

CURRICULUM VITA

RUTH BRECKINRIDGE CHURCH

January 2018

Work Address:

Department of Psychology
 Northeastern Illinois University
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4940 South lake Shore Drive, Unit B
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 (773) 947-9507

Education

1979-1987 The University of Chicago, PhD
 Chicago, Illinois
 Educational Psychology

1978-1979 The University of Chicago, MA
 Chicago, Illinois
 Personality and Social Systems

1972-1975 Coe College, BA
 Cedar Rapids, Iowa

Honors, Awards and Funding

1975 B.A., Cum Laude. Coe College

1980-1983 Division of Social Science Scholarship. The University of Chicago

1985-1987 Center for Developmental Studies Scholarship. The University of Chicago

1986-1988 Fellowship; Clinical Research Training Program in Adolescence Michael Reese Hospital

1988 Rosenburger Educational Prize for outstanding doctoral dissertation research, Department of Education, The University of Chicago

1989-1990 Individual National Research Service Award from National Institutes of Health

1993-1996 Co-Principal Investigator, Center for Disease Control Cooperative Agreement U81/CCU510015-01,
 Evaluating the effects of prosocial intervention and developmental receptivity in adolescents at risk.

1993 Faculty Excellence Award in Research, Northeastern Illinois University

- 1994-1995 Principal Investigator, Spencer Foundation Small Grant,
Assessment of understanding using gestural communication: The learner has a "hand" in shaping the environment.
- 1996-1998 Principal Investigator, Spencer Foundation Small Grant,
Can children learn from televised speech and gesture?
- 1997 Promotion to Associate Professor and Tenured: Department of Psychology
Northeastern Illinois University
- 1997-1998 Visiting Scholar, The University of Chicago
- 1999-2000 Principal Investigator, Spencer Foundation Small Grant
"Can peer instruction be effective using the T.V. medium?"
- 2006 Co-principal Investigator, Institute of Education Sciences Grant,
Do Teachers' Gestures Facilitate Students' Mathematics Learning? Evidence From Early Algebra.
- 2006 Promotion to Full professor: Department of Psychology, Northeastern Illinois University
- 2009-2014 Co-principal Investigator, NSF Reese grant,
How Does Visual Scaffolding Support Students' Mathematics Learning?
- 2013 Consultant, Institute of Education Sciences Grant,
Connecting Mathematical Ideas through Animated Multimodal Instruction
- 2013 Visiting Scholar, The University of Chicago
- 2014-2017 Student Center for Science Engagement Summer Research Funds
- 2014-2019 Co-principal Investigator, NIH MARC Training grant, NU-STARS for
Northeastern Illinois Student Training in Academic Research in the Sciences
- 2016-2019 Co-principal Investigator, NSF Science of Learning: Collaborative
Networks Grant,
The role of gesture in mathematics learning: From research to practice
- 8 grants

Affiliation

Jean Piaget Society
Society for Research in Child Development
Cognitive Development Society
International Society for Gesture Studies

Refereed Journal Publications

- Church, R. B., & Goldin-Meadow, S. (1986). The mismatch between gesture and speech as an index of transitional knowledge. *Cognition*, 23(1), 43-71. doi: [10.1016/0010-0277\(86\)90053-3](https://doi.org/10.1016/0010-0277(86)90053-3)
- Perry, M., Church, R. B., & Goldin-Meadow, S. (1988). Transitional knowledge in the acquisition of concepts. *Cognitive Development*, 3(4), 359-400. doi: [10.1016/0885-2014\(88\)90021-4](https://doi.org/10.1016/0885-2014(88)90021-4)
- Perry, M., Church, R. B. & Goldin-Meadow, S. (1992). Is gesture-speech mismatch a general index of transitional knowledge? *Cognitive Development*, 7, 109-122. doi: [10.1016/0885-2014\(92\)90007-E](https://doi.org/10.1016/0885-2014(92)90007-E)
- Goldin-Meadow, S., Nusbaum, H., Garber, P. & Church, R. B. (1993). Transitions in learning: Evidence for simultaneously activated strategies. *Journal of Experimental Psychology: Human Perception and Performance*, 19(1), 92-107. doi: [10.1037/0096-1523.19.1.92](https://doi.org/10.1037/0096-1523.19.1.92)
- Goldin-Meadow, S., Alibali, M. W., & Church, R. B. (1993). Transitions in concept acquisition: Using the hand to read the mind. *Psychological review*, 100(2), 279-297. doi: [10.1037/0033-295X.100.2.279](https://doi.org/10.1037/0033-295X.100.2.279)
- Hedricks, C. A., Ghiglieri, M., Church, R. B., Lefevre, J., & McClintock, M. K. (1994). Hormonal and ecological contributions toward interpersonal intimacy in couples. *Annals of the New York Academy of Sciences*, 709(1), 207-209. doi: [10.1111/j.1749-6632.1994.tb30403.x](https://doi.org/10.1111/j.1749-6632.1994.tb30403.x)
- Church, R. B., Hedricks, C., Le Fevre, J., McClintock, M. K. (1994). The importance of environmental context in mood and cognitive changes during the menstrual cycle. *In The 1991 Society for Menstrual Cycle Research Conference Proceedings*, Hamilton and Cross: Seattle, WA
- Church, R. B., Schonert-Reichl, K., Goodman, N., & Kelly, S. D. (1995). The role of gesture and speech communication as a reflection of cognitive understanding. *J. Contemp. Legal Issues*, 6, 237.
- Kelly, S. D., & Church, R. B. (1997). Can Children Detect Conceptual Information Conveyed Through Other Children's Nonverbal Behavior's. *Cognition and Instruction*, 15(1), 107-134. doi: [10.1207/s1532690xci1501_4](https://doi.org/10.1207/s1532690xci1501_4)
- Kelly, S. D., & Church, R. B. (1998). A comparison between children's and adults' ability to detect conceptual information conveyed through representational gestures. *Child development*, 69(1), 85-93. doi: [10.1111/j.1467-8624.1998.tb06135.x](https://doi.org/10.1111/j.1467-8624.1998.tb06135.x)

