

## **R. KEITH SAWYER**

### **CURRICULUM VITAE**

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### **EDUCATION**

#### **University of Chicago, Chicago, IL**

Ph.D., Psychology, 1994  
M.A., Psychology, 1992

#### **Massachusetts Institute of Technology, Cambridge, MA**

S. B., Computer Science, 1982

### **ACADEMIC EMPLOYMENT**

2014 – present: **Morgan Distinguished Professor in Educational Innovations**,  
School of Education, University of North Carolina, Chapel Hill

2013: **Visiting Morgan Distinguished Professor in Educational Innovations**,  
School of Education, University of North Carolina, Chapel Hill

2003 – 2013: **Associate Professor**, Department of Education, Washington  
University in St. Louis. Joint Appointments: Associate Professor of Psychology;  
Associate Professor of Business.

1996 – 2003: **Assistant Professor**, Department of Education, Washington  
University in St. Louis.

2010, Winter and Spring terms: **Visiting Professor**, Savannah College of Art &  
Design, with attachments to the Department of Industrial Design and the  
Collaborative Learning Center. (While on sabbatical from Washington  
University)

- 2009, Michaelmas (Fall) term: **Visiting Scholar**, University of Cambridge, Faculty of Education; also attached to Hughes Hall as a Visiting Scholar. (While on sabbatical from Washington University)
- 2007 – 2013: **Adjunct Associate Professor**, Olin School of Business, Washington University.
- 1997 – 2013: **Adjunct Associate Professor**, Department of Psychology, Washington University.
- 1997 – 2013: **Affiliated Professor**, Philosophy-Neuroscience-Psychology Program, Washington University.
- 1999 – 2013: **Affiliated Professor**, Central Institute for the Deaf, St. Louis, MO.
- 1997 – 2006: **Affiliated Professor**, Social Thought and Analysis Program, Washington University.
- 1995 – 1996: **Postdoctoral Fellow in Developmental Research**, Department of Psychology, University of California, Santa Cruz. Advisor: Barbara Rogoff.
- 1993 – 1994: **Lecturer**, University of Chicago.

## BOOKS

- Sawyer, R. K. (in press). *Learning to see: Inside the world's leading art and design schools*. Cambridge, MA: MIT Press.
- Sawyer, R. K., & Henriksen, D. (2024). *Explaining creativity: The science of human innovation (3<sup>rd</sup> edition)*. New York: Oxford University Press.
- Sawyer, R. K. (Ed.) (2022). *The Cambridge handbook of the learning sciences (3<sup>rd</sup> edition)*. New York: Cambridge University Press.
- Sawyer, R. K. (2019). *The creative classroom: Innovative teaching for 21<sup>st</sup> century learners*. Teachers College Press. Translation: Chinese.
- Sawyer, R. K. (2017). *Group genius: The creative power of collaboration (2<sup>nd</sup> edition)*. New York: BasicBooks.
- Evans, M. A., Packer, M. J., & Sawyer, R. K. (Eds.) (2016). *Reflections on the learning sciences: Past, present, and future*. New York: Cambridge University Press.
- Sawyer, R. K. (Ed.) (2014). *The Cambridge handbook of the learning sciences (2<sup>nd</sup> edition)*. New York: Cambridge University Press. Translations: Japanese, 2017-2018 (three volumes); Chinese.
- Sawyer, R. K. (2013). *Zig Zag: The Surprising Path to Greater Creativity*. San Francisco: Jossey-Bass. Translations: Chinese, Japanese, Korean.

- Sawyer, R. K. (2012). *Explaining creativity: The science of human innovation (2<sup>nd</sup> edition)*. New York: Oxford University Press. Translation: Chinese. Reviewed in *PsycCritiques*.
- Sawyer, R. K. (Editor). (2011). *Structure and improvisation in creative teaching*. New York: Cambridge University Press. Translation: Chinese.
- Sawyer, R. K. (2007). *Group genius: The creative power of collaboration*. New York: BasicBooks. Reviewed in *Psychology of Aesthetics, Creativity, and the Arts*, *CFO Magazine*, *Financial Executive Magazine*, *The Guardian*, *Publisher's Weekly*, *Science News*, *Shanghai Daily*. Selected as the Best Business Book of 2007 on Innovation by 1-800-CEO-READ; Best Business Book of 2007 in Management/Leadership by *The Library Journal*. Paperback edition 2008. Audio book by Gildan Audio. Translations: Chinese, Traditional Chinese (Taiwan), Japanese, Korean, Italian
- Sawyer, R. K. (Editor). (2006a). *Cambridge handbook of the learning sciences*. New York: Cambridge University Press. Reviewed in *British Journal of Psychiatry*, *Curriculum Inquiry*, *PsycCritiques*. Translations: Japanese, Chinese
- Sawyer, R. K. (2006b). *Explaining creativity: The science of human innovation*. New York: Oxford University Press. Reviewed in *Psychology of Aesthetics, Creativity, and the Arts*.
- Sawyer, R. K. (2005). *Social emergence: Societies as complex systems*. Cambridge, UK: Cambridge University Press. Reviewed in *Canadian Journal of Sociology*, *Journal of Artificial Societies and Social Simulation*, *Kenner Zeitschrift fur Soziologie und Sozialpsychologie* [German], *Philosophy of the Social Sciences*
- Sawyer, R. K., John-Steiner, V., Moran, S., Sternberg, R., Feldman, D. H., Csikszentmihalyi, M., Nakamura, J. (2003). *Creativity and development*. New York: Oxford University Press. Reviewed in *American Journal of Psychology*
- Sawyer, R. K. (2003a). *Group creativity: Music, theater, collaboration*. Mahwah, NJ: Erlbaum. Reviewed in *American Journal of Sociology*, *Choice*, *European Journal of Work and Organizational Psychology*, *Mind, Culture, & Activity*, *Personnel Psychology*, *Theatre Topics*
- Sawyer, R. K. (2003b). *Improvised dialogues: Emergence and creativity in conversation*. Westport, CT: Ablex. Reviewed in *Language in Society*
- Sawyer, R. K. (2001). *Creating conversations: Improvisation in Everyday Discourse*. Cresskill, NJ: Hampton Press, Inc. Reviewed in *Journal of Pragmatics*
- Sawyer, R. K. (Ed.). (1997). *Creativity in performance*. Greenwich, CT: Ablex.
- Sawyer, R. K. (1997). *Pretend play as improvisation: Conversation in the preschool classroom*. Mahwah, NJ: Lawrence Erlbaum Associates. Reviewed in *British Journal of Developmental Psychology*, *Child Development Abstracts and Bibliography*, *Choice*, *Theory and Psychology*

