in Education*. Mahwah, NJ: Taylor and Francis.

Graesser, A.C., Jeon, M., and Dufty, D. (2008). Agent Technologies Designed to Facilitate Interactive Knowledge Construction. *Discourse Processes*, 45: 298-322.

Graesser, A.C., Ozuru, Y., and Sullins, J. (2009). What Is a Good Question? In M. McKeown (Ed.), *Festschrift for Isabel Beck*. Mahwah, NJ: Erlbaum.

Graesser, A.C., Rus, V., D'Mello, S., and Jackson, G.T. (2008). Autotutor: Learning through Natural Language Dialogue that Adapts to the Cognitive and Affective States of the Learner. In D.H. Robinson and G. Schraw (Eds.), *Current Perspectives on Cognition, Learning and Instruction: Recent Innovations in Educational Technology that Facilitate Student Learning* (pp. 95-125). Information Age Publishing.

Hacker, D.J., Dunlosky, J., and Graesser, A.C. (Eds.). (2009). *Handbook of Metacognition in Education*. Mahwah, NJ: Erlbaum/Taylor and Francis.

Sullins, J., Witherspoon, A., Craig, S., and Gholson, B. (2006). Learning Physics Vicariously: A Test of the Deep-Level Reasoning Questions Effect in a Vicarious Learning Environment on Physics. In T. Reeves and S. Yamashita (Eds.), *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2006* (pp. 2410-2413). Chesapeake, VA: AACE.

**Institution:** University of Southern California

**Principal Investigator:** Carole Beal

**Project Title:** Dynamically Modifying the Learning Trajectories of Novices With Pedagogical Agents

**Grant:** R305H050052

Beal, C.R., Qu, L., and Lee, H. (2008). Mathematics Motivation and Achievement as Predictors of High School Students' Guessing and Help-Seeking With Instructional Software. *Journal of Computer Assisted Learning*, 24: 507-514.

Beal, C.R., Shaw, E., and Birch, M. (2007). Intelligent Tutoring and Human Tutoring in Small Groups: An Empirical Comparison. In R. Luckin, K.R. Koedinger and J. Greer (Eds.), *Artificial Intelligence in Education: Building Technology Rich Learning Contexts that Work* (pp. 536-538).

Stevens, R.H., and Thadani, V. (2007). A Value-Based Approach for Quantifying Scientific Problem Solving Effectiveness. *Journal of Technology, Instruction, Cognition and Learning*, 5: 325-337.

## FY 2006

**Institution:** Carnegie Mellon University

**Principal Investigator:** David Klahr

**Project Title:** Training in Experimental Design: Developing Scalable and Adaptive Computer-Based Science Instruction

**Grant:** R305H060034

Strand-Cary, M., and Klahr, D. (2008). Developing Elementary Science Skills: Instructional Effectiveness and Path Independence. *Cognitive Development*, 23: 488-511.

Zhang, X., Mostow, J., Duke, N.K., Trotochaud, C., Valeri, J., and Corbett, A. (2008). Mining Free-Form Spoken Responses to Tutor Prompts. *Proceedings of the First International Conference on Educational Data Mining*. Montreal.

Mostow, J., and Zhang, X. (2008). Analytic Comparison of Three Methods to Evaluate Tutorial Behaviors Mining Free-Form Spoken Responses to Tutor Prompts. In *Proceedings of the First International Conference on Educational Data Mining*. Montreal.

Zhang, X., Mostow, J., and Beck, J.E. (2008). A Case Study Empirical Comparison of Three Methods to Evaluate Tutorial Behaviors. In *Proceedings of the 10th International Conference on Intelligent Tutoring Systems*.

**Institution:** Columbia University

**Principal Investigator:** Janet Metcalfe

**Project Title:** The Effect of Metacognition on Children's Control of Their Study and of Their Cognitive Processes

**Grant:** R305H060161

Metcalfe, J., and Kornell, N. (2007). Principles of Cognitive Science in Education: The Effects of Generation, Errors and Feedback. *Psychonomic Bulletin and Review*, 14: 225-229.

**Institution:** University of California, Los Angeles

**Principal Investigator:** Philip Kellman

**Project Title:** Integrating Conceptual Foundations in Mathematics through the Application of Principles of Perceptual Learning

**Grant:** R305H060070

Garrigan, P.B., and Kellman, P.J. (2008). Perceptual Learning Depends on Perceptual Constancy. *Proceedings of the National Academy of Sciences (USA)*, 105(6): 2248-2253.

Kellman, P.J., and Garrigan, P.B. (in press). Perceptual Learning and Human Expertise. *Physics of Life Reviews*.

Kellman, P.J., Massey, C.M., Roth, Z., Burke, T., Zucker, J., Saw, A., Aguero, K.E., and Wise, J.A. (2008). Perceptual Learning and the Technology of Expertise: Studies in Fraction Learning and Algebra. *Learning Technologies and Cognition: Special Issue of Pragmatics and Cognition*, 16(2): 356-405.

Massey, C.M., Kellman, P.J., Roth, Z., and Burke, T. (in press). Perceptual Learning and Adaptive Learning Technology: Developing New Approaches to Mathematics Learning in the Classroom. In Stein, N.L. (Ed.), *Developmental and Learning Sciences Go to School: Implications for Education*. New York: Routledge.

Mettler, E., and Kellman, P.J. (2009). Unconscious and Abstract Perceptual Learning of Hidden Patterns. In *Proceedings of the 2009 Meeting of the Vision Sciences Society*.

Son, J., Massey, C., Roth, Z., Longmire, W., Burke, T., Zucker, J., and Kellman, P. (2008). Perceptual Learning in Mathematics Education [Abstract]. In B.C. Love, K. McRae, and V.M. Sloutsky (Eds.), *Proceedings of the 30th Annual Conference of the Cognitive Science Society* (p. 2366). Austin, TX: Cognitive Science Society.

**Institution:** University of Washington

**Principal Investigator:** Deborah McCutchen

**Project Title:** Making Meaning: Morphological Processing and Its Contribution to Adolescent and Pre-Adolescent Literacy

**Grant:** R305H060073

McCutchen, D., Green, L., and Abbott, R.D. (2008). Children's Morphological Knowledge: Links to Literacy. *Reading Psychology*, 29(4): 289-314.

**Institution:** University of Wisconsin, Madison

**Principal Investigator:** Martha Alibali

**Project Title:** Does Visual Scaffolding Facilitate Students' Mathematics Learning? Evidence From Early Algebra

**Grant:** R305H060097

Alibali, M.W., Nathan, M.J., and Fujimori, Y. (2008). Gestures in the Mathematics Classroom: What's the Point? In N. Stein (Ed.), *Developmental and Learning Sciences Go to School*.

Alibali, M.W., and Nathan, M.J. (2009). Teachers' Gestures as a Means of Scaffolding Students' Understanding: Evidence from an Early Algebra Lesson. In R. Goldman, R. Pea, B. Barron, & S. J. Derry (Eds.), *Video Research in the Learning Sciences*. Mahwah, NJ: Erlbaum.349-365.

Nathan, M.J., and Kim, S. (in press). Regulation of Teacher Elicitations in the Mathematics Classroom. *Cognition and Instruction*.

**Institution:** Vanderbilt University

**Principal Investigator:** Gautam Biswas

**Project Title:** A Learning by Teaching Approach to Help Students Develop Self-Regulatory Skills in Middle School Science Classrooms

**Grant:** R305H060089

Biswas, G., Schwartz, D., and Catley, K.M. (2008, July). A Learning by Teaching Approach to Help Students Develop Self-Regulatory Learning Skills in Middle School Science Classrooms. In C.L. O'Donnell and R. Harwood (Co-Chairs), *Enhancing Learning Using Adaptive Computerized Tutoring in K-12 Settings*. In B.C. Love, K. Mcrae, and V.M. Sloutsky (Eds.), *Proceedings of the 30<sup>th</sup> Annual Conference of the Cognitive Science Society* (pp. 695-696). Washington, DC.

Blair, K., Schwartz, D.L., Biswas, G., and Leelawong, K. (2007). Pedagogical Agents for Learning by Teaching: Teachable Agents. *Educational Technology*, 47(1): 56-61.

Chase, C., Chin, D.B., Opezzo, M., and Schwartz, D.L. (in press). Teachable Agents and the Protégé Effect: Increase the Effort Towards Learning. *International Journal of Science Education and Technology*.

- Hogyong, J., Gupta, A., Roscoe, R., Wagster, J. Biswas, G., and Schwartz, D. (2008). Using Hidden Markov Models to Characterize Student Behaviors in Learning-By-Teaching Environments. *Lecture Notes in Computer Science: Intelligent Tutoring Systems* (pp. 614-625). Berlin: Springer.
- Jeong, H., and Biswas, G. (2008). Mining Student Behavior Models in Learning-By-Teaching Environments. In *Educational Data Mining* (pp. 38-42). Montreal, Canada.
- Leelawong, K., and Biswas, G. (2008). Designing Learning by Teaching Environments: The Betty's Brain System. *International Journal of AI and Education*, 28(3).
- Lindgren, R., and Schwartz, D.L. (2009). Spatial Learning and Computer Simulations in Science. *International Journal of Science Education*, 31(3): 419-438.
- Schwartz, D.L., Blair, K.P., Biswas, G., Leelawong, K., and Davis, J. (2007). Animations of Thought: Interactivity in the Teachable Agents Paradigm. In R. Lowe and W. Schnotz (Eds.), *Learning With Animation: Research and Implications for Design* (pp. 114-40). Cambridge: Cambridge University Press.
- Schwartz, D.L., Chase, C., Wagster, J., Okita, S., Roscoe, R., Chin, D., and Biswas, G. (2009). Interactive Metacognition: Monitoring and Regulating a Teachable Agent. In D.J. Hacker, J. Dunlosky, and A.C. Graesser (Eds.), *Handbook of Metacognition in Education*.

**Institution:** Washington University, St. Louis

**Principal Investigator:** Henry Roediger, III

**Project Title:** Test-Enhanced Learning in the Classroom

**Grant:** R305H060080

- Agarwal, P.K., Karpicke, J.D., Kang, S.H.K., Roediger, H.L., and McDermott, K.B. (2008). Examining the Testing Effect with Open- and Closed-Book Tests. *Applied Cognitive Psychology*, 22(7): 861-876.
- Butler, A.C., and Roediger, H.L. (2007). Testing Improves Long-Term Retention in a Simulated Classroom Setting. *European Journal of Cognitive Psychology*, 19: 514-527.
- Butler, A.C., and Roediger, H.L. (2008). Feedback Enhances the Positive Effects and Reduces the Negative Effects of Multiple-Choice Testing. *Memory and Cognition*, 36: 604-616.
- Butler, A.C., Karpicke, J.D., and Roediger, H.L. (2007). The Effect of Type and Timing of Feedback on Learning From Multiple-Choice Tests. *Journal of Experimental Psychology: Applied*, 13: 273-281.
- Butler, A.C., Karpicke, J.D., and Roediger, H.L. (2008). Correcting a Metacognitive Error: Feedback Increases Retention of Low-Confidence Correct Responses. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 34(4): 918-928.
- Kang, S., McDermott, K.B., and Roediger, H.L. (2007). Test Format and Corrective Feedback Modulate the Effect of Testing on Memory Retention. *European Journal of Cognitive Psychology*, 19: 528-558.
- Karpicke, J.D., and Roediger, H.L. (2007). Repeated Retrieval during Learning is the Key to Long-Term Retention. *Journal of Memory and Language*, 57: 151-162.
- Karpicke, J.D., and Roediger, H.L. (2007). Expanding Retrieval Practice Promotes Short-term Retention, but Equally Spaced Retrieval Enhances Long-Term Retention. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 33: 704-719.
- McDaniel, M.A., Anderson, J.L., Derbish, M.H., and Morrisette, N. (2007). Testing the Testing Effect in the Classroom. *European Journal of Cognitive Psychology*, 19(4/5): 494-513.

Roediger, H.L. (2008). Relativity of Remembering: Why the Laws of Memory Vanished. In S. Fiske (Ed.), *Annual Review of Psychology* (Vol. 59, pp. 225-254).

**FY 2007**

**Institution:** Boise State University

**Principal Investigator:** Keith Thiede

**Project Title:** Improving Metacomprehension and Self-Regulated Learning From Scientific Texts

**Grant:** R305B070460

Anderson, M.C.M., and Thiede, K.W. (2008). Why do Delayed Summaries Improve Metacomprehension Accuracy? *Acta Psychologica*, 128: 110-118.

Ash, I.K., and Wiley, J. (2008). Hindsight Bias in Insight and Mathematical Problem Solving: Evidence of Different Retrospective Reconstruction Mechanisms for Metacognitive vs. Situational Judgments. *Memory and Cognition*, 36: 822-837.

Griffin, T.D., Wiley, J., and Thiede, K.W. (2008). Individual Differences, Rereading, and Self-Explanation: Concurrent Processing and Cue Validity as Constraints on Metacomprehension Accuracy. *Memory and Cognition*, 36: 93-103.

Thiede, K.W., Griffin, T.D., Wiley, J., and Anderson, M.C.M. (in press). Poor Metacomprehension Accuracy as a Result of Inappropriate Cue Use. *Discourse Processes*.

Thiede, K.W., Griffin, T.D., Wiley, J., and Redford, J.S. (2009). Metacognitive Monitoring During and After Reading. In D.J. Hacker, J. Dunlosky, and A.C. Graesser, (Eds.), *Handbook of Metacognition and Self-Regulated Learning*. Mahwah, NJ: Erlbaum.

Wiley, J., Griffin, T.D., and Thiede, K.W. (2008). To Understand Your Understanding, One Must Understand What Understanding Means. In B.C. Love, K. Mcrae, and V.M. Sloutsky (Eds.), *Proceedings of the 30<sup>th</sup> Annual Conference of the Cognitive Science Society* (pp. 817-822). Washington, DC.

**Institution:** Boulder Technologies

**Principal Investigator:** Wayne Ward

**Project Title:** Improving Science Learning through Tutorial Dialogs

**Grant:** R305B070434

Nielsen, R.D., Boyer, K., Heilman, M., Lin, C., Pino, J., and Stent, A. (in press). Evaluating Question Generation: Methodologies and Performance Metrics. In V. Rus and A. Graesser (Eds.), *NSF Report on the Question Generation Shared Task and Evaluation Challenge*.

Nielsen, R.D., Ward, W., and Martin, J.H. (in press). Recognizing Entailment in Intelligent Tutoring Systems. In I. Dagan, B. Dolan, B. Magnini and D. Roth (Eds.), *The Journal of Natural Language Engineering Special Issue on Textual Entailment*. Cambridge: Cambridge University Press.

Nielsen, R.D., Ward, W., and Martin, J.H. (2008). Soft Computing in Intelligent Tutoring Systems and Educational Assessment. In B. Prasad (Ed.), *Soft Computing Applications in Business* (pp. 201-230). Heidelberg, Germany: Springer-Verlag .

Nielsen, R.D., Ward, W., Martin, J.H., and Palmer, M. (2008). Annotating Students' Understanding of Science Concepts. In *Proceedings of the Sixth International Language Resources and Evaluation Conference* (pp. 341-348). Paris: European Language Resources Association.

Nielsen, R.D., Becker, L., and Ward, W. (2008). TAC 2008 CLEAR RTE System Report: Facet-Based Entailment. In *Proceedings of the Text Analysis Conference*. National Institute of Standards and Technology.

Nielsen, R.D. (2008). Question Generation: Proposed Challenge Tasks and Their Evaluation. In V. Rus and A. Graesser (Eds.), *Proceedings of the Workshop on the Question Generation Shared Task and Evaluation Challenge*.

Nielsen, R.D., Buckingham, J., Knoll, G., Marsh, B., and Palen, L. (2008). A Taxonomy of Questions for Question Generation. In V. Rus and A. Graesser (Eds.), *Proceedings of the Workshop on the Question Generation Shared Task and Evaluation Challenge*.

Nielsen, R.D., Ward, W., and Martin, J.H. (2008). Automatic Generation of Fine-Grained Representations of Learner Response Semantics. In B.P. Woolf, E. Aimeur, R. Nkambou, and S. P. Lajoie (Eds.), *Proceedings of the Ninth International Conference on Intelligent Tutoring Systems*. (pp. 173-183). Heidelberg, Germany: Springer.

Nielsen, R.D., Ward, W., Martin, J.H., and Palmer, M. (2008). Extracting a Representation From Text for Semantic Analysis. In *Proceedings of the Forty-Sixth Annual Meeting of the Association for Computational Linguistics and the Human Language Technologies Conference* (pp. 241-244). Stroudsburg, Pennsylvania: Association for Computational Linguistics.

Nielsen, R.D., Ward, W., and Martin, J.H. (2008). Classification Errors in a Domain-Independent Assessment System. In *Proceedings of the Third Workshop on Innovative Use of Natural Language Processing for Building Educational Applications, at the Forty-Sixth Annual Meeting of the Association for Computational Linguistics* (pp. 10-18). Stroudsburg, Pennsylvania: Association for Computational Linguistics.

Nielsen, R.D., Ward, W., and Martin, J.H. (2008). Learning to Assess Low-Level Conceptual Understanding. in David Wilson and H. Chad Lane (Eds.): *Proceedings of the Twenty-First International Artificial Intelligence Researchers Society Conference (FLAIRS-08)* (pp. 427-432). Menlo Park, California: Association for the Advancement of Artificial Intelligence.

**Institution:** Carnegie Mellon University

**Principal Investigator:** Philip Pavlik

**Project Title:** Bridging the Bridge to Algebra: Measuring and Optimizing the Influence of Prerequisite Skills on a Pre-Algebra Curriculum

**Grant:** R305B070487

Pavlik, P.I., Cen, H., Wu, L., and Keodinger, K.R. (2008). Using Item-Type Performance Covariance to Improve the Skill Model of an Existing Tutor. In R.S. Baker and J.E. Beck (Eds.), *Proceedings of the 1st International Conference on Educational Data Mining* (pp. 77-86). Montreal, Canada.

**Institution:** Carnegie Mellon University

**Principal Investigator:** David Mostow

**Project Title:** Explicit Comprehension Instruction in an Automated Reading Tutor that Listens

**Grant:** R305B070458

Chen, W. (2009). Understanding Mental States in Natural Language. In *Proceedings of the 8th International Workshop on Computational Semantics* (pp. 61-72). Tilburg, Netherlands.

Mostow, J., and Zhang, X. (2008). Analytic Comparison of Three Methods to Evaluate Tutorial Behaviors. In *Proceedings of the First International Conference on Educational Data Mining* (pp. 28-37). Montreal, Canada.

Zhang, X., Mostow, J., Duke, N.K. Trotochaud, C., Valeri, J., and Corbett, A. (2008). Mining Free-Form Spoken Responses to Tutor Prompts. In *Proceedings of the First International Conference on Educational Data Mining* (pp. 234-241). Montreal, Canada.

Zhang, X., Mostow, J., and Beck, J.E. (2008). A Case Study Empirical Comparison of Three Methods to Evaluate Tutorial Behaviors. In *9th International Conference on Intelligent Tutoring Systems* (pp. 122-131). Montreal, Canada: Springer-Verlag.

**Institution:** George Mason University

**Principal Investigator:** Robert Pasnak

**Project Title:** An Economical Improvement in Literacy and Numeracy

**Grant:** R305B07542

Greene, M.R., Pasnak, R., and Romero, S. (in press). A Time Lag Analysis of Temporal Relations Between Motivation, Academic Achievement, and Two Cognitive Abilities. *Early Education and Development*.

Kidd, J.K. Pasnak, R., Gadzichowski, M., Ferral-Like, M., and Gallington, D. (2008). Enhancing Kindergartners' Mathematics Achievement by Promoting Early Abstract Thought. *Journal of Advanced Academics*, 19: 164-200.

Pasnak, R., Kidd, J.K., Gadzichowski, M.K., Gallington, D.A., Saracina, R.P., and Addison, K. (in press). Can Emphasizing Cognitive Development Improve Academic Achievement? *Education Research*, 50: 261-276.

Pasnak, R., Kidd, J., Gadzichowski, M., Gallington, D., Saracina, R., and Addison, K. (in press). Promoting Early Abstraction to Promote Early Literacy and Numeracy. *Journal of Applied Developmental Psychology*.

Pasnak, R., Maccubbin, E., and Ferral-Like, M. (2007). Using Developmental Principles to Assist At-Risk Preschoolers in Developing Numeracy and Phonemic Awareness. *Perceptual and Motor Skills*, 105: 163-176.

Pasnak, R., Kidd, J., Gadzichowski, M., Ferral-Like, M., Gallington, D., and Saracina, R. (2007). Nurturing Developmental Processes. *Journal of Developmental Processes*, 2: 90-115.

Romero, S., Perez, K., Pasnak, R., and Lehman, E. (in press). Selection of Friends in an Ethnically Diverse Preschool. *National Head Start Association Journal*.

**Institution:** Northern Illinois University

**Principal Investigator:** Keith Millis

**Project Title:** Acquiring Research Investigative and Evaluative Skills (ARIES) for Scientific Inquiry

**Grant:** R305B070349

Graesser, A.C., Chipman, P., and King, B.G. (2008). Computer-Mediated Technologies. In J.M. Spector, M.D. Merrill, J.J.G. Van Merriënboer, and M.P. Driscoll (Eds.), *Handbook of Research on Educational Communications and Technology* (3rd ed., pp. 211-224). London: Taylor and Francis.

Graesser, A.C., Jeon, M., and Dufty, D. (2008). Agent Technologies Designed to Facilitate Interactive Knowledge Construction. *Discourse Processes*, 45: 298-322.

Storey, J.K., Kopp, K.J., Wiemer, K., Chipman, P., and Graesser, A.C. (in press). Using AutoTutor to Teach Scientific Critical Thinking Skills. *Behavior Research Methods*.

**Institution:** Ohio State University

**Principal Investigator:** Vladimir Sloutsky

**Project Title:** The Role of External Representations in Learning and Transfer of Mathematical Knowledge

**Grant:** R305B070407

Kaminski, J.A., Sloutsky, V.M., and Heckler, A.F. (2008). The Advantage of Abstract Examples in Learning Math. *Science*, 320:454-455.

Kaminski, J.A., Sloutsky, V.M., and Heckler, A.F. (2008). Response to J. Mourrat, L. Cultrona, and S. Reed, *Science*, 322: 1633.

Kaminski, J.A., Sloutsky, V.M., and Heckler, A.F. (in press). The Devil 's in the Superficial Details: Why Generic Instantiations Promote Portable Mathematical Knowledge. *Child Development Perspectives*.

Kaminski, J.A., Sloutsky, V.M., and Heckler, A.F. (in press). Concrete Instantiations of Mathematics: A Double-Edged Sword: Response to M. Jones, *Journal for Research in Mathematics Education*.

Kaminski, J.A., Sloutsky, V.M., and Heckler, A.F. (2008). Response to Mccallum, *Science Online*.

Robinson, C.W., and Sloutsky, V.M (2008). Effects of Auditory Input in Individuation Tasks. *Developmental Science*, 11: 869-881.

Sloutsky, V.M. (2008). Analogy is to Priming as Relations are to Transformations. *Behavioral and Brain Sciences*, 31: 396-397.

**Institution:** University of California, San Diego

**Principal Investigator:** Harold E. Pashler

**Project Title:** Harnessing Retrieval Practice to Enhance Learning in Diverse Domains

**Grant:** R305B070407

Carpenter, S.K., and Pashler, H. (2007). Testing Beyond Words: Using Tests to Enhance Visuospatial Map Learning. *Psychonomic Bulletin and Review*, 14: 474-478.

Carpenter, S.K., Pashler, H., Wixted, J.T., and Vul, E. (2008). The Effects of Tests on Learning and Forgetting. *Memory and Cognition*, 36: 438-448.

Carpenter, S.K., Pashler, H., Cepeda, N.J., and Alvarez, D. (2007). Applying the Principles of Testing and Spacing to Classroom Learning. In D.S. McNamara and J.G. Trafton (Eds.), *Proceedings of the 29th Annual Cognitive Science Society* (p. 19). Nashville, TN: Cognitive Science Society.

Pashler, H., Rohrer, D., Cepeda, N.J., and Carpenter, S.K. (2007). Enhancing Learning and Retarding Forgetting: Choices and Consequences. *Psychonomic Bulletin and Review*, 14: 187-193.

Rohrer, D., and Pashler, H. (2007). Increasing Retention without Increasing Study Time. *Current Directions in Psychological Science*, 16: 183-186.

**Institution:** University of Illinois

**Principal Investigator:** Brian Ross

**Project Title:** Conceptual Analysis and Student Learning in Physics

**Grant:** R305B070407

Ross, B.H. (2007). Cognitive Science: Problem Solving and Learning in Physics Education. In L. Hsu, C. Henderson and L. McCullough (Eds.), *Proceedings of the 2007 Physics Education Research Conference* (Vol. 951, pp. 11-14). Melville, NY: American Institute of Physics.

**Institution:** University of Notre Dame

**Principal Investigator:** Nicole McNeil

**Project Title:** Arithmetic Practice that Promotes Conceptual Understanding and Computational Fluency

**Grant:** R305B070297

McNeil, N.M. (2008). Limitations to Teaching Children  $2 + 2 = 4$ : Typical Arithmetic Problems Can Hinder Learning of Mathematical Equivalence. *Child Development*, 79(5): 1524-1537.

### **FY 2008**

**Institution:** University of Illinois, Urbana Champaign

**Principal Investigator:** Richard Anderson

**Project Title:** Mindful Instruction of Nonmainstream Children

**Grant:** R305A080347

Jadallah, M., Miller, B., Anderson, R.C., Nguyen-Jahiel, K., Archodidou, A., Zhang, J., and Grabow, K. (2009). Collaborative Reasoning About a Science and Public Policy Issue. In Margaret McKeown and Linda Kucan (Eds.), *Bringing Reading Researchers to Life: Essays in Honor of Isabel L. Beck*. New York: Guilford Press.

Reznitskaya, A., Kuo, L.J., Clark, A.M., Miller, B., Jadallah, M., Anderson, R.C., and Nguyen-Jahiel, K. (in press). Collaborative Reasoning: a Dialogic Approach to Group Discussions. *Cambridge Journal of Education*.

Reznitskaya, A., Kuo, L.J., Glina, M., and Anderson, R.C. (2009). Measuring Argumentation: What's Behind the Numbers? *Learning and Individual Differences*, 19(2): 219-224..