- Church, R. B. (1999). Using gesture and speech to capture transitions in learning. *Cognitive Development, 14*(2), 313-342. doi: [10.1016/S0885-2014\(99\)00007-6](https://doi.org/10.1016/S0885-2014(99)00007-6)
- Kelly, S. D., Barr, D. J., Church, R. B., & Lynch, K. (1999). Offering a hand to pragmatic understanding: The role of speech and gesture in comprehension and memory. *Journal of memory and Language, 40*(4), 577-592.
- Church, R. B., Kelly, S. D., & Lynch, K. (2000). Immediate memory for mismatched speech and representational gesture across development. *Journal of Nonverbal Behavior, 24*(2), 151-174. doi: [10.1023/A:1006610013873](https://doi.org/10.1023/A:1006610013873)
- Church, R. B., Ayman-Nolley, S., & Mahootian, S. (2004). The role of gesture in bilingual education: Does gesture enhance learning?. *International Journal of Bilingual Education and Bilingualism, 7*(4), 303-319. doi: [10.1080/13670050408667815](https://doi.org/10.1080/13670050408667815)
- Church, R. B., Garber, P., & Rogalski, K. (2007). The role of gesture in memory and social communication. *Gesture, 7*(2), 137-158. doi: [10.1075/gest.7.2.02bre](https://doi.org/10.1075/gest.7.2.02bre)
- Church, R. B. (2008). So Could We Have a ‘Planet of the Apes?’. *Human Development, 51*(2), 153-160. doi: [10.1159/000115962](https://doi.org/10.1159/000115962)
- Church, R. B. (2012). It’s not just about drawing and language... It’s really about reconceptualizing the roles of nature and nurture. *Human Development, 55*(4), 199-204. doi: [10.1159/000341845](https://doi.org/10.1159/000341845)
- Alibali, M. W., Nathan, M. J., Church, R. B., Wolfgram, M. S., Kim, S., & Knuth, E. J. (2013). Teachers’ gestures and speech in mathematics lessons: Forging common ground by resolving trouble spots. *ZDM, 45*(3), 425-440. doi: [10.1007/s11858-012-0476-0](https://doi.org/10.1007/s11858-012-0476-0)
- Alibali, M. W., Young, A. G., Crooks, N., Yeo, A., Wolfgram, M. S., Nathan, M., Church, R. B., Knuth, E. (2013). Students learn more when their teacher has learned to gesture effectively. *Gesture, 13*(2), 210-233. doi: [10.1075/gest.13.2.05ali](https://doi.org/10.1075/gest.13.2.05ali)
- Church, R. B., Kelly, S., & Holcombe, D. (2014). Temporal synchrony between speech, action and gesture during language production. *Language, Cognition and Neuroscience, 29*(3), 345-354. doi: [10.1080/01690965.2013.857783](https://doi.org/10.1080/01690965.2013.857783)
- Alibali, M. W., Nathan, M. J., Wolfgram, M. S., Church, R. B., Jacobs, S. A., Johnson Martinez, C., & Knuth, E. J. (2014). How teachers link ideas in mathematics instruction using speech and gesture: A corpus analysis. *Cognition and Instruction, 32*(1), 65-100. doi: [10.1080/07370008.2013.858161](https://doi.org/10.1080/07370008.2013.858161)

Carlson, C., Jacobs, S. A., Perry, M., & Church, R. B. (2014). The effect of gestured instruction on the learning of physical causality problems. *Gesture, 14*(1), 26-45. doi: [10.1075/gest.14.1.02car](https://doi.org/10.1075/gest.14.1.02car)

Koumoutsakis, T., Church, R. B., Alibali, M. W., Singer, M., & Ayman-Nolley, S. (2016). Gesture in instruction: evidence from live and video lessons. *Journal of Nonverbal Behavior, 40*(4), 301-315. doi: [10.1007/s10919-016-0234-z](https://doi.org/10.1007/s10919-016-0234-z)

Rueckert, L., Church, R. B., Avila, A., & Trejo, T. (2017). Gesture enhances learning of a complex statistical concept. *Cognitive Research: Principles and Implications, 2*(1), 2. doi: [10.1186/s41235-016-0036-1](https://doi.org/10.1186/s41235-016-0036-1)

Yeo, A., Ledesma, I., Nathan, M. J., Alibali, M. W., & Church, R. B. (2017). Teachers' gestures and students' learning: sometimes "hands off" is better. *Cognitive research: principles and implications, 2*(1), 41. doi: [10.1186/s41235-017-0077-0](https://doi.org/10.1186/s41235-017-0077-0)

25 Total Journal Publications

Invited Book Review

Church, R. B. (2008). A review of *Gesture and the Dynamic Dimension in Language*, Susan Duncan, Justine Cassell and Elena Levy (Eds.) *Journal of Language and Social Psychology, 27*, 200-300.

Church, R. B. (2009). A review of Steven G. McCafferty and Gale Stam. (Eds.). *Gesture: Second Language Acquisition and Classroom Research. European Journal of Developmental Psychology.*

Book Chapters

Church, R. B., Marquette, L.D., LeFevre, J., Hedricks, C., & McClintock, M. K. (1986). Changes in psychological state during the human menstrual cycle. In F. Massimini & P. Inghilleri (Eds.), *L'Esperienza Quotidiana* (pp. 359-368). Milano, Italy: Franco Angeli.

Offer, D., & Church, R. B. (1991). Turmoil, adolescent. In R. Lerner, A. Petersen & J. Brooks-Gunn (Eds), *Encyclopedia of Adolescence* (pp. 1148-1152). Garland Publishing: NY, NY.

Offer, D., & Church, R. B. (1991). Generation gap. In R. Lerner, A. Petersen & J. Brooks-Gunn (Eds), *RM Lerner, Petersen, AC y Brooks-Gunn, J. Encyclopedia of Adolescence*, (pp. 397-399). Garland Publishing: NY, NY.

LeFevre, J., Hedricks, C., Church, R. B., & McClintock, M. K. (1992). Psychological and social behavior in couples over a menstrual cycle: "On-the-spot" sampling from everyday life. In A.J. Dan & L.L. Lewis (Eds.) *Menstrual Health in Women's Lives* (pp. 75-82). University of Illinois Press: Urbana and Chicago, IL.

Alibali, M., Church, R. B., Kita, S., & Hostetter, A. (2014). Embodied knowledge in the development of conservation of quantity: Evidence from gesture. In Edwards, L., Ferrara, F., & Moore-Russo, D. (Eds.) *Emerging Perspectives on Gesture and Embodiment in Mathematics* (pp. 27-49). Charlotte, NC: Information Age Press.

Church, R. B., Kelly, S. D., & Wakefield, E. (2016). Measuring gesture. In Matsumoto, D., Hwang, H.C., & Frank, M. G. (Eds.) *APA Handbook of Nonverbal Communication* (pp. 499-523). APA Press.

