

Curriculum Vitae

Robert S. Siegler
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Carnegie-Mellon University
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Education:

<u>Schools</u>	<u>Dates</u>	<u>Degree</u>	<u>Major</u>
Univ. of Illinois, Urbana-Champaign	1966-1970	B.A.	Psychology
SUNY at Stony Brook	1970-1974	Ph.D.	Psychology

Employment:

1974-1978 Assistant Professor, Carnegie-Mellon University
1978-1980 Associate Professor, Carnegie-Mellon University
1980-1981 Associate Professor, University of Chicago
1981-1984 Associate Professor, Carnegie-Mellon University
1984- 1997 Professor, Carnegie-Mellon University
1997- Teresa Heinz Professor of Cognitive Psychology,
Carnegie-Mellon University

Courses taught:

Developmental Psychology	Children's Learning
Cognitive Development	Development of Mathematical Skills
Adolescent Psychology	Principles of Child Development
Graduate Research Methods	Theories of Development
Research Methods in Developmental Psychology	Information Processing Approaches to Development
Experimental Design	New Perspectives on Cognitive Development
Cognitive Processes in Reading	
How Children Learn Mathematics	

Memberships in Professional Organizations:

American Psychological Association	National Academy of Education
Association for Psychological Science	Society for Research in Child Development
Cognitive Development Society	

Awards and Honors:

Spencer Fellow, National Academy of Education, 1978
 McCandless Distinguished Young Scientist Award, Division 7 of the American Psychological Association, 1979
 Festival in Honor of Dr. Siegler, Tokyo University, September, 1984
 McEachern Lecturer, University of Alberta, 1988
 Association of American Publishers, "Best Psychology Book of 1996", Second Prize
 U.S. Delegate for Psychology, Oxford University Press, 1997-2002
 Teresa Heinz Chair in Cognitive Psychology, 1997-
 Named 1 of 40 most prominent alumni from University's first 40 years, SUNY at Stony Brook, 1998
 Honorary doctorate (Doctor Honoris Causa), University of Liege, Liege, Belgium, 2004
 American Psychological Association Distinguished Scientific Contribution Award, 2005
 Appointed to the National Mathematics Advisory Panel (Presidential Commission), 2006-2008
 Brotherton Fellow, University of Melbourne, 2006
 Pickering Lecturer, Carlton University, Ottawa, 2008
 Headed Fractions Practice Guide Panel for U. S. Department of Education/ Mathematica Policy Research, 2009-2010
 Tisch Visiting Professor, Columbia University, 2009-2010
 Elected Member of the National Academy of Education, 2010
 Presented B. F. Skinner Lecture, ABAI (Association for Behavior Analysis International) 37th Annual Convention, Denver, CO, May 28, 2011
 Presented Edward Ghiselli Lecture, UC-Berkeley, Berkeley, CA, November 2, 2011

References:

Dr. Judy DeLoache	Dr. David Klahr
Dr. John Flavell	Dr. Robert Sternberg
Dr. Susan Goldin-Meadow	

Publications:

Books

Siegler, R. S. (1978). (Ed.), *Children's thinking: What develops?* Hillsdale, NJ: Erlbaum.
 Siegler, R. S. (1986). *Children's thinking*. Englewood-Cliffs, NJ: Prentice-Hall. Translated into Japanese.

