

Sharon McCoy Carver

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The Children's School
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Carnegie Mellon University
Pittsburgh, PA 15213
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Education

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| 1986 | Ph.D. | Department of Psychology
Carnegie Mellon University
Pittsburgh, PA 15213 | Cognitive Development |
| 1982 | A.B. | Princeton University
Princeton, NJ 08544 | Psychology
Teach. Cert. K-12 Biology |

Employment History

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| 1993 - | Director, Children's School, Carnegie Mellon University
Teaching Professor, Department of Psychology |
| | Beginning 2005, Co-Training Director, PIER
(Program in Interdisciplinary Education Research) |
| 1988 - 1993 | Assistant Professor
Graduate School of Education and Human Development
and Department of Psychology, University of Rochester |
| 1986 - 1988 | Post-Doctoral Research Associate with David Klahr
Department of Psychology, Carnegie Mellon University |

Research Interests

Development of Cognitive Skills, Educational Applications of Cognitive Theory, Early Childhood Developmentally Appropriate Practice, Classroom Research and Reform, Integration of Technology Across the Curriculum

My research approach involves clear specification of developmental objectives for young children, designing instruction and assessment based on the specification, implementing the instruction and assessment collaboratively with teachers, and, when possible, conducting detailed studies of the learning impact on the targeted skills using naturalistic and structured observation,

interview, and protocol analysis techniques. I am working collaboratively with the staff and undergraduates at the CMU Children's School to test the impact of specific aspects of our program on young children's development, using experimental studies within the classroom setting. In addition, I work with senior honors students on projects related to early childhood development (e.g., the impact of observation coaching on children's graphic representations).

Teaching Interests

Developmental Psychology, Cognitive Development, Psychology in Education, Cognition & Instruction, Technology in Schools, Problem Solving, Research Methods

Teaching Experience

Recipient of the Elliott Dunlap Smith Award for Distinguished Teaching and Educational Service, Carnegie Mellon University, Humanities & Social Sciences (February 2011)

2011 - 2013 *Carnegie Mellon University, Pittsburgh, PA*
Practicum in Early Childhood Education
(2-Week Intensive Experience for students from Duksung Women's University at the Children's School)

2005 - *Carnegie Mellon University, Pittsburgh, PA*
Educational Goals, Instruction, and Assessment (Graduate)

1997 - *Carnegie Mellon University, Pittsburgh, PA*
Practicum in Child Development (Undergraduate)

1996 - 2004 *Carnegie Mellon University, Pittsburgh, PA*
Undergraduate Research Seminar

1995 - 2000 *Chatham College / CMU, Pittsburgh, PA*
The Developing Child (Teacher Certification)

1994 - *Carnegie Mellon University, Pittsburgh, PA*
Principles of Child Development (Undergraduate)

1994 - 2006 *Carnegie Mellon University, Pittsburgh, PA*
Developmental Core Course (Graduate)

1988-1993 *University of Rochester, Rochester, NY*

Developmental Psychology (Undergraduate)
Cognitive Development (Undergraduate)
Cognition and Instruction (Graduate)
Gender Issues in Math, Science, and Technology (Grad)
Integrating Computers into the Classroom (Graduate)
Qualitative Research Methods (Graduate)
Cognitive Development (Graduate)

- 1985-1988 *The Ellis School, Pittsburgh, PA*
6th and 7th Grade Computer (Logo)
- 1985-1986 *The Montessori Centre Academy, Glenshaw, PA*
3rd - 6th Grade Computer (Logo)
- 1983-1984 *Buhl Science Center, Pittsburgh, PA*
Logo I and II
- 1984 *Carnegie Mellon University, Pittsburgh, PA*
Developmental Psychology (Undergraduate)

Technical Skills

Computer Systems and Packages: Macintosh, MS Office, Powerpoint, Blackboard, PhotoShop, iPhoto, iMovie
Programming Languages: Lisp, Logo, BASIC, GRAPES (a Lisp-based production system), CT (a C-based language for developing computer tutors)

Publications

- Frye, D., Baroody, A., Burchinal, M., Carver, S. M., Jordan, N. C., & McDowell, J. (2013). Teaching math to young children: A practice guide (NCEE#). Washington, DC: National Center for Education Evaluation and Regional Assistance (NCEE), Institute of Education Sciences, U.S. Department of Education.
- Carver, S. M., & Shrager, J. (2012). The Psychology of Science, Science Education, and the Impact of David Klahr. In S. Carver & J. Shrager (Eds.), *The journey from child to scientist: Integrating cognitive development and the education sciences*. Washington, D.C.: American Psychological Association.
- Easterday, M., Aleven, V., Scheines, R. & Carver, S. (2009). *Constructing Causal Diagrams to Learn Deliberation*. International Journal of Artificial Intelligence in Education, 19 (4), 425-445.