## **Education Leadership**

### **FY 2004**

**Institution:** MDRC

**Principal Investigator:** Janet Quint

**Project Title:** Learning From Efforts to Strengthen Educational Leadership in Urban School Districts

**Grant:** R305E040100

Quint, J.C., Akey, T.M., Rappaport, S., and Willner, C.J. (2007). *Instructional Leadership, Teaching Quality, and Student Achievement: Suggestive Evidence From Three Urban School Districts*. New York: MDRC.

**Institution:** University of Pennsylvania

**Principal Investigator:** Jonathan Supovitz

**Project Title:** Assessing the Impact of Principals' Professional Development: An Evaluation of the National Institute for School Leadership

**Grant:** R305E040085

Goldring, E., Huff, J., May, H., & Camburn, E. (2008). School Context and Individual Characteristics: What Influences Principal Practice? *Journal of Educational Administration*, 46(3): 332-352.

Spillane, J.P., Camburn, E.M., and Pareja, A.S. (2007). Taking a Distributed Perspective to the School Principal's Workday. *Leadership and Policy in Schools*, 6(1): 103-125.

### **FY 2005**

**Institution:** University of Wisconsin, Madison

**Principal Investigator:** Anthony Milanowski

**Project Title:** Study of Innovative School Leadership Performance Evaluation Systems

**Grant:** R305E050135

Kimball, S.M., and Milanowski, A.T., and McKinney, S.A. (2009). Assessing the Promise of Standards-Based Performance Evaluation for Principals: Results From a Randomized Trial. *Leadership and Policy in Schools*, 8(3): 233-236.

Kimball, S.M., Heneman, H.G. III, and Milanowski, A. (2007). Performance Evaluation and Compensation for Public School Principals: Results From a National Survey. *ERS Spectrum*, 25:4-21.

## **Education Policy, Finance, and Systems**

**FY 2004**

**Institution:** Empirical Education

**Principal Investigator:** Denis Newman

**Project Title:** Low Cost Experiments to Support Local School District Decisions

**Grant:** R305E040031

Cabalo, J.V., Ma, B., and Jaciw, A. (2007). *Comparative Effectiveness of Carnegie Learning's Cognitive Tutor Bridge to Algebra Curriculum: a Report of a Randomized Experiment in the Maui School District*. Palo Alto, CA: Empirical Education Inc.

Cabalo, J.V., Jaciw, A., and Vu, M. (2007). *Comparative Effectiveness of Carnegie Learning's Cognitive Tutor Algebra I Curriculum: a Report of a Randomized Experiment in Maui School District*. Palo Alto, CA: Empirical Education Inc.

Cabalo, J.V., Ma, B., and Jaciw, A. (2007). *Comparative Effectiveness of Professional Development and Support Tools for World Language Instruction: a Report on a Randomized Experiment in Delaware*. Palo Alto, CA: Empirical Education Inc.

Cabalo, J.V., Ma, B., Jaciw, A., Miller, G.I., and Vu, M. (2007). *Effectiveness of Ongoing Professional Development on Interactive Whiteboard Use: a Report of a Randomized Experiment in Forsyth County Schools*. Palo Alto, CA: Empirical Education Inc.

Cabalo, J.V., Newman, D., and Jaciw, A. (2006). *Effectiveness of TCI's History Alive! for Eighth Graders: a Report of a Randomized Experiment in Alum Rock Union Elementary School District*. Palo Alto, CA: Empirical Education Inc.

Greene, D., and David, J.L. (2005). *Implementing Low-Cost RCTs to Support School District Decisions: Formative Evaluation Report for Year One*. Palo Alto, CA: Bay Area Research Group.

Greene, D., and David, J.L. (2006). *Implementing Low-Cost RCTs to Support School District Decisions: Formative Evaluation Report for Year Two*. Palo Alto, CA: Bay Area Resesarch Group.

Newman, D. (2007). *Generalization and the Unit of Decision Making*. Palo Alto, CA: Empirical Education Inc.

Newman, D. (2007). *The District Motivation and Design Constraints of Experimental Evaluations*. Palo Alto, CA: Empirical Education Inc.

**Institution:** New York University

**Principal Investigator:** Leanna Stiefel

**Project Title:** How Should We Organize Primary Schooling? Grade Span, School Size and Student Academic Achievement

**Grant:** R305E040096

Rubenstein, R., Schwartz, A.E., Stiefel, L., and Zabel, J. (2009). Spending, Size, and Grade Span in K-8 Schools, *Education Finance and Policy*, 4(1).

Zabel, J.E., Stiefel, L., and Schwartz, A.E. (in press). Aggregation, Sample Composition, and Measurement Issues Involved in Estimating School Effects. In J. Hannaway and D. Chaplin (Eds.), *Learning From Longitudinal Data in Education*. Washington, DC: Urban Institute Press.

**Institution:** Vanderbilt University

**Principal Investigator:** Ellen Goldring

**Project Title:** Public School Choice: Magnet Schools, Peer Effects, and Student Achievement

**Grant:** R305E040056

Ballou, D. (2009). Magnet School Outcomes. In M. Berends, M.G. Springer, D. Ballou, and H.J. Walberg (Eds.), *Handbook of Research on School Choice*. New York: Taylor and Francis Group.

Goldring, E. (2009). Perspectives on Magnet Schools. In M. Berends, M.G. Springer, D. Ballou, and H.J. Walberg (Eds.), *Handbook of Research on School Choice*. New York: Taylor and Francis Group.

### FY 2005

**Institution:** National Bureau of Economic Research

**Principal Investigator:** Patrick Bayer

**Project Title:** The Unintended Consequences of a Major Education Policy Reform: California's Class Size Reduction, Student Achievement, and the 'Social Multiplier'

**Grant:** R305E050137

Bayer, P., Fernando, F., and Mcmillan, R. (2007). A Unified Framework for Measuring Preferences for Schools and Neighborhoods, *Journal of Political Economy*, 115(4):2001-2052.

**Institution:** National Bureau of Economic Research

**Principal Investigator:** Thomas Kane

**Project Title:** Implementing Public School Choice in Charlotte, NC: Impacts on Student Outcomes, Competitiveness and Racial Segregation

**Grant:** R305E050052

Hastings, J.S., Kane, T.J., and Staiger, D.O. (2005). Parental Preferences and School Competition: Evidence From a Public School Choice Program (NBER Working Paper #11805). Cambridge, MA: National Bureau of Economic Research, Inc.

Hastings, J.S., Kane, T.J., and Staiger, D.O. (2006). Preferences and Heterogeneous Treatment Effects in a Public Choice Lottery (NBER Working Paper #12145). Cambridge, MA: National Bureau of Economic Research, Inc.

Hastings, J.S., Kane, T.J., and Staiger, D.O. (2006). Gender and Performance: Evidence From School Assignment by Randomized Lottery. *American Economic Review*, 96(2): 232-236.

Hastings, J.S., Kane, T.J., Staiger, D.O., and Weinstein, J.M. (2007). The Effects of Randomized School Admissions on Voter Participation. *Journal of Public Economics*, 91(5/6): 915-937.

### FY 2007

**Institution:** Carnegie Mellon University

**Principal Investigator:** Dennis Epple

**Project Title:** Determinants of Student Outcomes in an Urban School District: Educational Interventions and Family Choices

**Grant:** R305A07117

Tharp-Taylor, N., Dembosky, and Gill. (2007). *Partners in Pittsburgh Schools' Excellence for All Initiative: Findings From the First Year of Implementation*. Santa Monica CA: RAND DB-544.

**Institution:** Western Michigan University

**Principal Investigator:** Gary Miron

**Project Title:** Evaluation of the Kalamazoo Promise

**Grant:** R305A07381

Evergreen, S., and Miron, G. (2008). *Response From Community Groups*. Working Paper #2. Kalamazoo: The Western Michigan University Evaluation Center.

Jones, J., Miron, G., and Kelaher Young, A.J. (2008). *The Impact of the Kalamazoo Promise on Teachers' Expectations for Students*. Working Paper #5. Kalamazoo: The Western Michigan University Evaluation Center.

Miron, G., and Cullen, A. (2008). *Trends and Patterns in Student Enrollment for Kalamazoo Public Schools*. Working Paper #4. Kalamazoo: The Western Michigan University Evaluation Center.

Miron, G., and Evergreen, S. (2008). *The Kalamazoo Promise as a Catalyst for Change in an Urban School District: a Theoretical Framework for the Evaluation of the Kalamazoo Promise*. Working Paper #1. Kalamazoo: The Western Michigan University Evaluation Center.

Miron, G., Spybrook, J., and Evergreen, S. (2008). *Key Findings From the 2007 Survey of High School Students*. Working Paper #3. Kalamazoo: The Western Michigan University Evaluation Center.

## Education Technology

FY 2008

**Institution:** The University of Memphis

**Principal Investigator:** Danielle McNamara

**Project Title:** The Writing Pal: An Intelligent Tutoring System that Provides Interactive Writing Strategy Training

**Grant:** R305A080589

Crossley, S.A., and McNamara, D.S. (in press). Computationally Assessing Lexical Differences in L2 Writing. *Journal of Second Language Writing*, 17.

Crossley, S.A., Greenfield, J., and McNamara, D.S. (in press). Assessing Text Readability Using Psycholinguistic Indices. *TESOL Quarterly*.

Crossley, S.A., Salsbury, T., and McNamara, D.S. (in press). Measuring L2 Lexical Proficiency Using Hypernymic Relationships. *Language Learning*.

Dempsey, K.B., McCarthy, P.M., Weston J., Myers, J.C., and McNamara, D.S. (in press). Determining Paragraph Type From Paragraph Position. In C.H. Lane and H.W. Guesgen (Eds.), *Proceedings of the 22nd International Florida Artificial Intelligence Research Society Conference*. Menlo Park, CA: AAAI Press.

Duran, N.D., Hall, C., McCarthy, P.M., and McNamara, D.S. (in press). Pragmatic Deception and the Role of Lying. *Applied Psycholinguistics*.

Duran, N.D., Crossley, S.A., Hall, C., McCarthy, P.M., and McNamara D.S. (in press). Using Coh-Metrix to Analyze Deception With Linguistic Indices. In C.H. Lane and H.W. Guesgen (Eds.), *Proceedings of the 22nd International Florida Artificial Intelligence Research Society Conference*. Menlo Park, CA: AAAI Press.

Graesser, A.C., Franceschetti, D., Gholson, B., and Craig, S. (in press). Learning Newtonian Physics With Conversational Agents and Interactive Simulation. In N. Stein (Ed.), *Developmental and Learning Sciences Go to School: Implications for Education and Public Policy*.

Healy, S. J., Weintraub, J.D., McCarthy, P.M., Hall, C., and McNamara D.S. (in press). Assessment of LDAT as a Grammatical Diversity Assessment Tool. In C.H. Lane and H.W. Guesgen (Eds.), *Proceedings of the 22nd International Florida Artificial Intelligence Research Society Conference*. Menlo Park, CA: AAAI Press.

McCarthy, P.M., Myers, J.C., Briner, S.W., Graesser, A.C., and McNamara, D.S. (in press). Are Three Words All We Need? A Psychological and Computational Study of Genre Recognition. *Journal for Computational Linguistics and Language Technology*.

McCarthy, P.M., Guess, R., McNamara, D.S. (in press). The Components of Paraphrase. *Behavior Research Methods*.

McCarthy, P.M., Cai, Z., and McNamara D.S., (in press). Computational Replication of Human Assessments of Paraphrase. In C.H. Lane and H.W. Guesgen (Eds.), *Proceedings of the 22nd International Florida Artificial Intelligence Research Society Conference*. Menlo Park, CA: AAAI Press.

McNamara, D.S., Graesser, A.C., McCarthy, P.M., and Cai, Z. (in press). *Coh-Metrix: Automated Evaluation of Text and Discourse*. Cambridge University Press.

McNamara, D.S., Louwerse, M.M., McCarthy, P.M., and Graesser, A.C. (in press). Coh-Metrix: Capturing Linguistic Features of Cohesion. *Discourse Processes*.

Renner, A.M., McCarthy, P.M., and McNamara D.S. (in press). Computational Considerations in Correcting User-Language in an ITS Environment. In C.H. Lane and H.W. Guesgen (Eds.), *Proceedings of the 22nd International Florida Artificial Intelligence Research Society Conference*. Menlo Park, CA: AAAI Press.

## Mathematics and Science Education

FY 2003

**Institution:** Carnegie Mellon University

**Principal Investigator:** Kenneth Koedinger

**Project Title:** Using Web-Based Cognitive Assessment Systems for Predicting Student Performance on State Exams

**Grant:** R305K03140

Ayers, E., and Junker, B. (2008). IRT Modeling of Tutor Performance to Predict End-Of-Year Exam Scores. *Educational and Psychological Measurement*, 68(6): 972-987.

Ayers, E., and Junker, B.W. (2006). Do Skills Combine Additively to Predict Task Difficulty in Eighth Grade Mathematics? In J. Beck, E. Aimeur and T. Barnes (Eds.), *Educational Data Mining: Papers From the 2006 AAAI Workshop* (pp.14-20). Menlo Park, CA: AAAI Press.

Anozie, N.O., and Junker, B.W. (2006). Predicting End-Of-Year Accountability Assessment Scores From Monthly Student Records in an Online Tutoring System. In J. Beck, E. Aimeur and T. Barnes (Eds.), *Educational Data Mining: Papers From the 2006 AAAI Workshop* (pp.1-6). Menlo Park, CA: AAAI Press.

Baker, R., Walonoski, J., Heffernan, T., Roll, I., Corbett, A., and Koedinger, K. (2007). Why Students Engage in Gaming the System Behavior in Interactive Learning Environments. *Journal of Interactive Learning Research*, 19(2): 185-224.

Cen, H., Koedinger, K., and Junker, B. (2005). Automating Cognitive Model Improvement by A\*Search and Logistic Regression. In J.E. Beck (Ed.), *Educational Data Mining: Papers From the 2005 AAAI Workshop* (pp. 47-53). Menlo Park, CA: AAAI Press.

Cen, H., Koedinger, K.R., and Junker, B. (2006). Learning Factors Analysis: A General Method for Cognitive Model Evaluation and Improvement. In M. Ikeda, K.D. Ashley and T.W. Chan (Eds.), *Proceedings of the 8th International Conference on Intelligent Tutoring Systems* (pp. 164-175). Berlin: Springer-Verlag.

Cen, H., Koedinger, K., and Junker, B.W. (2007). Is Over Practice Necessary? - Improving Learning Efficiency With the Cognitive Tutor through Educational Data Mining. In R. Luckin, K. Koedinger and J. Greer (Eds.), *Artificial Intelligence in Education - Building Technology Rich Learning Contexts that Work* (pp. 511-518). Amsterdam: IOS Press.

Feng, M., Heffernan, N.T. (2006). Informing Teachers Live About Student Learning: Reporting in the Assistent System. *Technology, Instruction, Cognition, and Learning*, 3(1/2).

Feng, M., Heffernan, N.T. (2007). Towards Live Informing and Automatic Analyzing of Student Learning: Reporting in Assistent System. *Journal of Interactive Learning Research*, 18(2): 207-230.

Feng, M., Beck, J., Heffernan, N., Beck, J., and Koedinger, K. (2008). Can We Predict Which Groups of Questions Students Will Learn From? In Baker and Beck (Eds.), *Proceedings of the 1<sup>st</sup> International Conference on Education Data Mining* (pp. 218-225). Montreal, Canada.

Feng, M., Heffernan, N.T., and Koedinger, K.R. (2005). Looking for Sources of Error in Predicting Students' Knowledge. In J.E. Beck (Ed.), *Educational Data Mining: Papers From the 2005 AAAI Workshop* (pp. 54-61). Menlo Park, CA: AAAI Press.

- Feng, M., Heffernan, N.T., and Koedinger, K.R. (2006). Predicting State Test Scores Better With Intelligent Tutoring Systems: Developing Metrics to Measure Assistance Required. In M. Ikeda, K.D. Ashley and T.W. Chan (Eds.), *Proceedings of the 8th International Conference on Intelligent Tutoring Systems* (pp. 31-40). Berlin: Springer-Verlag.
- Feng, M., Heffernan, N.T., and Koedinger, K.R. (2006). Addressing the Testing Challenge With a Web-Based E-Assessment System that Tutors as It Assesses. *In Proceedings of the 15th International World Wide Web Conference* (pp. 307-316). New York: ACM Press.
- Feng, M., Heffernan, N., Mani, M., and Heffernan C. (2006). Using Mixed-Effects Modeling to Compare Different Grain-Sized Skill Models. In J. Beck, E. Aimeur and T. Barnes (Eds.), *Educational Data Mining: Papers From the 2006 AAAI Workshop* (pp.57-66). Menlo Park, CA: AAAI Press.
- Heffernan, N., Koedinger, K., and Razzaq, L. (in press). Expanding the Model-Tracing Architecture: a 3<sup>rd</sup> Generation Intelligent Tutor for Algebra Symbolization. *The International Journal of Artificial Intelligence in Education*, 18(2).
- Junker, B.W. (2007). Using On-Line Tutoring Records to Predict End-Of-Year Exam Scores: Experience With the Assistments Project and MCAS 8th Grade Mathematics. In R.W. Lissitz (Ed.), *Assessing and Modeling Cognitive Development in School: Intellectual Growth and Standard Settings*. Maple Grove, MN: JAM Press.
- Kardian, K., and Heffernan, N.T. (2006). Knowledge Engineering for Intelligent Tutoring Systems: Assessing Semi-Automatic Skill Encoding Methods. In M. Ikeda, K.D. Ashley and T.-W. Chan (Eds.), *Proceedings of the 8th International Conference on Intelligent Tutoring Systems* (pp. 735-737). Berlin: Springer-Verlag.
- Macasek, M.A., and Heffernan, N.T. (2006). Towards Enabling Collaboration in Intelligent Tutoring Systems (WPI Technical Report #CS-TR-06-07). Worcester Polytechnic Institute.
- Mendicini, M., Heffernan, N., and Razzaq, L. (2008). Comparing Classroom Problem-Solving With No Feedback to Web-Based Homework Assistance. In Woolf, Aimeur, Nkambou, and Lajoie (Eds.), *Proceedings of the 9<sup>th</sup> International Conference on Intelligent Tutoring Systems* (pp. 426-437). Berlin, Germany: Springer-Verlag.
- Nuzzo-Jones, G. Macasek M.A., Walonoski, J., Rasmussen K.P., and Heffernan, N.T. (2006). Common Tutor Object Platform: An E-Learning Software Development Strategy (WPI Technical Report #CS-TR-06-08). Worcester Polytechnic Institute.
- Nuzzo-Jones, G., Walonoski, J.A., Heffernan, N.T., Livak, T. (2005). The Extensible Tutor Architecture: a New Foundation for ITS. In C.K. Looi, G. Mccalla, B. Bredeweg, and J. Breuker (Eds.), *Artificial Intelligence in Education - Supporting Learning through Intelligent and Socially Informed Technology* (pp. 902-904). Amsterdam: IOS Press.
- Pardos, Z., Feng, M., and Heffernan, N.T., and Heffernan-Linquist, C. (2007). Analyzing Fine-Grained Skill Models Using Bayesian and Mixed Effect Methods. In R. Luckin, K. Koedinger, and J. Greer (Eds.), *Artificial Intelligence in Education - Building Technology Rich Learning Contexts that Work* (pp. 626-628). Amsterdam: IOS Press.
- Pardos, Z.A., Heffernan, N.T., Anderson, B., and Heffernan, C. (2006). Using Fine-Grained Skill Models to Fit Student Performance With Bayesian Networks. *On-Line Proceedings of the Workshop on Educational Data Mining at the Eighth International Conference on Intelligent Tutoring Systems*: 5-12.
- Pardos, Z.A., Heffernan, N.T., Anderson, B., and Heffernan, C.L. (2007). The Effect of Model Granularity on Student Performance Prediction Using Bayesian Networks. *Complete On-Line Proceedings of the Workshop on Data Mining for User Modeling at the 11th International Conference on User Modeling*: 91-100.
- Razzaq, L., Feng, M., Heffernan, N.T., Koedinger, K., Nuzzo-Jones, G., Junker, B.W., Macasek, M.A., Rasmussen, K.P., Turner.T.E., and Walonoski, J.A. (2007). A Web-Based Authoring Tool for Intelligent Tutors: Blending

Assessment and Instructional Assistance. In N. Nedjah, L.D. Mourelle, M.N. Borges, and N.N. Almeida (Eds.), *Intelligent Educational Machines: Methodologies and Experiences* (pp.23-49). New York: Springer.

Razzaq, L., Feng, M., Nuzzo-Jones, G., Heffernan, N.T., Koedinger, K.R., Junker, B., Ritter, S., Knight, A., Aniszczyk, C., Choksey, S., Livak, T., Mercado, E., Turner, T.E., Upalekar, R., Walonoski, J.A., Macasek, M.A., and Rasmussen, K.P. (2005). Blending Assessment and Instructional Assisting. In C.K. Looi, G. McCalla, B. Bredeweg, and J. Breuker (Eds.), *Artificial Intelligence in Education - Supporting Learning through Intelligent and Socially Informed Technology* (pp. 555-562). Amsterdam: IOS Press.

Razzaq, L., Heffernan, N.T. (2006). Scaffolding vs. Hints in the Assistent System. In M. Ikeda, K.D. Ashley and T.W. Chan (Eds.), *Proceedings of the 8th International Conference on Intelligent Tutoring Systems* (pp. 635-644). Berlin: Springer-Verlag.

Razzaq, L., and Heffernan, N.T. (2008). Towards Designing a User-Adaptive Web-Based E-Learning System. In M. Czerwinski, A.M. Lund, and D.S. Tan (Eds.), *Extended Abstracts Proceedings of the 2008 Conference on Human Factors in Computing Systems* (pp. 3525-3530). Florence, Italy: ACM 2008.

Razzaq, L., Heffernan, N.T., and Lindeman, R.W. (2007). What Level of Tutor Interaction Is Best? In R. Luckin, K. Koedinger and J. Greer (Eds.), *Artificial Intelligence in Education - Building Technology Rich Learning Contexts that Work* (pp. 222-229). Amsterdam: IOS Press.

Rose, C., Donmez, P., Gweon, G., Knight, A., Junker, B., Cohen, W., Koedinger, K., and Heffernan, N. (2005). Automatic and Semi-Automatic Skill Coding With a View Towards Supporting On-Line Assessment. In C.K. Looi, G. McCalla, B. Bredeweg, and J. Breuker (Eds.), *Artificial Intelligence in Education - Supporting Learning through Intelligent and Socially Informed Technology* (pp. 571-578). Amsterdam: IOS Press.

Turner, T.E., Macasek, M.A., Nuzzo-Jones, G., Heffernan, N.T, Koedinger, K. (2005). The Assistent Builder: a Rapid Development Tool for ITS. In C.K. Looi, G. McCalla, B. Bredeweg, and J. Breuker (Eds.), *Artificial Intelligence in Education - Supporting Learning through Intelligent and Socially Informed Technology* (pp. 929-931). Amsterdam: IOS Press.

Walonoski, J., and Heffernan, N.T. (2006). Detection and Analysis of Off-Task Gaming Behavior in Intelligent Tutoring Systems. In M. Ikeda, K.D. Ashley and T.-W. Chan (Eds.), *Proceedings of the 8th International Conference on Intelligent Tutoring Systems* (pp. 382-391). Berlin: Springer-Verlag.

Walonoski, J., and Heffernan, N.T. (2006). Prevention of Off-Task Gaming Behavior in Intelligent Tutoring Systems. In M. Ikeda, K.D. Ashley and T.-W. Chan (Eds.), *Proceedings of the 8th International Conference on Intelligent Tutoring Systems* (pp. 722-724). Berlin: Springer-Verlag.

## FY 2004

**Institution:** Educational Testing Service

**Principal Investigator:** Caroline Wiley

**Project Title:** Diagnostic Items in Math and Science

**Grant:** R305K040051

Ciofalo, J.F., and Wylie, E.C. (2006). Using Diagnostic Classroom Assessment: One Item at a Time. *Teachers College Record*.

Wylie, E.C., and Ciofalo, J.F. (2008). Supporting Teachers' Use of Individual Diagnostic Items. *Teachers College Record*.

**Institution:** University of Oregon  
**Principal Investigator:** David Chard  
**Project Title:** Early Learning in Mathematics: a Prevention Approach  
**Grant:** R305K040081

Chard, D.J., Baker, S.K., Clarke, B., Jungjohann, K., Davis, K., and Smolkowski, K. (2008). Preventing Early Mathematics Difficulties: The Feasibility of a Rigorous Kindergarten Mathematics Curriculum. *Learning Disabilities Quarterly*, 31(1): 11-20.

Chard, D.J., Clarke, B., Baker, S., Otterstedt, J., Braun, D., and Katz, R. (2005). Using Measures of Number Sense to Screen for Difficulties in Mathematics: Preliminary Findings. *Assessment for Effective Intervention*, 30(2): 3-14.

Chard, D.J., Ketterlin Geller, L., and Jitendra, A. (2008). A Model of Instructional Support to Enhance Mathematics Learning for All Students. In E.L. Grigorenko (Ed.), *Educating Individuals With Disabilities: IDEA 2004 and Beyond*. New York: Springer.

Clarke, B., Baker, S., and Chard, D.J. (2008). Best Practices in Mathematics Intervention and Assessment. In A. Thomas and J. Grimes (Eds.), *Best Practices in School Psychology* (pp. 465-476). Bethesda, MD: National Association of School Psychologists.

Clarke, B., Baker, S., and Chard, D.J. (2007). Measuring Number Sense Development in Young Children: A Summary of Early Research. *Leadership to Math Success for All*, 5: 1-11.

Clarke, B., Baker, S.K., Smolkowski, K., and Chard, D. (2008). An Analysis of Early Numeracy Curriculum-Based Measurement: Examining the Role of Growth in Student Outcomes. *Remedial and Special Education*, 29: 46-57.

## FY 2005

**Institution:** Purdue University  
**Principal Investigator:** Mantzicopoulos, Panayota  
**Project Title:** The Scientific Literacy Project: Enhancing Young Children's Scientific Literacy through Reading and Inquiry-Centered Adult-Child Dialog  
**Grant:** R305K050038

Mantzicopoulos, P., Patrick, H., and Samarapungavan, A. (2008). Young Children's Motivational Beliefs About Learning Science. *Early Childhood Research Quarterly*, 23: 378-394.