Kelly, S. D., Church, R. B., & Alibali, M. W. (2017). Understanding gesture: Description, mechanism and function. In Church, R. B., Alibali M. W., & Kelly S. D. (Eds.) *Why Gesture? How the hands function in speaking, thinking and communicating* (pp. 3-10). Amsterdam/Philadelphia: John Benjamins Publishing Company. doi: [10.1075/g7.01kel](https://doi.org/10.1075/g7.01kel)

Nathan, M. J., Alibali, M. W., Church, R. B. (2017). Making and breaking common ground: How teachers use gestures to foster learning in the classroom. In Church, R. B., Alibali M. W., & Kelly S. D. (Eds.) *Why Gesture? How the hands function in speaking, thinking and communicating* (pp. 285-316). Amsterdam/Philadelphia: John Benjamins Publishing Company. doi: [10.1075/g7.14nat](https://doi.org/10.1075/g7.14nat)

Church, R. B., & Goldin-Meadow, S. (2017). So how does gesture function in speaking, communication, and thinking? In Church, R. B., Alibali M. W., & Kelly S. D. (Eds.) *Why Gesture? How the hands function in speaking, thinking and communicating* (pp. 397-412). Amsterdam/Philadelphia: John Benjamins Publishing Company. doi: [10.1075/g7.19chu](https://doi.org/10.1075/g7.19chu)

Book

Church, R. B., Alibali, M. W., & Kelly, S. D. (2017). *Why Gesture? How the hands function in speaking, thinking and communicating*, (Eds). Amsterdam: Benjamins, 7,1. doi: [10.1075/g7](https://doi.org/10.1075/g7)

Manuscripts in Process

Mistak, A., Koumoutsakis, T., Valdiviejas, H., Khan, A., Ayman-Nolley, S., Singer, M., & Church R. B. *The Role of Children's Existing Understanding and Teachers' Gesture in Math Learning*. In preparation.

Presentations

- Church, R. B. (1980). Mood and the menstrual cycle. Paper presented at the meeting of the Graduate Committee on the Study of Women, Chicago, IL.
- Hedricks, C., Church, R. B., LeFevre, J., & McClintock, M. K. (1985). Changes in the psychological state of couples during a menstrual cycle: "On-the-spot" sampling from everyday life. Paper presented at the Conference on Reproductive Behavior, Asolimar, CA.
- LeFevre, J. Church, R. B., Hedricks, C. & McClintock, M. K. (1985). Changes in psychological state of couples during a menstrual cycle: "On-the-spot" sampling from everyday life. Paper presented at The 6th Conference of the Society for Menstrual Cycle Research, Galveston, TX.
- Church, R. B. & Perry, M. (1986). Gesture-speech mismatch as a reflection of knowledge in transition. Paper presented at Northwestern Colloquia in Language and Cognition, Evanston, IL.
- Church, R. B. (April, 1987). A longitudinal assessment of conservation knowledge. Paper presented at the meeting of the Society for research in Child Development (SRCD), Baltimore, MD.
- Church, R. B., Perry, M., & Goldin-Meadow, S. (April, 1987). The mismatch between gesture and speech as a reflection of knowledge in transition. Paper presented at the meeting of the Society of Research in Child Development (SRCD), Baltimore, MD.
- Church, R. B., Perry, M., & Goldin-Meadow, S. (November, 1988). The mismatch between gesture and speech as a reflection of transitional knowledge: A longitudinal assessment of concept acquisition. Paper presented at the meeting on Human Development, Charleston, NC.
- Perry, M., Church, R. B., & Goldin-Meadow, S. (1988). Learning a principle versus learning a procedure: Looking beyond what is taught. Paper presented at the meeting of the American Educational Research Association, New Orleans, LA.
- Church, R. B., Baker, D., Bunnag, D., & Whitmore, C. (April, 1989). The Development of the role of speech and gesture in story narration. Paper presented at the meeting of the Society of Research in Child Development (SRCD), Baltimore, MD.
- Church, R. B. (May, 1989). Equilibration: Using gesture and speech to monitor cognitive change. Paper presented at the Jean Piaget Society Symposium (JPS), Philadelphia, PA.

- Wagner, M., Scott, M., Church, R. B., & Goldin-Meadow, S. (May, 1989).
Disequilibrium in concept acquisition: What the hands reveal about a child's state of mind. Paper presented at the Jean Piaget Society Symposium (JPS), Philadelphia, PN.
- Schonert, K. A., Goodman, N., & Church, R. B. (November, 1990). Beyond Words: Gesture as another index of moral reasoning and transitional knowledge. Invited paper to be presented at the annual meeting of the Association for Moral Education, South Bend, IN.
- Church, R. B. (March, 1991). The role of gesture in the acquisition of formal operations. Invited paper presented to the Program in Adolescent Research, Northwestern University, Chicago, IL.
- Church, R. B. (April, 1991). Transitional Knowledge: What is it? Symposium organized for and presented to the meeting of the Society for Research in Child Development (SRCD), Seattle, WA.
- Wagner, M., Scott, M., & Church, R. B. (April, 1991). Transitions in concept acquisition: Multiple messages from gesture and speech. Symposium paper presented to the meeting of the Society of Research in Child Development (SRCD), Seattle, WA.
- Goodman, N., Church, R. B., & Schonert, K. A. (May, 1991). Moral Development and gesture: What can the hands reveal about moral reasoning? Paper presented to the meeting of the Jean Piaget Society (JPS), Philadelphia, PA.
- Church, R. B. (June, 1991). The role of gesture in normal speech. Invited paper presented to the Illinois Network for Augmentative and Alternative Communication, Chicago, IL.
- Church, R. B., Hedricks, C., LeFevre-Levy, J., & McClintock, M. (June, 1991). The importance of environmental context in mood and cognitive changes during the menstrual cycle. Paper presented to the Society for Menstrual Cycle Research, Seattle, WA.
- Schonert, K., Goodman, N., & Church, R. B. (November, 1991). What can the hands reveal about perspective taking: The role of gesture in moral reasoning. Invited paper to be presented at the annual meeting of the Association for Moral Education, Atlanta, GA.
- Church, R. B. (May, 1992). Transitional knowledge and its role in learning interactions. Symposium presented at the meeting of the Jean Piaget Society (JPS), Montreal, Canada.
- Church, R. B., Ayman-Nolley, S., & Matias, L. (May, 1992). Understanding the social