- Siegler, R. S., & Jenkins, E. A. (1989). *How children discover new strategies*. Hillsdale, NJ: Erlbaum.
- Siegler, R. S. (1991). *Children's thinking, 2nd edition*. Englewood Cliffs, NJ: Prentice-Hall. Translated into Korean.
- Siegler, R. S. (1996). *Emerging minds: The process of change in children's thinking*. New York: Oxford University Press. Translated into French and Portuguese.
- Kuhn, D., & Siegler, R. S. (Vol. Eds.). (1998). *Volume 2: Cognition, perception, and language*. In W. Damon (Series Ed.), *Handbook of child psychology* (5th ed.). New York: Wiley.
- Siegler, R. S. (1998). *Children's thinking, 3rd edition*. Upper Saddle River, NJ: Prentice Hall. Translated into French and Greek.
- McClelland, J. L., & Siegler, R. S. (Eds.). (2001). *Mechanisms of cognitive development: Behavioral and neural perspectives*. Mahwah, NJ: Erlbaum.
- Siegler, R. S., DeLoache, J., & Eisenberg, N. (2003). *How children develop*. New York: Worth. Translated into German.
- Siegler, R. S., & Alibali, M. W. (2005). *Children's thinking, 4th edition*. Upper Saddle River, NJ: Prentice Hall. Translated into Chinese, 2006.
- Siegler, R. S., DeLoache, J., & Eisenberg, N. (2006). *How Children Develop, 2nd edition*. New York: Worth.
- Siegler, R. S., DeLoache, J., & Eisenberg, N. (Eds.) (2006). *Child development reader: 15 articles from Scientific American*. New York: Scientific American, Inc./Worth.
- Kuhn, D., & Siegler, R. S. (Vol. Eds.). (2006). *Volume 2: Cognition, perception, and language*. In W. Damon & R. M. Lerner (Series Eds.), *Handbook of child psychology* (6th ed.). Hoboken, NJ: Wiley.
- Damon, W., Lerner, R. M., Kuhn, D., Siegler, R. S., & Eisenberg, N. (Eds.) (2008). *Child and adolescent development: An advanced course*. Hoboken, NJ: Wiley.
- Siegler, R., Carpenter, T., Fennell, F., Geary, D., Lewis, J., Okamoto, Y., Thompson, L., & Wray, J. (2010). *Developing effective fractions instruction for kindergarten through 8th grade: A practice guide* (NCEE #2010-009). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. See <http://ies.ed.gov/ncee/wwc/publications/practiceguides/>.

Journal Articles and Book Chapters

1972

- Siegler, R. S., & Liebert, R. M. (1972). Effects of presenting relevant rules and complete feedback on the conservation of liquid quantity task. *Developmental Psychology*, 7, 133-138.

Siegler, R. S., & Liebert, R. M. (1972). Learning of liquid quantity relationships as a function of rules and feedback, number of training problems, and age of subjects. *Proceedings of the American Psychological Association*, 80, 117-118.

1973

Siegler, R. S. (1973). Inducing a general conservation of liquid quantity relationship as a function of rules and feedback, number of training problems, and age of subjects. *Perceptual and Motor Skills*, 37, 443-452.

Siegler, R. S., & Liebert, R. M. (1973). Effects of consistent, partially consistent, and inconsistent model behavior on children's imitative learning. *Proceedings of the American Psychological Association*, 81, 75-76.

Siegler, R. S., Liebert, D. E., & Liebert, R. M. (1973). Inhelder and Piaget's pendulum problem: Teaching preadolescents to act as scientists. *Developmental Psychology*, 9, 97-101.

Siegler, R. S. (Among 56 other contributing consultants) (1973). *Educational psychology: A contemporary view*. Camino Del Mar, California: CRM Books.

1974

Siegler, R. S., & Liebert, R. M. (1974). Effects of contiguity, regularity, and age on children's causal inferences. *Developmental Psychology*, 10, 574-579.

Siegler, R. S. (Among 19 other contributing consultants) (1974). *Social Psychology: Experiments in understanding*. Camino Del Mar, CA: CRM Books.

1975

Siegler, R. S. (1975). Defining the locus of developmental differences in children's causal reasoning. *Journal of Experimental Child Psychology*, 20, 512-525.

Siegler, R. S., & Liebert, R. M. (1975). Acquisition of formal scientific reasoning by 10- and 13-year-olds: Designing a factorial experiment. *Developmental Psychology*, 11, 401-412.

1976

Siegler, R. S. (1976). Three aspects of cognitive development. *Cognitive Psychology*, 8, 481-520.

Siegler, R. S. (1976). The effects of simple necessity and sufficiency relationships on children's causal inferences. *Child Development*, 47, 1058-1063.