Patrick, H., Mantzicopoulos, P., and Samarapungavan, A. (in press). Reading, Writing, and Conducting Inquiry About Science in Kindergarten. *Young Children*.

Patrick, H., Mantzicopoulos, P., and Samarapungavan, A. (2009). Motivation for Learning Science in Kindergarten: Is There a Gender Gap and Does Integrated Inquiry and Literacy Instruction Make a Difference? *Journal of Research in Science Teaching*, 46: 166-191.

Patrick, H., Mantzicopoulos, P., Samarapungavan, A., and French, B.F. (2008). Patterns of Young Children's Motivation for Science and Teacher-Child Relationships. *Journal of Experimental Education*, 76: 121-144.

Samarapungavan, A., Mantzicopoulos, P., Patrick, H., and French, B.F. (in press). The Development and Validation of the Science Learning Assessment (SLA): A Measure of Kindergarten Science Learning. *Journal of Advanced Academics*.

Samarapungavan, A., Mantzicopoulos, P., and Patrick, H. (2008). Learning Science Through Inquiry in Kindergarten. *Science Education*, 92: 868-908.

**Institution:** Ohio State University Research Foundation  
**Principal Investigator:** Douglas Owens  
**Project Title:** Classroom Connectivity in Promoting Mathematics and Science Achievement  
**Grant:** R305K050045

Irving, K.E., Sanalan, V. A, and Shirley, M.L. (in press). Physical Science Connected Classrooms: Case Studies. *Journal of Computers in Mathematics and Science Teaching*, 28(3).

Owens, D.T., Irving, K. E, Pape, S.J., Abrahamson, L., Sanalan, V., and Boscardin, C.K. (2007). The Connected Classroom: Implementation and Research Trial. In C. Montgomerie and J. Seale (Eds.), *Proceedings of the ED-MEDIA World Conference on Educational Multimedia, Hypermedia and Telecommunications* (pp. 3710-3716). Chesapeake, VA: Association for the Advancement of Computing in Education.

Owens, D.T., Pape, S.L., Irving, K.E., Sanalan, V.A. , Boscardin, C.K., Abrahamson, L. (2008). The Connected Algebra Classroom: A Randomized Control Trial. *International Congress on Mathematics Education*.

Pape, S.J., Irving, K.E., Owens, D.T., Abrahamson, L. (2005). Classroom Connectivity in Promoting Algebra I and Physical Science Achievement and Self-Regulated Learning. In K. Steffens, R. Carneiro, and J. Underwood (Eds.), *Proceedings of the TACONET Conference: Self-Regulated Learning in Technology Enhanced Learning Environments* (pp. 143-158). Herzogenrath, Germany: Shaker Verlag.

**Institution:** University of Illinois  
**Principal Investigator:** Arthur Baroody  
**Project Title:** Developing an Intervention to Foster Early Number Sense and Skill  
**Grant:** R305K050082

Baroody, A.J. (2008). Fostering Early Numeracy in Preschool and Kindergarten. In J. Balayeva (Ed.), *The Encyclopedia of Language and Literacy Development*.

Baroody, A.J., Bajwa, N.P., and Eiland, M. (2009). Why Can't Johnny Remember the Basic Facts? *Developmental Disabilities Research Reviews*, 15(1): 69-79.

Baroody, A.J., Eiland, M., and Thompson, B. (2009). Fostering At-Risk Preschoolers' Number Sense. *Early Education and Development*, 20: 80-120.

Baroody, A.J., Feil, Y., and Johnson, A.R. (2007). An Alternative Reconceptualization of Procedural and Conceptual Knowledge. *Journal for Research in Mathematics Education*, 38: 115-131.

Baroody, A.J., and Li, X. (2009). Mathematics Instruction that Makes Sense for 2 to 5 Year Olds. In E.L. Essa and M.M. Burnham (Eds.), *Development and Education: Research Reviews From Young Children*. New York: The National Association for the Education of Young Children.

**Institution:** University of Southern California  
**Principal Investigator:** Carole Beal  
**Project Title:** Animal Watch: An Intelligent Tutoring System for Grade 6 Mathematics  
**Grant:** R305K050086

Beal, C.R., Shaw, E., and Birch, M. (2007). Intelligent Tutoring and Human Tutoring in Small Groups: An Empirical Comparison. In R. Luckin, K.R. Koedinger, and J. Greer (Eds.), *Artificial Intelligence and Education: Building Technology Rich Learning Environments that Work* (pp. 536-539). Amsterdam: IOS Press.

Cohen, P.R., Beal, C.R., and Adams, N. (in press). The Design, Deployment and Evaluation of the Animalwatch Intelligent Tutoring System. *Proceedings of the 5th Prestigious Applications of Intelligent Systems Conference*. Amsterdam: IOS Press.

**Institution:** New York University

**Principal Investigator:** Jan Plass

**Project Title:** Molecules and Minds: Simulations for Chemistry Education

**Grant:** R305K050140

Brünken, R., Plass, J.L., and Moreno, R. (Forthcoming). Current Issues and Open Questions in Cognitive Load Research. In J.L. Plass, R. Moreno, and R. Brünken (Eds.), *Cognitive Load: Theory and Application*. New York: Cambridge University Press.

Homer, B.D., and Nelson, K.N. (in press). Symbols, Signs and Models: Language and the Development of Dual Representation. *Journal of Cognition and Development*.

Homer, B.D., Plass, J.L., and Blake, L. (2008). The Effects of Video on Cognitive Load and Social Presence in Computer-Based Multimedia-Learning. *Computers in Human Behavior*, 24(3): 786-797.

Kalyuga, S., and Plass, J.L. (2008). Evaluating and Managing Cognitive Load in Educational Games. In R.E. Ferdig (Ed.), *Handbook of Research on Effective Electronic Gaming in Education* (Vol. 2, pp. 719–737). IGI Global Press.

Kalyuga, S., and Plass, J.L. (2007, July). Managing Cognitive Load in Instructional Simulations. In *Proceedings of the IADIS International Conference E-Learning* (pp. 198-219). IADIS Press.

Lee, H., Plass, J.L., and Homer, B.D. (2006). Optimizing Cognitive Load for Learning From Computer-Based Science Simulations. *Journal of Educational Psychology*, 98: 902-913.

Milne, C. (2007). Power, Status and the Whole Shebang: a Personal Perspective of Collaborative Research. In S. Ritchie (Ed.), *Research Collaboration: Relations and Praxis* (pp. 107-122). The Netherlands: Sense Publishers.

Plass, J.L., Homer, B.D., and Hayward, E. (in press). Design Factors for Educationally Effective Animations and Simulations. *Journal of Computing in Higher Education*.

Plass, J.L., Homer, B.D., Milne, C., Jordan, T., Kalyuga, S., Kim, M., and Lee, H.J. (2009). Design Factors for Effective Science Simulations: Representation of Information. *International Journal of Gaming and Computer-Mediated Simulations*, 1(1): 16–35.

Plass, J.L., Kalyuga, S., and Leutner, D. (forthcoming). Individual Differences and Cognitive Load Theory. In J.L. Plass, R. Moreno, and R. Brünken (Eds.), *Cognitive Load: Theory and Application*. New York: Cambridge University Press.

**Institution:** State University of New York at Buffalo

**Principal Investigator:** Douglas Clements

**Project Title:** Scaling up TRIAD: Teaching Early Mathematics for Understanding With Trajectories and Technologies

**Grant:** R305K050157

Brown, C.S., Sarama, J., and Clements, D.H. (2007). Thinking About Learning Trajectories in Preschool. *Teaching Children Mathematics*, 14: 178-181.

Clements, D.H., and Sarama, J. (2009). *Learning and Teaching Early Math: The Learning Trajectories Approach*. New York: Routledge.

Clements, D.H., and Sarama, J. (2008). Experimental Evaluation of the Effects of a Research-Based Preschool Mathematics Curriculum. *American Educational Research Journal*, 45: 443-494.

Clements, D.H., and Sarama, J. (2008). Mathematics and Technology: Supporting Learning for Students and Teachers. In O.N. Saracho and B. Spodek (Eds.), *Contemporary Perspectives on Science and Technology in Early Childhood Education* (pp. 127-147). Charlotte, NC: Information Age Publishing, Inc.

Clements, D.H., Sarama, J., and Liu, X. (2008). Development of a Measure of Early Mathematics Achievement Using the Rasch Model: The Research-Based Early Maths Assessment. *Educational Psychology*, 28(4): 457-482.

Clements, D.H., Sarama, J., Yelland, N.J., and Glass, B. (2008). Learning and Teaching Geometry With Computers in the Elementary and Middle School. In M.K. Heid and G.W. Blume (Eds.), *Research on Technology and the Teaching and Learning of Mathematics: Volume 1: Research Syntheses* (pp. 109-154). New York: Information Age Publishing, Inc.

Clements, Douglas H. (2008). Linking Research and Curriculum Development. In L.D. English (Ed.), *Handbook of International Research in Mathematics Education*. New York: Taylor and Francis.

Clements, D.H. (2007). Curriculum Research: Toward a Framework for 'Research-Based Curricula'. *Journal for Research in Mathematics Education*, 38: 35–70.

Clements, D.H., and Sarama, J. (2007). Early Childhood Mathematics Learning. In F.K. Lester, Jr. (Ed.), *Second Handbook of Research on Mathematics Teaching and Learning* (pp. 461-555). New York: Information Age Publishing.

Clements, D.H., and Sarama, J. (2007). Einsatz Von Computern in Amerikanischen Vor- Und Grundschulen — Ein Zwischenbericht [Using Computers in American Kindergartens and Primary Schools: An Interim Report]. In H. Mitzlaff (Ed.), *Internationales Handbuch: Computer (ICT), Grundschule, Kindeergarten und Neue Lernkultur* (Vol. 1 (pp. 251-259). Schneider Verlag Hohengehren: Baltmannsweiler.

Clements, D.H., and Sarama, J. (2007). Zur Rolle Des Computers in Der Frühen Mathematik in Amerikanischen Kindergärten and Grundschulen—Das Projekt Building Blocks for Early Childhood Mathematics [The Role of Computers in American Kindergartens and Primary Schools: The Building Blocks for Early Childhood Mathematics Project]. In H. Mitzlaff (Ed.), *Internationales Handbuch: Computer (ICT), Grundschule, Kindeergarten und Neue Lernkultur* (Vol. 2 (pp. 538-546). Schneider Verlag Hohengehren: Baltmannsweiler.

Clements, D.H., and Sarama, J. (2007). Gold Der Narren?—Fools's Gold?—Kritische Bemerkungen Zur Kritik Der Alliance for Childhood Et Al. [Fool's Gold? Critical Remarks About the Critics From the Alliance for Childhood]. In H. Mitzlaff (Ed.), *Internationales Handbuch: Computer (ICT), Grundschule, Kindeergarten und Neue Lernkultur* (Vol. 2 (pp. 740-748). Schneider Verlag Hohengehren: Baltmannsweiler.

Clements, D.H., and Sarama, J. (2007). Mathematics. In R.S. New and M. Cochran (Eds.), *Early Childhood Education: An International Encyclopedia* (Vol. 2, pp. 502-509). Westport, CN: Praeger.

Clements, D.H., and Sarama, J. (2007). Curriculum, Technology. In R.S. New and M. Cochran (Eds.), *Early Childhood Education: An International Encyclopedia* (Vol. 1, pp. 221-225). Westport, CN: Praeger.

Clements, D.H., and Sarama, J. (2007). Effects of a Preschool Mathematics Curriculum: Summative Research on the Building Blocks Project. *Journal for Research in Mathematics Education*, 38: 136-163.

Sarama, J., and Clements, D.H. (2009). *Early Childhood Mathematics Education Research: Learning Trajectories for Young Children*. New York: Routledge.

Sarama, J., and Clements, D.H. (2009). Building Blocks and Cognitive Building Blocks: Playing to Know the World Mathematically. *American Journal of Play*, 1: 313-337.

Sarama, J., and Clements, D.H. (2008). Linking Research and Software Development. In G.W. Blume and M.K. Heid (Eds.), *Research on Technology and the Teaching and Learning of Mathematics: Volume 2: Cases and Perspectives* (pp. 113-130). New York: Information Age Publishing, Inc.

Sarama, J., Clements, D.H., Starkey, P., Klein, A., and Wakeley, A. (2008). Scaling up the Implementation of a Pre-Kindergarten Mathematics Curriculum: Teaching for Understanding With Trajectories and Technologies. *Journal of Research on Educational Effectiveness*, 1(2): 89-119.

Sarama, J., and Clements, D.H. (2008). Mathematics in Early Childhood. In O.N. Saracho and B. Spodek (Eds.), *Contemporary Perspectives on Mathematics in Early Childhood Education* (pp. 67-94). Charlotte, NC: Information Age Publishing, Inc.

## FY 2006

**Institution:** Vanderbilt University

**Principal Investigator:** Richard Lehrer

**Project Title:** Assessing Data Modeling and Statistical Reasoning

**Grant:** R305K060091

Lehrer, R., and Schauble, L (in press). Invention in the Classroom: Structuring Natural Variability as Distribution. In T. Koschmann (Ed.), *Theorizing Practice*, Mahwah, NJ: Erlbaum.

**Institution:** SRI International

**Principal Investigator:** Jeremy Roschelle

**Project Title:** Getting Fractions Right With Technology-Mediated Peer-Assisted Learning (Techpals)

**Grant:** R305K060011

Rafanan, K., Roschelle, J., Bhanot, R., Gorges, T., and Penuel, W. (in press). Measuring Mathematics Discourse in Technology-Supported Collaborative Activities. In *Proceedings of the International Conference of the Learning Sciences 2008*.

**Institution:** University of Minnesota

**Principal Investigator:** Asha Jitendra

**Project Title:** Enhancing the Mathematical Problem Solving Performance of Sixth Grade Students Using Schema-based Instruction

**Grant:** R305K060075

Jitendra, A.K., Star, J.R., Starosta, K., Leh, J.M., Sood, S., Caskie, G., Hughes, C.L., & Mack, T.R. (2009). Improving Seventh Grade Students' Learning of Ratio and Proportion: The Role of Schema-Based Instruction. *Contemporary Educational Psychology*, 34(3): 250-264.

## FY 2007

**Institution:** Worcester Polytechnic Institute

**Principal Investigator:** Neil Heffernan

**Project Title:** Making Longitudinal Web-Based Assessments Give Cognitively Diagnostic Reports to Teachers, Parents and Students While Employing Masterly Learning

**Grant:** R305A070440

Feng, M., Beck, J., Heffernan, N., and Koedinger, K. (2008). Can an Intelligent Tutoring System Predict Math Proficiency as Well as a Standardized Test? In E. Baker and Beck (Eds.), *Proceedings of the 1<sup>st</sup> International Conference on Education Data Mining* (pp. 107-116). Montreal, Canada.

**Institution:** University of California, Berkeley

**Principal Investigator:** Geoffrey Saxe

**Project Title:** Teaching Fractions and Integers: The Development of a Research-Based Instructional Practice

**Grant:** R

Saxe, G.B., Gearhart, M., Shaughnessy, M., Earnest, D., Cremer, S., Sitabkhan, Y., Platas, L., and Young, A. (in press). A Methodological Framework and Empirical Techniques for Studying the Travel of Ideas in Classroom Communities. In Schwartz, T. Dreyfus, R. Hershkovitz (Eds.), *Transformation of Knowledge in Classroom Interaction*. New York: Elsevier.

**Institution:** University of Massachusetts, Dartmouth

**Principal Investigator:** Stephen Hegedus

**Project Title:** Democratizing Access to Core Mathematics Grades 9-12

**Grant:** R305B070299

Hegedus, S. (2007). Classroom Connectivity. *Educational Technology Special Issue on Mobile Computing*, 47(3): 21-25.

Hegedus, S., and Moreno-Armella, L. (2008). Analyzing the Impact of Dynamic Representations and Classroom Connectivity on Participation, Speech and Learning. In L. Radford, G. Schubring, and F. Seeger (Eds.), *Semiotics Education: Epistemology, Historicity and Culture* (pp. 175-194).

Hegedus, S., and Penuel, W. (2008). Studying New Forms of Participation and Classroom Identity in Mathematics Classrooms With Integrated Communication and Representational Infrastructures. *Special Issue of Educational Studies in Mathematics: Democratizing Access to Mathematics through Technology—Issues of Design and Implementation*, 68(2): 171-184

Moreno-Armella, L., and Hegedus, S., and Kaput J. (2008). Constitution of Symbols and the Evolution of the Reference Field With Digital Technologies. *Special Issue of Educational Studies in Mathematics: Democratizing Access to Mathematics through Technology—Issues of Design and Implementation*, 68(2): 99-112.

**Institution:** University of Virginia

**Principal Investigator:** Mable Kinzie

**Project Title:** Pre-K Mathematics and Science for At-Risk Children: Outcomes-Focused Curricula and Support for Teaching Quality

**Grant:** R305A07068

Kilday, C.R., and Kinzie, M.B. (in press). An Analysis of Instruments that Measure the Quality of Mathematics Teaching in Early Childhood. *Early Childhood Education Journal*.

## FY 2008

**Institution:** University of Illinois, Urbana-Champaign

**Principal Investigator:** Arthur Baroody

**Project Title:** Fostering Fluency With Basic Addition and Subtraction

**Grant:** R305A080479

Baroody, A.J., Bajwa, N.P., and Eiland, M. (2009). Why Can't Johnny Remember the Basic Facts? *Developmental Disabilities Research Reviews*, 15(1): 69-79.

## National Research and Development Centers

FY 2004

**Institution:** Vanderbilt University

**Principal Investigator:** Mark Berends (Now Ellen Goldring)

**Project Title:** National Center on School Choice

**Grant:** R305A040043

**Journal Articles:**

Berry, C., and Howell, W. (2007). Accountability and Local Elections: Rethinking Retrospective Voting. *Journal of Politics*, 69(3): 844-858.

Howell, W., and West, M. (2008). Is the Price Right? Probing Americans' Understanding of Education Spending. *Education Next*, 8(3): 36-41.

Howell, W., West, M., and Peterson, P. (2007). What Americans Think About Their Schools. *Education Next* 7(4):12-26.

Howell, W., West, M., and Peterson, P. (2008). What Americans Think About Their Schools, Results From the Second Annual Education Next-PEPG Survey. *Education Next*, 8(4): 12-27.

Hoxby, C.M., and Murarka, S. (2008). Charter Achievement in New York City. *Education Next* 8(3).

Loveless, T., Kelly, A., and Henriques, A. (in press). What Happens When Regular Public Schools Convert to Charter Schools? *Education Evaluation and Policy Analysis*.

Peterson, P.E. (2007). The Case for Curriculum-Based, External Examinations Which Have Significant Consequences for Students. *Peabody Journal of Education* 82(4): 645-666.

Peterson, P.E., Howell, W., and West, M. (2008). The 2008 Education Next – PEPG Survey of Public Opinion. *Education Next* 8(1).

Peterson, P.E., Howell, W., and West, M. (2007). What Americans Think About Their Schools: The 2007 Education Next – PEPG Survey. *Education Next* 7(4): 12-26.

Peterson, P.E., and Llaudet, E. (2007). Heterogeneity in School Sector Effects on Elementary Student Performance. *Harvard University Program on Education Policy and Governance*.

Peterson, P.E. (forthcoming). School Vouchers in the United States: Explaining the Variations in Benefits of Private Schooling. *Zeitschrift Für Erziehungswissenschaft, Journal of Educational Science*.

Peterson, P.E. (2008). School Vouchers in the United States: Productivity in the Public and Private Sectors, *Zeitschrift Für Erziehungswissenschaft, Journal of Educational Science*, 11(2): 253-267.

Peterson, P.E., and Llaudet, E. (2007). The NCES Private-Public School Study: Findings Are Other than They Seem. *Education Next*, 7(1): 75-79.

Springer, M. 2008. Accountability Incentives: Do Schools Practice Educational Triage? *Education Next* 8(1).

Springer, M. 2007. The Influence of an NCLB Accountability Plan on the Distribution of Student Test Score Gains. *Economics of Education Review*.

**Book Chapters:**

Ballou, D., Teasley, B., and Zeidner, T. (2008). Charter School Outcomes in Idaho. In M. Berends, M.G. Springer, and H.J. Walberg (Eds.), *Charter School Outcomes*. Mahwah, NJ: Lawrence Erlbaum Associates.

Berends, M., Watral, C., Teasley, B., and Nicotera, A. (2008). Charter School Effects on Achievement: Where We Are and Where We're Going. In M. Berends, M.G. Springer, and H.J. Walberg (Eds.), *Charter School Outcomes*. Mahwah, NJ: Lawrence Erlbaum Associates.

Goldring, E., and Cravens, X. (2008). Teachers' Academic Focus on Learning in Charter and Non-Charter Schools. In M. Berends, M.G. Springer, and H.J. Walberg (Eds.), *Charter School Outcomes*. Mahwah, NJ: Lawrence Erlbaum Associates.

Hoxby, C.M., and Murarka, S. (2008). Methods of Assessing the Achievement of Students in Charter Schools. In M. Berends, M.G. Springer, and H.J. Walberg (Eds.), *Charter School Outcomes*. Mahwah, NJ: Lawrence Erlbaum Associates.

Hoxby, C.M., and Murarka, S. (2006). A Tapestry of Choice Programs. In P.E. Peterson, *Reforming Education in Florida*. Stanford: Hoover Institution Press.

Loveless, T., and Field, K. (in press). Perspectives on Charter Schools. In M. Berends, M.G. Springer, D. Ballou and H. Walberg (Eds.), *Handbook of Research on School Choice*. Mahwah, NJ: Lawrence Erlbaum Associates.

Peterson, P.E. (in press). Perspectives on School Vouchers. In M. Berends, M.G. Springer, D. Ballou and H. Walberg (Eds.), *Handbook of Research on School Choice*. Mahwah, NJ: Lawrence Erlbaum Associates.

Peterson, P.E. (2007). The A+ Plan. In Paul E. Peterson (Ed.), *Reforming Education in Florida: Recommendations From the Koret Task Force*. Hoover Institution Press.

Peterson, P.E. (2007). School Choice in Milwaukee Fifteen Years Later. In Paul Hill (Ed.), *School Choice: The Supply Side*. Hoover Institution Press.

Peterson, P.E., Torinus, N., and Smith, B. (2006). School Choice in Milwaukee: Fifteen Years Later. In P.T. Hill (Ed.), *Charter Schools Against All Odds*. Stanford, CA: Education Next Books.

Springer, M.G., Pepper, M., Gardner, C.D., and Bower, C.B. (2009). Supplemental Educational Services Under No Child Left Behind. In M. Berends, M.G. Springer, D. Ballou and H. Walberg (Eds.), *Handbook of Research on School Choice*. Mahwah, NJ: Lawrence Erlbaum Associates.

Wong, K., and Klopott, S. (2009). Politics and Governance in Charter Schools. In M. Berends, M.G. Springer, D. Ballou and H. Walberg (Eds.), *Handbook of Research on School Choice*. Mahwah, NJ: Lawrence Erlbaum Associates.

Wong, K., and Shen, F.X. (2008). Charter Law and Charter Operations: Re-Examining the Charter School Marketplace. In M. Berends, M.G. Springer, and H.J. Walberg (Eds.), *Charter School Outcomes*. Mahwah, NJ: Lawrence Erlbaum Associates.

Wong, K., and Wishnick, D. (2007). Expanding the Possibilities: The Diverse-Provider Model in Urban Districts. In R. Rothman (Ed.), *City Schools*. Cambridge, MA: Harvard Education Press.

**Technical Reports:**

Hoxby, C.M., and Murarka, S. (2007a). *Charter Schools in New York City: Who Enrolls and How They Affect Their Students' Achievement*. Cambridge, MA: National Bureau of Economic Research.

Hoxby, C.M., and Murarka, S. (2007b). *New York City's Charter Schools: Overall Report (Reporting on Results through the 2005-06 School Year)*. Cambridge, MA: National Bureau of Economic Research.

Hoxby, C.M., and Murarka, S. (2007b-Rr). *A Series of Reports on Individual Charter Schools in New York City (Reporting on Results through the 2005-06 School Year)*. Cambridge, MA: National Bureau of Economic Research.

West, M., and Woessmann, L. 2008. *Every Catholic Child in a Catholic School: Historical Resistance to State Schooling, Contemporary Private Competition, and Student Achievement Across Countries*. Harvard University Program on Education Policy and Governance, PEPG08-05.

**Books:**

Howell, W., and Peterson, P. (2006). *Education Gap: Vouchers and Urban Schools, Revised Edition*. Brookings.

Peterson, P.E., and Llaudet, E. (2006). *On the Public-Private School Achievement Debate*.

Walberg, H.J. (2007). *School Choice: The Findings*. Washington, DC: Cato Institute.

Wong, K., Shen, F.X., Anagnostopoulos, D., and Rutledge, S. (2007). *The Education Mayor: Improving America's Schools*. Georgetown University Press.

**Institution:** University of North Carolina-Chapel Hill

**Principal Investigator:** Thomas Farmer

**Project Title:** National Research Center on Rural Education Support (NRCRES)

**Grant:** R305A004056

**Journal Articles:**

Dexter, D.D., Hughes, C.A., and Farmer, T.W. (2008). Responsiveness to Intervention: A Review of Field Studies and Implications for Rural Special Education. *Rural Special Education Quarterly*, 37: 3-9.

Estell, D.B., Farmer, T.W., Irvin, M.J., Thompson, J.H., Hutchins, B.C., and McDonough, E.M. (2007). Patterns of Middle School Adjustment and Ninth Grade Adaptation of Rural African American Youth: Grades and Substance Use. *Journal of Youth and Adolescence*, 36: 477-487.

Farmer, T.W., Irvin, M.J., Sgammato, Dadisman, K., and Thompson, J.H. (2009). Interpersonal Competence Configurations in Rural Appalachian Fifth Graders: Academic Achievement and Associated Adjustment Factors. *Elementary School Journal*, 109: 301-321.

Farmer, T.W., Vernon-Feagans, L., and Hannum, W. (in press). Educational Issues in Diverse Rural Communities: The Research Agenda of the National Research Center on Rural Education Support. *Journal of Research in Rural Education*.