- and cognitive mechanism of learning in peer interaction. Paper presented at the meeting of the Jean Piaget Society (JPS), Montreal, Canada.
- Church, R. B., Momeni, C., Williams, T., Garber, P., & Goldin-Meadow, S. (May, 1992). Detection of unstable knowledge: The function of gesture and speech in natural teaching interactions. Paper presented at the meeting of the Jean Piaget Society (JPS), Montreal, Canada.
- Schonert-Reichl, K., Goodman, N., & Church, R. B. (November, 1992). Do the hands hold the key?: The role of gesture in perspective-taking and moral reasoning. Paper presented at the annual meeting of the Association for Moral Education, Toronto, Ontario.
- Church, R. B. (March, 1993). Implicit-explicit knowledge: Theoretical and empirical implications for concept learning. Symposium organized and presented at the meeting of the Society for Research in Child Development (SRCD), New Orleans, LA.
- Ayman-Nolley, S. & Church, R. B. (March, 1993). Social and cognitive mechanisms of learning through interaction with peers. Paper presented at the meeting of the Society for Research in Child Development (SRCD), New Orleans, LA.
- Hedricks, C. Ghiglieri, M., Church, R. B., LeFevre, J., & McClintock, M. (May, 1993). Hormonal and ecological contributions toward interpersonal intimacy in couples. Paper presented at the meetings for Human Reproductive Ecology: Interactions of environment, fertility and behavior, New York Academy of Sciences, Research Triangle Park, NC.
- Hedricks, C., Church, R. B., LeFevre, J., & McClintock, M. (June, 1993). Menstrual cycles, social cycles, and mood changes of women and men in their everyday environment. Paper presented at the Society for Menstrual Cycle Research Meetings, Boston, MA.
- Church, R. B. (June, 1993). Gesture-speech mismatch as a descriptive marker of transitions in concept learning. Paper presented at the American Psychological Society (APS), Chicago, IL
- Church, R. B., Kelly, S., Schonert-Reichl, K., & Goodman, N. (December, 1993). Describing the role of gestural representation in social interactions. Invited paper given at the meetings for The Institute for Law and Systems Research, University of San Diego, Ann Arbor, MI.
- Schonert-Reichl, K., Goodman, N., Church, R. B., & Kelly, S. (December, 1993). Describing the role of gestural representation in moral development. Invited paper given at the meetings for The Institute for Law and Systems Research, University

of San Diego, Ann Arbor, Michigan.

Church, R. B. (January, 1994). Describing the role of gestural representation in social interactions. Invited presentation given for DASP division of the Educational Psychology Department, University of Illinois, Urbana-Champaigne.

Kelly, S. & Church, R. B. (March, 1993). Children's capacity to detect spontaneous gesture. Paper to be presented to the Midwest Psychological Association (MPA) Psi Chi meetings, Chicago, IL.

Alibali, M. & Church, R. B. (May, 1994) The Function of Gestural Representation for Cognitive Transition Symposium organized and presented to the meeting of the Jean Piaget Society (JPS), Chicago, IL.

Church, R. B. & Ayman-Nolley, S. (May, 1994). The Role of Gestural Communication for Learning in Peer Interactions. Paper presented to the meeting of the Jean Piaget Society (JPS), Chicago, IL.

Pitts, E., Compton, B., Church, R. B., Baranas, R., & Levine, S. (May, 1994). Gesture-speech mismatches in conservation: The effects of unilateral brain damage. Paper presented to the meeting of the Jean Piaget Society (JPS), Chicago, IL.

Church, R. B., Kosmos, C., & Smith, R. (January, 1995). Evaluating the effects of prosocial intervention and developmental receptivity on youth "at risk". Invited paper presented to the Center for Disease Control, Atlanta, GA.

Ayman-Nolley, S. & Church, R. B. (April, 1995). Mechanisms underlying the co-construction of knowledge. Symposium organized and presented to the meeting of the Society for Research in Child Development (SRCD), Indianapolis, IN.

Church, R. B. & Ayman-Nolley, S. (April, 1995). A microgenetic analysis of peer interaction: A bi-directional explanation of learning. Paper presented to the meeting of the Society for Research in Child Development (SRCD), Indianapolis, IN.

Church, R. B. & Perry, M. (April, 1995). Using gesture to determine how the learner influences the learning process. Symposium organized and presented to the meeting of the Society for Research in Child Development (SRCD), Indianapolis, IN.

Kelly, S. D. & Church, R. B. (April, 1995). Using gesture to determine how the learner influences the learning process. Paper presented to the meeting of the Society for Research in Child Development (SRCD), Indianapolis, IN.

Church, R. B. (October, 1995). The realities of doing a scientific evaluation in a low-

- income housing project. Paper presented to The National Conference on Violence Prevention, Des Moines, IA.
- Church, R. B., Smith, R., Kosmos, C., Goodman, N., & Garber, P. (November 1995). Evaluating the effects of a prosocial intervention and developmental receptivity on adolescents at risk. Paper presented to the Association of Moral Education Meetings, New York, NY.
- Singer, M., Kelly, S., Garber, P., & Church, R. B. (April, 1996). Identifying conscious and unconscious levels of reasoning and the role that these levels play in social interaction. Paper presented at the meeting on "The State of Consciousness" Tucson, Az.
- Singer, M., Church, R. B., & Ayman-Nolley, S. (March, 1996). The role of peers in the stabilization of knowledge. Paper presented to the Midwest Psychological Association (MPA) Psi Chi meetings, Chicago, IL.
- Garber, P. & Church, R. B. (June, 1996). The function of multiple representations for problem-solving in children. Symposium organized and presented to the Jean Piaget Society (JPS) meetings, Philadelphia, PA.
- Kelly, S. & Church, R. B. (June, 1996). Can adults process multiple representations conveyed through a speaker's speech and gesture. Paper presented to the Jean Piaget Society (JPS) meetings, Philadelphia, PA.
- Ayman-Nolley, S. & Church, R. B. (April, 1997). The role of verbal and non-verbal self-articulation for learning in peer interactions. Paper presented to the meeting of the Society for Research in Child Development (SRCD), Washington, D.C.
- Garber, P. & Church, R. B. (April, 1997). Evidence for the integration of multiple representations in learning. Symposium presented to meeting of the Society for Research in Child Development (SRCD), Washington, D.C.
- Garber, P. & Church, R. B. (April, 1997). The complexity of children's on-line plans revealed through gesture and speech. Paper presented to meeting of the Society for Research in Child Development (SRCD), Washington, D.C.
- Kelly, S., Schwaba, T., & Church, R. B. (April, 1997). Understanding the association between verbal and non-verbal representations for the observer of communication: A developmental study. Paper presented to meeting of the Society for Research in Child Development (SRCD), Washington, D.C.
- Schwaba, T., Lynch, K., Kelly, S. & Church, R. B. (June, 1997). Conservation effect in gestural detection in children and adults. Paper presented at the Jean Piaget Society (JPS), Santa Monica, LA.