Siegler, R. S., & Atlas, M. (1976). Acquisition of formal scientific reasoning by 10- and 13-year-olds: Detecting interactive patterns in data. *Journal of Educational Psychology*, 68, 360-370.

- Siegler, R. S. (1976). Where is the logic? Review of *Reasoning: Representation and process*. R. Falmagne (Ed.), *Contemporary Psychology*, 21, 462-464.
- Siegler, D. M., & Siegler, R. S. (1976). Stereotypes of male and female speech. *Psychological Reports*, 39, 167-170.

1977

- Carroll, J. S., & Siegler, R. S. (1977). Strategies for the use of base-rate information. *Organizational Behavior and Human Performance*, 19, 392-402.
- Siegler, R. S. (1977). The 20 questions game as a form of problem solving. *Child Development*, 48, 395-403.
- Siegler, R. S. (1977). Adventures in epistemology. Review of *Knowledge and development: Advances in theory and research*. W. Overton & J. M. Gallagher (Eds.), *Contemporary Psychology*, 22, 802-804.
- Siegler, R. S. (1977). Cognition, instruction, development, and individual differences. In A. M. Lesgold, J. W. Pellegrino, S. S. Fokkema, and R. Glaser (Eds.), *Cognitive psychology and instruction: The NATO conference* (pp. 389-403). New York: Plenum Press.
- Siegler, R. S. (1977). The development of formal operations. *The Genetic Epistemologist*, 6, 4-6.

1978

- Klahr, D., & Siegler, R. S. (1978). The representation of children's knowledge. In H. Reese & L. Lipsitt (Eds.), *Advances in child development and behavior*, Vol. 12 (pp. 61-116). New York: Academic Press.
- Siegler, R. S. (1978). The origins of scientific reasoning. In R. S. Siegler (Ed.), *Children's thinking: What develops?* (pp. 109-149). Hillsdale, NJ: Erlbaum.
- Siegler, R. S., & Vago, S. (1978). The development of a proportionality concept: Judging relative fullness. *Journal of Experimental Child Psychology*, 24, 371-395.
- Siegler, R. S. (1978). Reply to Brainerd. *The Behavioral and Brain Sciences*, 1, 202-203.
- Siegler, R. S. (1978). The intellectual development of Jean Piaget. Review of *Jean Piaget: Psychologist of the Real* (by Brian Rotman), *Contemporary Psychology*, 23, 818-819.

1979

- Siegler, R. S., & Richards, D. D. (1979). The development of speed, time, and distance concepts. *Developmental Psychology*, 15, 288-298.

Siegler, R. S. (1979). Children's thinking: The search for limits. In R. Whitehurst & B. Zimmerman (Eds.), *The functions of language and cognition* (pp. 83-113). New York: Academic Press.

Siegler, R. S. (1979). What young children do know. Review of *The child's understanding of number* (by R. Gelman & C. R. Gallistel), *Contemporary Psychology*, 24, 613-615.

1980

Siegler, R. S. (1980). Recent trends in the study of cognitive development: Variations on a task-analytic theme. *Human Development*, 23, 278-285.

Siegler, R. S. (1980). When do children learn? The relationship between existing knowledge and learning. *Educational Psychologist*, 15, 135-150.

1981

Richards, D. D., & Siegler, R. S. (1981). Children's acquisition of systematic problem solving strategies. *Child Development*, 52, 1318-1321.

Richards, D. D., & Siegler, R. S. (1981). U-shaped curves: It's not whether you're right or wrong, it's why. In S. Strauss & R. Stavy (Eds.), *U-shaped behavioral growth* (pp. 37-61). New York: Academic Press.

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1982

Siegler, R. S. (1982). The rule assessment approach and education. *Contemporary Educational Psychology*, 7, 272-289.

Siegler, R. S., & Klahr, D. (1982). When do children learn: The relationship between existing knowledge and the ability to acquire new knowledge. In R. Glaser (Ed.), *Advances in Instructional Psychology: Vol. 2* (pp. 121-211). Hillsdale, NJ: Erlbaum.