- Carver, S.M. (2009). Fun, Fitness, and Friends: Playing Games with Preschoolers. *Teaching Young Children*, **2(4)**, 12-16. There is a companion piece in *NEXT*, **2(4)**, 4-5 regarding how to use the TYC article for a professional development seminar.
- Carver, S.M. (2008). Frameworks for understanding individual differences: Comparison, contrast, and synthesis. *National Association of Laboratory Schools Monograph*, 4-14.
- Vlach, H.A. and Carver, S.M. (2008). The Effects of Observation Coaching on Children's Graphic Representations. *Early Childhood Research and Practice*. (<http://ecrp.uiuc.edu/v10n1/vlach.html>).
- Carver, S.M. (2008). Experimental approaches for overcoming practical challenges of classroom research. In *Applying Cognitive Development and Cognitive Research to K-3 Classroom Learning*. Thurman, S.K and Fiorello, C.A. (Eds.).
- Vlach, H.A. and Carver, S.M. (Spring 2006). The impact of observation on children's graphic representations. *National Association of Laboratory Schools Journal*, **30(1)**, 6-15.
- Carver, S.M. (2006). Assessing for Deep Understanding. In *Cambridge Handbook of the Learning Sciences*. R. K. Sawyer (Ed). New York, NY: Cambridge University Press.
- Carver, S.M. and Klahr, D. (2001). *Cognition and instruction: Twenty-Five years of progress*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Carver, S.M. (2001). Cognition and instruction: Enriching the laboratory school experience of children, teachers, parents, and undergraduates. In *Cognition and instruction: Twenty-five years of progress*. Carver, S.M. and Klahr, D. (Eds.). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Kaufman, G. F. and Carver, S. M. (2000). The Effects of piano instruction on the visual-motor development of kindergartners. *National Association of Laboratory Schools Journal*, **24(2)**, 9-17.
- Carver, S.M. (in press). The Discover Rochester Design Experiment: Collaborative Change through Five Designs. In *Design Experiments: Integrating Technology into Schools*. Hawkins, J. and Collins, A. (Eds.). Center for Technology and Education.

- Klahr, D. and Carver, S.M. (1995). Scientific Thinking about Scientific Thinking. Commentary on Kuhn, D., Garcia-Mila, M., Zohar, A., Andersen, C. *Strategies of Knowledge Acquisition in Monographs of the Society for Research in Child Development*, Serial #245, **60(4)**, 137-151.
- Carver, S.M. (1995). Cognitive Apprenticeships: Putting Theory into Practice on a Large Scale. In C.N. Hedley (Ed.) *Thinking and Literacy: The Mind at Work*. Northvale, NJ: Lawrence Erlbaum Associates, Inc.
- Carver, S.M., Lehrer, R., Connell, T. and Erickson, J. (1992). Learning by hypermedia design: Issues of assessment and implementation. *Educational Psychologist*, **27(3)**, 385-404.
- Collins, A., Hawkins, J. and Carver, S.M. (1991). A cognitive apprenticeship for disadvantaged students. In B. Means, C. Chelemer, and M.S. Knapp (Eds.), *Teaching Advanced Skills to At-Risk Students: Views from Research and Practice*. San Francisco, CA: Jossey, Bass.
- Carver, S.M. and Walker, M.L. (1989). In search of general planning skills. In the *NECC '89 Connections* (Proceedings of the National Educational Computing Conference). International Council on Computers for Education: Boston, MA.
- Carver, S.M. (1988). Learning and transfer of debugging skills: Applying task analysis to curriculum design and assessment. In R.E. Mayer (Ed.), *Teaching and Learning Computer Programming: Multiple Research Perspectives* (pp. 259-297). Hillsdale, NY: Erlbaum.
- Klahr, D. and Carver, S.M. (1988). Cognitive objectives in a LOGO debugging curriculum: Instruction, learning, and transfer. *Cognitive Psychology*, **20**, 362-404.
- Carver, S.M. and Risinger, S.C. (1987). Improving children's debugging skills. In G. Olson, S. Sheppard, and E. Soloway (Eds.), *Empirical Studies of Programmers: Second Workshop* (pp. 147-171). Norwood, NJ: Ablex.
- Carver, S.M. and Klahr, D. (1986). Assessing children's LOGO debugging skills with a formal model. *Journal of Educational Computing Research*, **2(4)**, 487-525.
- My work was also described in *Byte* magazine (October 1989), *The New York Times* (Parent and Child column, October 5, 1989), and the GSEHD's *Education News* (Inaugural Edition 1989).

Reviews

- Carver, S. M. & Klahr, D. (2002). Response to review by Maurice Galton of "Cognition and instruction: Twenty-five years of progress." *British Journal of Educational Psychology*, 72, 449-450.
- Carver, S. M. (1995). Getting Down to the Brass Tacks: The Practical Issues of Large Scale Technology Innovation. *Journal of Educational Computing Research*, **12(4)**, 411-414.
- Carver, S. M. (1992). Toward a Scientific Practice of Science Education. *Journal of Curriculum Studies*, **24(2)**, 191-193.
- Carver, S.M. (1988). Does the rubber meet the road? Issues for applying Cognitive Psychology to real-world problems. *Contemporary Psychology*, **33(11)**, 982-983.

Working Papers

- Carver, S.M. and Carpenter, P.A. Developmental trends in compound comprehension. Carnegie Mellon University.
- Klahr, D. and Carver, S.M. Developmental progress in the use of weak methods: From hill-climbing to sub-goaling. Carnegie Mellon University.

Dissertation

- Transfer of Logo debugging skill: Analysis, instruction, and assessment. Thesis committee: David Klahr (chair), Robert S. Siegler, Catherine Sophian, and Lynne M. Reder.

Paper Presentations

- Carver, S.M. (2012). *Modeling, Mentoring, Courses, Field Experience, and Research in the Education Community*. American Psychological Association Symposium: Presidential Program - Preparing Psychologists to Create, Join, and Lead Interdisciplinary Teams, Orlando, FL.
- Bauer, I., Carver, S.M., Nicolet, D.M., and Payne, K.W. (2011). *Accreditation Options for Campus Children's Centers*. Full Day Preconference Session for the Annual Conference of the National Coalition for Campus Children's Centers, San Diego, CA.
- Bird, J., Perovich, D., and Carver, S. (2010). *Creative Drama: Fostering Expression and Appreciation at the Preschool and Kindergarten Level*. Presented at the Annual Conference of the National Association of Laboratory Schools, Muncie, IN.