Farmer, T.W., Leung, M.C., Banks, J.B., Schaefer, V., Andrews, B., and Murray, R.A. (2006). Adequate Yearly Progress in Small Rural Schools and Rural Low-Income-Schools. *Rural Educator*: 1-7.

Farmer, T.W., Irvin, M.J., Thomson, J.H., Hutchins, B.C., and Lueng, M.C. (2006). School Adjustment and the Academic Success of Rural African American Early Adolescents in the Deep South. *Journal of Research in Rural Education*, 21: 1-14.

Farmer, T.W., Dadisman, K., Latendresse, S.J., Thomson, J., Irvin, M.J., and Zhang, L. (2006). Educating Out and Giving Back: Adults' Conceptions of Successful Outcomes of African American High School Students From Impoverished Rural Communities. *Journal of Research in Rural Education*, 21(10).

Farmer, T.W., Farmer, E.M.Z., Estell, D., and Hutchins, B.C. (2007). The Developmental Dynamics of Aggression and the Prevention of School Violence. *Journal of Emotional and Behavioral Disorders*, 15: 197-208.

Farmer, T.W., and Xie, H.L. (2007). Aggression and School Social Dynamics: The Good, the Bad, and the Ordinary. *Journal of School Psychology*, 45: 461-478.

Farmer, T.W. (2007). Studying the Individual Within the Peer Context: Are We on Target? *New Directions in Child and Adolescent Development*, 118: 101-108.

Hannum, W., Irvin, M.J., Banks, J.B., and Farmer, T.W. (in press). Distance Education Use in Rural Schools. *Journal of Research in Education*.

Hannum, W.H., and McCombs, B.L. (2008). Enhancing Distance Learning With Learner-Centered Principles. *Educational Technology*, 48(4): 11-21.

**Book Chapters:**

Keane, J., De La Varre, C., Irvin, M.J., and Hannum, W. (2008). Learner-Centered Social Support: Enhancing Online Distance Education for Underserved Rural High School Students in the United States. In Whitelock, D., and Wheeler, S. (Eds.), *Reframing the Digital Divide. Research Proceedings of the 15<sup>th</sup> Association for Learning Technology Conference*.

Meece, J.L., and Schaefer, V. (in press). Current Status of Youth in America's Schools. In J.Meece Andj. Eccles (Eds.), *Handbook of Research on Schools, Schooling, and Human Development*. New York: Lawrence Erlbaum Associates, Taylor Francis Group.

**Technical Reports and Monographs:**

Arnold, M.L, Biscoe, B., Farmer, T.W., Robertson, D.L., and Shapley, K.L. (2007). *How the Government Defines Rural Has Implications for Education Policies and Practices* (Issues and Answers Report, REL 2007-No 010).

Southerland, K.S., Carter, E., Farmer, T.W., Hoover, H., and Kostewicz, D. (2007). Reexamination of Effective Classroom Management With Focus on Learners With or At-Risk for Emotional /Behavioral Disorders. *Monograph Published by the Division of the Council for Children With Behavior Disorders*, Reston, VA.

**Institution:** Johns Hopkins University

**Principal Investigator:** Bob Slavin

**Project Title:** Center for Data Driven Reform in Education (CDDRE)

**Grant:** R305A040082

**Journal Articles:**

Cheung, A., and Slavin, R. (2005). Effective Reading Programs for English Language Learners and Other Language Minority Students. *Bilingual Research Journal*, 29(2): 241-267.

Slavin, R. (2008). Evidence-Based Reform in Education: What Will It Take? *European Educational Research Journal*, 7(1): 124-128.

Slavin, R. (2008). Evidence-Based Reform in Education: Which Evidence Matters? *Educational Researcher*, 37(1): 47-50.

Slavin, R. (2008). What Works? Issues in Synthesizing Education Program Evaluations. *Educational Researcher*, 37(1): 5-14.

Slavin, R. (2006). Research and Effectiveness: A '10 Percent Solution' That Can Make Evidence-Based Reform a Reality. *Education Week*.

Slavin, R. (2005). Evidence-Based Reform in Education: Promise and Pitfalls. *Mid-Western Educational Researcher*, 18(1): 8-13.

Slavin, R., Chamberlain, A., and Daniels, C. (2007). Preventing Reading Failure. *Educational Leadership*, 65(2): 22-27.

Slavin, R., and Cheung, A. (2005). A Synthesis of Research on Language of Reading Instruction for English Language Learners. *Review of Educational Research*, 75 (2): 247-284.

Slavin, R., Cheung, A., Groff, C., and Lake, C. (2008). Effective Reading Programs for Middle and High Schools: a Best Evidence Synthesis. *Reading Research Quarterly*, 43(3): 290-322.

Slavin, R., and Lake, C. (2008). Effective Programs in Elementary Mathematics; a Best-Evidence Synthesis. *Review of Educational Research*, 78(3): 427-515.

Slavin, R., Lake, C., and Groff, C. (2009). Effective Programs in Middle and High School Mathematics. *Review of Educational Research*, 79(2), 839-911.

**Books:**

Slavin, R., Lake, C., Chambers, B., Cheung, C., and Davis, S. (2009). *Effective Beginning Reading Programs: a Best-Evidence Synthesis*. Baltimore: Center for Research and Reform in Education, Johns Hopkins University.

Slavin, R., Lake, C., Cheung, A., and Davis, S. (2008). *Beyond the Basics: Effective Reading Programs for the Upper Elementary Grades*. Baltimore: Center for Research and Reform in Education, Johns Hopkins University.

**Book Chapters:**

Chambers, B., Cheung, A., and Slavin, R. (2006). A Review of Research on Alternative Early Childhood Program. In Spodek, B. and Saracho, O (Eds.), *Handbook of Research on the Education of Young Children* (pp. 347-360). Mahwah, NJ: Lawrence Erlbaum.

Chambers, B., Cheung, A., and Slavin, R. (2006). Effective Preschool Programs for Children at Risk of School Failure: a Best-Evidence Synthesis. In B. Spodek (Ed.), *Handbook of Research on the Education of Young Children* (pp. 347-360). New York: Lawrence Erlbaum.

**FY 2005**

**Institution:** University of California at Los Angeles (UCLA)

**Principal Investigator:** Eva Baker

**Project Title:** Center for Research on Evaluation, Standards and Student Testing (CRESST)

**Grant:** R305A050004

**Journal Articles:**

Heritage, M., Kim, J., Vendlinski, T., and Herman, J. (In Press). From Evidence to Action. *Educational Measurement*.

Wolf, M.K., Farnsworth, T., And Herman, J.L. (2008). Validity Issues In Assessing English Language Learners' Language Proficiency. *Educational Assessment* 13(2), 80-107.

**Book Chapters:**

Baker, E.L., Chung, G.K.W.K., And Delacruz, G.C. (2008). Design And Validation Of Technology-Based Performance Assessments. In J.M. Spector, M.D. Merrill, J.J.G. Van Merriënboer, And M.P. Driscoll (Eds.), *Handbook Of Research On Educational Communications And Technology* (3rd Ed. pp. 595–604). Mahwah, NJ: Erlbaum.

Baker, E.L., Niemi, D., And Chung, G.K.W.K. (2008). Simulations And The Transfer Of Problem Solving Knowledge And Skills. In E.L. Baker, J. Dickieson, W. Wulfeck, And H.F. O'Neil (Eds.), *Assessment Of Problem Solving Using Simulations* (pp. 1-17). Mahwah, NJ: Erlbaum.

Chung, G.K.W.K., Baker, E.L., Delacruz, G.C., Bewley, W.L., Elmore, J., And Seely, B. (2008). A Computational Approach To Authoring Problem-Solving Assessments. In E.L. Baker, J. Dickieson, W. Wulfeck, and H.F. O'Neil (Eds.), *Assessment Of Problem Solving Using Simulations* (pp. 289–307). Mahwah, NJ: Erlbaum.

Chung, G.K.W.K., O'Neil, H.F., Bewley, W.L., And Baker, E.L. (2008). *Computer-Based Assessments To Support Distance Learning*. In E. Klieme, J. Hartig, And A. Jurecka (Eds.), *Assessment Of Competencies In Educational Contexts* (Pp.253–276). Göttingen, Germany: Hogrefe And Huber.

#### **Conference Proceedings:**

Delacruz, G.C., Chung, G.K.W.K., Heritage, M., Vendlinski, T., Bailey, A., And Kim, J.O. (2007, April). *Validating Knowledge Elicitation Techniques: Examining The Relation Between Measures Of Content Knowledge And Knowledge Of Teaching Algebra*. Paper Presented At The Annual Meeting Of The National Council On Measurement In Education, Chicago, IL.

Encarnacao, A., Espinosa, P.D., Au, L., Chung, G.K.W.K., Johnson, L., And Kaiser, W.J. (2008). Individualized, Interactive Instruction (3I): An Online Formative Assessment And Instructional Tool. *Proceedings Of The Annual Meeting Of The American Society Of Engineering Education* (Session AC 2007-1524), Honolulu, HI.

Phelan, J., and Niemi, D. (2008). *Eliciting Big Ideas in Biology*. Paper Presented at The Conceptual Assessment in Biology II Conference, Asilomar, CA.

#### **Technical Reports:**

Heritage, M., Kim, J., Vendlinski, T.P., and Herman, J.L. (2008). *From Evidence to Action: A Seamless Process in Formative Assessment?* (Tech. Rep. No. 741). University of California, Los Angeles, National Center for Research on Evaluation, Standards, and Student Testing.

Herman, J.L. (2007). *Accountability and Assessment: Is Public Interest in K-12 Education Being Served?* (Tech. Rep. No. 728). University of California, Los Angeles, National Center for Research on Evaluation, Standards, and Student Testing.

Phelan, J., Kang, T., Niemi, D.N., Vendlinski, T., and Choi, K. (2009). *Some Aspects of the Technical Quality of Formative Assessments in Middle School Mathematics* (Tech. Rep. No. 750). University of California, Los Angeles, National Center for Research on Evaluation, Standards, and Student Testing.

Ruiz-Primo, M.A., Li, M., Tsai, S., and Schneider, J. (2008). *Testing One Premise of Scientific Inquiry in Science Classrooms: A Study That Examines Students' Scientific Explanations* (Tech. Rep. No. 733). University of California, Los Angeles, National Center for Research on Evaluation, Standards, and Student Testing.

Vendlinski, T.P., Baker, E.L., and Niemi, D. (2008). *Templates and Objects in Authoring Problem-Solving Assessments* (Tech. Rep. No. 735). University of California, Los Angeles, National Center for Research on Evaluation, Standards, and Student Testing.

Vendlinski, T.P., Howard, K.E., Hemberg, B.C., Vinyard, L., Martel, A., Kyriacou, E., Casper, J., Chai, Y., Phelan, J.C., and Baker, E.L. (2008). *Using Data and Big Ideas: Teaching Distribution as an Instance of Repeated Addition* (Tech. Rep. No. 734). University of California, Los Angeles, National Center for Research on Evaluation, Standards, and Student Testing.

National Research and Development Centers

Wolf, M.K., Herman, J.L., Kim, J., Abedi, J., Leon, S., Griffin, N., Bachman, P.L., Chang, S.M., Farnsworth, T., Jung, H., Nollner, J., and Shin, H.W. (2008). *Providing Validity Evidence to Improve the Assessment of English Language Learners* (Tech. Rep. No. 738). University of California, Los Angeles, National Center for Research on Evaluation, Standards, and Student Testing.

Wolf, M.K., Kao, J., Griffin, N., Herman, J.L., Bachman, P.L., Chang, S.M., and Farnsworth, T. (2008). *Issues in Assessing English Language Learners: English Language Proficiency Measures and Accommodation Uses--Practice Review* (Tech. Rep. No. 732). University of California, Los Angeles, National Center for Research on Evaluation, Standards, and Student Testing.

Wolf, M.K., Kao, J., Herman, J.L., Bachman, L.F., Bailey, A.L., Bachman, P.L., Farnsworth, T., and Chang, S.M. (2008). *Issues in Assessing English Language Learners: English Language Proficiency Measures and Accommodation Uses--Literature Review* (Tech. Rep. No. 731). University of California, Los Angeles, National Center for Research on Evaluation, Standards, and Student Testing.

**FY 2006**

**Institution:** Columbia University, Teacher College  
**Principal Investigator:** Thomas Bailey  
**Project Title:** National Center for Postsecondary Research  
**Grant:** R305A06010

**Books:**

Calcagno, J.C., and Long, B.T. (2008). *The Impact of Postsecondary Remediation Using a Regression Discontinuity Approach: Addressing Endogenous Sorting and Noncompliance*. New York: Columbia University.

Long, B.T. (2008). *What Is Known About the Impact of Financial Aid? Implications for Policy*. New York: Columbia University.

Vishner, M., Wathington, H., Richburg-Hayes, L., Schneider, E., Cerna, O., Sansone, C., and Ware, M. (2008). *The Learning Communities Demonstration: Rationale, Sites, and Research Design*. New York: Columbia University.

**Institution:** Vanderbilt University  
**Principal Investigator:** Jim Guthrie  
**Project Title:** National Center for Performance Incentives (NCPI)  
**Grant:** R305A06034

**Journal Articles:**

Podgursky, M., and Springer, M.G. (2007). Teacher Performance Pay: A Review. *Journal of Policy Analysis and Management*, 26(4): 909-949.

Podgursky, M., and Springer, M.G. (2008). Credentials Versus Performance: Review of the Teacher Performance Pay Research. *Peabody Journal of Education*, 82(4): 551-573.

**Books:**

Springer, M.G. (Ed.), (2009). *Performance Incentives: Their Growing Impact on American K-12 Education*. Washington, DC: Brookings Institution Press.

**Technical Reports and Monographs:**

Springer, M.G., Podgursky, M., Lewis, J.L., Ehlert, M.W., Gardner, C.D., Ghosh-Dastidar, B., Lopez, O., Patterson, C.H., and Taylor, L.L. (2007). *Governor's Educator Excellence Grant (GEEG) Program: Year One Evaluation Report*. Austin, TX: Texas Education Agency.

Springer, M.G., Podgursky, M., Lewis, J.L., Ehlert, M.W., Ghosh-Dastidar, B., Gronberg, T.J., Hamilton, L.S., Jansen, D.W., Lopez, O., Patterson, C.H., Stecher, B.M., and Taylor, L.L. (2007). *Texas Educator Excellence Grant (TEEG) Program: Year One Evaluation*. Austin, TX: Texas Education Agency.

Springer, M.G., Podgursky, M.J., Lewis, J.L., Ehlert, M., Gronberg, T.J., Hamilton, L.S., Jansen, D.W., Lopez, O.S., Peng, A., Stecher, B., and Taylor, L.L. (2008). *Texas Educator Excellence Grant (TEEG) Program: Year Two Evaluation*. Austin, TX: Texas Education Agency.

Springer, M.G., Lewis, J.L., Podgursky, M.J., Ehlert, M.W., Taylor, L.L., Lopez, O.S., and Peng, A. (2009). *Governor's Educator Excellence Grant (GEEG) Program: Year Two Evaluation*. Austin, TX: Texas Education Agency.

Springer, M.G., Lewis, J.L., Podgursky, M.J., Ehlert, M.W., Gronberg, T.J., Hamilton, L.S., Jansen, D.W., Stecher, B.S., Taylor, L.L., Lopez, O.S., and Peng, A. (2009). *Texas Educator Excellence Grant (TEEG) Program: Year Three Evaluation*. Austin, TX: Texas Education Agency.

Springer, M.G., Lewis, J.L., Podgursky, M.J., Ehlert, M.W., Taylor, L.L., Lopez, O.S., and Peng, A. (2009). *Governor's Educator Excellence Grant (GEEG) Program: Year Three Evaluation*. Austin, TX: Texas Education Agency.

Burns, S.F., Gardner, C.D., and Meeuwssen, J. (2009). *An Interim Evaluation of Teacher and Principal Experiences During the Pilot Phase of AISD REACH*. National Center on Performance Incentives: Policy Evaluation Report. Nashville, TN.

**Working Papers:<sup>1</sup>**

Ballou, D. (2008). *Test Scaling and Value-Added Measurement*. NCPI Working Paper Series No. 2008-23. Nashville, TN.

Booker, K., and Glazerman, K. (2008) *Does the Missouri Career Ladder Program Raise Student Achievement?* NCPI Working Paper Series No. 2008-15. Nashville, TN.

Brown, K. (2009). *The Link Between Pensions and Retirement Timing: Lessons from California Teachers*. NCPI Conference Paper Series No. 2009-12. Nashville, TN.

Cannon, M. (2007). *Pay-for-Performance: New Developments and Issues*. NCPI Workingpaper Series No. 2007-05. Nashville, TN.

Clark, R. (2009). *Retiree Health Plans for Public School Teachers After GASB 43 and 45*. NCPI Conference Paper Series No. 2009-03. Nashville, TN.

Clark, R., and Craig, L. (2009). *Determinants of the Generosity of Pension Plans for Public School Teachers, 1982 to 2006*. NCPI Conference Paper Series No. 2009-05. Nashville, TN.

Costrell, R., and Mcgee, J. (2009). *Teacher Pensions Incentives, Retirement Behavior, and Potential for Reform in Arkansas*. NCPI Conference Paper Series No. 2009-10. Nashville, TN.

Costrell, R., and Podgursky, M. (2009). *Distribution of Benefits in Teacher Retirement Systems and Their Implications for Mobility*. NCPI Conference Paper Series No. 2009-04. Nashville, TN.

---

<sup>1</sup> Proceedings from the joint NCPI/CALDER conference on NCLB will be added to the NCPI website by the end of September.

- Costrell, R., and Podgursky, M. (2007). *Efficiency and Equity in the Time Pattern of Teacher Pension Benefits: An Analysis of Four State Systems*. NCPI Working Paper Series No. 2007-01. Nashville, TN.
- DeArmond, M. and Goldhaber, D. (2009). *Scrambling the Nest Egg: How well do teachers understand their pensions and what do they think about alternative pension structures?* NCPI Conference Paper Series No. 2009-13. Nashville, TN.
- Friedberg, L., and Turner, S. (2009). *Labor Market Effects of Pensions and Implications for Teachers*. NCPI Conference Paper Series No. 2009-06. Nashville, TN.
- Glewwe, P., Ilias, N., and Kremer, M. (2009). *Teacher Incentives in Developing Countries: Recent Experimental Evidence From Kenya*. NCPI Working Paper Series. Nashville, TN.
- Goldhaber, D. (2008). *The Politics of Teacher Pay Reforms*. NCPI Working Paper Series No. 2008-01. Nashville, TN.
- Hannaway, J., and Rotherham, A. (2008). *Collective Bargaining in Education and Pay for Performance*. NCPI Working Paper Series No. 2008-11. Nashville, TN.
- Hansen, J. (2009). *An Introduction to Teacher Retirement Benefits*. NCPI Conference Paper Series No. 2009-01. Nashville, TN.
- Hess, F. and Squire, J. (2009). *"But the Pension Fund Was Just Sitting There..." The Politics of Teacher Retirement Plans*. NCPI Conference Paper Series No. 2009-09. Nashville, TN.
- Jacob, B., and Springer, M. (2007). *Teacher Attitudes on Pay for Performance: A Pilot Study*. NCPI Working Paper Series No. 2007-06. Nashville, TN.
- Koedel, C. (2009). *An Empirical Analysis of Teacher Spillover Effects in Secondary School*. NCPI Working Paper Series No. 2008-25. Nashville, TN.
- Koedel, C. (2008). *Teacher Quality and Dropout Outcomes in a Large, Urban School District*. NCPI Working Paper Series No. 2007-04. Nashville, TN.
- Koedel, C., and Betts, J. (2009a). *Value-Added to What? How a Ceiling in the Testing Instrument Influences Value-Added Estimation*. NCPI Working Paper Series No. 2008-21. Nashville, TN.
- Koedel, C., and Betts, J. (2009b). *Does Student Sorting Invalidate Value-Added Models of Teacher Effectiveness: An Extended Analysis of the Rothstein Critique*. NCPI Working Paper Series No. 2009-01. Nashville, TN.
- Koedel, C., and Betts, J. (2007). *Re-Examining the Role of Teacher Quality in the Educational Production Function*. NCPI Working Paper Series No. 2007-03. Nashville, TN.
- Koppich, J. (2008). *Toward a More Comprehensive Model of Teacher Pay*. NCPI Working Paper Series No. 2008-06. Nashville, TN.
- Kotlikoff, L. (2009). *Teacher Retirement Ponzi Schemes*. NCPI Conference Paper Series No. 2009-02. Nashville, TN.
- Lewis, J., and Springer, M. (2008) *Performance Incentives in Texas: Why Schools Chose Not to Participate*. NCPI Working Paper Series No. 2008-18. Nashville, TN.
- Lockwood, J., and McCaffrey, D. (2008). *Exploring Student Teacher Interactions in Longitudinal Data Sets*. NCPI Working Paper Series No. 2008-24. Nashville, TN.
- McCaffrey, D., Sass, T., and Lockwood, J. (2008). *The Intertemporal Stability of Teacher Effect Estimates*. NCPI Working Paper Series No. 2008-22. Nashville, TN.

- McCaffrey, D., Han, B., and Lockwood, J.R. (2008). *From Data to Bonuses: a Case Study of the Issues Related to Awarding Teachers Pay on the Basis of Their Students' Progress*. NCPI Working Paper Series No. 2008-14. Nashville, TN.
- Meyer, R., and Christian, M. (2008). *Value-Added and Other Methods for Measuring School Performance: An Analysis of Performance Measurement Strategies in Teacher Incentives Fund Proposals*. NCPI Working Paper Series No. 2008-17. Nashville, TN.
- Monahan, A. (2009). *Legal Limitations on Public Pension Plan Reform*. NCPI Conference Paper Series No. 2009-08.. Nashville, TN
- Muralidharan, K. and Sundararaman, V. (2008). *Teacher Incentives: Lessons From Andhra Pradesh, India*. NCPI Working Paper Series No. 2008-13. Nashville, TN.
- Neal, D. (2008). *Designing Incentive Systems for Schools*. NCPI Working Paper Series No. 2008-16. Nashville, TN.
- Nelson, S. (2008). *Performance-Based Pay in the Federal Government*. NCPI Working Paper Series No. 2008-05. Nashville, TN.
- Ni, S., Podgursky, M., and Ehlert, M. (2009). *Teacher Pension Incentives and Labor Market Behavior: Evidence from Missouri Administrative Teacher Data*. NCPI Conference Paper Series No. 2009-11. Nashville, TN.
- Podgursky, M. (2008). *Market-Based Pay Reforms for Public School Teachers*. NCPI Working Paper Series No. 2008-07. Nashville, TN.
- Podgursky, M., and Springer, M. (2006). *Teacher Performance Pay: A Review*. NCPI Working Paper Series No. 2006-01. Nashville, TN.
- Rothstein, R. (2008). *Holding Accountability to Account: How Scholarship and Experience in Other Fields Inform Exploration of Performance Incentives in Education*. NCPI Working Paper Series No. 2008-04. Nashville, TN.
- Ryan, J. (2008). *A Legal Perspective on Performance-Based Pay for Teachers*. NCPI Working Paper Series No. 2008-10. Nashville, TN.
- Sanders, W., Wright, S.P., Springer, M., and Langevin, W. (2008). *Do Teacher Effects Persist When Teachers Move to Schools With Different Socioeconomic Environments?* NCPI Working Paper Series No. 2008-20. Nashville, TN.
- Smith, E. and Guthrie, J. (2009). *Teacher Pension Preferences: Pilot Study Results*. NCPI Conference Paper Series No. 2009-14. Nashville, TN.
- Springer, M., Ballou, D., and Peng, A. (2008). *Impact of the Teacher Advancement Program on Student Test Score Gains: Findings From an Independent Appraisal*. NCPI Working Paper Series No. 2008-19. Nashville, TN.
- Springer, M.G., and Winters, M.A. (2009). *New York City's School-Wide Bonus Pay Program: Early Evidence From a Randomized Trial*. NCPI Working Paper Series No. 2009-02. Nashville, TN.
- Strauss, R. and Liu, J. (2009). *Patterns of Retirement and Return Employment of Pennsylvania's Professional School Personnel: 1984-2005*. NCPI Conference Paper Series No. 2009-07. Nashville, TN.
- Taylor, L., Springer, M., and Ehlert, M. (2008). *Characteristics and Determinants of Teacher-Designed Pay for Performance Plans: Evidence From Evaluations of Texas' Governor's Educator Excellence Grant (GEEG) Program*. NCPI Working Paper Series No. 2008-26. Nashville, TN.
- Tran, D., and Huang, E. (2009). *Early Career Teachers' Perceptions of Traditional Versus Innovative Benefits Packages*. NCPI Conference Paper Series No. 2009-15. Nashville, TN.
- Vigdor, J. (2008). *Teacher Salary Bonuses in North Carolina*. NCPI Working Paper Series No. 2008-03. Nashville, TN.

West, M., and Chingos, M. (2008). *Teacher Effectiveness, Mobility, and Attrition in Florida: A Descriptive Analysis*. NCPI Working Paper Series No. 2008-12. Nashville, TN.

Winters, M., Greene, J., Ritter, G., and Marsh, R. (2008). *The Effect of Performance-Pay in Little Rock, Arkansas on Student Achievement*. NCPI Working Paper Series No. 2008-02. Nashville, TN.

**Policy Briefs:**

National Center on Performance Incentives. (2008). *A Legal Perspective on Differential Pay for Teachers*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Characteristics and Determinants of Teacher-Designed Pay for Performance Plans: Evidence From Texas' Governor's Educator Excellence Grant (GEEG) Program*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Collective Bargaining in Education and Pay for Performance*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Designing Incentive Systems for Schools*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Do Teacher Effect Estimates Persist When Teachers Move to Schools With Different Socioeconomic Environments?* NCPI Policy Brief.