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1983

Siegler, R. S. (1983). Five generalizations about cognitive development. *American Psychologist*, *38*, 263-277.

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Siegler, R. S. (1983). How knowledge influences learning. *American Scientist*, *71*, 631-638.

Siegler, R. S. (1983). Information processing approaches to development. In W. Kessen (Vol. Ed.), *Volume 1: History, theory, and methods* (pp. 129-211). In P. H. Mussen (Series Ed.), *Handbook of child psychology*. New York: John Wiley & Sons.

Siegler, R. S. (1983). Review of *The development of mathematical thinking*. H. P. Ginsburg (Ed.), New York: Academic Press, *Science*, *221*, 1042-1043.

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Siegler, R. S. (1983). Psychology is ready. Review of *The psychology of mathematics for instruction*. L. B. Resnick and W. Ford (Eds.), *American Journal of Education*, *91*, 385-387.

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1984

Briars, D. J., & Siegler, R. S. (1984). A featural analysis of preschoolers' counting knowledge. *Developmental Psychology*, *20*, 607-618.

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Siegler, R. S. (1984). Research on learning. In T. Romberg and D. Stewart (Eds.), *School mathematics: Options for the 1990s* (pp. 79-84). Washington, DC: National Council of Teachers of Mathematics.

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1986

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Reprinted in R. S. Albert (Ed.). (1992). *Genius and eminence*, 2nd Edition (pp. 95-108). Oxford: Pergamon Press.

Siegler, R. S., & Taraban, R. (1986). Conditions of applicability of a strategy choice model. *Cognitive Development*, 1, 31-51.

1987

Siegler, R. S. (1987). The perils of averaging data over strategies: An example from children's addition. *Journal of Experimental Psychology: General*, 116, 250-264.

Siegler, R. S. (1987). Strategy choices in subtraction. In J. Sloboda and D. Rogers (Eds.), *Cognitive process in mathematics* (pp. 81-106). Oxford: Oxford University Press.

Siegler, R. S. (1987). Some general conclusions about children's strategy choice procedures. *International Journal of Psychology*, In special issue "The neo-Piagetian theories of cognitive development: Toward an integration." 22, 729-749.

Reprinted in A. Demetriou (Ed.), (1988). *The neo-Piagetian theories of cognitive development: Toward an integration* (pp. 223-243). Elsevier: The Netherlands.

Siegler, R. S., & Shipley, C. (1987). The role of learning in children's strategy choices. In L. S. Liben (Ed.), *Development and learning: Conflict or congruence?* (pp. 71-107). Hillsdale, NJ: Erlbaum.

1988

Siegler, R. S. (1988). Strategy choice procedures and the development of multiplication skill. *Journal of Experimental Psychology: General*, *117*, 258-275.

Siegler, R. S. (1988). Individual differences in strategy choices: Good students, not-so-good students, and perfectionists. *Child Development*, *59*, 833-851.

Siegler, R. S. (1988). Transitions in strategy choices. In *Proceedings of the Cognitive Science Society*, *9*, 11-18.

1989

McGilly, K., & Siegler, R. S. (1989). How children choose among serial recall strategies. *Child Development*, *60*, 172-182.

Siegler, R. S. (1989). Mechanisms of cognitive development. *Annual Review of Psychology*, *40*, 353-379.

Siegler, R. S. (1989). How domain-general and domain-specific knowledge interact to produce strategy choices. *Merrill-Palmer Quarterly*, *35*, 1-26.

Siegler, R. S. (1989). Hazards of mental chronometry: An example from children's subtraction. *Journal of Educational Psychology*, *81*, 497-506.

Siegler, R. S. (1989). Strategy diversity and cognitive assessment. *Educational Researcher*, *18*, 15-20.

Siegler, R. S. (1989). Commentary. Special topic "Development of biological concepts in cross-cultural perspective." *Human Development*, *32*, 104-109.

Siegler, R. S. (1989). Connecting formal and informal mathematical knowledge. Review of *Children and number: Difficulties in learning mathematics*. *Contemporary Psychology*, *34*, 585-586.