## JOURNAL ARTICLES

\*Asterisk indicates a peer-reviewed article.

- \*Sawyer, R. K. (2021a). The dialogue of creativity: Teaching the creative process by animating student work as a collaborating creative agent. *Cognition and Instruction*, 40(4), 459-487. DOI: 10.1080/07370008.2021.1958219
- \*Sawyer, R. K. (2021b). The iterative and improvisational nature of the creative process. *Journal of Creativity*, 31. <https://doi.org/10.1016/j.yjoc.2021.100002>
- \*Sawyer, R. K. (2021c). Teaching creative thinking: How design professors externalize their creative thinking in studio classroom talk. *Mind, Culture, and Activity*, 29(1), 21-42. DOI: 10.1080/10749039.2021.1893337
- \*Sawyer, R. K. (2020). The development of creativity. *Empirical Studies of the Arts*, 38(1), 24-32.
- \*Sawyer, R. K. (2019a). Dialogic status in design education: Authority and peer relations in studio class conversations. *Social Psychology Quarterly*, 82(4), 407-430. DOI: 10.1177/0190272519867100
- \*Sawyer, R. K. (2019b). The role of failure in learning how to create in art and design. *The Journal of Thinking Skills and Creativity*, 33, 100527. <https://doi.org/10.1016/j.tsc.2018.08.002>
- \*Sawyer, R. K. (2018). Teaching and learning how to create in schools of art and design. *Journal of the Learning Sciences*, 27(1), 137-181.
- \*Greene, J. A., Freed, R., Sawyer, R. K. (2018). Fostering Creative Performance in Art and Design Education via Self-Regulated Learning. *Instructional Science*, 47, 127-149.
- \*Sawyer, R. K. (2017a). Creativity research and cultural context: Past, present, and future. *Journal of Creative Behavior*, 51(4), 352-354.
- Sawyer, R. K. (2017c). Scholen hervormen om creativiteit te stimuleren. (Dutch translation of Sawyer, 2014, "How to transform schools to foster creativity.") *Cultuur+Educatie*, 16(47), 8-41,
- \*Sawyer, R. K. (2017d). Teaching creativity in art and design studio classes: A systematic review. *Educational Research Review*, 22, 99-113.
- \*Frey, F., Sawyer, R. K., et al. (2016a). Talking Through the Problems: A Study of Discourse in Peer-Led Small Groups. *Chemistry Education Research and Practice*, DOI: 10.1039/C5RP00154D. Special issue "Language and the teaching and learning of chemistry."
- \*Sawyer, R. K. (2016b). How artists create: An empirical study of MFA painting students. *Journal of Creative Behavior*, 52(2), 127-141.
- \*Sawyer, R. K. (2015a). A call to action: The challenges of creative teaching and learning. *Teachers College Record*, 117(10), 1-34.

- Sawyer, K. (2015b). The zig zag path to *Toy Story*. *Journal of Business Anthropology*, 4(2), 252-258.
- Hong, K.-S., Lai, K.-W., & Sawyer, R. K. (2014). Guest editors' introduction to special issue "Optimizing learning: Technology meets learning sciences". *Research and Practice on Technology-Enhanced Learning (RPTEL)*, 9(2), 211-213.
- Sawyer, R. K. (2012). Response to "Emergence in sociology." *Philosophy of the Social Sciences*, 42(2), 270-275.
- \*Sawyer, R. K. (2011a). The cognitive neuroscience of creativity: A critical review. *The Creativity Research Journal*, 23(2), 137-154.
- \*Sawyer, R. K. (2011b). Extending sociocultural theory to group creativity. *Vocations and Learning*, 5(1), 59-75.
- Sawyer, R. K. (2011c). The need for a deeper exploration and conceptual understanding: The critical role of creativity and collaboration in real-world learning. *Learning Landscapes*, 5(1), 27-35.
- \*Sawyer, R. K. (2011d). The Western cultural model of creativity: Its influence on intellectual property law. *Notre Dame Law Review*, 86(5), 2027-2056.
- \*Sawyer, R. K. (2010). La conversation comme phénomène d'émergence collaborative. *Tracés: Revue de Sciences humaines*, 18, 45-67.  
<http://traces.revues.org>.
- Sawyer, R. K. (2009). The collaborative nature of innovation. *Journal of Law and Policy*, 30, 293-324.
- \*Sawyer, R. K. and DeZutter, S. (2009). Distributed creativity: How collective creations emerge from collaboration. *Psychology of Aesthetics, Creativity, and the Arts*, 3(2), 81-92.
- Sawyer, R. K. (2008a). Creativity, innovation, and nonobviousness. *Lewis & Clark Law Review*, 12(2), 461-487.
- \*Sawyer, R. K. (2008b). Learning music from collaboration. *International Journal of Educational Research*, 47 (50-59).
- Sawyer, R. K. (2007). Improvisation and teaching. Invited contribution published as a "Notes and Opinions" piece in the "Special Issue on Improvisation and Pedagogy" of *Critical Studies in Improvisation*, 3(2).
- \*Scribner, J. P., Sawyer, R. K., Watson, S. T., & Myers, V. (2007). Teacher teams and distributed leadership: A study of group creativity and collaboration. *Educational Administration Quarterly*, 43(1), 67-100.
- \*Sawyer, R. K. (2006a). Educating for innovation. *Thinking Skills and Creativity*, 1(1), 41-48.
- \*Sawyer, R. K. (2006b). Group creativity: Musical performance and collaboration. *Psychology of Music*, 34(2), 148-165.