National Center on Performance Incentives. (2008). *From Data to Bonuses: a Case Study of the Issues Related to Awarding Teacher Pay on the Basis of Their Students' Performance*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Holding Accountability to Account: How Scholarship and Experience in Other Fields Inform Exploration of Performance Incentives in Education*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Market-Based Pay Reforms for Teachers*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Missouri's Teacher Career Ladder Program*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Performance Incentives in Texas: Why Schools Chose Not to Participate*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Performance-Based Pay in the Federal Government*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Teacher Attitudes About Performance Incentives in Texas: Early Reactions to the TEEG Program*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Teacher Attitudes About Performance Incentives in Texas: Early Reactions to the GEEG Program*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Teacher Attitudes on Pay for Performance: a Pilot Study*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Teacher Behaviors and Performance Incentives in Texas: Early Reactions to the GEEG Program*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Teacher Behaviors and Performance Incentives in Texas: Early Reactions to the TEEG Program*. NCPI Policy Brief. National Center on Performance Incentives. (2008). *Teacher Effectiveness, Mobility, and Attrition in Florida: a Descriptive Analysis*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Teacher Effectiveness, Mobility, and Attrition in Florida: a Descriptive Analysis*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Teacher Incentives in Developing Countries: Experimental Evidence From India*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Teacher Incentives in Developing Countries: Experimental Evidence From Kenya*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Teacher Performance Pay: A Review*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Teacher Salary Bonuses in North Carolina*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *The Design of Schools' Performance Incentive Programs in Texas: Findings From Year One of TEEG*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *The Design of Schools' Performance Incentive Programs in Texas: Findings From Year One of GEEG*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *The Effect of Performance-Pay in Little Rock, Arkansas on Student Achievement*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *The Politics of Teacher Pay Reform*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Toward a More Comprehensive Model of Teacher Pay*. NCPI Policy Brief.

National Center on Performance Incentives. (2008). *Value-Added and Other Methods for Measuring School Performance: An Analysis of Performance Measurement Strategies in Teacher Incentive Fund Proposals*. NCPI Policy Brief.

### **Research Brief**

Hansen, J., Podgursky, M., and Costrell, R. (2009). *Rethinking Teacher Retirement Benefit Systems*. NCPI Research Brief.

### **Video Lecture Series**

Booker, K. (2008). *Do Teacher Incentives Work? Evidence from the Missouri Career Ladder Program*. Available at [http://www.performanceincentives.org/lectures/2008conference.asp?video\\_id=7](http://www.performanceincentives.org/lectures/2008conference.asp?video_id=7)

Greene, J. (2008). *The Effect of Performance-Pay in Little Rock, Arkansas on Student Achievement*. Available at [http://www.performanceincentives.org/lectures/2008conference.asp?video\\_id=8](http://www.performanceincentives.org/lectures/2008conference.asp?video_id=8)

Jacob, B. (2008). *Teacher Attitudes on Pay for Performance: Evidence from Hillsborough County, Florida*. Available at [http://www.performanceincentives.org/lectures/2008conference.asp?video\\_id=4](http://www.performanceincentives.org/lectures/2008conference.asp?video_id=4)

McCaffrey, D. (2008). *From Data to Bonuses: A Case Study of the Issues Related to Awarding Teachers Pay on the Basis of Their Students' Progress*. Available at [http://www.performanceincentives.org/lectures/2008conference.asp?video\\_id=11](http://www.performanceincentives.org/lectures/2008conference.asp?video_id=11)

Meyer, R. (2008). *Value-Added and Other Methods for Measuring School Performance: An Analysis of Performance Measurement Strategies in Teacher Incentives Fund Proposals*. Available at [http://www.performanceincentives.org/lectures/2008conference.asp?video\\_id=9](http://www.performanceincentives.org/lectures/2008conference.asp?video_id=9)

Neal, D. (2008). *Designing Incentive Systems for Schools*. Available at [http://www.performanceincentives.org/lectures/2008conference.asp?video\\_id=10](http://www.performanceincentives.org/lectures/2008conference.asp?video_id=10)

Podgursky, M. (2008). *Market-Based Pay Reform for Public School Teachers*. Available at: [http://www.performanceincentives.org/lectures/2008conference.asp?video\\_id=2](http://www.performanceincentives.org/lectures/2008conference.asp?video_id=2)

Rothstein, R. (2008). *Holding Accountability to Account: How Scholarship and Experience in Other Fields Inform Exploration of Performance Incentives in Education*. Available at [http://www.performanceincentives.org/lectures/2008conference.asp?video\\_id=3](http://www.performanceincentives.org/lectures/2008conference.asp?video_id=3)

Springer, M. (2008). *Opening Remarks: Performance Incentives: Their Growing Impact on American K-12 Education*. Available at [http://www.performanceincentives.org/lectures/2008conference.asp?video\\_id=0](http://www.performanceincentives.org/lectures/2008conference.asp?video_id=0)

Springer, M. (2008). *Teacher Advancement Program: Findings from an Independent Appraisal*. Available at [http://www.performanceincentives.org/lectures/2008conference.asp?video\\_id=6](http://www.performanceincentives.org/lectures/2008conference.asp?video_id=6)

Taylor, L. (2008). *Lessons Learned: Evaluating the First Year of the GEEG and TEEG Programs*. Available at [http://www.performanceincentives.org/lectures/2008conference.asp?video\\_id=5](http://www.performanceincentives.org/lectures/2008conference.asp?video_id=5)

Teske, P., Ryan, J., Goldhaber, D., and Hannaway, J. (2008). *Legal and Political Dynamics of Pay for Performance*. Available at [http://www.performanceincentives.org/lectures/2008conference.asp?video\\_id=12](http://www.performanceincentives.org/lectures/2008conference.asp?video_id=12)

Weingarten, R. (2008). *Keynote Address for Performance Incentives: Their Growing Impact on American K-12 Education*. Available at [http://www.performanceincentives.org/lectures/2008conference.asp?video\\_id=1](http://www.performanceincentives.org/lectures/2008conference.asp?video_id=1)

#### **Other**

Ballou, D. (2009). *Pensions and Retirement Timing: Lessons from California*. 2009 conference rejoinder.

Forman, J. (2009). *Comments on Session V: Legal Framework and Governance*. 2009 conference rejoinder.

Greene, J. (2008). *The Effect of Performance-Pay in Little Rock, Arkansas on Student Achievement*. PowerPoint presentation available at <http://www.performanceincentives.org/lectures/slides/Greene.pdf>

Jacob, B. (2008). *Teacher Attitudes on Pay for Performance: Evidence from Hillsborough County, Florida*. PowerPoint presentation available at <http://www.performanceincentives.org/lectures/slides/Jacob.pdf>

Lamenzio, J. (2009). *Teacher Retirement Ponzi Schemes*. 2009 conference rejoinder.

McCaffrey, D. (2008). *From Data to Bonuses: A Case Study of the Issues Related to Awarding Teachers Pay on the Basis of Their Students' Progress*. PowerPoint presentation available at <http://www.performanceincentives.org/lectures/slides/McCaffrey.pdf>

National Center on Performance Incentives. (2008). *State-By-State-Resources: An Interactive Map of National, State, and Local Performance Incentive Programs*. [http://www.performanceincentives.org/statebystate\\_resources/state%20initiatives%20overview.pdf](http://www.performanceincentives.org/statebystate_resources/state%20initiatives%20overview.pdf)

Neal, D. (2008). *Designing Incentive Systems for Schools*. PowerPoint presentation available at <http://www.performanceincentives.org/lectures/slides/Neal.pdf>

Nelson, F. H. (2009). *Transform or Tweak: Concerns About the Financial Sustainability and Labor Market Effects of Teacher Retirement Systems*. 2009 conference rejoinder.

Podgursky, M. (2008). *Market-Based Pay Reform for Public School Teachers*. PowerPoint presentation available at <http://www.performanceincentives.org/lectures/slides/Podgursky.pdf>

Quinn, J. (2009). *Comments on Session IV: Labor Market Effects*. 2009 conference rejoinder.

Springer, M. (2008). *Opening Remarks: Performance Incentives: Their Growing Impact on American K-12 Education*. PowerPoint presentation available at <http://www.performanceincentives.org/lectures/slides/SpringerOpening.pdf>

Springer, M. (2008). *Teacher Advancement Program: Findings from an Independent Appraisal*. PowerPoint presentation available at <http://www.performanceincentives.org/lectures/slides/Springer.pdf>

Taylor, L. (2008). *Lessons Learned: Evaluating the First Year of the GEEG and TEEG Programs*. PowerPoint presentation available at <http://www.performanceincentives.org/lectures/slides/Taylor.pdf>

Teske, P., Ryan, J., Goldhaber, D., and Hannaway, J. (2008). *Legal and Political Dynamics of Pay for Performance*. PowerPoint presentation available at <http://www.performanceincentives.org/lectures/slides/Teske.pdf>

**Other**

National Center on Performance Incentives. (2008). *State-By-State-Resources: An Interactive Map of National, State, and Local Performance Incentive Programs*.  
[http://www.performanceincentives.org/statebystate\\_resources/state%20initiatives%20overview.pdf](http://www.performanceincentives.org/statebystate_resources/state%20initiatives%20overview.pdf)

**Institution:** Urban Institute

**Principal Investigator:** Jane Hannaway

**Project Title:** Center for Applied Data Analysis in Education Research (CALDER)

**Grant:** R305A06018

**Journal Articles:**

Clotfelter, C.T., Ladd, H.F., and Vigdor, J.L. (2007). High Poverty Schools and the Distribution of Teachers and Principals. *North Carolina Law Review*, 85(5): 1345-1380.

Clotfelter, C.T., Ladd, H.F., and Vigdor, J.L. (forthcoming). Teacher Credentials and Student Achievement: Longitudinal Analysis With Student Fixed Effects. *Economics of Education Review*.

Clotfelter, C.T., Glennie, E., Ladd, H.F., and Vigdor, J.L. (2006). Teacher Bonuses and Teacher Retention in Low Performing Schools: Evidence From the North Carolina \$1,800 Teacher Bonus Program. *Public Finance Review*.

Clotfelter, C.T., Ladd, H.F., and Vigdor, J.L. (2006). Teacher-Student Matching and the Assessment of Teacher Effectiveness. *Journal of Human Resources*, 41(4): 778-820.

Clotfelter, C.T., Ladd, H.F., Vigdor, J.L., and Wheeler, J. (forthcoming). High Poverty Schools and the Distribution of Teachers and Principals. *North Carolina Law Review*.

Clotfelter, C.T., Ladd, H.F., and Vigdor, J.L. (2006). Federal Oversight, Local Control, and the Specter of 'Resegregation' in Southern Schools. *American Law and Economics Review*, 8(2): 347-389.

Cook, P., Maccoun, R., Muschkin, C., and Vigdor, J.L. (forthcoming). The Negative Impacts of Starting Middle School in Sixth Grade. *Journal of Policy Analysis and Management*.

Figlio, D. (forthcoming). Boys Named Sue: Disruptive Children and Their Peers. *Education Finance and Policy*.

Figlio, D., and Kenny, L. (forthcoming). Individual Teacher Incentives and Student Performance. *Journal of Public Economics*.

Figlio, D., and Downes, T. (forthcoming). Tax and Expenditure Limits, School Finance and School Quality. *Handbook of Education Finance and Policy*.

Figlio, D., and Ladd, H.F. (forthcoming). School Accountability and Student Achievement. *Handbook of Education Finance and Policy*.

Goldhaber, D. (forthcoming). Everyone's Doing It, But What Does Teacher Testing Tell Us About Teacher Effectiveness? *Journal of Human Resources*.

Goldhaber, D., and Anthony, E. (2007). Can Teacher Quality Be Effectively Assessed? National Board Certification as a Signal of Effective Teaching. *Review of Economics and Statistics*, 89(1): 134-150.

Goldhaber, D., Cramer, L., and Choi, H. A. (2007). Descriptive Analysis of the Distribution of NBPTS Certified Teachers in North Carolina. *Economics of Education Review*, 26(2): 160-172.

Goldhaber, D. (2006). National Board Teachers Are More Effective, But Are They in the Classrooms Where They're Needed the Most? *Education Finance and Policy*, 1(3).

Hanushek, E.A., and Rivkin, S. (2007). Pay, Working Conditions, and Teacher Quality. In S. Loeb, C. Rouse, and A. Shorris (Eds.), *Excellence in the Classroom: Policies to Improve the Teacher Workforce*, 17(1).

Wheeler, J., and Glennie, E. (2007). Can Pay Incentives Improve the Recruitment and Retention of Teachers in America's Hard-To-Staff Schools? *Terry Sanford Institute of Public Policy*.

Retrieved from <http://www.childandfamilypolicy.duke.edu/publications/policybriefs/files/edureform/incentives.pdf>.

Wyckoff, J. with Boyd, D., Lankford, H., and Loeb, S. (forthcoming). The Impact of Assessment and Accountability on Teacher Recruitment and Retention: Are There Unintended Consequences? *Public Finance Review*.

#### **Book Chapters:**

Figlio, D., and Roth, J. (forthcoming). The Effects of Pre-Kindergarten Participation On Behavioral Outcomes. In J. Gruber (Ed.), *The Economics of Disadvantaged Youth*. University of Chicago Press.

Vigdor, J. and Nechyba, T.S. (2007). Peer Effects in North Carolina Public Schools. In P.E. Peterson and L. Wößmann (Eds.), *Schools and the Equal Opportunity Problem*. MIT Press.

Wyckoff, J. (forthcoming). Closing the Student Achievement Gap by Increasing the Effectiveness of Teachers in Low-Performing Schools. In H. Ladd and E. Fiske with D. Boyd and H. Lankford (Eds.), *Handbook of Research in Education Finance and Policy*.

Wyckoff, J. with Boyd, D., Goldhaber, D., and Lankford, H. (2007). The Role of Teacher Preparation and Certification in Improving the Quality of K-12 Teachers. In S. Loeb, C. Rouse and A. Shorris (Eds.), *Excellence in the Classroom: Policies to Improve the Teacher Workforce* (Vol. 17, pp. 45-68).

#### **Working Papers:**

Bifulco, R., Ladd, H.F., and Ross, S. (2008). *Public School Choice and Integration: Evidence From Durham, North Carolina*. CALDER Working Paper 14.

Boyd, D., Lankford, H., Loeb, S., Rockoff, J., and Wyckoff, J. (2007). *The Narrowing Gap in New York City Teacher Qualifications and Its Implications For Student Achievement in High Poverty Schools*. CALDER Working Paper 10.

Burke, M.A., and T.R. (2008). *Classroom Peer Effects and Student Achievement*. CALDER Working Paper 18.

Clotfelter, C., Ladd, H.F., and Vigdor, J. (2007). *Teacher Credentials and Student Achievement in High School: a Cross-Subject Analysis With Student Fixed Effects*. CALDER Working Paper 11.

Clotfelter, C.T., Glennie, E., Ladd, H.F., and Vigdor, J.L. (2006). *Would Higher Salaries Keep Teachers in High-Poverty Schools? Evidence From a Policy Intervention in North Carolina*. National Bureau of Economic Research Working Paper #12285. Presently Under Consideration for Publication in the Journal of Public Economics.

Clotfelter, C.T., Ladd, H.F., and Vigdor, J.L. (2007). *How and Why Do Teacher Credentials Matter for Student Achievement?* CALDER Working Paper 2.

Clotfelter, C.T., Ladd, H.F., and Vigdor, J.L. (2008). *School Segregation Under Color-Blind Jurisprudence: The Case of North Carolina*. CALDER Working Paper 16.

Clotfelter, C.T., Ladd, H.F., Vigdor, J.L., and Wheeler, J. (2007). *High Poverty Schools and the Distribution of Teachers and Principals*. CALDER Working Paper 1.

Clotfelter, C.T., Ladd, H.F., and Vigdor, J.L. (2007). *How and Why Do Teacher Credentials Matter for Student Achievement?* National Bureau of Economic Research Working Paper No. 12828.

Costrell, R.M., and Podgursky, M. (2007). *Efficiency and Equity in the Time Pattern of Teacher Pension Benefits: An Analysis of Four State Systems*. CALDER Working Paper 6.

Donovan, C., Figlio, D., and Rush, M. (2007). *Cramming: The Effects of School Accountability on College-Bound Students*. CALDER Working Paper 8.

Figlio, D., and Kenny, L. (2007). *Individual Teacher Incentives and Student Performance*. CALDER Working Paper 7.

Goldhaber, D. (2007). *Everyone's Doing It, But What Does Teacher Testing Tell Us About Teacher Effectiveness?* CALDER Working Paper 9.

Goldhaber, D., Gross, B., and Player, D. (2007). *Are Public Schools Really Losing Their Best? Assessing the Career Transitions Of Teachers and Their Implications for the Quality of the Teacher Workforce*. CALDER Working Paper 12.

Hanushek, E.A., and Rivkin, S. (2006). *School Quality and the Black-White Achievement Gap*. NBER Working Paper #12651.

Harris, D.N., and Sass, T.R. (2007). *Teacher Training, Teacher Quality and Student Achievement*. CALDER Working Paper 3.

Harris, D.N., and Sass, T.R. (2007). *The Effects of NBPTS-Certified Teachers on Student Achievement*. CALDER Working Paper 4.

Podgursky, M., and Ehlert, M. (2007). *Teacher Pensions and Retirement Behavior: How Teacher Pension Rules Affect Behavior, Mobility, and Retirement*. CALDER Working Paper 5.

Rouse, C.E., Hannaway, J., Goldhaber, D., and Figlio, D. (2007). *Feeling the Florida Heat?: How Low-Performing Schools Respond to Voucher and Accountability Pressure*. CALDER Working Paper 13.

Vigdor, J., and Ludwig, J. (2007). *Segregation and the Black-White Test Score Gap*. National Bureau of Economic Research Working Paper No. 12988.

Vigdor, J.L. (2008). *Teacher Salary Bonuses in North Carolina*. CALDER Working Paper 15.

Xu, Z., Hannaway, J., and Taylor, C. (2008). *Making a Difference?: The Effects of Teach for America in High School*. CALDER Working Paper 17.

**Research Notes:**

Sass, T.R., and Cartwright, S. (2008) *High School Diploma and GED Attainment in Florida*. CALDER Research Note 1.

**Policy Briefs:**

Boyd, D., Lankford, H., Loeb, S., Rockoff, J., and Jwyckoff, J. *The Narrowing Gap in New York City Teacher Qualifications and Implications for Student Achievement in High-Poverty Schools*. Policy Brief 6.

Hanushek, E.A., and Rivkin, S.G. *Do Disadvantaged Urban Schools Lose Their Best Teachers?* Policy Brief 7.

Haskins, R., and Loeb, S. A. (2007). *Plan to Improve the Quality of Teaching In American Schools*. The Future of Children Policy Brief.

NC Education Research Data Center and SERVE. (2006). *Teacher Retention at Low Performing Schools*.

O'Brien, D. *The Texas FERPA Story*. Policy Brief 5.

Sass, T.R. *The Stability of Value-Added Measures of Teacher Quality and Implications for Teacher Compensation Policy*. Policy Brief 4.

Goldhaber, D., and Hansen, M. *Assessing the Potential of Using Value-Added Estimates of Teacher Job Performance for Making Tenure Decisions*. Policy Brief 3.

Boyd, D., Grossman, P., Lankford, H., Loeb, S., and Wyckoff, J. *Overview of Measuring Effect Sizes: The Effect of Measurement Error*. Policy Brief 2.

Rivkin, S.G. *Value-Added Analysis and Education Policy*. Policy Brief 1.

**Institution:** University of Virginia

**Principal Investigator:** Robert Pianta

**Project Title:** National Research and Development Center on Early Childhood Development and Education (NCRECE)

**Grant:** R305A060021

**Journal Articles:**

Burchinal, M. (in press). How Measurement Error Affects the Interpretation and Understanding of Effect Sizes. *Child Development Perspectives*.

Pianta, R.C., Mashburn, A.J., Downer, J.T., Hamre, B.K., and Justice, L. (in press). Effects of Web-Mediated Professional Development Resources on Teacher-Child Interactions in Pre-Kindergarten Classrooms. *Early Childhood Research Quarterly*.

Vu, J.A., Jeon, H-J, and Howes, C. (2008). Formal Education, Credential, or Both: Early Childhood Program Practices. *Early Education and Development*, 19: 479-504.

**Book Chapters:**

Grissmer, D.W., and Eiseman, E. (in press). Can Gaps in the Quality of Early Environment and Non-Cognitive Skills Help Explain Persisting Black-White Achievement Gaps? In J. Waldfogel and K. Magnuson (Eds.), *Steady Gains and Stalled Progress: Inequality and the Black-White Test Score Gap*. Russell Sage Foundation.

Pianta, R.C., and Hadden, D.S. (in press). What We Know About the Quality of Early Education Settings: Implications for Research on Teacher Preparation and Professional Development. In *State Education Standard*. Alexandria, VA: National Association of State Boards of Education.

**Books:**

Pianta, R.C., and Howes, C. (Eds.), (in press). *The Promise of Pre-Kindergarten*. Baltimore: Brookes Publishing Co.

**White Papers:**

Howes, C., Pianta, R., Bryant, D., Hamre, B., Downer, J., and Soliday-Hong, S. (2008). *NCRECE White Paper - Ensuring Effective Teaching in Early Childhood Education through Linked Professional Development Systems, Quality Rating Systems and State Competencies: The Role of Research in an Evidence-Driven System*.

## Preschool Curriculum Evaluation Research

Preschool Curriculum Evaluation Research Consortium (2008). *Effects of Preschool Curriculum Programs on School Readiness* (NCER 2008-2009). U.S. Department of Education, National Center for Education Research. Washington, DC: U.S. Government Printing Office.

### FY 2002

**Institution:** Vanderbilt University

**Principal Investigator:** Dale Farran

**Project Title:** Focus in Early Childhood Curricula: Helping Children Transition to School

**Grant:** R305J020020

Dickinson, D., Watson, B., and Farran, D. (2008). It's in the Details: Approaches to Describing and Improving Preschool Classrooms. In C. Vukelich and L. Justice (Eds.), *Achieving Excellence in Preschool Literacy Instruction* (pp. 136-162). New York: Guilford Press.

Farran, D.C. (2007). *Is Education the Way Out of Poverty? A Reflection on the 40th Anniversary of Head Start* (With Commentaries by James King and Bernard L. Charles), Center for Research on Child Development and Learning, No. 3.

Varol, F., and Farran, D. (2006). Early Mathematical Growth: How to Support Young Children's Mathematical Development, *Early Childhood Education Journal*.

Farran, D.C., Aydogan, K., and Lipsey, M.W. (2005). Preschool Classroom Environments and the Quantity and Quality of Children's Literacy and Language Behaviors. In David K. Dickinson and Susan B. Neuman (Eds.), *Handbook of Early Literacy Research* (Vol. 2, pp. 257-268). New York: Guilford Press.

**Institution:** University of North Florida

**Principal Investigator:** Cheryl Fountain

**Project Title:** Evaluation of the Early Literacy and Learning Model (ELLM): a Curriculum and Instructional Support System

**Grant:** R305J020040

Preschool Curriculum Evaluation Research Consortium (2008). *Effects of Preschool Curriculum Programs on School Readiness* (NCER 2008-2009). U.S. Department of Education, National Center for Education Research. Washington, DC: U.S. Government Printing Office.

**Institution:** University of North Carolina at Charlotte

**Principal Investigator:** Richard Lambert

**Project Title:** Evaluation of the Effects of Creative Curriculum on Classroom Quality and Child Outcomes in Head Start

**Grant:** R305J020039

Preschool Curriculum Evaluation Research Consortium (2008). *Effects of Preschool Curriculum Programs on School Readiness* (NCER 2008-2009). U.S. Department of Education, National Center for Education Research. Washington, DC: U.S. Government Printing Office.

**Institution:** University of Texas Health Science Center

**Principal Investigator:** Susan Landry

**Project Title:** Evaluation of Pre-Kindergarten Curricula in Head Start and Public School Settings

**Grant:** R305J020014

Assel, M., Landry, S.H., Swank, P.R., and Gunnewig, S. (2007). An Evaluation of Curriculum, Setting, and Mentoring on the Performance of Children Enrolled in Pre-Kindergarten. *Reading and Writing: An Interdisciplinary Journal*, 20: 463-494.

Assel, M.A., Landry, S.H., and Swank, P.R. (2007). Are Early Childhood Classrooms Preparing Children to Be School Ready?: The CIRCLE Teacher Behavior Rating Scale. In L. Justice and C. Vukelich (Eds.), *Achieving Excellence in Preschool Literacy Instruction* (pp. 120-135). New York: The Guilford Press.

**Institution:** Purdue University

**Principal Investigator:** Douglas Powell

**Project Title:** Impact of the Project Approach on Children's School Readiness and School Achievement

**Grant:** R

Powell, D.R., Burchinal, M.R., File, N., and Kontos, S.J. (2008). An Eco-Behavioral Analysis of Children's Engagement in Public School Preschool. *Early Childhood Research Quarterly*, 23: 108-123.

**Institution:** University of New Hampshire

**Principal Investigator:** Jeff Priest

**Project Title:** Granite Ladders: An Experimental Evaluation of an Early Literacy Curriculum for New Hampshire's Preschoolers

**Grant:** R305J020027

Preschool Curriculum Evaluation Research Consortium (2008). *Effects of Preschool Curriculum Programs on School Readiness* (NCER 2008-2009). U.S. Department of Education, National Center for Education Research. Washington, DC: U.S. Government Printing Office.

**Institution:** University of California at Berkeley

**Principal Investigator:** Prentice Starkey

**Project Title:** a Longitudinal Study of the Effects of a Pre-Kindergarten Mathematics Curriculum on Low-Income Children's Mathematical Knowledge

**Grant:** R305J020026

Clements, D.H., and Sarama, J. (2005). Young Children's Abstract Mathematical Thinking. *Hong Kong Journal of Early Education*, 4(1): 5-10.

Clements, D.H., and Sarama, J (Eds.), (2004). Learning Trajectories in Mathematics Education [Special Issue]. *Mathematical Thinking and Learning*, 6(2).

Klein, A., Starkey, P., Sarama, J., Clements, D.H., and Iyer, R. (2008). Effects of a Pre-Kindergarten Mathematics Intervention: a Randomized Experiment. *Journal of Research on Educational Effectiveness*, 1: 155-178.

Sarama, J., and Clements, D.H. (2006). Mathematics, Young Students, and Computers: Software, Teaching Strategies and Professional Development. *The Mathematics Educator*, 9(2): 16-38.

Starkey, P., and Klein, A (Eds.). (in press). *Curricular Intervention in Public Preschool Programs*. New York: Teachers College Press.

Starkey, P., Klein, A., and Nishida, T. (in press). Effects of a Pre-Kindergarten Mathematics Curriculum on Classroom Quality and Children's Development. In P. Starkey and A. Klein (Eds.), *Curricular Intervention in Public Preschool Programs*.