Siegler, R. S., & Campbell, J. I. D. (1989). Individual differences in children's strategy choices. In P. L. Ackerman, R. J. Sternberg, & R. Glaser (Eds.), (pp. 218-254). *Learning and individual differences*. New York: Freeman.

Siegler, R. S., & McGilly, K. (1989). Strategy choices in children's time-telling. In I. Levin and D. Zakay (Eds.) *Time and human cognition: A life span perspective* (pp. 185-218). The Netherlands: Elsevier Science Publishers.

1990

- Levin, I., Siegler, R. S., & Druyan, S. (1990). Misconceptions about motion: Development and training effects. *Child Development, 61*, 1544-1557.
- Levin, I., Siegler, R. S., Druyan, S., & Gardosh, R. (1990). Everyday and curriculum-based physics concepts: When does short-term training bring change where years of schooling have failed to do so? *British Journal of Developmental Psychology, 8*, 269-279.
- McGilly, K., & Siegler, R. S. (1990). The influence of encoding and strategic knowledge on children's choices among serial recall strategies. *Developmental Psychology, 26*, 931-941.
- Siegler, R. S. (1990). How content knowledge, strategies, and individual differences interact to produce strategy choices. In W. Schneider and F. E. Weinert (Eds.), *Interactions among aptitudes, strategies, and knowledge in cognitive performance* (pp. 74-89). New York: Springer-Verlag.
- Siegler, R. S. (1990). Information processing theories and developmental research. In The Developmental Psychology Committee of the Chinese Psychological Association (Eds.), *Lectures on special topics in developmental psychology*. Beijing, China: Beijing Normal College Press.
- Siegler, R. S., & Campbell, J. I. D. (1990). Diagnosing individual differences in strategy choice procedures. In N. Fredriksen, R. Glaser, A. Lesgold., & M. G. Shafto (Eds.), *Diagnostic monitoring of skill and knowledge acquisition* (pp. 113-139). Hillsdale, NJ: Erlbaum.

1991

- Brown, N. R., & Siegler, R. S. (1991). Subjective organization of U.S. presidents. *American Journal of Psychology, 104*, 1-33.
- Brown, N. R., & Siegler, R. S. (1991). Understanding and improving real-world quantitative estimation. In *Proceedings of the 13th Annual Conference of the Cognitive Science Society* (pp. 209-215). Hillsdale, NJ: Erlbaum.
- Crowley, K., & Siegler, R. S. (1991). Review of *Children's strategies: Contemporary views of cognitive development*. D. F. Bjorklund (Ed.), Hillsdale, NJ: Erlbaum, *The American Journal of Psychology, 104*, 605-609.
- Siegler, R. S. (1991). In young children's counting, procedures precede principles. *Educational Psychology Review, 3*, 127-135.
- Siegler, R. S. (1991). Strategy choice and strategy discovery. *Learning and Instruction, 1*, 89-102.

- Siegler, R. S. (1991). How domain-general and domain-specific knowledge interact to produce strategy choices. In P. Light, S. Sheldon, and M. Woodhead (Eds.), *Child development in social context: Learning to think* (pp. 236-262). London: Routledge.
- Siegler, R. S., & Crowley, K. (1991). The microgenetic method: A direct means for studying cognitive development. *American Psychologist*, *46*, 606-620.
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1992

- Brown, N. R., & Siegler, R. S. (1992). The role of availability in the estimation of national populations. *Memory and Cognition*, *20*, 406-412.
- Siegler, R. S. (1992). The other Alfred Binet. *Developmental Psychology*, *28*, 179-190. Translated into Greek.
Reprinted in G. Kugiumutzakis (Ed.) (1995). *Developmental psychology: past, present and future*. Crete: Crete University Press.
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- Siegler, R. S., & Crowley, K. (1992). Microgenetic methods revisited. *American Psychologist*, *47*, 1241-1243.