- Carver, S. and Hancock, L. (2010). *Involving Families in Creative Art, Music and Drama*. Presented at the BiAnnual Conference of the Pittsburgh Association for the Education of Young Children, Pittsburgh, PA.
- Carver, S. (2009). *A Life's Journey from Child to Scientist: Foundations, Passion, Risk, Respect, and Balance*. Tribute and Introduction to the Festschrift Honoring Dr. David Klahr, Pittsburgh, PA.
- Carver, S.M., Bird, J., and Hancock, L. (2009). Teaching Chinese Hand Gestures to Build Understanding of Numerical Magnitude in Preschoolers and Kindergartners. Presented at the Annual Conference of the National Association of Laboratory Schools, Nashville, TN.
- Carver, S.M., Bird, J., and Hancock, L. (2009). NAEYC Accreditation in a Laboratory School Context. Presented at the Annual Conference of the National Association of Laboratory Schools, Nashville, TN.
- Carver, S.M. (2009). Music, Games, and Art: Whole School Thematic Units Where Connections Abound. Presented at the Annual Conference of the National Coalition of Campus Children's Centers, Phoenix, AZ.
- Carver, S.M. (2008). Articulating Center Value via Publicity and Annual Reports. Presented during the NCCCC Pre-conference Session at the Annual Conference of the National Association for the Education of Young Children, Dallas, TX.
- Carver, S.M. (2008). Practical Accreditation Tips for Administrators. Presented at the Annual Conference of the Pittsburgh Association for the Education of Young Children, Pittsburgh, PA.
- Carver, S.M., Hancock, L., Perovich, D., Rosenblum, M.L., Salinetto, T., Solomon, E., and Tomer, C. (2008). Practical Accreditation Tips for Teachers. Presented at the Annual Conference of the Pittsburgh Association for the Education of Young Children, Pittsburgh, PA.
- Carver, S.M. (2008). On turning 50: Generativity for NALS in the Early Childhood Arena and Beyond. "Eminent Educator Address" presented at the Annual Conference of the National Association of Laboratory Schools, Providence, RI.
- Carver, S.M. (2007). New Director's Day (full day pre-conference workshop for practical learning and comfortable networking among new or almost-new directors) at the National Coalition for Campus Children's Centers (NCCCC) annual conference, St. Louis, MO.

- Carver, S.M. (2007). Proactive Approaches to Understanding Learning Differences in Early Childhood. Presented at the National Coalition for Campus Children's Centers (NCCCC) annual conference, St. Louis, MO. See attached summary and email feedback
- Bird, J. and Carver, S.M. (2007). Music and Games: Building Skills in all Developmental Domains via Early Childhood Investigations. Presented at the National Conference of the National Association of Laboratory Schools, Los Angeles, CA.
- Vlach, H. and Carver, S.M. (2007). The Effects of Observation Coaching on Children's Graphic Representations. Presented at the National Conference of the National Association of Laboratory Schools, Los Angeles, CA.
- Carver, S.M., Chadwick, C., Freund, C. and Woods, T. (2007). Intentionality in Professional Development: Collaboration Across Centers and Cities. Presented at the NAEYC Professional Development Conference in Pittsburgh, PA.
- Carver, S.M. (2007). Children's School Process for Approaching Re-Accreditation. Presented during a Panel Discussion at the NAEYC annual conference in Chicago, IL.
- Carver, S.M. (2006). Frameworks for Understanding Individual Differences: Comparison, Contrast & Synthesis. Presented at the Fall Symposium of the National Association of Laboratory Schools, Scranton, PA.
- Bird, J., Hancock, L., and Carver, S.M. (2006). Scaffolding Development via Embedded Structure and Thematic Content. Presented at the National Conference of the National Association of Laboratory Schools, New York, NY.
- Carver, S.M. (2006). Staying Focused in a Crazy Environment. Presented at the Annual Conference of the Pittsburgh Association for the Education of Young Children, Pittsburgh, PA.
- Carver, S.M. (2005). Documenting Center Impact Proactively: Practical Strategies for Developing Annual Reports. Presented at the Annual Conference of the National Coalition of Campus Children's Centers, Charleston, SC.
- Carver, S.M., Cleary, S.M., and Freund, C. (2005). Leadership and Innovation: A Collaborative Professional Development Project. Presented at the Annual

- Conference of the National Coalition of Campus Children's Centers, Charleston, SC.
- Carver, S.M. (2005). Leadership and Innovation: A Collaborative Professional Development Project. Presented at the Annual Conference of the National Association of Laboratory Schools, Logan UT.
- Carver, S.M. (2005). Understanding, Detecting and Responding to Neurologically-Based Learning Differences. Presented at the Annual Conference of the Pittsburgh Association for the Education of Young Children, Pittsburgh, PA.
- Carver, S.M. (2005). Create and Support Teams that Work. Presented at the Annual Conference of the Pittsburgh Association for the Education of Young Children, Pittsburgh, PA.
- Abrams, J., Carver, S.M., and Ehrlich, L. (2005). Create and Support Teams that Work. Presented at the Annual Conference of the National Association for the Education of Young Children, Washington, D.C.
- Carver, S.M. (2004). The Balancing Act: Meeting Diverse Needs of Multiple Center Constituents. Presented at the Annual Conference of the National Coalition of Campus Children's Centers, Seattle, WA.
- Carver, S.M. (2004). Practical Designs for Experimental Research in Campus Children's Programs. Presented at the Annual Conference of the National Coalition of Campus Children's Centers, Seattle, WA.
- Abrams, J., Carver, S.M., Cleary, S., Ehrlich, L., and Freund, C. (2004). Campus and Community Collaboration: An Opportunity for a New Kind of Professional Development. Presented at the Annual Conference of the National Coalition of Campus Children's Centers, Seattle, WA.
- Carver, S.M. with other members of the Alcoa Collaborative (2004). New Director's Track (three related sessions): Building an Effective Administration, Building a Staff Team, and Building Parent Partnerships. Presented at the Annual Conference of the Pittsburgh Association for the Education of Young Children, Pittsburgh, PA.
- Carver, S.M. & Feise, W. (2004). The Art of Leadership within the Framework of Possibility. Presented at the Annual Conference of the Pittsburgh Association for the Education of Young Children, Pittsburgh, PA.