Starkey, P., and Klein, A. (2008). Sociocultural Influences on Young Children's Mathematical Knowledge. In O.N. Saracho and B. Spodek (Eds.), *Contemporary Perspectives on Mathematics in Early Childhood Education* (pp. 253-276). Charlotte, NC: Information Age Publishing.

Starkey, P. (2007). Fostering the Learning of Mathematics in Low-Income Children. *Dialog Briefs*, 10(2): 1-7. Alexandria, VA: National Head Start Association.

Starkey, P., Klein, A., Clements, D., and Sarama, J. (2006). Enhancing Low-Income Children's School Readiness through a Pre-Kindergarten Mathematics Curriculum. In F. Lamb-Parker (Ed.), *Proceedings of Head Start's Eighth National Research Conference*. Washington, D.C.: Administration for Children and Families.

Starkey, P., Klein, A., Clements, D., and Sarama, J. (2004). A Longitudinal Study of the Effects of a Pre-Kindergarten Mathematics Curriculum on Low-Income Children's Mathematical Knowledge. In F. Lamb-Parker (Ed.), *Proceedings of Head Start's Seventh National Research Conference: Promoting Positive Development in Young Children*. Washington, D.C.: Administration for Children and Families.

### FY 2003

**Institution:** Success for All Foundation

**Principal Investigator:** Bette Chambers

**Project Title:** Randomized Evaluation of Curiosity Corner With Follow-Up Into SFA and Control Elementary Programs

**Grant:** R305J030138

Chambers, B., Cheung, A., and Slavin, R.E. (2006). Effective Preschool Programs for Children at Risk of School Failure: A Best-Evidence Synthesis. In B. Spodek (Ed.), *Handbook of Research on the Education of Young Children* (pp. 347-360). New York: Erlbaum.

Chambers, B. (in press). Curiosity Corner: Getting All Children Ready for School. *Early Childhood Services*.

**Institution:** University of California at Berkeley

**Principal Investigator:** Anne Cunningham

**Project Title:** A Longitudinal Study of the Effectiveness of a Pre-K Multisensory Literacy Curriculum

**Grant:** R305J030037

Cunningham, A.E. (Ed.). (in press). Perspectives on Teachers' Disciplinary Knowledge of Reading Processes, Development, and Pedagogy. *Special Issue: Reading and Writing: An Interdisciplinary Journal*.

Cunningham, A.E., Zibulsky, J., and Callahan, M. (in press). Starting Small: Building Preschool Teacher Knowledge that Supports Early Literacy Development. *Special Issue on Teacher Knowledge: Reading and Writing: An Interdisciplinary Journal*.

Joshi, M. and Cunningham, A.E. (Eds.). (in press). Teacher Knowledge and Link to Children's Learning. *Special Issue: Journal of Learning Disabilities*.

Cunningham, A.E., Zibulsky, J., Stanovich, K.E., and Stanovich, P.K. (in press). How Teachers Would Spend Their Time Teaching Language Arts: The Mismatch Between Self-Reported and Best Practices. *Journal of Learning Disabilities*.

Cunningham, A.E., Nathan, R., and Schmidt, K. (in press). Orthographic Processing: Issues and Relationships to Phonological and Lexical Processing in Beginning Word Recognition. In M. Kamil, P.D. Pearson (Eds.), *Handbook of Reading Research*, 4.

Cunningham, A.E. (2008). Reading Aloud to Students. *Encyclopedia of Cross-Cultural School Psychology*.

Cunningham, A.E. (2008). Children Literature. *Encyclopedia of Cross-Cultural School Psychology*.

Cunningham, A.E. (2008). Teaching Reading. *Encyclopedia of Cross-Cultural School Psychology*.

**Institution:** University of Virginia

**Principal Investigator:** Laura Justice

**Project Title:** Evaluation of the Language-Focused Curriculum

**Grant:** R305J030084

Justice, L.M., Cottone, E.A., Mashburn, A., and Rimm-Kaufman, S.E. (2008). Relationships Between Teachers and Preschoolers Who Are at Risk: Contribution of Children's Language Skills, Temperamentally-Based Attributes, and Gender. *Early Education and Development*, 19: 1-22.

Justice, L.M., Mashburn, A., Pence, K., and Wiggins, A. (2008). Experimental Evaluation of a Comprehensive Language-Rich Curriculum in At-Risk Preschools. *Journal of Speech, Language, and Hearing Research*, 51: 1-19.

Justice, L.M., Pence, K., Bowles, R., and Wiggins, A.K. (2006). An Investigation of Four Hypotheses Concerning the Order by Which 4-Year-Old Children Learn the Alphabet Letters. *Early Childhood Research Quarterly*, 21: 374-389.

Massey, S., Pence, K.L., Justice, L.M., and Bowles, R.P. (2008). Abstract Questioning in the Preschool Classroom. *Early Education and Development*, 19: 340-360.

McGinty, A., Justice, L.M., and Rimm-Kaufman, S.E. (2008). Sense of School Community for Preschool Teachers Serving At-Risk Pupils. *Early Education and Development*, 19: 361-384.

Pence, K., Justice, L.M., and Wiggins, A. (2008). Preschool Teachers' Fidelity of Implementation for a Language-Rich Preschool Curriculum. *Language, Speech, and Hearing Services in Schools*, 39: 1-14.

Pence, K., Beckman, A., Justice, L.M., and Bowles, R. (in press). Preschoolers' Exposure to Language Stimulation in Classrooms Serving At-Risk Children: The Contribution of Group Size and Activity Context. *Early Education and Development*.

Rudasill, K.M., Rimm-Kaufman, S.E., Justice, L.M., and Pence, K. (2006). Temperament and Language Skills as Predictors of Teacher-Child Relationship Quality in Preschool. *Early Education and Development*, 17: 271-291.

**Institution:** Florida State University

**Principal Investigator:** Christopher Lonigan

**Project Title:** Evaluating the Effectiveness of Preschool Literacy Curriculum for Children At-Risk

**Grant:** R305J030093

Preschool Curriculum Evaluation Research Consortium. (2008). *Effects of Preschool Curriculum Programs on School Readiness* (NCER 2008-2009). U.S. Department of Education, National Center for Education Research. Washington, DC: U.S. Government Printing Office.

**Institution:** University of Missouri

**Principal Investigator:** Kathy Thornburg

**Project Title:** Project Construct: A Catalyst for Early Achievement

**Grant:** R305J030103

Preschool Curriculum Evaluation Research Consortium. (2008). *Effects of Preschool Curriculum Programs on School Readiness* (NCER 2008-2009). U.S. Department of Education, National Center for Education Research. Washington, DC: U.S. Government Printing Office.

## Reading and Writing

FY 2002

**Institution:** Ohio State University

**Principal Investigator:** Ian Wilkinson

**Project Title:** Group Discussions as a Mechanism for Promoting High-Level Comprehension of Text

**Grant:** R305G02075

Murphy, P.K., Wilkinson, I.A.G., Soter, A.O., Hennessey, M.N., and Alexander, J.F. (2009). Examining the Effects of Classroom Discussion on Students' High-Level Comprehension of Text: a Meta-Analysis. *Journal of Educational Psychology*, 101(3): 740-764.

Murphy, P.K. (2007). The Eye of the Beholder: The Interplay of Social and Cognitive Components in Change. *Educational Psychologist*, 42: 41-53.

Soter, A.O. (2007). The Use of Discussion as a Pedagogical Tool in the University Context. In Donnermeyer, J. (Ed.), *Talking About Teaching: Essays by Members of the Ohio State University Academy of Teaching* (pp. 30-43). Columbus, Ohio.

Soter, A.O. (2008). Engaging Readers: Variations on Reader Response. In Soter, A.O., Faust, M., and Rogers, T (Eds.), *Interpretive Play: Using Critical Perspectives to Teach Young Adult Literature* (pp.33-36). Norwood, MA: Christopher-Gordon Publishers.

Soter, A.O., Connors, S., and Rudge, L. (2008). Use of a Coding Manual When Providing a Meta-Interpretation of Internal-Validity Mechanisms and Demographic Data Used in Qualitative Research. *Journal of Ethnographic and Qualitative Research*, 2: 269-280.

Soter, A.O., Wilkinson, I.A.G., Murphy, P.K., Rudge, L., Reninger, K., and Edwards, M. (in press). What the Discourse Tells Us: Talk and Indicators of High-Level Comprehension. *International Journal of Educational Research*.

Wilkinson, I.A.G. (2009). Discussion Methods. In E.M., Anderman and L.H., Anderman (Eds.), *Psychology of Classroom Learning: An Encyclopedia* (pp. 330-336). Detroit, MI: Gale/Cengage.

Wilkinson, I.A.G., and Hye Son, E. (2009). Questioning. In E.M., Anderman and L.H., Anderman (Eds.), *Psychology of Classroom Learning: An Encyclopedia* (pp. 723-728). Detroit, MI: Gale/Cengage.

Wilkinson, I.A.G., Soter, A.O., and Murphy, P.K. (in press). Developing a Model of Quality Talk About Literary Text. In M.G. McKeown and L. Kucan (Eds.), *Bringing Reading Researchers to Life: Essays in Honor of Isabel L. Beck*. NY: Guilford Press.

**Institution:** Pacific Institutes for Research

**Principal Investigator:** Scott Baker

**Project Title:** The Story Read Aloud Project: The Development of an Innovative Instructional Approach to Promote Comprehension and Vocabulary in First Grade Classrooms

**Grant:** R305G020057

Santoro, L.E., Chard, D.J., Howard, L., and Baker, S.K. (2008). Making the Very Most of Classroom Read-Alouds to Promote Comprehension and Vocabulary. *Reading Teacher*, 61(5): 396-408.

**Institution:** University of Colorado

**Principal Investigator:** Thomas Landauer

**Project Title:** Research on and With Novel Educational Technologies for Comprehension

**Grant:** R305G02027

Dennis, S. (2005). An Exemplar-Based Approach to Unsupervised Parsing. In B.G. Bara, L. Barsalou and M. Bucciarelli (Eds.), *Proceedings of the 27th Annual Conference of the Cognitive Science Society* (pp. 583-588). Hillsdale, NJ: Erlbaum.

Dennis, S. (2007). Introducing Word Order in an LSA Framework. In T. Landauer, D. McNamara, S. Dennis and W. Kintsch (Eds.), *Handbook of Latent Semantic Analysis* (pp. 449-466). Mahwah, NJ: Erlbaum.

Doxas, I., Dennis, S., and Oliver, W. (2007). The Dimensionality of Language. In D.S. McNamara and J.G. Trafton (Eds.), *Proceedings of the 29th Annual Conference of the Cognitive Science Society* (pp. 227-232). New York: Erlbaum.

Kintsch, W., McNamara, D.S., Dennis, S., and Landauer, T.K. (2007). LSA and Meaning: in Theory and Application. In T. Landauer, D. McNamara, S. Dennis and W. Kintsch (Eds.), *Handbook of Latent Semantic Analysis* (pp. 467-480). Mahwah, NJ: Erlbaum.

Landauer, T.K. (2007). LSA as a Theory of Meaning. In T. Landauer, D. McNamara, S. Dennis and W. Kintsch (Eds.), *Handbook of Latent Semantic Analysis* (pp. 3-35). Mahwah, NJ: Erlbaum.

Steyvers, M., Griffiths, T.L., and Dennis, S. (2006). Probabilistic Inference in Human Semantic Memory. *Trends in Cognitive Sciences*, 10(7): 327-334.

**Institution:** University of Memphis

**Principal Investigator:** Danielle McNamara

**Project Title:** Coh-Metrix: Automated Cohesion and Coherence Scores to Predict Text Readability and Facilitate Comprehension

**Grant:** R305G020018

Best, R.M., Floyd, R.G., and McNamara, D.S. (2008). Differential Competencies Contributing to Children's Comprehension of Narrative and Expository Texts. *Reading Psychology*, 29: 137-164.

Bruss, M., Albers, M., and McNamara, D.S. (2004). Changes in Scientific Articles Over Two Hundred Years: a Coh-Metrix Analysis. *Proceedings of the 22nd Annual International Conference on Computer Documentation*. Memphis: ACM Press.

Cai, Z., McNamara, D.S., Louwerse, M., Hu, X., Rowe, M., and Graesser, A.C. (2004). NLS: Non-Latent Similarity Algorithm. In K. Forbus, D. Gentner, T. Regier (Eds.), *Proceedings of the 26th Annual Meeting of the Cognitive Science Society* (pp. 180-185). Mahwah, NJ: Erlbaum.

Crossley, S.A., McCarthy, P.M., Louwerse, M., and McNamara, D.S. (2007). Linguistic Analysis of Simplified and Authentic Texts. *Modern Language Journal*, 91: 15-30.

Dufty, D.F., McNamara, D., Louwerse, M., Cai, Z., Graesser, A.C. (2004). Automated Evaluation of Aspects of Document Quality. *Proceedings of the 22nd Annual International Conference on Documentation*. Memphis: ACM Press.

Hempelmann, C.F., Dufty, D., McCarthy, P.M., Graesser, A.C., Cai, Z., and McNamara, D.S. (2005). Using LSA to Automatically Identify Givenness and Newness of Noun Phrases in Written Discourse. *Proceedings of the 27th Annual Meeting of the Cognitive Science Society*.

Hempelmann, C.F., Rus, V., Graesser, A.C., and McNamara, D.S. (2006). Evaluating State-Of-The-Art Treebank-Style Parsers for Coh-Metrix and Other Learning Technology Environments. *Natural Language Engineering Special Issue: Building Educational Applications Using Natural Language Processing* 12(2): 131-144.

Graesser, A.C., Hu, X., and McNamara, D.S. (2005). Computerized Learning Environments that Incorporate Research in Discourse Psychology, Cognitive Science, and Computational Linguistics. In A.F. Healy (Ed.), *Experimental*

*Cognitive Psychology and Its Applications: Festschrift in Honor of Lyle Bourne, Walter Kintsch, and Thomas Landauer* (pp. 183-194). Washington, D.C.: American Psychological Association.

Graesser, A.C., and Petschonek, S. (2005). Automated Systems that Analyze Text and Discourse: QUAID, Coh-Metrix, and Autotutor. In W.R. Lenderking and D. Revicki (Eds.), *Advancing Health Outcomes Research Methods and Clinical Applications*. Mclean, VA: Degnon Associates.

Graesser, A., Louwerse, M., McNamara, D., Olney, A., Cai, Z., and Mitchell, H. (2007). Inference Generation and Cohesion in the Construction of Situation Models: Some Connections With Computational Linguistics. In F. Schmalhofer and C.A. Perfetti (Eds.), *Higher Level Language Processes in the Brain: Inference and Comprehension Processes* (pp. 289 - 310). Mahwah, NJ: Erlbaum.

Graesser, A.C., McNamara, D.S., Louwerse, M.M., and Cai, Z. (2004). Coh-Metrix: Analysis of Text on Cohesion and Language. *Behavioral Research Methods, Instruments and Computers*, 36: 193-202.

Graesser, A.C., Jeon, M., Yan, Y., and Cai, Z. (2007). Discourse Cohesion in Text and Tutorial Dialogue. *Information Design Journal* Special Issue: Discourse, Cognition and Communication, 15: 199-213.

Duran, N.D.; McCarthy, P.M.; Graesser, A.C., and McNamara, D. (2007). Using Temporal Cohesion to Predict Temporal Coherence in Narrative and Expository Texts. *Behavior Research Methods*, 39: 212-223.

Louwerse, M.M., McCarthy, P.M., McNamara, D.S., and Graesser, A.C. (2004). Variation in Language and Cohesion Across Written and Spoken Registers. In K. Forbus, D. Gentner, T. Regier (Eds.), *Proceedings of the 26th Annual Meeting of the Cognitive Science Society* (pp. 843-848). Mahwah, NJ: Erlbaum.

McNamara, D.S., Ozuru, Y., Graesser, A.C., and Louwerse, M. (2006). Validating Coh-Metrix. In R. Sun and N. Miyake (Eds.), *Proceedings of the 28th Annual Conference of the Cognitive Science Society* (p. 573). Mahwah, NJ: Erlbaum.

McNamara, D.S., Cai, Z., and Louwerse, M.M. (2007). Optimizing LSA Measures of Cohesion. In T. Landauer, D.S., McNamara, S. Dennis, and W. Kintsch (Eds.), *Handbook of Latent Semantic Analysis* (pp. 379-400). Mahwah, NJ: Erlbaum.

McNamara, D.S., Floyd, R.G., Best, R., and Louwerse, M. (2004). World Knowledge Driving Young Readers' Comprehension Difficulties. In Y.B. Yasmin, W.A., Sandoval, N. Enyedy, A.S. Nixon, and F. Herrera (Eds.), *Proceedings of the Sixth International Conference of the Learning Sciences: Embracing Diversity in the Learning Sciences* (pp. 326-333). Mahwah, NJ: Erlbaum.

O'Reilly, T., and McNamara, D.S. (in press). Good Texts Can Be Better for Active Readers. Text Coherence Effects: Interactions of Prior Knowledge and Reading Skill. *Discourse Processes*.

Ozuru, Y., Dempsey, K., Sayroo, J., and McNamara, D.S. (2005). Effect of Text Cohesion on Comprehension of Biology Texts. *Proceedings of the 27th Annual Meeting of the Cognitive Science Society* (pp. 1696-1701). Hillsdale, NJ: Erlbaum.

Rus, V., Hempelmann, C., Graesser, A.C., McNamara, D.S. (2006). Evaluating State-Of-The-Art Treebank-Style Parsers for Coh-Metrix and Other Learning Technology Environments. *Natural Language Engineering* 12: 1-14.

**Institution:** University of Pittsburgh

**Principal Investigator:** Charles Perfetti

**Project Title:** Word Learning and Comprehension: New Laboratory Approaches and Classroom Studies

**Grant:** R305G02006

Beck, I.L., and McKeown, M.G. (2007). Increasing Young Low-Income Children's Oral Vocabulary Repertoires through Rich and Focused Instructions. *The Elementary School Journal*, 107(3): 251-271.

- Landi, N., Perfetti, C.A., Bolger, D.J., Dunlap, S., and Foorman, B.R. (2006). The Role of Discourse Context in Developing Word Form Representations: a Paradoxical Relationship Between Reading and Learning. *Journal of Experimental Child Psychology* 94 (2): 114-133.
- McKeown, M.G., and Beck, I.L. (2004). Direct and Rich Vocabulary Instruction. In J.F. Baumann and E.J. Kame'enui (Eds.), *Vocabulary Instruction: Research to Practice* (pp. 13-27). New York: Guilford Press.
- Nelson, J., Balass, M., and Perfetti, C.A. (2005). Differences Between Written and Spoken Input in Learning New Words. *Written Language and Literacy. Special Issue: Literacy Processes and Literacy Development* 8(2): 101-120.
- Perfetti, C.A., Landi, N., and Oakhill, J. (2005). The Acquisition of Reading Comprehension Skill. In M.J. Snowling and C. Hulme (Eds.), *The Science of Reading: a Handbook*. (pp. 227-247). Malden, MA: Blackwell.
- Perfetti, C.A., Wlotko, E.W., and Hart, L.A. (2005). Word Learning and Individual Differences in Word Learning Reflected in Event-Related Potentials. *Journal of Experimental Psychology: Learning Memory and Cognition*, 31(6): 1281-1292.
- Pollatsek, A., Reichle, E.D., and Rayner, K. (2006). Tests of the E-Z Reader Model: Exploring the Interface Between Cognition and Eye-Movement Control. *Cognitive Psychology*, 52: 1-56.
- Pollatsek, A., Juhasz, B.J., Reichle, E.D., Machacek, D., and Rayner, K. (2008). Immediate and Delayed Effects of Word Frequency and Word Length on Eye Movements in Reading: a Reversed Delayed Effect of Word Length. *Journal of Experimental Psychology: Human Perception and Performance*, 34: 726-750.
- Pollatsek, A., Reichle, E.D., and Rayner, K. (2006). Attention to One Word at a Time in Reading Is Still a Viable Hypothesis: Rejoinder to Inhoff, Radach, and Eiter (2006). *Journal of Experimental Psychology: Human Perception and Performance*, 32: 1496-1500.
- Rayner, K., Reichle, E.D., and Pollatsek, A. (2006). Tests of the E-Z Reader Model: Exploring the Interface Between Cognition and Eye-Movement Control. *Cognitive Psychology*, 52(1): 1-56.
- Reichle, E.D., Laurent, Patryk A. (2006). Using Reinforcement Learning to Understand the Emergence of Intelligent Eye-Movement Behavior During Reading. *Psychological Review*, 113: 390-408
- Reichle, E.D., and Perfetti, C.A. (2003). Morphology in Word Identification: a Word-Experience Model that Accounts for Morpheme Frequency Effects. *Scientific Studies of Reading*, 7(3): 219-237
- Reichle, E.D., Pollatsek, A., and Rayner, K. (2006). E-Z Reader: a Cognitive-Control, Serial-Attention Model of Eye-Movement Behavior During Reading. *Cognitive Systems Research Special Issue: Cognitive Systems Research on Models of Eye-Movement Control in Reading*, 7(1): 4-22.
- Yang, C.L., Perfetti, C.A., and Schmalhofer, F. (2007). Event-Related Potential Indicators of Text Integration Across Sentence Boundaries. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 33(1): 55-89.
- Yang, C.Y., Perfetti, C.A., and Schmalhofer, F. (2005). Less Skilled Comprehenders' Erps Show Sluggish Word-To-Text Integration Processes. *Written Language and Literacy. Special Issue: Literacy Processes and Literacy Development*, 8(2): 233-257.

### FY 2003

**Institution:** Carnegie Mellon University

**Principal Investigator:** James Callan

**Project Title:** Reader-Specific Lexical Practice for Improved Reading Comprehension

**Grant:** R305G030123

- Brown, J. Frishkoff, G., and Eskenazi, M. (2005). Automatic Question Generation for Vocabulary Assessment. In *Proceedings of HLT/EMNLP 2005*. Vancouver, B.C.
- Brown, J., and Eskenazi, M. (2005). Student, Text and Curriculum Modeling for Reader-Specific Document Retrieval. *Proceedings of the IASTED International Conference on Human-Computer Interaction 2005*, Phoenix, AZ.
- Brown, J., and Eskenazi, M. (2004). Retrieval of Authentic Documents for Reader-Specific Lexical Practice. In *Proceedings of Instil/ICALL Symposium 2004*. Venice, Italy.
- Collins-Thompson, K., and Callan, J. (2005). Query Expansion Using Random Walk Models. In *Proceedings of the 14th ACM International Conference on Information and Knowledge Management* (pp. 704-711). New York: ACM Press.
- Collins-Thompson, K., and Callan, J. (2005). Predicting Reading Difficulty With Statistical Language Models. *Journal of the American Society for Information Science and Technology*, 56(13): 1448-1462.
- Collins-Thompson, K., and Callan, J. (2004). Information Retrieval for Language Tutoring: An Overview of the REAP Project (Poster Description). In *Proceedings of the Twenty Seventh Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*. Sheffield, UK.
- Collins-Thompson, K., and Callan, J. (2004). A Language Modeling Approach to Predicting Reading Difficulty. In *Proceedings of the HLT/NAACL 2004 Conference*. Boston.

**Institution:** Florida State University

**Principal Investigator:** Richard Wagner

**Project Title:** Origins of Individual and Developmental Differences in Reading Comprehension

**Grant:** R305G03104

- Mcbride-Chang, C., Cho, J.R., Lie, H., Wagner, R.K., Shu, H., Zhou, A., Cheuk, C., and Muse, A. (2005). Changing Models Across Cultures: Associations of Phonological Awareness and Morphological Structure Awareness With Vocabulary and Word Recognition in Second Graders From Beijing, Hong Kong, Korea, and the United States. *Journal of Experimental Child Psychology*, 92(2): 140-160.
- Mcbride-Chang, C., Wagner, R.K., Muse, A., Chow, B.W.Y., and Shu, H. (2005). Morphological Awareness in Children's Vocabulary Acquisition in English. *Journal of Applied Psycholinguistics*, 26(3): 415-435.
- Tannenbaum, K.R., Torgesen, J.K., and Wagner, R.K. (2006). Relationships Between Word Knowledge and Reading Comprehension in Third-Grade Children. *Scientific Studies of Reading*, 10(4): 381-398.
- Wagner, R.K., Muse, A., and Tannenbaum, K. (Eds.). (2006). *Vocabulary Acquisition: Implications for Reading Comprehension*. New York: Guilford Press.
- Wagner, R.K., Muse, A., and Tannenbaum, K. (2006). Promising Avenues for Better Understanding Implications of Vocabulary Development for Reading Comprehension. In R.K. Wagner, A. Muse, and K. Tannenbaum, (Eds.), *Vocabulary Acquisition: Implications for Reading Comprehension* (pp. 276-292). New York: Guilford Press.
- Wagner, R.K., Phythian-Sence, C., and Tannenbaum, K. (2006). Vocabulary Acquisition: a Primer. In R.K. Wagner, A. Muse, and K. Tannenbaum, (Eds.), *Vocabulary Acquisition: Implications for Reading Comprehension* (pp. 1-14). New York: Guilford Press.

**Institution:** Pennsylvania State University

**Principal Investigator:** Bonnie Meyer

**Project Title:** Intelligent Tutoring Using the Structure Strategy to Improve Reading Comprehension of Middle School Students

**Grant:** R305G03072

Wijekumar, K., Meyer, B.J.F., Ferguson, L., and Wagoner, D. (2006). Technology Affordances: The Real Story in Research With K-12 and Undergraduate Learners. *British Journal of Educational Technology: Special Issue on Technology Effects*, 37: 191-209.

Wijekumar, K., and Meyer, B.J.F. (2006). Design and Pilot of a Web-Based Intelligent Tutoring System to Improve Reading Comprehension in Middle School Students. *International Journal of Technology in Teaching and Learning*, 2(1): 36-49.

Meyer, B.J.F., and Wijekumar, K. (2007). A Web-Based Tutoring System for the Structure Strategy: Theoretical Background, Design, and Findings. In D.S. McNamara (Ed.), *Reading Comprehension Strategies: Theories, Interventions, and Technologies* (pp. 347-374). Mahwah, NJ: Erlbaum.

Wijekumar, K., Meyer, B., and Spielvogel, J. (2005). Web-Based Intelligent Tutoring to Improve Reading Comprehension in Elementary and Middle Schools: Design, Research, and Preliminary Findings. In G. Richards (Ed.), *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2005* (pp. 3206-3211). Chesapeake, VA: American Association for the Advancement of Computing Education.