- Ayman-Nolley, S., Church, R. B., Oshana, D. & Singer, M. (June, 1997). Peer Interaction: The joint role of knowledge stability, social dominance and scaffolding in learning, Santa Monica, CA.
- Church, R. B., Kelly, S., & Lynch, K. (June, 1998). The link between verbal and nonverbal representations for the observer of communication: A developmental Study. Paper presented at the Jean Piaget Society (JPS) Annual Symposium, Chicago, IL.
- Church, R. B. & Garber, P. (April, 1998). Making use of Implicit knowledge to teach. Symposium organized to be presented to the Society for Research in Child Development (SRCD), Albuquerque, New Mexico.
- Church, R. B., Ayman-Nolley, S., Alibali, M. W., & Kelly, S. (April, 1998). Can we learn something from televised speech and gesture? Paper to be presented to the Society for Research in Child Development (SRCD), Albuquerque, New Mexico.
- Ayman-Nolley, S., Oshana, D., Church, R. B., & Singer, M. (June, 1999). Do children's beliefs about competence shape peer interactions and learning? Paper presented at the meeting of the Jean Piaget Society (JPS), Mexico.
- Church, R. B. (May, 2000). The role of gesture in the mechanisms of learning and memory. Invited talk at the Midwestern Psychological Association (MPA).
- Church, R. B., Ayman-Nolley, S., Estrada, J., Glover, D., & Dullum, T. (April, 2001). What role can gesture play in teaching mathematical concepts? Paper presented at Paper to be presented to the Society for Research in Child Development (SRCD), Minneapolis, MN.
- Church, R. B., Perry, M., & Schonert-Reicl, K. (April, 2001). Gesture-speech mismatch as dual representation. Paper to be presented to the Society for Research in Child Development (SRCD), Minneapolis, MN.
- Church, R. B., Ayman-Nolley, S., & Estrada, J., (May, 2001). The effects of gestural instruction on bilingual children. Paper to be presented at the 31st Annual Meeting of the Jean Piaget Society (JPS), Berkeley, CA.
- Church, R. B., Ayman-Nolley, S., & Alibali, M. (October, 2001). Cross-modal representation and deep learning. Paper presented at the Cognitive Development Society (CDS) Meeting, Virginia Beach, VA.
- Church, R. B. & Singer, M. (June, 2002). Hands on learning: An examination of how different embodied representations influence concept learning. Symposium submitted to the 32st Annual Meeting of the Jean Piaget Society (JPS),

Philadelphia, PN.

Church, R. B., Ayman-Nolley, S., & Gordon, E. (June, 2002). Levels of embodiment and learning: "Do as I do not as I say." Paper submitted to the 32st Annual Meeting of the Jean Piaget Society (JPS), Philadelphia, PN.

Church, R. B., Ayman-Nolley, S., Arnold, M., & Anderson, W. (April 2003). Lab innovation in application: What role does gesture play in the lab and in the classroom? Paper presented to the Society for Research in Child Development (SRCD), Tampa, FL.

Ayman-Nolley, S., Church, R. B., Nolley, O., & Gordon, L. (April, 2003). Lab innovation in application: Can the constructivist approach to teaching really work in the classroom? Paper presented to the Society for Research in Child Development (SRCD), Tampa, FL.

Church, R. B. (October, 2003). The embodied representation as a mechanism of learning: Evidence from neurological, cognitive and social research. Symposium organized and presented to The Cognitive Development Society (CDS), Park City, UT.

Church, R. B. (October, 2003). The embodied representation as a mechanism of learning: Evidence from neurological, cognitive and social research. Paper presented to The Cognitive Development Society (CDS), Park City, UT.

Church, R. B., Ayman-Nolley, S., Glover, D., Vasich, M., & Alibali, M. (October, 2003). The role of multi-modal instruction in deep learning: Does the instructor's gesture embody the concept for the learner? Paper presented to The Cognitive Development Society (CDS), Park City, UT.

Church, R. B., Ayman-Nolley, S., & Maldonado, L. (June, 2005). Using gesture in the classroom: Can we apply what we learned in the lab? Paper presented at the Jean Piaget Society (JPS), Vancouver, British Columbia.

Malone, T., Church, R. B., & Ayman-Nolley, S. (October, 2005). The role of gesture and speech in children's learning of mathematical concepts. Paper presented at the Cognitive Development Society (CDS) meeting, San Diego, CA.

Gross, I. & Church, R. B. (October, 2005). The role of gesture in the acquisition of compliance. Paper presented at the Cognitive Development Society (CDS) meeting, San Diego, CA.

Gross, I. & Church, R. B. (June, 2006). Speech-gesture mismatch as an index of transitional understanding and receptivity to training in a social concept. Paper presented at the Jean Piaget Society (JPS), Baltimore, MD.

- Church, R. B. & Ayman-Nolley, S. (June, 2006). What role does gesture play during instruction: Does gesture stimulate active engagement in problem-solving? Paper presented at the Jean Piaget Society (JPS), Baltimore, MD.
- Church, R. B. & Ayman-Nolley, S. (March, 2007). The role of gesture in the creation of conceptual representations. Symposium created and organized for the Society for Research in Child Development (SRCD), Boston.
- Church, R. B., Ayman-Nolley, S., & Vasich, M. (March, 2007). The role does gesture play during math instruction. Presented at the Society for Research in Child Development (SRCD), Boston.
- Church, R. B., Kelly, S., & Ayman-Nolley, S. (June, 2007). The impact of gesture on speech processing: Evidence from behavioral and ERP data. Paper presented at the Jean Piaget Society (JPS) conference, Amsterdam.
- Gross, I. & Church, R. B. (June, 2007). Intensity of religion, transitional knowledge and the acquisition of compliance. Poster presented at the Jean Piaget Society (JPS) conference. Amsterdam.
- Church, R. B., Khannam S., Dunn, K., & Taylor, H. (October, 2007). The impact of gesture on memory for vocabulary. Abstract published in the Cognitive Development Society (CDS) V Biennial Meeting Program book of abstracts.
- Baker, J. E., Ayman-Nolley, S., Church, R. B., Morone, M., Ortiz, E. & Valencia, S. (October, 2007). Grumpy old men? Literal and non-literal representation of emotion in children's drawings of an old person. Abstract published in the Cognitive Development Society (CDS) V Biennial Meeting Program book of abstracts.
- Church, R. B., Alibali, M. W., Nathan, M. J., & Wolfgram, M. S. (June, 2008). How teachers use linking gestures to establish cohesion across multiple representations. Paper to be presented at the Jean Piaget Society (JPS) Conference, Quebec City.
- Church, R. B. & Ayman-Nolley, S. (June, 2008). The role of gesture when instruction is given by adults versus same-age peers. Paper to be presented at the Jean Piaget Society (JPS) Conference, Quebec City.
- Flores, J., Jacobs, S., & Church, R. B. (June, 2009). Tandem instruction: The role of gesture as an aid to verbal instruction in spatial tasks. Presented at the Jean Piaget Society (JPS) meetings, Park City, UT.
- Jacobs, S., Church, R. B., Nathan, N. J., Knuth, E. J., Wolfgram, M. S., & Alibali, M. (April, 2009). How teachers use linking gestures to establish cohesion across multiple representations. Presented at the Society for Research in Child