- Carver, S.M. (2003). Lab School Partnerships With Campus Colleagues. Presented at the Annual Conference of the National Association of Laboratory Schools, Fort Worth, TX.
- Carver, S.M. (2003). Lab School Partnerships With Community Colleagues. Presented at the Annual Conference of the National Association of Laboratory Schools, Fort Worth, TX.
- Carver, S.M. (2003). Building an Effective Administration: Relationships, Responsibilities & Resources. Presented at the New Directors' Preconference Day of the National Coalition of Campus Children's Centers, Bethesda, MD.
- Carver, S. M. and Booth, H. (2003). Creating a Learning Environment in Your Home, School, and Community Programs. Tenth Annual Family Support Conference, Pittsburgh, PA.
- Carver, S.M. with other members of the Alcoa Collaborative (2003). New Director's Track (three related sessions): Building an Effective Administration, Building a Staff Team, and Building Parent Partnerships. Presented at the Annual Conference of the Pittsburgh Association for the Education of Young Children, Pittsburgh, PA.
- Carver, S.M., Bird, J., and Brosnahan, H. (2002). Combining Strategies: Direct and Guided Discovery Approaches for Teaching Science. Presented at the Northeast Conference of the National Association of Laboratory Schools, Poughkeepsie, NY (Vassar College).
- Carver, S.M., Rosenblum, M., Abrams, J., and Volz, C. (2002). Collaborations Build Community for Children, Educators, and Administrators. Presented at the Annual Conference of the Pittsburgh Association for the Education of Young Children, Pittsburgh, PA.
- Carver, S.M. and Simpson, J. with other members of the Alcoa Collaborative (2002). Collaborating with Parents: Multiple Perspectives. Presented at the Annual Conference of the Pittsburgh Association for the Education of Young Children, Pittsburgh, PA.
- Carver, S.M. (2002). Formal and Informal Strategies for Tracking Knowledge Gain. Presented at the Annual Conference of the National Association of Laboratory Schools, San Juan, PR.
- Perovich, D. & Carver, S.M. (2001). Enriching Kindergarten Themes with Diverse Dramatic Play Centers. Presented at the Annual Conference of the National Association of Laboratory Schools, Gainesville, FL.

- Carver, S.M. (2001). Systematic program documentation: Strategies and benefits. Presented at the Northeast Conference of the National Association of Laboratory Schools, Toronto, Canada.
- Hancock, L. & Carver, S.M. (2001). Individual and group journals across the kindergarten curriculum. Presented at the Northeast Conference of the National Association of Laboratory Schools, Toronto, Canada.
- Carver, S.M. & Simpson, J. (2001). Connecting with families: Developmentally appropriate special events. Presented at the Annual Conference of the Pittsburgh Association for the Education of Young Children, Pittsburgh, PA.
- Carver, S.M. with other members of the Alcoa Collaborative (2001). Birth to Three: Multiple Perspectives. Presented at the Annual Conference of the Pittsburgh Association for the Education of Young Children, Pittsburgh, PA.
- Carver, S.M. as part of a panel from the Alcoa Collaborative (2001). The collaborative process. Presented at the Adult Development Conference sponsored by Louise Child Care, Pittsburgh, PA.
- Carver, S.M. (2001). Practical designs for experimental research in lab school classrooms. Presented at the Annual Conference of the National Association of Laboratory Schools, Gainesville, FL.
- Carver, S.M., Morley, E. and Riess, J. (2000). The ethics of research in lab schools: Improving national guidelines. Presented at the Northeast Conference of the National Association of Laboratory Schools, Pittsburgh, PA.
- Carver, S.M. & Perovich D. (2000). Diverse models for outreach to practicing educators. Presented at the Northeast Conference of the National Association of Laboratory Schools, Pittsburgh, PA.
- Carver, S.M. & Perovich D. (2000). In-depth theme exploration for preschool and kindergarten children. Presented at the Annual Conference of the Pittsburgh Association for the Education of Young Children, Pittsburgh, PA.
- Carver, S.M. (1999). Where in the school is cognition and instruction? Enriching the laboratory school experience of children, teachers, parents and undergraduates. Presented at the 30th Carnegie Symposium on