1993

- Brown, N. R., & Siegler, R. S. (1993). Metrics and mappings: A framework for understanding real-world quantitative estimation. *Psychological Review*, *100*, 511-534.
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1994

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Reprinted in M. Gauvain & M. Cole (Eds.) (1997). *Readings on the development of children, 2nd Edition* (pp. 165-171). New York: Freeman.

Reprinted in K. Lee (Ed.) (2000). *Childhood cognitive development: The essential readings* (pp. 51-61). Malden, MA: Blackwell.

Siegler, R. S., & Crowley, K. (1994). Constraints on learning in non-privileged domains. *Cognitive Psychology*, *27*, 194-227.

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1995

Lemaire, P., & Siegler, R. S. (1995). Four aspects of strategic change: Contributions to children's learning of multiplication. *Journal of Experimental Psychology: General*, *124*, 83-97.

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In Press

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- Opfer, J. E., & Siegler, R. S. (in press). Development of quantitative thinking. In K. Holyoak & R. Morrison (Eds.), *Oxford handbook of thinking and reasoning*. Cambridge, UK: Oxford University Press.
- Ramani, G. B., & Siegler, R. S. (in press). How informal learning activities can promote children's numerical knowledge. In R.C. Kadosh & A. Dowker (Eds.), *Oxford handbook of mathematical cognition*.
- Siegler, R. S. (in press). From theory to application and back: Following in the giant footsteps of David Klahr. In J. Shrager & S. Carver (Eds.), *From child to scientist*, Sage Press.
- Siegler, R. S. (in press). How do people become experts? In J. Staszewski, (Ed.), *Expertise and skill acquisition: The impact of William G. Chase*. New York: Taylor & Francis.
- Siegler, R. S., Duncan, G. J., Davis-Kean, P. E., Duckworth, K., Claessens, A., Engel, M., Susperreguy, M. I., & Chen, M. (in press). Early predictors of high school mathematics achievement. *Psychological Science*.

Talks

Keynote Addresses

From 1993 to the present, I have presented keynote addresses at the following meetings: International Society for the Study of Behavioral Development, Recife, Brazil, July, 1993; Gatlinburg Conference on Mental Retardation, March, 1994; Human Development Conference, April, 1994; Jean Piaget Society, June 1994; Society for Research and Child Development, 1995; British Psychological Society, London, 1996; Freiburg Autumn School in Cognitive Science, Freiburg, Germany, October, 1997; Conference on Intellectual Development, Santiago, Chile, January, 1998; Human Development Conference, March, 1998; American Psychological Association, 2000; Conference on the Rule Assessment Method, Amsterdam, Netherlands, 2001; 16th Annual Joseph Royce Conference, Edmonton, Canada, April 2002; American Psychological Association, August,

2002; Conference on Learning & Instruction, Paris, France, June, 2002; Third Annual Waterford Early Education Conference, November, 2003; American Education Research Association, April, 2004; Conference on Studying Developmental Change Processes, Verona, Italy, May, 2004; Conference on Microgenetic Methods, St. Andrews, Scotland, September, 2004; American Psychological Association, August, 2005; Midwestern Psychological Association, May, 2006; International Society for the Study of Behavioral Development, Melbourne, Australia, July, 2006; Cognitive Science Society, Vancouver, BC, July, 2006, Conference on Human Development, Indianapolis, April, 2008, Eastern Psychological Association, Pittsburgh, March, 2009, Japanese Psychological Association, Kyoto, August, 2009, Nordic Research Network on Special Needs in Mathematics, October, 2009, Tisch Lecture, Columbia University, February, 2010, B. F. Skinner Lecture, Association for Behavior Analysis International, Denver, May, 2011, Ghiselli Lecture, UC-Berkeley, November, 2011.