- Development (SRCD), Denver, CO.
- Jablonska, J., Church, R. B., & Ayman-Nolley, S. (April, 2009). Gesture-speech linguistic mismatches may be an index of a critical period in language learning. Presented at the Society for Research in Child Development (SRCD), Denver, CO.
- Alibali, M., Church, R. B., Nathan, M. J., Knuth, E. J., Wolfgram, M. S., Jacobs, S., Hostetter, A., & Johnson, C. V. (April, 2009). How teachers link mathematical ideas in instructional communication. Presented at the Society for Research in Child Development (SRCD), Denver, CO.
- Nathan, M. J., Church, R. B., Sidney, P. G., Wolfgram, M., Johnson, C. V., Biedal, K., Hostetter, A. B., Jacobs, S., Knuth, E., & Alibali, M. (June, 2009). How teachers link mathematical ideas during instructional communication. Presented at the Institute of Educational Sciences Conference, Washington, D.C.
- Jacobs, S., Church, R. B., Johnson, C., Kim, S., Wolfgram, M., Knuth, E., Nathan, M. & Alibali, M. (October, 2009). Mathematical ideas in classroom instruction. Presented at the Cognitive Development Society (CDS) conference, San Antonio, TX.
- Church, R. B., Jacobs, S., Ayman-Nolley, S., Bennett, C., M., & Murray, J. (November, 2011). Paper presented at the Northeastern University First Annual Faculty' Research Symposium, Chicago, IL.
- Jacobs, S., Murray, J., & Church, R. B. (June, 2010). Gesture's effect on learning and explanations in a spatial task. Presented at the Jean Piaget Society (JPS) conference, St. Louis.
- Church, R. B., Alibali, M., Ayman-Nolley, S., Singer, M., Hanawalt, R., & Marella, N. (April, 2011). Does gesture enhance math learning across school contexts? Paper presented at the Society for Research in Child Development (SRCD), Montreal, CA.
- Church, R. B., Mahootian, S., & Burgo, I. M. (June 2011). Of two minds: Speech and gesture as an index of the simultaneous activation of two language systems. Paper presented at the Jean Piaget Society (JPS) conference, Berkeley, CA.
- Jacobs, S., Church, R. B., Bennett, C., & Murray, J. (June, 2011). The effect of gesture on adult memory of a legal closing argument. Paper presented at the Jean Piaget Society conference (JPS), Berkeley, CA.
- Holcombe, D., Church, R. B., & Kelly, S. D. (October 2011). Temporal Synchrony in gesture and speech. Presented at the Cognitive Development Society (CDS), Philadelphia, PA.

- Alibali, M. W., Wolfgram, M., Young, A. G., Church, R. B., Johnson, C. H., Jacobs, S. J., & Nathan, M. J. (April, 2012). Linking mathematical ideas multimodally enhances learning. Paper presented at AERA, Vancouver, CA.
- Hernandez, D., Koumoutsakis, T., Ross, J., Weinstein, M. J., Church, R. B., & Ayman-Nolley, S. (June, 2012). Using representational gestures to teach monolingual and bilingual children math. Paper presented at the Rethinking Cognitive Development, 42nd Annual Meeting Jean Piaget Society (JPS) conference, Toronto, Canada.
- Burgo, I. M., Quiros, L., Church, R. B., & Mahootian, S. (June 2012). Revisiting Speech and gesture as an index of the simultaneous activation of two language systems. Paper presented at the Jean Piaget Society (JPS) conference, Toronto, CN.
- Bem, J., Jacobs, S. A., Goldin-Meadow, S., Levine, S., Alibali, M. A., & Nathan, M. (June, 2012). Gesture's benefit for instruction: Attention coordination or embodied cognition? Paper presented at the Jean Piaget Society (JPS) conference, Toronto, CN.
- Church, R. B., (July, 2012). Navigating the connections among mathematical representations: Exploring gesture's role during mathematical instruction of algebra. Organizer for Panel presented to the Fifth Conference of the International Society for Gesture Studies (ISGS), Lund, Sweden.
- Church, R. B., Hernandez, D., Ross, J., Koumoutsakis, T., & Ayman-Nolley, S. (July, 2012). Gestured instruction: Is it more influential "live" or on video? Paper presented as part of the panel "Navigating the Connections among Mathematical Representations: Exploring Gesture's Role during Mathematical Instruction of Algebra" at the Fifth Conference of the International Society for Gesture Studies (ISGS), Lund, Sweden.
- Church, R. B. (November, 2012). Gesture talks in math education: Exploring a back channel of communication. Paper presented at the Northeastern Illinois University (NEIU) Third Annual Faculty Research & Creative Activities Symposium, Chicago, IL.
- Koumoutsakis, T., Ross, J., Brown, A., Church, R. B., & Ayman-Nolley, S. (May, 2013). Live versus video: The effects of medium in communication with gestures. Poster presented as part of the 25th Association of Psychological Science (APS) Annual Convention, Washington, DC.
- Koumoutsakis, T., Ross, J., Brown, A., Church, R. B., & Ayman-Nolley, S. (June, 2013). Gesture's role in learning pre-algebraic math. Paper presented at the Jean Piaget Society (JPS) Conference, Chicago, Illinois.

- Brown, A., Quiros, L., Burgo, I., Church, R. B., & Mahootian, S. (June, 2013). The effect of activating multiple language systems on working memory. Presentation at the Jean Piaget Society (JPS) Conference, Chicago, IL.
- Koumoutsakis, T., Kaltenhauser, A., Silva, A., Brown, A., Church, R. B., & Ayman-Nolley, S. (October, 2013). Gestures provide more than a helping hand: Gestures' impact on learning. Poster presented as part of the Cognitive Development Society (CDS) VIII Biennial Meeting, Memphis, TN.
- Brown, A., Quiros, L., Koumoutsakis, T., Kaltenhauser, A., Silva, A., Church, R. B., & Mahootian, S. (October, 2013). Measuring cognitive resources in early-acquisition bilinguals. Poster presented as part of the Cognitive Development Society (CDS) VIII Biennial Meeting, Memphis, TN.
- Koumoutsakis, T., Church, R. B., & Ayman-Nolley, S. (July, 2014). Exploring transitional knowledge in response to gestured instructional input across live and video mediums. Poster presented as part of the Sixth Conference of the International Society for Gesture Studies (ISGS), San Diego, CA.
- Brown, A., Quiros, L., Limon, F., Aspuez, K., Koumoutsakis, T., Church, R. B., & Mahootian, S. (July, 2014). Cognitive load indicates simultaneous activation of two language systems for bilinguals: Alternative explanations. Poster presented as part of the International Society for Gesture Studies (ISGS), San Diego, CA.
- Koumoutsakis, T., Church, R. B., Alibali, M., Singer, M., & Ayman-Nolley, S. (March, 2015). Comparing live versus video instruction on children's progression to mathematical understanding. Poster presented as part of the 2015 Society for Research in Child Development (SRCD), Philadelphia, PA.
- Rueckert, L., Church, R. B., Saucedo, M., & Alibali, M. (March, 2015). Enhanced learning associated with muscle activation while viewing gesture. Poster presented at the Society for Research in Child Development (SRCD), Philadelphia, PA.
- Louden, D., Saucedo, M., Latif, D., Gorczynski, L., Burns, C., Rueckert, L., Church, R. B., & Alibali, M. (June, 2015). Factors that determine the embodiment of mathematical concepts: The effect of instruction with gesture on learning and muscle movement. Poster presented at the Jean Piaget Society (JPS) Conference in Toronto, CA.
- Monroy, A., Rada, L., Church, R. B., & Rueckert, L. (June, 2015). Impact of short exercise and gestural instruction on mathematical learning: Does order of exercise and instruction matter? Poster presented at the Jean Piaget Society (JPS) Conference in Toronto, CA.