- Cognition, entitled "Cognition and Instruction: 25 Years of Progress, Pittsburgh, PA.
- Carver, S.M. (1999). Cognition and Instruction in the Laboratory School: Mentoring the Minds of Children, Teachers, Parents, and Undergraduates. Presented at the Northeast Conference of the National Association of Laboratory Schools, Edinboro, PA.
- Carver, S.M. & McDonald, W. (1999). Kindergarten Readiness. Presented at the PAISTA Conference at Sewickley Academy in Pittsburgh, PA.
- Carver, S.M. & Meyers, M. (1999). Computers as Tools for Stimulating Social, Cognitive, Physical, and Aesthetic Development. Presented at the Annual Conference of the Pittsburgh Association for the Education of Young Children, Pittsburgh, PA.
- Carver, S.M., McClintic, A., and Perovich, D. (1999). Practical Classroom Strategies for Fostering the Development of Preschool and Kindergarten Children. Presented at the Annual Conference of the Pittsburgh Association for the Education of Young Children, Pittsburgh, PA.
- Carver, S.M. & Prizner, B. (1998). Food, Nutrition, and Cooking: Attitudes, Knowledge, and Skill Building in Early Childhood Education. Presented at the Northeast Conference of the National Association of Laboratory Schools, New York, NY.
- Carver, S.M. & Hancock, L. (1998). Developmental Objectives for Curriculum and Assessment. Presented at the Annual Conference of the Pittsburgh Association for the Education of Young Children, Pittsburgh, PA.
- Carver, S.M. & McDonald, W. (1998). Kindergarten Transitions: Entrance and Placement Practices in Diverse Laboratory Schools. Presented at the Annual Conference of the National Association of Laboratory Schools, New Orleans, LA.
- Carver, S.M. & McDonald, W. (1998). Facilitating Transitions from Preschool to Elementary: Assessing Readiness. Professional Development Seminar presented for the Pittsburgh Association for the Education of Young Children, Pittsburgh, PA.
- Carver, S.M. & Gidwani, E. (1997). Effective Partnerships for Meeting Children's Individual Needs. Presented at the Northeast Conference of the National Association of Laboratory Schools, Providence, RI.

- Howe, M. & Carver, S.M. (1997). School Registration, Accreditation, and Charters: Issues for Laboratory Schools. Panel Discussion at the Northeast Conference of the National Association of Laboratory Schools, Providence, RI.
- Carver, S.M. & Ryu, M.K. (1997). Modeling, Teaching, and Assessing Knowledge Organization Skills in a HyperCard Context. Presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.
- Carver, S.M. & McDonald, W. (1997). Facilitating Transitions from Preschool to Elementary: Assessing Readiness. Presented at the Annual Conference of the National Association of Laboratory Schools, Phoenix, AZ.
- Carver, S.M. (1996). Fostering Developmentally Appropriate Pre-Academic Skills in Early Childhood Education. Presented at the Northeast Conference of the National Association of Laboratory Schools, Indiana, PA.
- Carver, S.M. (1996). Pre-Service Training and Professional Development for the 21st Century. Part of Interactive Symposium 85.07 (Preschool Curriculum for the 21st Century) presented at the Annual Meeting of the American Educational Research Association, New York, NY.
- Carver, S.M. & Devlin, R. (1996). Fostering Global Perspectives (Part 1): A Curriculum and Assessment Framework for Young Children. Presented at the Annual Conference of the National Association of Laboratory Schools, Chicago, IL.
- Devlin, R. & Carver, S.M. (1996). Fostering Global Perspectives (Part 2): Celebrating Cultural Diversity with Young Children and Their Families. Presented at the Annual Conference of the National Association of Laboratory Schools, Chicago, IL.
- Carver, S.M. & Hancock, L. (1995). Managing the Balancing Act: Teacher/Researcher Training and Education of Young Children. Presented at the NE Regional Conference of the National Association of Laboratory Schools, Bridgewater, MA.
- Carver, S.M., Jones, P., Asquith, P., Ryu, M., Mukooza, M., and Essley, D. (1994). Cognitive Approaches to Assessment of High-Level Skills: Lessons from a Long-Term Intervention. Presented at annual meeting of the American Educational Research Association, New Orleans.

- Carver, S.M., Jones, P., Asquith, P., Ryu, M., Mukooza, M., and Essley, D. (1994). Year of Discovery Project: Approaches to Teaching High-Level Thinking. Presented at the 8th John M. Curran Colloquium, entitled "Inviting Thinking: Educational Environments that Invite Thinking" at the Norman Howard School, Rochester, NY.
- Carver, S.M., Jones, P. and Giuliano, N. (1992). Interdisciplinary Problem Solving. Presented at the National Educational Computing Conference, Dallas. (Also participated in a hands-on demonstration of HyperCard applications.)
- Carver, S.M. (1992). Interdisciplinary Inquiry and the Development of Research and Communication Skills. Presented at the annual meeting of the American Educational Research Association, San Francisco.
- Carver, S.M. (1992). A Curriculum to Promote Transfer of Interdisciplinary Research and Communication Skills. Presented at the annual meeting of the American Educational Research Association, San Francisco. (Also participated in a hands-on demonstration of HyperCard applications.)
- Carver, S.M. and Chomyn, M. (1992). Assessing Interdisciplinary Design Tasks: Researchers' and Teachers' Approaches. Presented at the annual meeting of the American Educational Research Association, San Francisco.
- Skinner, E.A. and Carver, S.M. (1991). Studying the Processes of Cognitive and Motivational Development: Is It Time for More Differentiation or More Integration. Discussion/Debate at the biannual meeting of the Society for Research in Child Development, Seattle.
- Carver, S.M. (1991). Interdisciplinary Problem Solving. Presented at the annual meeting of the American Educational Research Association, Chicago. (Also participated in a hands-on demonstration of HyperCard applications.)
- Carver, S.M. (1991). Discover Rochester: Teaching Research and Communication Skills. Presented at the *Learning with Hypermedia* Conference, Madison.
- Carver, S.M. (1990). Discover Rochester: Inquiry and Communication with the Help of Computer Tools. Presented at the Technology Tools for the Classroom conference, Rochester.