- \*Sawyer, R. K. (2004a). Creative teaching: Collaborative discussion as disciplined improvisation. *Educational Researcher*, 33(2), 12-20.
- \*Sawyer, R. K. (2004b). Improvised lessons: Collaborative discussion in the constructivist classroom. *Teaching Education*, 15(2), 189-201.
- \*Sawyer, R. K. (2004c). The mechanisms of emergence. *Philosophy of the Social Sciences*, 34(2), 260-282. Special issue: "Systems and mechanisms: A symposium on Mario Bunge's philosophy of social science." Guest Editor: Andreas Pickel.
- \*Sawyer, R. K. (2004d). Social explanation and computational simulation. *Philosophical Explorations*, 7(3), 219-231. Special issue: "The social explanation of action." Guest editors: Stefan Cuypers and Robrecht Vanderbeeken.
- \*Sawyer, R. K. and Berson, S. (2004). Study group discourse: How external representations affect collaborative conversation. *Linguistics and Education*, 15, 387-412.
- Sawyer, R. K. (2003a). Archäologie des Diskursbegriffs. *Das Argument*, 249, 48-62. (German translation of Sawyer, 2002a.)
- \*Sawyer, R. K. (2003b). Artificial societies: Multi agent systems and the micro-macro link in sociological theory. *Sociological Methods and Research*, 31(3), 325-363. Reprinted in N. Gilbert (Ed.) 2010, *Computational Social Science*, Sage.
- Sawyer, R. K. (2003c). Coherence in discourse: Suggestions for future work. *Human Development*, 46(4), 189-193. (Invited commentary on article by E. T. Levy)
- \*Sawyer, R. K. (2003d). Nonreductive individualism, Part II: Social causation. *Philosophy of the Social Sciences*, 33(2), 203-224.
- \*Sawyer, R. K. (2002a). A discourse on discourse: An archeological history of an intellectual concept. *Cultural Studies*, 16(3), 433-456.
- \*Sawyer, R. K. (2002b). Durkheim's dilemma: Toward a sociology of emergence. *Sociological Theory*, 20(2), 227-247.
- \*Sawyer, R. K. (2002c). Emergence in psychology: Lessons from the history of non-reductionist science. *Human Development*, 45, 2-28.
- \*Sawyer, R. K. (2002d). Improvisation and narrative. *Narrative Inquiry*, 12(2), 319-349.
- Sawyer, R. K. (2002e). Improvizačné predstavenie v každodennom živote. *Biograf*, 27, 17-28. (Czech translation of Sawyer, 2001b; ISSN 1211-5770.)
- Sawyer, R. K. (2002f). The new anthropology of children, play, and games. *Reviews in Anthropology*, 31(2), 147-164.
- \*Sawyer, R. K. (2002g). Nonreductive individualism, Part I: Supervenience and wild disjunction. *Philosophy of the Social Sciences*, 32(4), 537-559.

- \*Sawyer, R. K. (2002h). Unresolved tensions in sociocultural theory: Analogies with contemporary sociological debates. *Culture & Psychology*, 2002, 8(3), 283-305.
- \*Sawyer, R. K. (2001a). Emergence in sociology: Contemporary philosophy of mind and some implications for sociological theory. *American Journal of Sociology*, 107(3), 551-585.
- \*Sawyer, R. K. (2001b). The improvisational performance of everyday life. *Journal of Mundane Behavior*, 2(2). On-line journal available at [www.mundanebehavior.org](http://www.mundanebehavior.org).
- \*Moss, S., Sawyer, R. K., Conte, R., and Edmonds, B. (2001). Sociology and social theory in agent based social simulation: A symposium. *Computational and Mathematical Organization Theory*, 7(3), 183-205.
- Sawyer, R. K. (2000a). Improvisation. *Journal of Linguistic Anthropology* special issue, "Lexicon for the New Millennium," 9(1-2), 121-123. Reprinted in Duranti, A. (Ed.). 2001. *Key terms in language and culture* (pp. 116-118). Oxford: Blackwell.
- \*Sawyer, R. K. (2000b). Improvisation and the creative process: Dewey, Collingwood, and the aesthetics of spontaneity. *The Journal of Aesthetics and Art Criticism*, 58(2), 149-161.
- Sawyer, R. K. (2000c). Improvisational cultures: Collaborative emergence and creativity in improvisation. Commentary on lead article by Howard Becker, "The etiquette of improvisation." *Mind, Culture, and Activity*, 7(3), 180-185.
- \*Sawyer, R. K. (1999a). The emergence of creativity. *Philosophical Psychology*, 12(4), 447-469.
- Sawyer, R. K. (1999b). Improvised conversations: Music, collaboration, and development. *Psychology of Music*, 27, 192-205.
- Sawyer, R. K. (1999c). Moving forward: Issues for future research in improvisation and education. *Psychology of Music*, 27, 215-216.
- \*Sawyer, R. K. (1998). The interdisciplinary study of creativity in performance. *Creativity Research Journal*, 11, 11-19.
- \*Sawyer, R. K. (1996a). Role voicing, gender, and age in preschool play discourse. *Discourse Processes*, 22, 287-305.
- \*Sawyer, R. K. (1996b). The semiotics of improvisation: The pragmatics of musical and verbal performance. *Semiotica*, 108(3/4), 269-306.
- \*Sawyer, R. K. (1995a). Creativity as mediated action: A comparison of improvisational performance and product creativity. *Mind, Culture, and Activity*, 2, 172-191.
- Sawyer, R. K. (1995b, March). Linguistic anthropology—and ourselves. *Anthropology Newsletter*, 36(3), 27-28.