- Koumoutsakis, T., Church, R. B., Alibali, M., Singer, M., & Ayman-Nolley, S. (June, 2015). Does gesture enhance mathematical learning when presented live and on video? Paper presented as part of the 45th Annual Meeting of the Jean Piaget Society (JPS) Neuroplasticity & Change Conference, Toronto, Canada.
- Monroy, A., Church, R. B., & Rueckert, L. (October, 2015). Does short exercise impact the learning of polynomials before or after instruction? Poster presented at the Cognitive Development Society (CDS), Columbus, OH.
- Kazi, M., Dupaya, K., Rustum, H., Brylak, J., Church, R. B., Parrill, F., & Ping, R. (May, 2016). The effect of action-based instruction on learning a chemistry concept. Presented at American Psychological Society (APS), Chicago, IL.
- Koumoutsakis, T., Khan, A., Mistak, A., Ayman-Nolley, S., & Church, R. B. (June, 2016). How gesture affects math learning: Do male and female children respond differently? Poster presented as part of the 47th Annual Meeting of the Jean Piaget Society (JPS) Neuroplasticity & Change Conference, Chicago, IL.
- Koumoutsakis, T., Khan, A., Mistak, A., Ayman-Nolley, S., & Church, R. B. (July, 2016). Under what circumstances does gesture in instruction exert an effect on learning: The role of gender and context. Poster presented as part of the Gesture--Creativity--Multimodality at the seventh Conference of the International Society for Gesture Studies (ISGS), Paris, France.
- Mistak, A., Khan, A., Koumoutsakis, T., & Church, R. B. (October, 2016). The contribution of children's misconceptions and gestured instruction to math learning. Poster presented as part of the 2016 Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) The National Diversity in STEM Conference, Long Beach, CA.
- Khan, A. Mistak, A., Pineda, L., Koumoutsakis, T., Ayman-Nolley, S., & Church, R. B. (February, 2017). The effects of gesture, instruction medium, and existing understanding on math learning. Poster presented as part of the Regional Louis Stokes Alliance for Minority Participation (LSAMP) Symposium & Student Research Conference, Rosemont, IL.
- Khan, A. Mistak, A., Koumoutsakis, T., Ayman-Nolley, S., & Church, R. B. (April, 2017). Is gesture included in math instruction as effective across video and face-to-face mediums: Examination in a classroom setting? Poster presented as part of the 2017 Society for Research in Child Development (SRCD) Biennial Meeting, Austin, TX.
- Khan, A., Mistak, A., Pineda, L., Koumoutsakis, T., Ayman-Nolley, S., & Church, R. B. (May, 2017). Not all wrong answers are equal: Gesture interacts with pre-existing knowledge to enhance math learning. Poster presented as part of the 2017

- University of Chicago regional Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) Conference, Chicago, IL.
- Mistak, A., Koumoutsakis, T., Khan, A., Pineda, L., Valdiviejas, H., Ayman-Nolley, S., & Church, R. B. (June, 2017). Gestured instruction and children's misconceptions of mathematical equivalence. Paper presented as part of the 47th Annual Meeting of the Jean Piaget Society (JPS), San Francisco, CA.
- Pineda, L., Valdiviejas, H., Mistak, A., Khan, A., Koumoutsakis, T., Ayman-Nolley, S., & Church, R. B. (June, 2017). The role of gesture in teaching bilingual students mathematical equivalence. Poster presented as part of the 47th Annual Meeting of the Jean Piaget Society (JPS), San Francisco, CA.
- Valdiviejas, H., Khan, A., Koumoutsakis, T., Mistak, A., & Church, R. B. (September, 2017). Closing the gender gap in math achievement: The role gesture plays in math education for girls. Paper presented as part of the Women in Science Conference, Northeastern Illinois University, Chicago, IL.
- Koumoutsakis, T., Mistak, A., Pineda, L., Khan, A., Valdiviejas, H., Ayman-Nolley, S., & Church, R. B. (October, 2017). The role of gesture in math learning: Do boys benefit more than girls? Poster presented as part of the Cognitive Development Society (CDS), Portland, OR.
- Valdiviejas, H., Alonzo, Y., Khan, A., Koumoutsakis, T., Mistak, A., Ayman-Nolley, S., & Church, R. B. (October, 2017). Can gesture help students in bilingual classrooms learn math? Poster presented as part of the Cognitive Development Society (CDS), Portland, OR.
- Khan, A., Alonzo, Y., Koumoutsakis, T., Mistak, A., & Church, R. B. (October, 2017). The role of gesture in math learning: Does gender matter? Poster presented as part of the 2017 Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) The National Diversity in STEM Conference, Salt Lake City, UT.
- Alonzo, Y., Khan, A., Valdiviejas, H., Koumoutsakis, T., Mistak, A., & Church, R. B. (October, 2017). Too much input for bilingual students?: Gesture and math learning. Poster presented as part of the 2017 Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) The National Diversity in STEM Conference, Salt Lake City, UT.
- Koumoutsakis, T., Mistak, A., Khan, A., Pineda, L., Valdiviejas, H., Ayman-Nolley, S. & Church, R. B. (November, 2017). Is the success of gestured instruction affected by students' preexisting incorrect math strategies? Paper presented as part of the National Council of Teachers (NCTM) 2017 Regional Conference & Exposition, Chicago, IL.

Valdiviejas, H., Koumoutsakis, T., Khan, A., Mistak, A., Ayman-Nolley, S. & Church, R. B. (April, 2018). TMI: Is Instruction with Gesture Too Much Input for ESL Students? Upcoming poster to be presented as part of the 2018 Midwestern Psychological Association (MPA) Conference, Chicago, IL.