**Institution:** Teachers College, Columbia University

**Principal Investigator:** Joanna Williams

**Project Title:** Teaching Elementary Students to Comprehend Expository Text

**Grant:** R305G03283

Williams, J.P., Nubla-Kung, A.M., Pollini, S., Stafford, K.B., Garcia, A., Snyder, A.E. (2007). Teaching Cause-Effect Text Structure through Social Studies Content to At-Risk Second Graders. *Journal of Learning Disabilities*, 40(2): 111-120.

Williams, J.P. (2007). Literacy in the Curriculum: Integrating Text Structure and Content Area Instruction. In D.S. McNamara (Ed.), *Reading Comprehension Strategies: Theories, Interventions, and Technologies* (pp. 199-219). Mahwah, N.J.: Erlbaum.

**Institution:** University of Connecticut

**Principal Investigator:** Michael Coyne

**Project Title:** Project VITAL: Vocabulary Intervention Targeting At-Risk Learners

**Grant:** R305G030250

Coyne, M.D., Mccoach, B., and Kapp, S. (2007). Vocabulary Intervention for Kindergarten Students: Comparing Extended Instruction to Embedded Instruction and Incidental Exposure. *Learning Disabilities Quarterly*, 30(2): 74-88.

**Institution:** University of Illinois, Champaign-Urbana

**Principal Investigator:** Richard Anderson

**Project Title:** Improving Comprehension and Writing through Reasoned Argumentation

**Grant:** R305G030070

Li, Y., Anderson, R.C., Nguyen-Jahiel, K., Dong, T., Archodidou, A., Kim, I., Kuo, L.J., Clark, A.M., Wu, X., Jadallah, M., and Miller, B. (2007). Emergent Leadership in Children's Discussion Groups. *Cognition and Instruction*, 25(1): 75-111.

Nguyen-Jahiel, K., Anderson, R., Waggoner, M., and Rowell, B. (2007). Using Literature Discussions to Reason through Real Life Dilemmas: A Journey Taken by One Teacher and Her Fourth-Grade Students. In R. Horowitz (Ed.), *Talking Texts: How Speech and Writing Interact in School Learning*. Hillsdale, NJ: Erlbaum.

Reznitskaya, A., and Anderson, R.C. (2007). Assessing Argumentation in Rich, Natural Contexts. *Informal Logic*, 26: 175-198.

Reznitskaya, A., Anderson, R.C., and Kuo, L.J. (2007). Teaching and Learning Argumentation. *Elementary School Journal*, 107: 449-472.

Dong, T., Anderson, R.C., Kim, I., and Li, Y. (2008). Collaborative Reasoning in China and Korea. *Reading Research Quarterly*, 43: 400-424.

Lin, T.J., and Anderson, R.C. (2008). Reflections on Collaborative Discourse, Argumentation, and Learning. *Contemporary Educational Psychology*, 33: 443-448.

Reznitskaya, A., Anderson, R.C., Dong, T., Li, Y., Kim, I.H., and Kim, S.Y. (2008). Learning to Think Well: Applications of Argument Schema Theory. In C.C. Block and S. Parris (Eds.), *Comprehension Instruction: Research-Based Best Practices* (Vol. 2, pp. 196-213). New York: Guilford Publishing.

Jadallah, M., Miller, B., Anderson, R.C., Nguyen-Jahiel, K., Archodidou, A., Zhang, J., and Grabow, K. (2009). Collaborative Reasoning About a Science and Public Policy Issue. In M. McKeown and L. Kucan (Eds.), *Bringing Reading Researchers to Life: Essays in Honor of Isabel L. Beck*. New York: Guilford Press.

Reznitskaya, A., Kuo, L.J., Clark, A.M., Miller, B., Jadallah, M., Anderson, R.C., and Nguyen-Jahiel, K. (in press). Collaborative Reasoning: A Dialogic Approach to Group Discussions. *Cambridge Journal of Education*.

Reznitskaya, A., Kuo, L.J., Glina, M., and Anderson, R.C. (2009). Measuring Argumentation: What's Behind the Numbers? *Learning and Individual Differences*, 19(2): 219-224.

**Institution:** University of Illinois, Champaign-Urbana

**Principal Investigator:** Georgia Garcia

**Project Title:** Instruction of Reading Comprehension: Cognitive Strategies or Cognitive Engagement

**Grant:** R305G03140

Stahl, K.A.D., Garcia, G.E., Bauer, E.B., Pearson, P.D., and Taylor, B.A. (2006). Making the Invisible Visible: The Development of a Comprehension Assessment System. In K.A.D. Stahl and McKenna (Eds.), *Reading Research at Work: Foundations of Effective Practice* (pp. 425-436). New York: Guilford Press.

Taylor, B.M., Pearson, P.D., Garcia, G.E., Stahl, K.A.D., Bauer, E.B. (2006). Improving Students Reading Comprehension. In K.A.D. Stahl and McKenna (Eds.), *Reading Research at Work: Foundations of Effective Practice* (pp. 303-315). New York: Guilford Press.

## FY 2004

**Institution:** Northern Illinois University

**Principal Investigators:** Joseph Magliano and Keith Millis

**Project Title:** Assessing Reading Comprehension With Verbal Protocols and Latent Semantic Analysis

**Grant:** R305G04055

Gilliam, S., Magliano, J.P., Millis, K.K., Levinstein, I., and Boonthum, C. (2007). Assessing the Format of the Presentation of Text in Developing a Reading Strategy Assessment Tool (R-SAT). *Behavior Research Methods, Instruments, and Computers*, 39: 199-204.

Magliano, J.P., Millis, K.K., Ozurur, Y., and McNamara, D.S. (2007). A Multidimensional Framework to Evaluate Assessment Tools. In D.S. McNamara (Ed.), *Reading Comprehension Strategies: Theories, Interventions, and Technologies* (pp. 107-136). Mahwah, NJ: Erlbaum.

Magliano, J.P., and Perry, P.J. (in press). Individual Differences in Reading Proficiencies and Comprehension. In N.J. Salkind (Ed.), *Encyclopedia of Educational Psychology*. Thousand Oaks, CA: Sage Publications, Inc.

Millis, K.K., Magliano, J.P., and Todaro, S. (2006). Measuring Discourse-Level Processes With Verbal Protocols and Latent Semantic Analysis. *Scientific Studies of Reading*, 10(3): 251-283.

Millis, K.K., Magliano, J.P., Todaro, S., and McNamara, D.S. (2007). Assessing and Improving Comprehension With Latent Semantic Analysis. In T. Landauer, D.S. McNamara, S. Dennis, and W. Kintsch (Eds.), *Handbook of Latent Semantic Analysis* (pp. 207-226). Mahwah, NJ: Erlbaum.

Munoz, B., Magliano, J.P., Sheridan, R., and McNamara, D.S. (2006). Typing Versus Thinking Aloud When Reading: Implications for Computer-Based Assessment and Training Tools. *Behavior Research Methods, Instruments, and Computers*, 38(2): 211-217.

**Institution:** State University of New York, Buffalo

**Principal Investigator:** James Collins

**Project Title:** Writing Intensive Reading Comprehension: Effects of Comprehension Instruction With and Without Integrated Writing Instruction on Fourth and Fifth Grade Students' Reading Comprehension and Writing Performance

**Grant:** R305G04153

Srihari, S., Collins, J., Srihari, R., Srinivasan, H., Shetty, S, and Brutt-Griffler, J. (2008). Automatic Scoring of Short Handwritten Essays in Reading Comprehension Tests. *Artificial Intelligence*, 172 : 2-3.

Srihari, S., Collins, J., Srihari, R.K., Babu, P., and Srinivasan, H. (2006). Automatic Scoring of Handwritten Essays Using Latent Semantic Analysis. In H. Bunke and L. Spitz (Eds.), *Document Analysis Systems* (pp. 71-83). New Zealand: Springer Nelson.

**Institution:** University of Colorado

**Principal Investigator:** Barbara Wise

**Project Title:** ICARE: Independent Comprehensive Adaptive Reading Evaluation System

**Grant:** R305G04097

Olson, R., and Wise, B. (2006). Computer-Based Remediation for Reading and Related Phonological Disabilities. In M. McKenna, L. Labbo, R. Kieffer, and D. Reinking (Eds.), *Handbook of Literacy and Technology* (Vol. 2). Mahwah, NJ: Erlbaum.

Snyder, L., Caccamise, D., and Wise, B. (2005). The Assessment of Reading Comprehension: Considerations and Cautions. *Topics in Language Disorders. Reading Comprehension's New Look: Influences of Theory and Technology on Practice*. 25(1):33-50.

**Institution:** University of Kansas

**Principal Investigator:** Michael Hock

**Project Title:** Improving Adolescent Reading Comprehension: a Multi-Strategy Reading Intervention

**Grant:** R305G04011

Hock, M.F., Brasseur, I.F., Deshler, D.D., Catts, H.W., Marques, J., Mark, C.A., and Wu Stribling, J. (2009). What Is the Nature of Struggling Adolescent Readers in Urban High Schools? *Learning Disability Quarterly*, 32(1): 21-38.

**Institution:** University of Memphis

**Principal Investigator:** Danielle McNamara

**Project Title:** iSTART: Interactive Strategy Trainer for Active Reading and Thinking**Grant:** R305G040046

Bellissens, C., Jeuniaux, P., Duran, N., and McNamara, D. (2007). Towards a Textual Cohesion Model that Predicts Self-Explanations Inference Generation as a Function of Text Structure and Readers' Knowledge Levels. In D.S. McNamara and J.G. Trafton (Eds.), *Proceedings of the 29th Annual Conference of the Cognitive Science Society* (pp. 815-820). New York: Erlbaum.

Best, R., Dockrell, J.E., and McNamara, D.S. (2004). Children's Semantic Representation of a Science Term. In K. Forbus, D. Gentner and T. Regier (Eds.), *Proceedings of the 26th Annual Conference of the Cognitive Science Society* (p. 1525). Mahwah, NJ: Erlbaum.

Best, R., Ozuru, Y., and McNamara, D.S. (2004). Self-Explaining Science Texts: Strategies, Knowledge, and Reading Skill. In Y.B. Yasmin, W.A. Sandoval, N. Enyedy, A.S. Nixon, and F. Herrera (Eds.), *Proceedings of the 6th International Conference of the Learning Sciences: Embracing Diversity in the Learning Sciences* (pp. 89-96). Mahwah, NJ: Erlbaum.

Best, R., Rowe, M.P., Ozuru, Y., and McNamara, D.S. (2005). Deep-Level Comprehension of Science Texts: The Role of the Reader and the Text. *Topics in Language Disorders*, 25(1): 65-83.

Boonthum, C., Levinstein, I., and McNamara, D.S. (2007). Evaluating Self-Explanations in iSTART: Word Matching, Latent Semantic Analysis, and Topic Models. In A. Kao and S. Poteet (Eds.), *Natural Language Processing and Text Mining* (pp. 91-106). London: Springer-Verlag UK.

Crossley, S.A., Duffy, D.F., McCarthy, P.M., and McNamara, D.S. (2007). Toward a New Readability: A Mixed Model Approach. In D.S. McNamara and J.G. Trafton (Eds.), *Proceedings of the 29th Annual Conference of the Cognitive Science Society* (pp. 197-202). New York: Erlbaum.

Duran, N., Bellissens, C., Taylor, R., and McNamara, D. (2007). Qualifying Text Difficulty With Automated Indices of Cohesion and Semantics. In D.S. McNamara and J.G. Trafton (Eds.), *Proceedings of the 29th Annual Conference of the Cognitive Science Society* (pp. 233-238). New York: Erlbaum.

Graesser, A.C., Hu, X., and McNamara, D.S. (2005). Computerized Learning Environments that Incorporate Research in Discourse Psychology, Cognitive Science, and Computational Linguistics. In A.F. Healy (Ed.), *Experimental Cognitive Psychology and Its Applications: Festschrift in Honor of Lyle Bourne, Walter Kintsch, and Thomas Landauer* (pp. 183-194). Washington, D.C.: American Psychological Association.

Kurby, C.A., Ozuru, Y., and McNamara, D.S. (2007). Individual Differences in Comprehension Monitoring Ability During Reading. In D.S. McNamara and J.G. Trafton (Eds.), *Proceedings of the 29th Annual Conference of the Cognitive Science Society* (pp. 413-418). New York: Erlbaum.

Landauer, T., McNamara, D.S., Dennis, S., and Kintsch, W. (Eds.), (2007). *Handbook of Latent Semantic Analysis*. Mahwah, NJ: Erlbaum.

Levinstein, I.B., Boonthum, C., Pillarisetti, S.P., Bell, C., and McNamara, D.S. (in press). iSTART 2: Improvements for Efficiency and Effectiveness. *Behavior Research Methods*.

Magliano, J.P., Millis, K.K., Ozuru, Y., and McNamara, D.S. (2007). A Multidimensional Framework to Evaluate Reading Assessment Tools. In D.S. McNamara (Ed.), *Reading Comprehension Strategies: Theories, Interventions, and Technologies* (pp. 107-136). Mahwah, NJ: Erlbaum.

Magliano, J.P., Todaro, S., Millis, K.K., Wiemer-Hastings, K., Kim, H.J., and McNamara, D.S. (2005). Changes in Reading Strategies as a Function of Reading Training: A Comparison of Live and Computerized Training. *Journal of Educational Computing Research*, 32(2): 185-208.

McCarthy, P.M., and McNamara, D.S. (2007). Are Seven Words All We Need? Recognizing Genre at the Sub-Sentential Level. In D.S. McNamara and J.G. Trafton (Eds.), *Proceedings of the 29th Annual Conference of the Cognitive Science Society* (pp. 1295-1300). New York: Erlbaum.

McNamara, D.S. (Ed.), (2007). *Reading Comprehension Strategies: Theory, Interventions, and Technologies*. Mahwah, NJ: Erlbaum.

McNamara, D.S., Boonthum, C., Levinstein, I.B., and Millis, K. (2007). Evaluating Self Explanations in iSTART: Comparing Word-Based and LSA Algorithms. In T. Landauer, D.S. McNamara, S. Dennis, and W. Kintsch (Eds.), *Handbook of Latent Semantic Analysis* (pp. 227- 241). Mahwah, NJ: Erlbaum.

McNamara, D.S., De Vega, M., and O'Reilly, T. (2007). Comprehension Skill, Inference Making, and the Role of Knowledge. In F. Schmalhofer and C.A. Perfetti (Eds.), *Higher Level Language Processes in the Brain: Inference and Comprehension Processes* (pp.233-254). Mahwah, NJ: Erlbaum.

McNamara, D.S., Levinstein, I.B., and Boonthum, C. (2004). iSTART: Interactive Strategy Trainer for Active Reading and Thinking. *Behavioral Research Methods, Instruments, and Computers*, 36(2): 222-233.

McNamara, D.S., and O'Reilly, T. (in press). Theories of Comprehension Skill: Knowledge and Strategies Versus Capacity and Suppression. In F. Columbus (Ed.), *Progress in Experimental Psychology Research*. Hauppauge, NY: Nova Science Publishers, Inc.

McNamara, D.S., O'Reilly, T., Best, R., and Ozuru, Y. (2006). Improving Adolescent Students' Reading Comprehension With iSTART. *Journal of Educational Computing Research*, 34(2): 147- 171.

McNamara, D.S., O'Reilly, T., Rowe, M., Boonthum, C., and Levinstein, I.B. (2007). iSTART: A Web-Based Tutor that Teaches Self-Explanation and Metacognitive Reading Strategies. In D.S. McNamara (Ed.), *Reading Comprehension Strategies: Theories, Interventions, and Technologies* (pp. 397-421). Mahwah, NJ: Erlbaum.

McNamara, D.S., Ozuru, Y., Best, R., and O'Reilly, T. (2007). The 4-Pronged Comprehension Strategy Framework. In D.S. McNamara (Ed.), *Reading Comprehension Strategies: Theories, Interventions, and Technologies* (pp. 465-496). Mahwah, NJ: Erlbaum.

McNamara, D.S., and Shapiro, A. (2005). Multimedia and Hypermedia Solutions for Promoting Metacognitive Engagement, Coherence, and Learning. *Journal of Educational Computing Research*, 33(1): 1-29.

Millis, K., Kim, H.J., Todaro, S. Magliano, J., Wiemer-Hastings, K., and McNamara, D.S. (2004). Identifying Reading Strategies Using Latent Semantic Analysis: Comparing Semantic Benchmarks. *Behavior Research Methods, Instruments, and Computers*, 36(2): 213-221.

Millis, K., Magliano, J., Wiemer-Hastings, K., Todaro, S., and McNamara, D.S. (2007). Assessing and Improving Comprehension With Latent Semantic Analysis. In T. Landauer, D.S. McNamara, S. Dennis, and W. Kintsch (Eds.), *Handbook of Latent Semantic Analysis* (pp. 207-225). Mahwah, NJ: Erlbaum.

Muñoz, B., Magliano, J.P., Sheridan, R., and McNamara, D.S. (2006). Typing Versus Thinking Aloud When Reading: Implications for Computer-Based Assessment and Training Tools. *Behavior Research Methods, Instruments, and Computers*, 38(2): 211-217.

O'Reilly, T., and McNamara, D.S. (2007). Reversing the Reverse Cohesion Effect: Good Texts Can Be Better for Strategic, High-Knowledge Readers. *Discourse Processes*, 43(2): 121-152.

O'Reilly, T., and McNamara, D.S. (2007). The Impact of Science Knowledge, Reading Strategy Knowledge on More Traditional High-Stakes Measures of High School Students' Science Achievement. *American Educational Research Journal*, 44(1): 161 -196.

O'Reilly, T., Taylor, R.S., and McNamara, D.S. (2006). Classroom Based Reading Strategy Training: Self-Explanation Vs. Reading Control. In R. Sun and N. Miyake (Eds.), *Proceedings of the 28th Annual Conference of the Cognitive Science Society* (pp. 1887-1892). Mahwah, NJ: Erlbaum.

O'Reilly, T.P., Sinclair, G.P., and McNamara, D.S. (2004). iSTART: a Web-Based Reading Strategy Intervention that Improves Students' Science Comprehension. In Kinshuk, D.G. Sampson, and P. Isaias (Eds.), *Proceedings of the*

IADIS International Conference Cognition and Exploratory Learning in Digital Age: CELDA 2004 (pp. 173-180). Lisbon, Portugal: IADIS Press.

Rus, V., McCarthy, P.M., Lintean, M.C., Graesser, A.C., and McNamara, D.S. (2007). Assessing Student Self-Explanations in an Intelligent Tutoring System. In D.S. McNamara and J.G. Trafton (Eds.), *Proceedings of the 29th Annual Conference of the Cognitive Science Society* (pp. 623-628). New York: Erlbaum.

Taylor, R.S., O'Reilly, T., Rowe, M., and McNamara, D.S. (2006). Improving Understanding of Science Texts: iSTART Strategy Training Vs. Web Design Control Task. In R. Sun and N. Miyake (Eds.), *Proceedings of the 28th Annual Conference of the Cognitive Science Society* (pp. 2234-2239). Mahwah, NJ: Erlbaum.

Taylor, R., O'Reilly, T., Sinclair, G., and McNamara, D.S. (2006). Enhancing Learning of Expository Science Texts in a Remedial Reading Classroom Via iSTART. In S. Barab, K. Hay, and D. Hickey (Eds.), *Proceedings of the Seventh International Conference of Learning Sciences* (pp. 765-770). Mahwah, NJ: Erlbaum.

Vanderveen, A., Huff, K., Gierl, M., McNamara, D.S., Louwerse, M., and Graesser, A.C. (2007). Developing and Validating Instructionally Relevant Reading Competency Profiles Measured by the Critical Reading Sections of the SAT. In D.S. McNamara (Ed.), *Reading Comprehension Strategies: Theories, Interventions, and Technologies* (pp. 137-172). Mahwah, NJ: Erlbaum.

**Institution:** University of Minnesota

**Principal Investigator:** Paul van den Broek

**Project Title:** Improving Comprehension of Struggling Readers: Connecting Cognitive Science and Educational Practice

**Grant:** R305G04021

van den Broek, P., White, M.J., Kendeou, P., and Carlson, S. (in press). Developmental and Individual Differences in Cognitive Processes in Reading Comprehension. In R. Wagner (Ed.), *Biological and Behavioral Bases of Reading Comprehension*. Mahwah, NJ: Erlbaum.

van den Broek, P., Kendeou, P., and White, M.J. (2008). Cognitive Processes During Reading: Implications for the Use of Multimedia to Foster Reading Comprehension. In A.G. Bus and S.B. Neuman (Eds.), *Multimedia and Literacy Development: Improving Achievement for Young Learners* (pp. 57-74). New York: Routledge.

Rapp, D.N., van den Broek, P., McMaster, K.L., Kendeou, P., and Espin, C.A. (2007). Higher-Order Comprehension Processes in Struggling Readers: a Perspective for Research and Intervention. *Scientific Studies of Reading*, 11: 289-312.

Rapp, D.R., and van den Broek, P. (2005). Dynamic Text Comprehension: An Integrative View of Reading. *Current Directions in Psychological Sciences*, 14 (5): 276-279.

**Institution:** Vanderbilt University

**Principal Investigator:** Douglas Fuchs

**Project Title:** Scaling Up Peer Assisted Learning Strategies to Strengthen Reading Achievement

**Grant:** R305G04104

Stein, M.L., Berends, M., Fuchs, D., McMaster, K., Sáenz, L., Loulee Y., Fuchs, L.S., and Compton, D.L. (2008). Scaling up an Early Reading Program: Relationships Among Teacher Support, Fidelity of Implementation, and Student Performance Across Different Sites and Years. *Educational Evaluation and Policy Analysis*, 30: 368-388.

McMaster, K.L., Kung, H., Han, I., and Cao, M. (2008). Peer-Assisted Learning Strategies: A Tier 1 Approach to Promoting Responsiveness to Beginning Reading Instruction for English Learners. *Exceptional Children*, 74 (3): 194-214.

Petursdottir, A.-L., McMaster, K., McComas, J.J., Bradfield, T., Braganza, V., Koch-McDonald, J., Rodriguez, R., and Scharf, H. (2009). Brief Experimental Analysis of Early Reading Interventions. *Journal of School Psychology, 47*(4): 215-243.

Saenz, L., McMaster, K., Fuchs, D., Fuchs, L.S. (2007). Peer-Assisted Learning Strategies in Reading for Students With Different Learning Needs. *Journal of Cognitive Education and Psychology, 6*(3): 395-410.

**Institution:** Washington Research Institute

**Principal Investigator:** Patricia Vadasy

**Project Title:** Quick Reads Supplementary Tutoring Efficacy and Replication Trials

**Grant:** R305G04103

Vadasy, P.F., and Sanders, E.A. (2008). Benefits of Repeated Reading Intervention for Low-Achieving Fourth- and Fifth-Grade Students. *Remedial and Special Education, 29*: 235-249.

Vadasy, P.F., and Sanders, E.A. (2008). Repeated Reading Intervention: Outcomes and Interactions With Readers' Skills and Classroom Instruction. *Journal of Educational Psychology, 100*: 272-290.

Vadasy, P.F., and Sanders, E.A. (2009). Supplemental Fluency Intervention and Determinants of Reading Outcomes. *Scientific Studies of Reading, 13*(5): 383-425.

**Institution:** University of Pittsburgh

**Principal Investigator:** Margaret McKeown

**Project Title:** Toward More Meaningful Decisions About Comprehension Instruction

**Grant:** R305G040049

McKeown, M.G., and Beck, I.L., (in press). The Role of Metacognition in Understanding and Supporting Reading Comprehension. In D. J. Hacker, J. Dunlosky, and A. C. Graesser, (Eds.), *Handbook of Metacognition in Education*. Mahwah, NJ: Lawrence Erlbaum Associates.

McKeown, M.G., Beck, I.L., and Blake, R.G.K. (2009a). Rethinking Reading Comprehension Instruction: A Comparison of Instruction for Strategies and Content Approaches. *Reading Research Quarterly, 44*(3): 218-253.

McKeown, M.G., Beck, I.L., and Blake, R.G.K. (2009b, Spring). Reading Comprehension Instruction: Focus on Content or Strategies? *Perspectives on Language and Literacy, 28-32*.

## FY 2005

**Institution:** CAST, Inc.

**Principal Investigator:** Bridget Dalton

**Project Title:** Improving Reading Comprehension for Struggling Readers: Understanding the Roles of Vocabulary Development, Guided Strategy Use, and Spanish Language Supports in a Digital Reading Environment

**Grant:** R305G050029

Dalton, B., and Proctor, C.P. (2007). Reading as Thinking: Integrating Strategy Instruction in a Universally Designed Digital Literacy Environment. In D.S. McNamara (Ed.), *Reading Comprehension Strategies: Theories, Interventions, and Technologies* (pp. 421-440). Mahwah, NJ: Erlbaum Publishers.

Proctor, C.P., Uccelli, P., Dalton, B., and Snow, C.E. (2009). Understanding Depth of Vocabulary Online With Bilingual and Monolingual Children. *Reading & Writing Quarterly*, 25(4): 311-333.

**Institution:** University of Connecticut

**Principal Investigator:** Donald Leu

**Project Title:** Developing Internet Comprehension Strategies Among Adolescent Students at Risk to Become Dropouts

**Grant:** R305G050154

Boling, E., Castek, J., Zawilinski, L., Barton, K., and Nierlich, T. (2008). Collaborative Literacy: Blogs and Internet Projects. *The Reading Teacher*, 61: 504-506.

Leu, D.J., Coiro, J., Castek, J., Hartman, D., Henry, L.A., and Reinking, D. (in press). Research on Instruction and Assessment in the New Literacies of Online Reading Comprehension. In C.C. Block, S. Parris, and P. Afflerbach (Eds.), *Comprehension Instruction: Research-Based Best Practices*. New York: Guilford Press.

Castek, J., Leu, D.J., Jr., Coiro, J., Gort, M., Henry, L.A., and Lima, C. (in press). Developing New Literacies among Multilingual Learners in the Elementary Grades. In L. Parker (Ed.), *Technology-Mediated Learning Environments for Young English Learners: Connections in and Out of School*. Mahwah, NJ: Erlbaum.

Coiro, J., and Dobler, E. (2007). Exploring the Online Reading Comprehension Strategies Used by Sixth-Grade Skilled Readers to Search for and Locate Information on the Internet. *Reading Research Quarterly*, 42(2): 214-257.