\*Sawyer, R. K. (1993). The pragmatics of play: Interactional strategies during children's pretend play. *Pragmatics*, 3, 259-282.

\*Sawyer, R. K. (1992). Improvisational creativity: An analysis of jazz performance. *Creativity Research Journal*, 5, 253-263.

#### JOURNAL SPECIAL ISSUE

\*Halverson, E. R., and Sawyer, R. K. (eds.) (2022). *The Journal of the Learning Sciences*: Co-editors of the special issue "Learning in and through the arts" and co-authors of the first paper in the issue. Volume 31, Issue 1.

#### BOOK CHAPTERS

Sawyer, R. K. (in press). Improvisation. To appear in *Encyclopedia of Creativity*, third edition, edited by Mark Runco and Steven Pritzker. Oxford: Elsevier.

Sawyer, R. K. (2022a). Introduction: The new science of learning. In Sawyer, R. K. (Ed.), *The Cambridge handbook of the learning sciences (third edition)* (pp. 1-23). New York: Cambridge University Press.

Sawyer, R. K. (2022b). Conclusion: The future of learning. In Sawyer, R. K. (Ed.), *The Cambridge handbook of the learning sciences (third edition)* (pp. 658-686). New York: Cambridge University Press.

Sawyer, R. K. (2022c). On the autonomy of social and mental entities: A paraphrased translation of Durkheim's "Individual and Collective Representations." In N. Marcucci and G. Fitzi (Eds.) *The Anthem companion to Émile Durkheim* (pp. 29-50). New York: Anthem Press.

Nathan, M. J., and Sawyer, R. K. (2022). Foundations of the learning sciences. In R. K. Sawyer (Ed.), *Cambridge Handbook of the Learning Sciences (third edition)* (pp. 27-52). New York: Cambridge.

Sawyer, R. K. (2019). John Dewey: *Art as Experience*. In V. P. Glaveanu (Ed.), *The creativity reader* (pp. 385-396). Oxford University Press.

Sawyer, R. K., and Dunlosky, J. (2019). How the learning sciences can inform cognitive psychology. In Dunlosky, John, and Rawson, Katherine (Eds.), *The Cambridge handbook of cognition and education* (pp. 17-34). New York: Cambridge University Press.

Sawyer, R. K. (2018). An interdisciplinary study of group creativity. In Sternberg, R., and Kaufman, J. (Eds.), *The nature of human creativity* (pp. 280-290).

Aviñaa, G. E., Schunn, C. G., Silva, A. R., Bauer, T. L., Crabtree, G. W., Johnson, C. M., Odumosu, T. Picraux, S. T., Sawyer, R. K., Schneider, R. P., Sun, R., Feist, G. J., Narayanamurti, V., Tsao, J. Y. (2018). The art of research: A divergent/convergent thinking framework and opportunities for science-based approaches. In Subrahmanian, E., Odumoso, T., & Tsao, J. Y. (Eds.), *Engineering a better future: Interplay between engineering, science, and innovation* (pp. 167-186). New York: Springer.



- Sawyer, R. K. (2016a). A Foucauldian analysis of the learning sciences, past, present, and future. In Evans, M. A., Packer, M. J., & Sawyer, R. K. (Eds.), *Reflections on the learning sciences: Past, present, and future* (pp. 259-280). New York: Cambridge University Press.
- Sawyer, R. K. (2016b). Learning for creativity. In Ron Beghetto and James Kaufman (Eds.), *Nurturing Creativity in the Classroom, Second edition* (pp. 265-286). New York: Cambridge University Press.
- Sawyer, R. K. (2015a). Drama, theatre and performance creativity. In Davis, S., Ferholt, B., Grainger Clemson, H., Jansson, S., Marjanovic-Shane, A. (Eds.), *Dramatic interactions in education: Vygotskian and sociocultural approaches to drama, education and research* (pp. 245-260). London: Bloomsbury Press.
- Sawyer, R. K. (2015b). Group creativity: Musical performance and collaboration. (Reprint of Sawyer, 2006b in *Psychology of Music*). In: Caines, R. and Heble, A. (Eds.) *The improvisation studies reader: Spontaneous acts* (pp. 87-100). New York: Routledge.
- Sawyer, R. K. (2015c). How organizational innovation emerges through improvisational processes. In R. Garud, B. Simpson, A. Langley, & H. Tsoukas (Eds.), *The emergence of novelty in organizations* (pp. 180-215). New York: Oxford University Press.
- Sawyer, R. K. (2014a). Conclusion: The future of learning: Grounding educational innovation in the learning sciences. In R. K. Sawyer (Ed.), *Cambridge Handbook of the Learning Sciences* (pp. 726-746). New York: Cambridge.
- Nathan, M. J., and Sawyer, R. K. (2014b). Foundations of the learning sciences. In R. K. Sawyer (Ed.), *Cambridge Handbook of the Learning Sciences* (pp. 21-43). New York: Cambridge.
- Sawyer, R. K. (2014c). Introduction: The new science of learning. In R. K. Sawyer (Ed.), *Cambridge Handbook of the Learning Sciences* (pp. 1-18). New York: Cambridge.
- Sawyer, R. K. (2014d). Musical performance as collaborative practice. In M. S. Barrett (Ed.), *Collaborative creative thought and practice in music* (pp. 271-286). Surrey, UK: Ashgate.
- Sawyer, R. K. (2014e). The sociocultural approach to creativity. In V. Glaveanu, A. Gillespie, and J. Valsiner (Eds.), *Rethinking creativity: Contributions from social and cultural psychology* (pp. xii-xiv). Routledge.
- Sawyer, R. K. (2013a). Development as emergence. In B. Sokol, F. M. E. Grouzet, and U. Müller (Eds.), *Self-regulation and autonomy: Social and developmental dimensions of human conduct* (pp. 78-100). Cambridge University Press.
- Sawyer, R. K. (2013b). Emergence and social collectivism. In Kaldis, B. (Ed.), *Encyclopedia of philosophy and the social sciences, Volume 1* (pp. 240-243). Thousand Oaks, CA: Sage.