- Carver, S.M. (1990). Design Experiments: Integrating Interactive Technologies into Classrooms. Presented at the annual meeting of the American Educational Research Association, Boston.
- Carver, S.M. and Rosenbloom, K. (1989). Facilitating Organizational Skills in Middle School Students with Learning Disabilities. Presented at the Greater Rochester Area School Psychologists Conference, Rochester.
- Carver, S.M. and Walker, M.L. (1989). In search of general planning skills. Presented at the National Educational Computing Conference, Boston.
- Carver, S.M. and Carpenter, P.A. (1989). Developmental trends in compound comprehension. Presented at the biannual meeting of the Society for Research in Child Development, Kansas City.
- Carver, S.M. (1989). Discovering and alleviating mismatches between school skills and thinking skills: Planning and debugging in computer programming. Presented at the annual meeting of the American Educational Research Association, San Francisco.
- Carver, S.M. and Risinger, S.C. (1987). Improving children's debugging skills. Presented at the Second Workshop on Empirical Studies of Programmers, Washington, D.C.
- Carver, S.M. and Klahr, D. (1987). Teaching transferable debugging skills: Applying task analysis to curriculum design and assessment. Presented at the Third International Conference on Artificial Intelligence and Education, Pittsburgh.
- Klahr, D. and Carver, S.M. (1987). Analysis, instruction, and transfer of the components of debugging skill. Presented at the biannual meeting of the Society for Research in Child Development, Baltimore.
- Carver, S.M. and Klahr, D. (1987). Debugging Skills as Search Tools. Presented at the biannual meeting of the Society for Research in Child Development, Baltimore.
- Carver, S.M. and Klahr, D. (1987). Learning and transfer of debugging skills after explicit instruction. Presented at the annual meeting of the American Educational Research Association, Washington, D.C.
- Klahr, D. and Carver, S.M. (1985). Debugging LOGO programs: A model of children's performance. Presented at the annual meeting of the Psychonomic Society, Boston.

Carpenter, P.A. and Carver, S.M. (1985). Children's and adults' heuristics for interpreting noun-noun compounds. Presented at the annual meeting of the Psychonomic Society, Boston.

Klahr, D. and Carver, S.M. (1985). Developmental progress in the use of weak methods: From hill-climbing to sub-goaling. Presented at the biannual meeting of the Society for Research in Child Development, Toronto.

Colloquia

Carnegie Mellon University, Growing Theatre Class (Anne Mundell),
Developmental Considerations for Growing Theatre” on 9/14/12
Series of three invited seminars at Duksung Women’s University in Seoul,
South Korea in October 2011
Supporting Development & Learning: The Whole Child, Each Unique Child
(for lab school parents)

Lifelong Learning as Early Childhood Professionals (for Early Childhood
undergrads & masters students)

Laboratory Schools as Centers of Excellence and Innovation (for
Laboratory School professionals and other education colleagues)

Co-Hosted a Festschrift for Dr. David Klahr, entitled “From Child to Scientist:
Mechanisms of Learning and Development” at CMU on October 9-11,
2009

Invited Presentation at Temple University, College of Education 11/16/04
“Experimental Approaches for Overcoming Practical Challenges of Classroom
Research”

PAEYC Director’s Network Breakfast Seminar 7/9/04 “Supporting Staff in
Creative Ways”

Preschool Director’s Luncheon at the Ellis School 10/22/03 “Talking to Parents
about Developmentally Appropriate Practice”

Carnegie Mellon University, Academy for Lifelong Learning 9/26/02
“Designing Laboratory School Programs According to Psychology
Principles”

Carnegie Mellon University, Margaret Morrison Alumna 4/11/01 – with Ann
Baldwin Taylor re: the Children’s School

Carnegie Mellon University, Psychology 3/20/01 – with Cheryl Ciecieski re:
her senior honors thesis

Carnegie Mellon University, Psychology 2/2/99 – based on my teacher
training experience in Malawi

Carnegie Mellon University, Psychology 5/9/95, 12/5/95

Carnegie Mellon University, Teaching Center 2/16&17/94

Carnegie Mellon University, Ed. Research & Development 10/22/93

SUNY Geneseo, Department of Psychology, 4/8/92
Fordham University, School of Education, 11/20/91
Greece Central School District, Summer Institute, 7/12/89
University of Rochester, Department of Psychology, 10/27/88
University of Pittsburgh, Regional Computer Resource Center, 3/4/88
University of Rochester, Graduate School of Education, 2/22/88
Yale University, Department of Psychology, 2/12/88
University of Rochester, Department of Psychology, 1/28/88
University of Chicago, Graduate School of Education, 1/13/88
University of Chicago, Department of Cognition and Communication, 1/12/88.
University of Michigan, Department of Psychology, 12/14/87
U.C. Berkeley, Graduate School of Education, 6/1/87
M.I.T., Media Technology Laboratory, 10/8/86

Professional Development Seminars

Coordinator and Co-Instructor for Children's School's Workshops
• "Early Childhood Workshops" 8/18&19/2011 (2 full days)
Two days on Science & Math Innovations, including Light & Color, Meaningful Math, Block Building, and Recycling

Coordinator and Co-Instructor for Children's School's Workshops
• "Early Childhood Workshops" 8/19&20/2010 (2 full days)
Two days on Creative Approaches to Quality Program Design

Coordinator and Co-Instructor for Children's School's Workshops
• "Early Childhood Workshops" 8/20&21/2009 (2 full days)
One day on Program Structures and one on Games in Early Childhood

Coordinator and Co-Instructor for Children's School's Workshops
• "Early Childhood Workshops" 8/18&19/2008 (2 full days)
One day on NAEYC Accreditation and one on Arts in Early Childhood

Coordinator and Co-Instructor for Children's School's Workshops
• "Early Childhood Workshops" 8/20&21/2007 (2 full days)
One day on thematic units and one on individual differences

Coordinator and Co-Instructor for Children's School's Workshops
• "Early Childhood Enhancements" 8/21&22/2006 (2 full days)
My sessions were entitled, "Considering the Use and Misuse of Standards" and "Understanding Individual Differences".