Khan, A., Koumoutsakis, T., Valdiviejas, H., Mistak, A., Ayman-Nolley, S. & Church, R. B. (April, 2018). This is a Man's World: Students Learn More Easily From a Male Math Instructor. Upcoming poster to be presented as part of the 2018 Midwestern Psychological Association (MPA) Conference, Chicago, IL.

Standley, M., Koumoutsakis, T., Levan, Z., Mistak, A., Lepic, R., Church, R. B., & Goldin-Meadow, S. (April, 2018). Timing matters: Gesture preceding or co-occurring with speech enhances math learning. Upcoming poster to be presented as part of the 2018 Midwestern Psychological Association (MPA) Conference, Chicago, IL.

Valdiviejas, H., Morales, D., Koumoutsakis, T., Khan, A., Standley, M., Mistak, A., Ayman-Nolley, A., and Church R. B. (May, 2018). Not a one-size-fits-all: Gesture's questionable role in English-Language-Learning students' mathematical equivalence understanding. Submitted paper for upcoming presentation for 48th Annual Meeting of the Jean Piaget Society, Amsterdam, The Netherlands.

Koumoutsakis, T., Valdiviejas, H., Khan, A., Standley, M., Mistak, A., Ayman-Nolley, S., and Church, R. B. (July, 2018). Male instructors enhance gesture's effect on learning. Submitted poster for upcoming presentation for The International Society of Gesture Studies (ISGS) conference, Cape town, South Africa.

Lepic, R., Lu, J., Koumoutsakis, T., Levan, Z., Mistak, A., Standley, M., Church, R. B., & Goldin-Meadow, S. (July, 2018). Timing matters: Gestures preceding or occurring with speech facilitate math learning. Submitted poster for upcoming presentation for The International Society of Gesture Studies (ISGS) conference, Cape town, South Africa.

131 presentations; 3 submitted

Research Experience

1978-1982 Laboratory Assistant, supervised by Dr. Martha McClintock. Involved in projects investigating the relationship between hormonal and behavioral activity. Responsibilities included collecting and analyzing animal endocrine and behavioral data; directing the maintenance and health of laboratory animals; and helping to develop a training protocol for the coding and categorizing of endocrine and behavioral data.

1979-1984 Laboratory Assistant, supervised by Dr. Susan Goldin-Meadow.

Involved in projects investigating the development of a manual language system in deaf children not exposed to a conventional language. Responsibilities included collecting, coding and analyzing the gestural data of deaf children; helping to develop a system for coding the morphology of the children's gestures; and developing a training protocol for coding gestural data.

- 1979-1987 Research Assistant, "The relationship between biological, psychological and social factors across the human menstrual cycle, supervised by Dr. Martha McClintock. Involvement at all phases of this project including development of a theoretical construct to explain the relationship between hormones and psychological state; data collection, coding and analysis; report writing and presentation preparation.
- 1980-1987 Member of Research group, "Behavioral Endocrinology," led by Dr. Martha McClintock. Involvement at all stages of several research projects carried out by faculty and student members.
- 1980-1990 Member of Research Group, "Language Acquisition and Cognitive Development," led by Dr. Susan Goldin-Meadow. Involvement at all stages of several research projects carried out by faculty and student members.
- 1981-1982 Member of Organizational Committee of the Child Development Colloquia series at The University of Chicago.
- 1984-1987 Research Assistant, "Transitional Knowledge in the Acquisition of Concepts, " supervised by Dr. Susan Goldin-Meadow, funded by NICHD. Involvement at all phases of this project including the preparation of the proposal; data collection, coding and analysis; report writing and presentation preparation.
- 1987-1989 Postdoctoral Fellow in The Adolescent Clinical Research and Training Program in the Department of Psychiatry, Michael Reese Hospital. Conducted research (including proposal preparation, data collection, coding and analysis; report writing and presentation preparation) which examines the role of gesture and speech in: (1) knowledge acquisition of mathematical concepts, and (2) as devices to foreground and background information in story narration.
- 1987-1990 Member of Research Group, "Psycholinguistics, " led by Dr. David McNeill. Involvement at all stages of several research projects carried out by faculty and student members.
- 1989-1990 Postdoctoral Fellow in the Department of Linguistics at the University

of Chicago in diagnostic assessment and individual therapy. For example, I was a member of the educational staff in the adolescent treatment program at Michael Reese hospital; a program which provides milieu therapy for in-patient adolescents. In addition, I conducted supervised diagnostic and on-going therapy for out-patient adolescents.

- 1990-1996 Assistant Professor, Northeastern Illinois University. I maintained an active research program investigating factors underlying changes in cognitive mental representations over development.
- 1996-2005 Associate Tenured Professor, Northeastern Illinois University. I maintained an active research program investigating factors underlying changes in cognitive mental representations over development.
- 2006-present Full professor: Department of Psychology, Northeastern Illinois University. I maintain an active research program investigating cognitive and social factors underlying learning and memory.

Clinical Experience

- 1988-1989 Postdoctoral Fellow in The Adolescent Clinical Research and Training Program in the Department of Psychiatry, Michael Reese Hospital. As part of the fellowship, I was given clinical experience in diagnostic assessment and individual therapy. For example, I was a member of the educational staff in the adolescent treatment program at Michael Reese hospital; a program which provides milieu therapy for in-patient adolescents. In addition, I conducted supervised diagnostic and on-going therapy for out-patient adolescents.

Teaching Experience

- 1982 Teaching Assistant, Introduction to Developmental Psychology (with Dr. Susan Goldin-Meadow), Departments of Education and Behavioral Sciences, The University of Chicago. My duties included planning and organizing the course curriculum, leading the graduate discussion section, lecturing, test construction, and grading exams.
- 1982-present Research Advisor, The University of Chicago. I have supervised several undergraduate and graduate student research projects in the areas of cognitive development, nonverbal communication and behavioral endocrinology.
- 1990-1996 Assistant Professor, Northeastern Illinois University. I taught as a full-time faculty member responsible for teaching undergraduate courses in child development (Childhood Psychopathology, Developmental Research Methods, Child Development, Adolescent Psychology and General Psychology), and advised students in individual research projects.
- 1996-2006 Associate Tenured Professor, Northeastern Illinois. I taught undergraduate courses in child development (Childhood Psychopathology, Developmental Research Methods, Child Development, Adolescent Psychology and General Psychology), and advise students in individual research projects.
- 2006-present Full professor: Department of Psychology, Northeastern Illinois University. I have a full-time responsibility teaching courses in Development and Research methods.

Teaching Interests

Cognitive psychology, educational psychology, cognition and instruction, human development, cognitive development, abnormal psychology, abnormal development, adolescence, psycho-social development, introductory psychology, nonverbal communication, language development.

References

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