- Sawyer, R. K. (2013c). Evaluative practices in the creative industries. In Bo Christensen and Brian Moeran (Eds.), *Exploring creativity: Evaluative practices in innovation, design, and the arts* (pp. 278-304). Cambridge: Cambridge University Press.
- Sawyer, R. K. (2013d). Interpreting and understanding simulations. In B. Edmonds and R. Meyer (Eds.), *Simulating social complexity* (pp. 273-289). New York: Springer.
- Sawyer, R. K. (2013e). Qualitative methodologies for studying small groups. In Cindy Hmelo-Silver, Clark Chinn, Carol Chan, and Angela O'Donnell (Eds.), *The International Handbook of Collaborative Learning* (pp. 126-148). New York: Routledge.
- Sawyer, R. K. (2013f). Vera John-Steiner's influence on creativity research. In Lake, R., and Connery, M. C. (Eds.), *Constructing a Community of Thought: Letters on the Scholarship, Teaching and Mentoring of Vera John-Steiner* (pp. 86-88). New York: Peter Lang Publishers.
- Sawyer, R. K., Frey, R., and Brown, P. (2013a). Knowledge building discourse in peer led team learning (PLTL) groups in first-year general chemistry. In D. Suthers, K. Lund, C. P. Rosé, C. Teplovs, & N. Law (Eds.), *Productive multivocality in the analysis of group interactions* (pp. 191-204). New York: Springer.
- Sawyer, R. K., Frey, R., and Brown, P. (2013b). Peer-led team learning in general chemistry. In D. Suthers, K. Lund, C. P. Rosé, C. Teplovs, & N. Law (Eds.), *Productive multivocality in the analysis of group interactions* (pp. 183-189). New York: Springer.
- Sawyer, R. K. (2012). What is emergence? In Jean McGloin, Christopher J. Sullivan, and Leslie W. Kennedy (Eds.) *Crime emergence* (pp. 19-38). New York: Routledge.
- Sawyer, R. K. (2011a). Complexity and emergence. In George Ritzer and J. Michael Ryan (Eds.), *The Concise Blackwell Encyclopedia of Sociology* (pp. 76-77). Oxford, UK: Blackwell.
- \*Sawyer, R. K. (2011b). Conversation as mechanism: Emergence in creative groups. In Pierre Demeulenaere (Ed.), *From Analytical Sociology to Social Mechanisms* (pp. 78-95). Cambridge, UK: Cambridge University Press.
- Sawyer, R. K. (2011c). Emergenz, Komplexität und die Zukunft der Soziologie [Emergence, complexity, and the future of sociology]. Published in German in: Jens Greve and Annette Schnabel (Eds.), *Emergenz: Zur Analyse und Erklärung komplexer Strukturen* (pp. 187-213). Berlin: Suhrkamp Verlag.
- Sawyer, R. K. (2011d). Improvisation. In Runco M. A. & Pritzker, S.R. (Eds.), *Encyclopedia of Creativity, Second Edition* (Vol. 1, pp. 647-652). San Diego: Academic Press.