Colloquia

From 1974 to the present, I have presented colloquia at the following universities: University of Virginia, University of Washington, University of North Carolina, Chapel Hill, Washington University of St. Louis, University of Pittsburgh, University of California at Santa Barbara, University of Alberta, University of Delaware, University of Heidelberg, Germany, Yale University, University of California at San Diego, University of Michigan, Institute of Child Development (University of Minnesota), Cornell University, University of Chicago, University of Rochester, Stanford University, University of Waterloo, University of Massachusetts, University of Texas, University of California at Los Angeles, Tulane University, Case Western Reserve University, University of Delaware, University of Wisconsin, University of Virginia, University of Michigan, Tokyo University, University of Kyoto, University of Minnesota, Brown University, McGill University, Vanderbilt University, University of California, Berkeley, University of California, Santa Barbara, University of Illinois, Chicago, Duke University, Tel Aviv University, Oberlin College, Beijing University, University of Delaware, Yale University, University of North Carolina, Greensboro, University of Puerto Rico, Catholic University of Puerto Rico, Max-Planck-Institut, Munich, Stanford University, University of Alberta, University of California, Santa Cruz, Ontario Institutes for Studies in Education (OISE), Vanderbilt University, SUNY at Stony Brook, General Motors Institute (Sigma XI Speaker), Johns Hopkins University, University of California at Berkeley, University of West Virginia, Fordham University, University of Minnesota, Universidad Autonoma, Madrid, Spain, U.N.E.D. Ciudad Universitaria, Madrid, Spain, Universidad de La Laguna, Tenerife, Spain, University of North Carolina

(Carolina Consortium on Development), University of Illinois, Urbana, University of South Florida, University of Virginia, University of California, Riverside, UCLA, Yale University, Tel-Aviv University, University of Paris, University of Alabama, Birmingham, Fordham University, Brock University, University of Missouri, University of Leipzig (Germany), University of Padova, Italy, Max Planck Institut, Berlin, University of Texas at Dallas, Brandeis University, University of Illinois, Champaign, University of Sussex, University College, London, University of Iowa, Ohio State University, University of Freiburg, Germany, University de Chile, University of South Alabama, University of Pittsburgh, West Virginia University, University of Aix-en-Provence, University of Iowa, Vanderbilt University, Yale University, Arizona State University, UCLA, University of Amsterdam, University of Hawaii, University of Alberta, University of Paris, University of Maryland, University of Leuven, University of St. Andrews, Brock University, University of California, Davis, University of Maryland, University of Liege, Belgium, University of Verona, Italy, University of St. Andrews, Scotland, University of California, San Diego, University of California, Davis, Brock University, St. Catherine's University, Ontario University, Emory University, Tel-Aviv University, Sackler Institute (Cornell Medical School), Duke University, University of Melbourne, Harvard University, University of Athens, University of Pavia, University of Delaware, Beijing Normal University, University of Wisconsin-Madison.

Convention Papers

From 1972 to the present, I have presented over 150 talks at conferences, including those of the American Association of Physics Teachers, American Chemical Society, American Educational Research Association, American Psychological Association, American Psychological Society, British Psychological Association, Carnegie-Mellon Cognition Symposium, Cognitive Development Society, Cognitive Science Society, Gatlinburg Conference on Mental Retardation, International Society for the Study of Behavioral Development, Learning Disabilities Conference, Midwest Psychological Association, Minnesota Symposium on Child Development, National Council of Teachers of Mathematics, Jean Piaget Society, Psychiatric Outpatient Clinics of America, Psychonomics Society, Reading Recovery Council of North America, Society for Research in Child Development, Waterford Institute.

Grant Funding:

1978-1981 National Institutes of Health Grant HD15285, "Development of scientific reasoning," Principal Investigator.