Children's School Coordinator for our contributions to the Alcoa Collaborative Joint Professional Development Project
• February 2006 – Roundtable Discussion re: Responding to Individual Differences
• November 2006 – Leadership Conference at CMU "The Art of Possibility"

Coordinator and Co-Instructor for Children's School's Workshops
• "Constructing Quality" 8/22&23/05 (2 full days)

My sessions were entitled, "Securing the Foundations" and "Building the Staff Team"

Children's School Coordinator for our contributions to the Alcoa Collaborative Joint Professional Development Project

- April 2005 – Walk & Talk Session (Intro to the Children's School)
- August 2005 – Training Event for all staff of four centers (Wyndham)

Carver, S.M. and Perovich, D. (3/20/04) Planning Theme Explorations that Enhance Development. Full Day Seminar at the Penn State Cooperative Extension - Cambria County.

Coordinator and Co-Instructor for Alcoa Collaborative's Workshops

- April 2004 – Walk & Talk Session (Intro to the Children's School)
- April 2004 – Panel Discussion with Directors of ECE Programs in Faith-Based Contexts

- "Connections for Learning" 8/23&24/04 (2 full days)

My session was entitled, "Connecting with children via objective observation" and was based on a new curriculum produced by PA Pathways (I also participated in the piloting of the curriculum prior to its publication)

Children's School Coordinator for our contributions to the Alcoa Collaborative Joint Professional Development Project

- June 2004 – Kick Off Event for all staff of four centers
- October 2004 – Open House (Intro to the Children's School)
- November 2004 – Walk & Talk Session (Intro to the Children's School)
- December 2004 – Roundtable Discussion re: Maps of Reality

Carver, S.M. Scientific Exploration and Discovery for Young Children. Parent Program on Child Development at the Children's Museum (6/17/04). Pittsburgh, PA.

Abrams, J., Carver, S.M., and Ehrlich, L. Create and Support Teams that Work. South Hills Director's Network Dinner Seminar (11/8/04). Pittsburgh, PA.

Approved as a Pennsylvania TQAS (Trainer Quality Assurance System) Certified Trainer #CT-0338000 (December 2003 - valid until 12/08)

Duquesne University, Charter School CEOs 7/16/02

Coordinator and Primary Instructor for Teacher Enhancement Courses offered by our Alcoa Foundation supported Professional Development Center. Week-long sessions offered in June of 1999 and 2000. Two Day sessions offered in August 1999, March 2000, August 2000, March 2001, August 2001, April 2002, August 2002, March 2003 and August 2003. Director's Day offered in February 2000, February 2001, and March / April 2003.

Coordinated a series of professional development workshops for the Jewish Teacher Resource Center (six sessions, each offered at both Squirrel Hill JCC and South Hills JCC, all taught by Children's School Staff)

Taught “Goals to Structure Program and Assessment Design” 9/14 and 19/00 and “Developing Thematic Units to Build Knowledge and Skills” 1/11 and 16/01.

In-Depth Theme Exploration with Toddlers, Pre-schoolers, and Pre-Kindergarten Children (Evening Seminar after morning site visit) 1/4/01 on-site for the staff of the Duck Hollow Discovery Learning Center.

Coordinated a Director’s Panel involving 6 experienced directors for a PAEYC workshop event on 2/26/00, then wrote an article for the PAEYC newsletter based on the event.

PAEYC Professional Development Day held at the Children’s School
 Taught “Using Computers with Preschool and Kindergarten Children” 1/29/00

Developmentally Appropriate Goals, Program, and Assessment (Full Day) 3/20/99 at the Children’s School for the staff of the Beulah Christian Preschool

Facilitating Transitions from Preschool to Elementary: Assessing Readiness (an adaptation of the January PAEYC talk) with Dr. Bill McDonald from the Falk School, Regional Early Childhood Group of the Early Childhood Initiative, 3/26/98 at the United Way Building

Theme Content and Skill Analysis (Full day) 6/17/97 Pittsburgh Urban Christian School

Cognitive Principles for Enhancing Learning (Full Day) 8/23/96 The Ellis School

A UNIQUE Approach to Computers in CHILD Care (Full Day) 9/14/96 The Unique Child, Rochester, NY

Cooperative Learning in the Middle School: Issues and Answers for Gifted Students (2 hours) 4/19/94 Fox Chapel PAGE

Cognition and Teaching Styles (4 hours), 2/25&3/3/92

Cognition and Teaching Styles (4 hours), 3/20&27/91

McQuaid High School Science Department In-Service (6 hours), 3/16/90

Teacher Training / Community Programs

PRIX JEUNESSE Suitcase: Lessons Learned from International Children’s Programming, Expert Panel at WQED Multimedia on 10/12/12

“**The World Outside**” High-quality programming can expand young children’s vision and understanding of all that’s around them. How is television’s role as a “window to the world” used by producers and broadcasters across cultures?

Evening Parent Seminar at the Community Day School on 11/11/11 re:
“Supporting your child’s academic success”

Morning seminar for a Mothers of Preschoolers Group in Oakland 11/5/07
 “Considering Preschool for Your Child

Parenting Course, 6 weeks during fall 1998, taught at the Bower Hill Community Church in their “Growth Center”

Taught part of the Chancellor-Chirunga Early Childhood Education Teacher Training Workshops in July, 1998 (Chancellor College is one of 5 branches of the University of Malawi, Central Africa.) During my 6 weeks in Malawi during the summer of 1998, I also visited many schools from preschool to secondary, public and private

Seminar on the curriculum and assessment frameworks that I developed in collaboration with the teachers, Pittsburgh Urban Christian School, Parent Association, 3/5/98

Children's Play, seminar for the CMU babysitting network, 1/25/94

Math, Science, and Technology Camp for Girls Ages 8-12, coordinated a 2 week, full-day summer program during July of 1991, 1992, and 1993.