- Sawyer, R. K. (2011e). Improvisation and narrative. In D. Faulkner and E. Coates (Eds.), *Exploring children's creative narratives* (pp.11-38). London: Routledge. Reprint of Sawyer, 2002d, "Improvisation and narrative."
- Sawyer, R. K. (2010a). Improvisational Creativity as a Model for Effective Learning. In Marina Santi (Ed.), *Improvisation: Between Technique And Spontaneity* (pp. 135-151). Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Sawyer, R. K. (2010b). Individual and group creativity. In J. C. Kaufman and R. J. Sternberg (Eds.), *The Cambridge Handbook of Creativity* (pp. 366-380). Cambridge, UK: Cambridge University Press.
- Sawyer, R. K. (2010c). Learning for creativity. In Ron Beghetto and James Kaufman (Eds.) *Nurturing Creativity in the Classroom* (pp. 172-190). New York: Cambridge University Press.
- DeZutter, S., & Sawyer, R. K. (2010). Jaettu Luovuus [Distributed creativity]. Published in Finnish in: Kaija Collin, Susanna Paloniemi, Helena Rasku-Puttonen, and Päivi Tynjälä (Eds.), *Luovuus, Identiteetti Ja Asiantuntijuus* (pp. 225-241). Helsinki: WSOYpro Oy.
- Sawyer, R. K., & Goldman, K. J. (2010). Learning the big ideas of computer science. In K. Littleton and C. Howe (Eds.), *Educational dialogues: Understanding and promoting productive interaction* (pp. 323-349). London: Routledge.
- Sawyer, R. K. (2009a). Kreativität [Creativity]. In Sabine Andresen, Rita Casale, Thomas Gabriel, Rebekka Horlacher, Sabina Larcher Klee, & Jürgen Oelkers (Eds.), *Handwörterbuch Erziehungswissenschaft [Handbook of Education]* (pp. 507-519). Landsberg, Germany: Beltz Verlag.
- Sawyer, R. K. (2009b). The richness of play research. In Clark, C. D. (Ed.), *Transaction at Play: Play & Culture Studies, Volume 9* (pp. 63-65). Lanham, MD: University Press of America.
- Sawyer, R. K. (2009c). The science of social emergence. In Trajkovski, G., & Collins, S. G. (Eds.) *Handbook of research on agent-based societies: Social and cultural interactions* (pp. 1-16). Hershey, PA: Idea Group Inc.
- Sawyer, R. K. (2009d). Writing as a collaborative act. In Scott Barry Kaufman and James C. Kaufman (Eds.), *The psychology of creative writing* (pp. 166-179). New York: Cambridge University Press.
- Greeno, J., & Sawyer, R. K. (2008). Situativity and learning. In Robbins, P., & Aydede, M. (Eds.), *The Cambridge Handbook of Situated Cognition* (pp. 347-367). New York: Cambridge University Press.
- Sawyer, R. K. (2007-a). Foreword. In Lobman, C., & Lundquist, M. *Unscripted learning: Using improv activities across the K-8 curriculum*. New York: Teacher's College Press.

- Sawyer, R. K. (2007-b). Simulating complexity. In W. Outhwaite & S. P. Turner (Eds.), *The Sage handbook of social science methodology* (pp. 316-332). Thousand Oaks: Sage.
- Sawyer, R. K., and DeZutter, S. (2007). Improvisation: A lens for play and literacy research. In K. Roskos & J. Christie (Eds.), *Play and literacy in early childhood: Research from multiple perspectives* (pp. 21-36). Mahwah, NJ: Erlbaum.
- Sawyer, R. K. (2006a). Analyzing collaborative discourse. In R. K. Sawyer (Ed.), *Cambridge Handbook of the Learning Sciences* (pp. 187-204). New York: Cambridge.
- Sawyer, R. K. (2006b). Complexity and emergence. In G. Ritzer (Ed.), *Encyclopedia of Social Theory* (pp. 633-636). Oxford: Blackwell.
- Sawyer, R. K. (2006c). Conclusion: The school of the future. In R. K. Sawyer (Ed.), *Cambridge Handbook of the Learning Sciences* (pp. 567-580). New York: Cambridge.
- Sawyer, R. K. (2006d). Improvisation and narrative. In R. Parker-Rees and J. Willan (Eds.), *Early Years Education (Major Themes in Education Series)* (pp. 351-377). London: Routledge. Reprint of Sawyer, 2002d, "Improvisation and narrative."
- Sawyer, R. K. (2006e). Introduction: The new science of learning. In R. K. Sawyer (Ed.), *Cambridge Handbook of the Learning Sciences* (pp. 1-16). New York: Cambridge.
- Sawyer, R. K. (2005a). Acting. In J. C. Kaufman and J. Baer (Eds.), *Creativity across domains: Faces of the muse* (pp. 41-57). Mahwah, NJ: Erlbaum.
- Sawyer, R. K. (2005b). Music and conversation. In Miell, D. E., MacDonald, R., & Hargreaves, D. *Musical Communication* (pp. 45-60). New York: Oxford.
- Sawyer, R. K. and Bunderson, S. (2013). Innovation: A review of research in organizational behavior. In Thakor, A. (Ed.) *Innovation and growth: What do we know?* (pp. 13-55). Singapore: World Scientific Press.
- Sawyer, R. K., Scribner, J. P., Watson, S. T., & Myers, V. L. (2005). Talking leadership: Conversation analysis and distributed leadership. In W. K. Hoy & C. G. Miskel (Eds.), *Educational leadership and reform* (pp. 169-185). Greenwich, CT: Information Age Publishing.
- Sawyer, R. K. (2003a). Evaluative processes during group improvisational performance. In M. A. Runco (Ed.), *Critical creative processes* (pp. 303-327). Cresskill, NJ: Hampton Press.
- \*Sawyer, R. K. (2003b). Levels of analysis in pretend play discourse: Metacommunication in conversational routines. In D. E. Lytle (Ed.), *Play and educational theory and practice (Play and Culture Studies, Volume 5)* (pp. 137-157). Westport, CT: Greenwood.