- 1981-1984 National Institutes of Health Grant HD15285 (4-6), "Development of scientific reasoning," Principal Investigator.
- 1984-1986 National Institute of Education, Grant NIE-G-0050, "Children's early understandings of numbers," Principal Investigator.
- 1984-1986 National Institutes of Health Grant HD 19011, "Development of strategy choice procedures," Principal Investigator.
- 1986-1989 Spencer Foundation, "Children's strategy choices: Theoretical and educational issues." Principal Investigator.
- 1986-1990 National Institutes of Health, HD 19011/3-6 "The development of strategy choice procedures". Principal Investigator.
- 1987-1991 McDonnell Foundation. "Project Rightstart" Co Principal Investigator (with Robbie Case).
- 1989-1993 Spencer Foundation, "Long term strategy construction." Principal Investigator.
- 1989-1992 Mellon Foundation, "Literacy in Science Center." Project Director (David Klahr, PI).
- 1990-1992 Binational Foundation (U.S.-Israel) "A geometrical misconception: Development, schooling, and training effects." Co Principal Investigator (with Iris Levin).
- 1991-1995 National Institutes of Health, HD 19011/6-10 "The development of strategy choice procedures". Principal Investigator.
- 1992-1995 Mellon Foundation, "Literacy in Science Center," Project Director. (David Klahr, PI).
- 1995-2000 National Institutes of Health, HD 19011/11-15 "The development of strategy choice procedures". Principal Investigator.
- 1997-2000 Spencer Foundation Grant "Microgenetic studies of self-explanation". Principal Investigator.
- 1997-1999 NICHD Grant PA-96 025 "Microgenetic studies of infants' problem solving". Co-Principal Investigator (with Zhe Chen)

- 1997-1998 University of Iowa grant "Closing the "Great Divide": Toward a synthesis of social-emotional and cognitive development". Co-Principal Investigator (with Grazyna Kochanska).
- 1998-1999 National Science Foundation SBR-9729061 "Mechanisms of cognitive development: Behavioral and neural perspectives". (Funding for Carnegie Mellon Cognition Symposium, October, 1998). Co-Principal Investigator (with Jay McClelland).
- 2000-2005 National Institutes of Health, HD 19011/16-20 "The development of strategy choice procedures". Principal Investigator.
- 2002-2005 U.S. Department of Education, R305H020060 "Using cognitive analyses to improve children's math and science learning". Project Director.
- 2005-2010 U.S. Department of Education, R305H050035 "Improving children's pure numerical estimation". Project Director.
- 2008-2012 U.S. Department of Education, Institute of Education Sciences, R305A080013, "Improving children's numerical understanding". Project Director.
- 2010-2015 U.S. Department of Education, Institute of Education Sciences, R305B100001, "Postdoctoral Training in Children's Mathematics Learning". Project Director.
- 2010-2015 U.S. Department of Education, Institute of Education Sciences, R324C10004: 84.324C, "National Center for Special Research (Center for Improvement of Fractions Learning)". Co-PI.

Professional Work:

Editing:

Associate Editor

Developmental Psychology (1993-1996)

Editorial Board Member

Child Development (1976-1984)

Developmental Psychology (1977-1984)

Developmental Review (1980-)
American Journal of Education (1982-1986)
Contemporary Psychology (1984-1991)
Cognitive Development (1985-1999)
Developmental Science (1996-)
Cognitive Science Quarterly (1999-)
Journal of Experimental Psychology: General (2001-2008)
Journal of Cognition and Development (2006-)
Psychological Science (2012-)

Guest Consulting Editor

American Psychologist
American Scientist
Cognition and Instruction
Cognitive Psychology
Contemporary Psychology
Journal of Educational Psychology
Journal of Experimental Child Psychology
Journal of Experimental Psychology: General
Psychological Bulletin
Psychological Review
Review of Educational Research
Science

National Service:

Grants Review Panel Member

National Institutes of Health - Child Development & Aging
 (1987-1991)
 National Institute of Education - Mathematics Learning - Ad
 Hoc
 NIE/NSF Joint Panel on Science Learning - Ad Hoc
 NIE Center for the Study of Learning - Ad Hoc
 National Institutes of Health - BPPP IV - Ad Hoc

Grant Reviewer

Bush Foundation
 Canada Council
 McDonnell Foundation
 National Institute of Education
 National Institute of Mental Health

National Research Council of Canada
National Science Foundation
Spencer Foundation

National Panels

Boyd McCandless Award Selection Committee, 1990 & 2011
National Mathematics Advisory Panel (U. S. Presidential
Commission), 2006-2008
Headed Fractions Practice Guide Panel for U. S. Department of
Education/Mathematica Policy Research, 2009-2010
American Psychological Association Committee on Scientific Awards,
2010-2012