Grants and Awards

2011	Consultant on Vincent Alevan's DARPA Grant (5% salary writeoff - funding delayed until 2012 but work began in 2011) <i>"ENGAGE: Learning to Solve Problems, Solving Problems to Learn"</i>
2011	Consultant on Anna Fisher's IES Grant (5% salary writeoff) <i>"Classroom environment, allocation of attention, and learning outcomes in K-4 students"</i>
2011	PNC Grow Up Great Grant Subcontract of \$35K for Pilot Testing and Professional Development Planning related to Message From Me (with Illah Nourbakhsh, Robotics)
2009	Charitable Foundation Grant for Playground Renovation after the Flood (\$10,000)
2009	International Association of Laboratory and University Affiliated Schools (NALS) Mini-Grant of \$1,944.80 for a Theater Artist in Residence for the Children's School
2009	American Psychological Association Festschrift Grant of \$12,000 to support the 10/09 Carnegie Symposium honoring Dr. David Klahr
2006	DSF Charitable Foundation Grant for Kitchen Renovation (\$30,000)
2003	Continued to participate with three other centers in a joint project (\$20K) – the Alcoa Collaborative (funds administrated by ShadyLane Resources)

- 2002 Continued to participate with three other centers in a joint project (\$50K) – the Alcoa Collaborative (funds administrated by ShadyLane Resources)
- 2001 Received additional Alcoa Foundation funds of \$10K to continue to develop a Professional Development Center
- Also continued to participate with four other centers in a joint project (\$50K) – the Alcoa Collaborative (funds administrated by ShadyLane Resources)
- 2000 Received additional Alcoa Foundation funds of \$20K to continue to develop a Professional Development Center
- Also selected to participate with four other centers in a joint project (\$50K) – the Alcoa Collaborative (funds administrated by ShadyLane Resources)
- 1998 Received a one-time gift from the Alcoa Foundation of \$50K to design a Professional Development Center in 1999
- 1997 Received a one-time gift from the Alcoa Foundation of \$20K to hire a part-time research assistant in 1998
- 1992 Principal Investigator on Apple™ Crossroads II grant #1704668 (Macintosh equipment worth about \$45,000, plus travel and teacher training funds)
- 1991-1992 Received sub-contract from an OERI grant given to the Center for Technology and Education (\$20,000)
- 1991 Principal Investigator on Apple™ Crossroads II grant #1704668 (Macintosh equipment worth about \$30,000, plus \$7,000 in travel and teacher training funds)
- 1991-1994 Principal Investigator on McDonnell Foundation, Cognitive Studies in Educational Practice grant (\$393,723)
- 1990-1991 Received sub-contract from an OERI grant given to the Center for Technology and Education (\$14,400)
- 1990 Principal Investigator on Apple™ Crossroads grant #161054 (Macintosh equipment worth about \$25,000)

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| 1989-1990 | Principal Investigator on Public Health Service grant #2 S07 RR07069-24 (\$6,700) |
| 1986-1989 | Co-Principal Investigator on NSF grant #MDR8554464 |
| 1983-1986 | NSF Graduate Fellowship |
| 1982-1983 | Richard King Mellon Fellowship
Carnegie Mellon University |
| 1982 | Howard Crosby Warren Senior Prize in Psychology
Princeton University |
| 1981 | Howard Crosby Warren Junior Prize in Psychology
Princeton University |

Professional Memberships

International Association of Laboratory Schools
 National Association for the Education of Young Children
 National Coalition of Campus Children's Centers
 American Educational Research Association
 Society for Research in Child Development

Professional Committee Work

What Works Clearinghouse Practice Guide Panel re: Early Mathematics, beginning in Fall 2010 (Funded by IES, Coordinated by Mathematica)
 Serve as a Board Member of the National Coalition of Campus Children's Centers beginning in 2009, also the Publications Chair (Journal and WebNews editor) since 2010
 Serve as the Board Member of the National Association of Laboratory Schools beginning in 2007, also the Conference Chair for Pittsburgh 2011
 Serve on the Carnegie Mellon Institutional Review Board (IRB) beginning in 2005, and as Interim Chair for the 2011-2012 academic year
 Served as a Board Member of the Pittsburgh Association for the Education of Young Children from 2008 through 2011
 Served on the Program / Exhibits Committee of the Pittsburgh Children's Museum from 2002-2007
 Served as Vice President of Community Outreach for the Pittsburgh Association for the Education of Young Children (from July 2000 – June 2002, governing council member since 1999), a member of the Transition Task Force (Acquiring Grants from the Grable Foundation, the Heinz

Endowments, and the United Way to secure paid staff for the volunteer organization) and Vice President for Administration (July 2003 – June 2006).

Served as Board Member for the National Association of Laboratory Schools (2001-2004)

Served as Co-Editor for the Journal of the National Association of Laboratory Schools (March 2000 – 2006)

Served on the Mini-Grant Guideline Task Force for the National Association of Laboratory Schools in 1998

Coordinated the Email Network for the Pittsburgh Association for the Education of Young Children (1998 - 2005)

Coordinated the Email Network for the National Association of Laboratory Schools (1996 - 2005)

Co-Edited the Review section of the Journal of Educational Computing Research with Dr. David Penner (1995 - 1999)