- Sawyer, R. K. (2001a). Play as improvisational rehearsal: Multiple levels of analysis in children's play. In A. Göncü and E. L. Klein (Eds.), *Children in play, story, and school* (pp. 19-38). New York: Guilford.
- \*Sawyer, R. K. (2001b). Simulating Emergence and Downward Causation in Small Groups. In S. Moss and P. Davidsson (Eds.), *Multi Agent Based Simulation* (pp. 49-67). Berlin: Springer-Verlag.
- Sawyer, R. K. (1999). Improvisation. Entry in the *Encyclopedia of creativity* (pp. 31-38). San Diego, CA: Academic Press.
- Sawyer, R. K. (1997). Improvisational theater: An ethnotheory of conversational practice. In R. K. Sawyer (Ed.), *Creativity in performance* (pp. 171-193). Greenwich, CT: Ablex.
- \*Sawyer, R. K. (1995). A developmental model of heteroglossic improvisation in children's fantasy play. In A. Ambert (Ed.), *Sociological Studies of Children, Volume 7* (pp. 127-153). Greenwich, CT: JAI Press.
- Csikszentmihalyi, M., & Sawyer, R. K. (1995a). Creative insight: The social dimension of a solitary moment. In R.J. Sternberg and J.E. Davidson (Eds.), *The nature of insight* (pp. 329-363). Cambridge, MA: MIT Press.
- Csikszentmihalyi, M., & Sawyer, R. K. (1995b). Shifting the focus from individual to organizational creativity. In C.M. Ford and D.A. Gioia (Eds.), *Creative action in organizations: Ivory tower visions and real world voices* (pp. 167-173). Thousand Oaks, CA: Sage Publications.
- \*Sahin, K., & Sawyer, R. K. (1989). The intelligent banking system. In H. Schorr & A. Rappaport (Eds.), *Innovative applications of artificial intelligence* (pp. 43-50). Cambridge, MA: MIT Press.

\*Asterisk indicates a peer-reviewed book chapter.

### **BOOK REVIEWS AND REVIEW ESSAYS**

- Sawyer, R. K. (2017). Review of Domenico Pietrapaolo, *Semiotics and pragmatics of stage improvisation*. London: Bloomsbury. *Studies in Theatre and Performance*.
- Sawyer, R. K. (2011). Review of David Elder-Vass, *The causal power of social structures: Emergence, structure and agency*. Cambridge, UK: Cambridge University Press. *Journal of Artificial Societies and Social Simulation (JASSS)*, 14(3).
- Sawyer, R. K. (2010). Review of Petra Ahrweiler (Ed.), *Innovation in complex social systems*. London: Routledge. *Journal of Artificial Societies and Social Simulation (JASSS)*, 13(4).
- Sawyer, R. K. (2008a). Conversations with exceptional creators. Review of Meyers & Gerstman (Eds.), *Creativity: Unconventional wisdom from 20*

- accomplished minds. PsycCRITIQUES—Contemporary Psychology: APA Review of Books*, 53 (No. 17), Article 7.
- Sawyer, R. K. (2008b). Howard Gardner's recommendations for the future. Review of Howard Gardner, *Five minds for the future*. Boston, MA: Harvard Business School Press. *American Journal of Psychology*, 121(4).
- Sawyer, R. K. (2008c). How creative contributions emerge over the lifespan. Review of Feinstein, *The Nature of Creative Development. Mind, Culture, and Activity*, 15(3), 263-265.
- Sawyer, R. K. (2007a). Review of Carter, Ronald, *Language and creativity: The art of common talk. Language in Society*, 36(2), 270-274.
- Sawyer, R. K. (2007b). Review of Diego Gambetta and Heather Hamill, *Streetwise: How Taxi Drivers Establish Customers' Trustworthiness*. New York: Russell Sage Foundation, 2005. *American Journal of Sociology*, 113(2), 554-556.
- Sawyer, R. K. (2007c). Review of Peter Hedström, *Dissecting the Social: On the Principles of Analytic Sociology*. Cambridge, UK: Cambridge University Press, 2005. *The Philosophy of the Social Sciences*, 37, 255-260.
- Sawyer, R. K. (2006). The Montessori method and the learning sciences. Review of Lillard, A. S. *Montessori: The science behind the genius. PsycCRITIQUES—Contemporary Psychology: APA Review of Books*, 51 (No. 24), Article 11. Accessible at <http://www.psycinfo.com/psyccritiques/>
- Sawyer, R. K. (2005). Review of Egan, Kieran, *An imaginative approach to teaching. Teacher's College Record*, 107(11). Accessible at <http://www.tcrecord.org>, ID number 11898.
- Sawyer, R. K. (2004a). Brainstorming: Using groups to generate ideas. Review of Paulus, Paul B. and Nijstad, Bernard A. (Ed.), *Group creativity: Innovation through collaboration. PsycCRITIQUES*, 49(supplement 14).
- Sawyer, R. K. (2004b). The narrative turn and psychology. Review of Green, Melanie C., Strange, Jeffrey J., and Brock, Timothy C. (Eds.) *Narrative impact: Social and cognitive foundations. Contemporary Psychology*, 49(6), 719-721.
- Sawyer, R. K. (2004c). Positive psychology and the critique of capitalism. Review of Tim Kasser, *The high price of materialism. Contemporary Psychology*, 49(2), 231-234.
- Sawyer, R. K. (2002a). Toward a positive psychology: Review of Edward C. Chang (Ed.), *Optimism and pessimism: Implications for theory, research, and practice. Contemporary Psychology*, 47, 691-693.
- Sawyer, R. K. (2002b). Review of Paul Dourish, *Where the action is: The foundations of embodied interaction. Philosophical Psychology*, 15, 572-575.
- Sawyer, R. K. (2001). Review of Jack Goody, *The power of the written tradition. Written Language and Literacy*, 5, 127-134.