Coiro, J., Knobel, M., Lankshear, C., and Leu, D.J. (Eds.), (in press). *Handbook of Research on New Literacies*. Mahwah, NJ: Erlbaum.

Coiro, J., Knobel, M., Lankshear, C., and Leu, D.J. (in press). Central Issues in New Literacies and New Literacies Research. In J. Coiro, M. Knobel, C. Lankshear and D. Leu (Eds.), *Handbook of Research on New Literacies*. Mahwah, NJ: Erlbaum.

Holcomb, L., Castek, J., and Johnson, P. (2007). Unlocking the Potential of K-12 Classroom Websites to Enhance Learning. *New England Reading Association Journal*, 43(1): 36-43.

Leu, D.J. (2006). New Literacies, Reading Research, and the Challenges of Change: A Deictic Perspective. (NRC Presidential Address). In J. Hoffman, D. Schallert, C.M. Fairbanks, J. Worthy, and B. Maloch (Eds.), *The 55th Yearbook of the National Reading Conference* (pp.1-20). Milwaukee, WI: National Reading Conference.

Leu, D.J. (2007). Foreword. In M.B. Eagleton and W. Dobler. *Reading the Web: Strategies for Internet Inquiry*. New York: The Guilford Press.

Leu, D.J. (2007). *Expanding the Reading Literacy Framework of PISA 2009 to Include Online Reading Comprehension*. Princeton, NJ: Educational Testing Service.

Leu, D.J., and Zawilinski, L. (in press). The New Literacies of Online Reading Comprehension. *New England Reading Association Journal*.

Leu, D.J., Zawilinski, L., Castek, J., Banerjee, M., Housand, B., Liu, Y., and O'Neil, M. (2007). What Is New About the New Literacies of Online Reading Comprehension? In A. Berger, L. Rush, and J. Eakle (Eds.), *Secondary School Reading and Writing: What Research Reveals for Classroom Practices* (pp. 37-68). Chicago: National Council of Teachers of English/National Conference of Research on Language and Literacy.

McKenna, M.C., Labbo L.D., Reinking D., and Zuker, T.A. (2007). Effective Use of Technology in Literacy Instruction. In L. Gambrell, L.M. Morrow, and M. Pressley (Eds.), *Best Practices in Literacy Instruction* (pp. 344-372). New York: Guilford.

McKenna, M. C, Labbo, L.D., Kieffer, R.D., and Reinking, D. (2006). *International Handbook of Literacy and Technology*, 2. Mahwah, NJ: Erlbaum.

Reinking, D. (in press). Instant Messaging, Literacies, and Social Identities: a Review Commentary. In J. Coiro, M. Knobel, C. Lankshear, and D. Leu (Eds.), *Handbook of Research on New Literacies*. Mahwah, NJ: Erlbaum.

Reinking, D. (in press). Valuing Reading, Writing, and Books in a Post-Typographic World. In D. Nord and J. Rubin (Eds.), *The History of the Book in American* (Vol. 5). Cambridge, UK: American Antiquarian Society and Cambridge University Press.

Reinking, D., and Bradley, B.A. (in press). *On Formative and Design Experiments*. NY: Teachers College Press.

Reinking, D., and Carter, A. (in press). Accommodating Digital Literacies Within Conceptions of Literacy Instruction. In B. Guzzetti (Ed.), *Literacy for a New Century*. Westport, CT: Praeger.

The New Literacies Research Team (2007). New Literacies, New Challenges, and New Opportunities. In M.B. Sampson, S. Szabo, F. Falk-Ross, M.M. Foote and P.E. Linder (Eds.), *Multiple Literacies in the 21st Century: The Twenty-Eighth Yearbook of the College Reading Association*. Logan, UT: College Reading Association.

**Institution:** University of Houston

**Principal Investigator:** David Francis

**Project Title:** Diagnostic Assessment of Reading Comprehension: Development and Validation

**Grant:** R305G050201

August, D., Francis, D., Hsu, H-Y.A., and Snow, C. (2006). Assessing Reading Comprehension in Bilinguals. In R. Gersten (Ed.), *Instructional Research on English Learners. Special Issue of Elementary School Journal*, 107(2): 221-238.

Francis, D., Snow, C., August, D., Carlson, C., Miller, J., and Iglesias, A. (2006). Measures of Reading Comprehension: A Latent Variable Analysis of the Diagnostic Assessment of Reading Comprehension. *Scientific Studies of Reading* 10(3): 301-322.

Pan, B., and Uccelli, P. (in press). Semantic Development. In J. Berko-Gleason and N. Bernstein Ratner (Eds.), *The Development of Language*.

Uccelli, P., and Páez, M. (2007). Narrative and Vocabulary Development of Bilingual Children From Kindergarten to First Grade: Developmental Changes and Associations among English and Spanish Skills. *Language, Speech, and Hearing Services in Schools*, 38: 1-13.

**Institution:** University of Illinois, Chicago

**Principal Investigator:** Kimberly Lawless

**Project Title:** Assessing Readers Struggling to Comprehend Multiple Sources of Information

**Grant:** R305G050091

Goldman, S.R., Lawless, K.A., Gomez, K.W., Braasch, J.B., Macleod, S., Manning, F. (in press). Literacy in the Digital World: Comprehending and Learning From Multiple Sources. In M.G. McKeown and L. Kucan (Eds.), *Threads of Coherence in Research on the Development of Reading Ability, or Bringing Reading Researchers to Life*. New York: Guilford.

Goldman, S.G., Ozuru, Y., Braasch, J.G., Manning, F.H., Lawless, K.A., Gomez, K.W., Slanovits, M.J. (in press). Literacies for Learning: a Multiple Source Comprehension Illustration. In N. Stein (Ed.), *Developmental Science Goes to School*. Taylor and Francis.

Manning, F.H., Goldman, S.R., Ozuru, Y., Lawless, K.A., Gomez, K., and Braasch, J.G. (2008). Students Analysis of Multiple Sources for Agreements and Disagreements. *Proceedings of the Eighth International Conference of the Learning Sciences*. Mahwah, NJ: Erlbaum.

**Institution:** University of Virginia

**Principal Investigator:** Laura Justice

**Project Title:** Print Referencing Efficacy

**Grant:** R305G050057

McGinty, A., Justice, L.J., and Rimm-Kaufman, S.E. (2008). Sense of School Community for Preschool Teachers Serving At-Risk Children. *Early Education and Development*, 19(2): 361-384.

Justice, L.M., Kaderavek, J.N., Xitao F., Sofka, A., and Hunt, A. (2009). Accelerating Preschoolers' Early Literacy Development through Classroom-Based Teacher-Child Storybook Reading and Explicit Print Referencing. *Language, Speech, and Hearing Services in Schools*, 40: 67-85.

Justice, L.M., and Sofka, A. (in press). *Calling Attention to Print: Building Young Children's Knowledge of Print*. NY: Guilford Press.

Zucker, T., Justice, L.M., Piasta, S., and Kaderavek, J. (in press). Preschool Teachers' Reference to Print During Classroom-Based Large-Group Shared Reading. *Language, Speech, and Hearing Services in Schools*.

Zucker, T., Ward, A., and Justice, L.M. (in press). Print-Referencing During Read-Alouds: Examining a Technique for Increasing Emergent Readers' Print Knowledge. *Reading Teacher*.

**Institution:** University of California, Riverside

**Principal Investigator:** Robert Calfee

**Project Title:** The Read-Write Cycle: An Integrated Model for Instruction and Assessment of Reading Comprehension through Reading and Writing in the Disciplines

**Grant:** R305G050069

Calfee, R.C., and Miller, R.G. (2007). Best Practices in Writing Assessment. In S. Graham, C. MacArthur and J. Fitzgerald (Eds.), *Best Practices in Writing Instruction* (pp. 265-286). New York: Guilford Press.

Calfee, R.C., and Miller, R.G. (2005). Breaking Ground: Constructing Authentic Reading-Writing Assessments for Middle and Secondary Students. In R. Indrisano and J. Paratore, (Eds.), *Learning to Write, Writing to Learn: Theory and Research in Practice* (pp. 203-219). Delaware: IRA.

Calfee, R.C., and Miller, R.G. (2005). Comprehending through Composing: Reflections on Reading Assessment Strategies. In S. Paris and S. Stahl (Eds.), *Children's Reading Comprehension and Assessment* (pp. 215-233). Mahwah, NJ: Erlbaum.

Calfee, R.C., Miller, R.G., Norman, K.A., Wilson, K.M., and Trainin, G. (2006). Learning to Do Educational Research. In R.J. Sternberg and M. Conatas, (Eds.), *Translating Theory and Research Into Educational Practice* (pp. 77-104). Mahwah, NJ: Erlbaum.

**Institution:** University of California, Riverside

**Principal Investigator:** Rollanda O'Connor

**Project Title:** Variations in Procedures to Improve Reading Fluency and Comprehension

**Grant:** R305G050122

O'Connor, R.E., White, A., and Swanson, H.L. (2007). Repeated Reading Versus Continuous Reading: Influences on Reading Fluency and Comprehension. *Exceptional Children*, 74(1): 31-46.

**FY 2006****Institution:** University of California, Santa Cruz**Principal Investigator:** Judith Scott**Project Title:** Vocabulary Development through Writing: A Key to Academic Success**Grant:** R305G060140

Scott, J., Nagy, B., and Flinspach, S. (2008). More than Merely Words: Redefining Vocabulary Learning in a Culturally and Linguistically Diverse Society. In A. Farstrup and J. Samuels (Eds.), *What Research Has to Say About Vocabulary Instruction* (pp. 182-210). Newark, DE: International Reading Association.

Scott, J., Hoover, M., Flinspach, S., and Vevea, J. (2008). A Multiple-Level Vocabulary Assessment Tool: Measuring Word Knowledge Based on Grade-Level Materials. In Y. Kim, V. Risko, D. Compton, D. Dickinson, M. Hundley, R. Jimenez, K. Leander, D. Rowe (Eds.), *57<sup>th</sup> Annual Yearbook of the National Reading Conference* (pp. 325-340). Oak Creek, WI: National Reading Conference.

Scott, J., Skobel, B., and Wells, J. (2008). *The Word Conscious Classroom: Building the Vocabulary Readers and Writers Need*. New York: Scholastic.

Lubliner, S., and Scott, J. (2008). *Nourishing Vocabulary*. Thousand Oaks, CA: Corwin.

Samway, K. Davies, and Taylor, D. (2008). *Teaching English Language Learners, 6-12: Strategies that Work*. New York: Scholastic.

**FY 2007****Institution:** University of Colorado**Principal Investigator:** Barbara Wise**Project Title:** Early ICARE: Early Independent Comprehensive Adaptive Reading Evaluation System**Grant:** R305A070231

Bolanos, D., Ward, W., Wise, B., Vuuren, S. (2008). Pronunciation Error Detection Techniques for Children's Speech. *Interspeech 2008*, Brisbane, Australia.

Wise, B. & Van Vuuren, S. (2007). Choosing Software Gems to Improve Your Child's Reading. *Perspectives*, 33:3, pp. 34-38.

Brojde, C. & Wise, B. (2008). An Evaluation of the Testing Effect with Third Grade Students. In B.C. Love, K. McRaie & V.M. Sloutsky (Eds.), *Proceedings of the 30<sup>th</sup> Annual Conference of the Cognitive Science Society* (pp. 1362-1367). Washing, DC: Cognitive Science Society.

**Institution:** Florida State University**Principal Investigator:** Carol Connor**Project Title:** Child-Instruction Interactions in Reading: Examining Causal Effects of Individualized Instruction in Second and Third Grade**Grant:** R305B070074

Morrison, F.J., and Connor, C.M. (2009). The Transition to School: Child-Instruction Transactions in Learning to Read. In A. Sameroff (Ed.), *The Transactional Model of Development: How Children and Contexts Shape Each Other* (pp. 183-201). Washington, DC: American Psychological Association.

## **Social and Character Development**

**FY 2003**

**Institution:** New York University

**Principal Investigator:** Lawrence Aber

**Project Title:** Reading, Writing, Respect and Resolution: The Impact of a Social and Character Development and Literacy Program on Teachers and Children

**Grant:** R305L030003

Larusso, M.D., Brown, J.L., Jones, S.M., and Aber, J.L. (in press). School Context and Micro-Contexts: the Complexity of Studying School Settings. In L.M. Dinella (Ed.), *Conducting Psychology Research in School-Based Settings: a Practical Guide for Researchers Conducting High Quality Science Within School Environments*. Washington, D.C.: APA Books.

Jones, S.M., Brown, J.L., and Aber J.L. (2008). Classroom Settings as Targets of Intervention and Research. In M. Shinn and H. Yoshikawa (Eds.), *Towards Positive Youth Development: Transforming Schools and Community Programs*. New York: Oxford University Press.

Gershoff, E.T., and Aber, J.L. (2006). Neighborhoods and Schools: Contexts and Consequences for the Mental Health and Risk Behaviors of Children and Youth. In L. Balter and C. Tamis-Lemonda (Eds.), *Child Psychology: A Handbook of Contemporary Issues* (2nd Edition).(pp. 611-645). New York: Psychology Press/Taylor and Francis.

**Institution:** Oregon State University

**Principal Investigator:** Brian Flay

**Project Title:** Positive Action for Social and Character Development

**Grant:** R305L030072

Ji, P., Flay, B., Dubois, D.L., Patton, V., Day, J., and Cantillon, D. (2006). Consent Form Return Rates for Third Grade Urban Elementary Students. *American Journal of Health Behavior*, 30(5): 467-474.

Ji, P., Dubois, D.L., Flay, B.R., and Brechling, V. (2008). Congratulations, You Have Been Randomized Into the Control Group!(!): Issues to Consider When Recruiting Schools for Matched-Pair Randomized Control Trials of Prevention Programs. *Journal of School Health*, 78(3): 131-139.

## **Teacher Quality – Mathematics and Science**

### **FY 2003**

**Institution:** LessonLab Research Institute  
**Principal Investigator:** James Stigler  
**Project Title:** Algebra Learning for All  
**Grant:** R305M030154

Santagata, R. (2009). Designing Video-Based Professional Development for Mathematics Teachers in Low-Performing Schools. *Journal of Teacher Education, Theme Issue: Innovative Uses of Technology in Teacher Education*, 60(1): 38-51.

### **FY 2005**

**Institution:** University of Cincinnati  
**Principal Investigator:** Carla Johnson  
**Project Title:** Utah's Improving Science Teacher Quality Initiative  
**Grant:** R305M050005

Johnson, Carla C., and Sherry Marx (in press). Transformative Professional Development: a Model for Urban Science Education Reform. *Journal of Science Teacher Education*.

Johnson, C.C. (in press). Transformative Professional Development for In-Service Teachers: Enabling Change in Science Teaching to Better Meet the Needs of Hispanic ELL Students. In Sunal, D.W., Sunal, D.S., Mantero, M., and Wright, E. (Eds.), *Teaching Science With Hispanic ELLs in K-16 Classrooms*. Information Age Publishing.

Johnson, C.C., and Fargo, J.D. (in press). Urban School Reform through Transformative Professional Development: Impact on Teacher Change and Student Learning of Science. *Urban Education*.

### **FY 2006**

**Institution:** LessonLab, Inc.  
**Principal Investigator:** Nicole Kersting  
**Project Title:** Using Video Clips of Classroom Instruction as Item Prompts to Measure Teacher Knowledge of Teaching Mathematics: Instrument Development and Validation  
**Grant:** R305M060057

Kersting, N. (2008). Using Video Clips as Item Prompts to Measure Teachers' Knowledge of Teaching Mathematics. *Educational and Psychological Measurement*, 68:845-886.

## **Teacher Quality – Reading and Writing**

### **FY 2003**

**Institution:** Haskins Laboratories

**Principal Investigator:** Susan Brady

**Project Title:** Mastering Reading Instruction: A Professional Development Project for First Grade Teachers

**Grant:** R305M030099

Brady, S., Gillis, M., Smith, T., Lavalette, M., Liss-Bronstein, L., Lowe, E., North, W., Russo, E., and Wilder, T.D. (2009). First Grade Teachers' Knowledge of Phonological Awareness and Code Concepts: Examining Gains From an Intensive Form of Professional Development. *Reading and Writing: An Interdisciplinary Journal*, 22(4): 425-455.

**Institution:** Instructional Research Group

**Principal Investigator:** Gersten, Russell

**Project Title:** Teacher Quality Study: An Investigation of the Impact of Teacher Study Groups as a Means to Enhance the Quality of Reading Instruction for First Graders in High Poverty Schools in Two States

**Grant:** R305M030052

Dimino, J., and Taylor, M.J. (in press). *Learning How to Improve Vocabulary Instruction through Teacher Study Groups*. Baltimore: Paul H. Brookes.

Gersten, R., Dimino, J., and Jayanthi, M. (2007). Towards the Development of a Nuanced Classroom Observational System for Studying Comprehension and Vocabulary Instruction. In B. Taylor and J. Ysseldyke (Eds.), *Educational Interventions for Struggling Readers* (pp. 381-425). New York: Teachers College Press.

**Institution:** University of Michigan

**Principal Investigator:** Joanne Carlisle

**Project Title:** Identifying Key Components of Effective Professional Development in Reading for First-Grade Teachers and Their Students

**Grant:** R305M030090

Carlisle, J.F., Cortina, K.S., and Katz, L.A. (in press). First-Grade Teachers Response to Three Models of Professional Development in Reading. *Reading and Writing Quarterly*.

### **FY 2004**

**Institution:** Florida State University

**Principal Investigator:** Douglas Harris

**Project Title:** Assessing Teacher Effectiveness: How Can We Predict Who Will Be a High Quality Teacher?

**Grant:** R305M040121

Harris, D., and Rutledge, S. (forthcoming). Models and Predictors of Teacher Effectiveness: A Review of the Evidence With Lessons From (and For) Other Occupations. *Teachers College Record*.

Rutledge, S., and Harris, D. (2008). Certify, Blink, Hire: An Examination of the Process and Tools of Teacher Selection. *Leadership and Policy in Schools*, 7(3): 237-263.

Harris, D. (2008). The Policy Uses and Policy Validity of Value-Added and Other Teacher Quality Measures. In D.H. Gitomer (Ed.), *Measurement Issues and the Assessment of Teacher Quality*. Thousand Oaks, CA: SAGE Publications.

Harris, D., and Sass, T. (2007). *Teacher Training, Teacher Quality, and Student Achievement*. National Center for the Analysis of Longitudinal Data in Education Research (CALDER). Working Paper #3. Washington, DC: Urban Institute.

**Institution:** Purdue University

**Principal Investigator:** Douglas Powell

**Project Title:** Professional Development in Early Reading (Classroom Links to Early Literacy)

**Grant:** R305M040167

Diamond, K.E., Gerde, H.K., and Powell, D.R. (2008). Development in Early Literacy Skills During the Pre-Kindergarten Year in Head Start: Relations Between Growth in Children's Writing and Understanding of Letters. *Early Childhood Research Quarterly*, 23: 467-478.

Powell, D.R., Diamond, K.E., Bojczyk, K.E., and Gerde, H.K. (2008). Head Start Teachers' Perspectives on Early Literacy. *Journal of Literacy Research*, 40: 422-460.

Gerde, H.K., and Powell, D.R. (in press). Teacher Education, Book-Reading Practices, and Children's Language Growth Across One Year of Head Start. *Early Education and Development*.

**Institution:** RAND

**Principal Investigator:** Richard Buddin

**Project Title:** Teacher Licensure Tests and Student Achievement

**Grant:** R305M040186

Buddin, R., and Zamaro, G. *Teacher Quality, Teacher Licensure Tests, and Student Achievement* (WR-555-IES). Santa Monica, CA: RAND Education Working Paper.

Le, Vi-Nhuan, and Buddin, R. (2005). *Examining the Validity Evidence for California Teacher Licensure Exams* (WR 334-EDU). Santa Monica, CA: RAND Education.

## FY 2005

**Institution:** Florida State University

**Principal Investigator:** Alysia Roehrig

**Project Title:** Identifying the Conditions Under Which Large Scale Professional Development Policy Initiatives Are Related to Teacher Knowledge, Instructional Practices, and Student Reading Outcomes

**Grant:** R305M050122

Roehrig, A.D., Turner, J.E., Grove, C.M., Schneider, N., and Liu, Z. (in press). Degree of Alignment Between Beginning Teachers' Practices and Beliefs About Effective Classroom Practices. *The Teacher Educator*.

Roehrig, A.D., Duggar, S.W., Moats, L., Glover, M., and Mincey, B. (2008). When Teachers Work to Use Progress Monitoring Data to Inform Literacy Instruction: Identifying Potential Supports and Challenges. *Remedial and Special Educatio*, 29: 364-382.

Roehrig, A.D., Bohnb, C.M., Turner, J.E., and Pressley, M. (2008). Mentoring Beginning Primary Teachers for Exemplary Teaching Practices. *Teaching and Teacher Education*, 24: 684-702.

**Institution:** University of Michigan

**Principal Investigator:** Joanne Carlisle

**Project Title:** Assessment of Pedagogical Knowledge of Teachers of Reading

**Grant:** R305M050087

Carlisle, J.F., Cortina, K.S., and Katz, L.A. (in press). First-Grade Teachers' Response to Three Models of Professional Development in Reading. *Reading and Writing Quarterly*.

**Institution:** University of Texas, San Antonio

**Principal Investigator:** Misty Sailors

**Project Title:** Teaching Teachers to Teach Critical Reading Strategies (CREST).through an Intensive Professional Development

**Grant:** R305M050021

Sailors, M. (2007). Supporting Teachers Through an Intensive Professional Development Model. In *Supporting Student Success*. Corpus Christi, TX: CEDER Yearbook.

Sailors, M. (in press). Improving Comprehension Instruction through Quality Professional Development. In S.E. Israel and G.G. Duffy (Eds.), *Handbook of Research on Reading Comprehension*. Mahwah, NJ: Erlbaum.

### FY 2008

**Institution:** National Bureau of Economic Research

**Principal Investigator:** Jesse Rothstein

**Project Title:** Value-Added Models and the Measurement of Teacher Quality: Tracking or Causal Effects?

**Grant:** R305A080560

Rothstein, Jesse (2008). *Teacher Quality in Educational Production: Tracking, Decay, and Student Achievement*. National Bureau of Economic Research Working Paper 14442.

**Institution:** University of Pittsburgh

**Principal Investigators:** Linda Kucan and Annemarie Sullivan Palincsar

**Project Title:** The Iterative Design of Modules to Support Reading Comprehension Instruction

**Grant:** R305A080005

Kucan, L., Palincsar, A.S., Khasnabis, D., and Chang, C. (in press). The Video Viewing Task: a Source of Information for Assessing and Addressing Teacher Understanding of Text-Based Discussion. *Teaching and Teacher Education*.

## **Unsolicited and Other Awards**

### **FY 2002**

**Institution:** Southern Methodist University

**Principal Investigator:** Patricia Mathes

**Project Title:** Scaling-up Effective Intervention for Preventing Reading Difficulties in Young Children

**Grant:** R305W03257

Denton, C.A., Swanson, E.A., and Mathes, P.G. (2007). Assessment-Based Instructional Coaching Provided to Reading Intervention Teachers. *Reading and Writing*, 20(6): 569-590.

**Institution:** University of Texas Health Science Center at Houston

**Principal Investigator:** Susan Landry

**Project Title:** Scaling Up a Language and Literacy Development Program at the Pre-Kindergarten Level

**Grant:** R305W02002

Landry, S.H., Anthony, J.L., Swank, P.R., and Monseque-Bailey, P. (2009). Effectiveness of Comprehensive Professional Development for Teachers of At-Risk Preschoolers. *Journal of Educational Psychology*, 101(2): 448-465

**Institution:** Florida State University

**Principal Investigator:** Barbara Foorman

**Project Title:** Scaling Up an Assessment-Driven Intervention Using the Internet and Hand-held Computers

**Grant:** R305W02001

Francis, D.J., Santi, K.L., Fletcher, J.M., Varisco, A., and Foorman, B. (2008). Form Effects on the Estimation of Students' Oral Reading Fluency Using DIBELS. *Journal of School Psychology*, 46(3): 315-342.

Foorman, B.R., Carlson, C.D., and Santi, K.L. (2007). Classroom Reading Instruction and Teacher Knowledge in the Primary Grades. In D. Haager, J. Klinger, and S. Vaughn (Eds.), *Evidence Based Reading Practices for Response to Intervention* (pp. 45-71). Baltimore: Paul H. Brookes.

### **FY 2003**

**Institution:** Georgetown University

**Principal Investigator:** Sharon Ramey

**Project Title:** Building Language for Literacy and Core Knowledge

**Grant:**

Ramey, S.L., and Ramey, C.T. (in press). Establishing a Science of Professional Development for Early Education Programs: The Knowledge Application Information Systems (KAIS). Theory of Professional Development. In L. Justice and C. Vukelich (Eds.), *Every Moment Counts: Achieving Excellence in Preschool Language and Literacy Instruction*. New York: Guilford Press.

Ramey, S.L., Ramey, C.T., and Lanzi, R.G. (2004). The Transition to School: Building on Preschool Foundations and Preparing for Lifelong Learning. In E. Zigler and S.J. Styfco (Eds.), *The Head Start Debates* (pp. 397-413). Baltimore: Paul H. Brookes.

**Institution:** McLean Hospital

**Principal Investigator:** Gil Noam

**Project Title:** The New 3R's – Reading, Resilience, and Relationships in After-School Programs

**Grant:** R

Pierce, M.E., Katzir, T., Wolf, M., and Noam, G.G. (2007). Clusters of Second and Third Grade Dysfluent Urban Readers. *Reading and Writing*, 20(9): 885-907.

### FY 2007

**Institution:** Northwestern University

**Principal Investigator:** Thomas Cook

**Project Title:** Improving Best Quasi-Experimental Practice

**Grant:** R305U070003

Cook, T.D. (2008). Waiting for Life to Arrive: a History of the Regression-Discontinuity Design in Psychology, Statistics and Economics. *Journal of Econometrics*, 142(2): 636-654.

Wong, V.C., Cook, T.D., Barnett, S.W., and Jung, K. (2008). An Effectiveness-Based Evaluation of Five State Pre-Kindergarten Programs. *Journal of Policy Analysis and Management*, 27(1): 122-154.