- Sawyer, R. K. (2000). Connecting culture, psychology, and biology: Essay review on Inghilleri's *From subjective experience to cultural change*. *Human Development*, 43, 56-59.
- Sawyer, R. K. (1998). Review of Elinor Ochs, Emanuel A. Schegloff, and Sandra Thompson (Eds.), *Interaction and grammar*. *Journal of Linguistic Anthropology*, 8(2).
- Sawyer, R. K. (1997a). Review of Bonnie A. Nardi (Ed.), *Context and consciousness: Activity theory and human-computer interaction*. *Philosophical Psychology*, 10, 245-248.
- Sawyer, R. K. (1997b). Review of Margaret Boden (Ed.), *Dimensions of creativity*. *Theory and Psychology*, 7, 138-140.
- Sawyer, R. K. (1996a). On Berliner's *Thinking in jazz: The infinite art of improvisation*. *Creativity Research Journal*, 9, 283-285.
- Sawyer, R. K. (1996b). A new direction for the philosophy of science: On Crease's *The play of nature: Experimentation as performance*. *Creativity Research Journal*, 9, 279-282.
- Sawyer, R. K. (1994). On Raffel's critique of *Artists All*. *Creativity Research Journal*, 7, 219-220.
- Sawyer, R. K. (1993). He blinded me with science. Review of Colin Martindale, *The clockwork muse: The predictability of artistic change*. *Creativity Research Journal*, 6, 461-464.
- Sawyer, R. K. (1992). Literature as a metaphor for the creative process. Review of Burton Raffel, *Artists all: Creativity, the university, and the world*. *Creativity Research Journal*, 5, 321-322.

## RESEARCH REPORTS

- Sawyer, R. K. (2011). *The creativity initiative: An interdisciplinary science of creativity and innovation*. White paper prepared for the National Science Foundation, Directorate for Social, Behavioral, & Economic Sciences.
- Sawyer, R. K. (2008a). *Creativity, innovation, and imagination as a gateway to knowledge and learning*. Bristol, UK: Futurelab, for the UK Department for Children, Schools, and Families.
- Sawyer, R. K. (2008b). *Optimizing learning: Implications of learning sciences research*. Paris, France: OECD/CERI.
- Sawyer, R. K. (2001). *The Internet freight train: Are schools ready for eEducation companies?* Chicago, IL: Raine Education Group.

## INVITED PRESENTATIONS AND KEYNOTE TALKS

*Presentations to corporations and associations are not included in this list.*

Invited speaker, Aspen Ideas Festival, Aspen Colorado. June 30, 2023.

- Invited speaker, University of Oslo. “Learning to see: How professors teach in schools of art and design.” June 1, 2023.
- Invited speaker, University of Helsinki. “Learning to see: How professors teach in schools of art and design.” May 24, 2023.
- Invited panelist, *Journal of Learning Sciences* [Webinar](#) discussing the journal special issue “Learning in and Through the Arts,” co-edited by Keith Sawyer and Erica Halverson. Virtual event, June 16, 2022.
- Invited speaker, Seton Hall University, Center for Faculty Development, “The creative classroom.” Virtual event, February 25, 2022.
- Invited speaker, Futures of Design Education conference, “Teaching and learning how to create in schools of art and design.” International virtual conference, February 18, 2022.
- Invited speaker, Cooperation Science Network, “Social emergence: The emergence of groups from individual interaction.” International virtual seminar, February 14, 2022.
- Invited speaker, International Society for the Study of Creativity and Innovation (ISSCI), Paris, France, “The dialogue of creativity.” International virtual seminar, November 16, 2021.
- Invited speaker, Social Theory Series, ReD Associates, Copenhagen, Denmark. “The emergence paradigm.” International virtual event, October 5, 2021.
- Invited speaker, Boston College Lynch School of Education, “What if art and science aren’t opposites.” Virtual podcast with Professor Ellen Winner. September 7, 2021.
- Invited keynote speaker, EdInnovate conference, San Diego University, “The creative classroom.” Virtual conference, August 3, 2021.
- Invited guest lecture, University of Wisconsin-Madison, in the doctoral class “Current topics in the learning sciences” taught by Mitch Nathan. March 12, 2021.
- Invited keynote talk, University of Cambridge, United Kingdom, Faculty of Music, Research Colloquium Series. “Teaching musical creativity using guided improvisation.” February 24, 2021.
- Invited speaker, Research Triangle International, RTI Fellows Speaker Series, “Group genius: The creative power of collaboration.” Durham, NC, December 10, 2019.
- Invited speaker, at the symposium “Creativity in Art and Science: Genius, Collaborative Processes and Networks Symposium.” Talk title: “Dialogic status in design education: Authority and peer relations in studio class conversations.” Helsinki Collegium for Advanced Studies, Helsinki, Finland, December 10-11, 2018.



- Invited speaker, annual seminar of the Makerspaces in the Early Years (MakeEY) project, “Animating artifact agency: A study of a situated social practice that scaffolds learning how to create.” University of Aarhus, Aarhus, Denmark, June 13<sup>th</sup>, 2018.
- Invited plenary speaker, Workshop on Improvisation, “Improvisation as social action: The dialectic emergence of individual and group creativity.” Lund University, Lund, Sweden, June 12, 2018.
- Invited seminar speaker, LECI Seminar (Learning, Culture, and Interventions), “Creative thinking made visible: Externalizing and internalizing creative thinking in design school studio classrooms.” University of Helsinki, Helsinki, Finland, June 8<sup>th</sup>, 2018.
- Invited keynote speaker, Association for the Study of Primary Education (ASPE) Seminar, “Creativity in the Primary Curriculum.” The Open University, London, UK, June 19, 2015.
- Invited Annual CREET lecture, The Open University, Milton Keynes, UK, June 17, 2015. (CREET: Center for Research on Education and Educational Technology)
- Invited CogNovo speaker, University of Plymouth, UK, June 15, 2015.
- Invited keynote speaker, Rommetveit Summer School, “The art and science of improvisation in education.” University of Stord/Haugesund, Norway, June 9-12, 2015.
- Invited keynote speaker, McGill University teacher professional development conference. April 1, 2015.
- Invited speaker, NCSU QEP TH!NK special lecture for NCSU faculty: The creative process. March 24, 2015.
- Invited speaker, University of Pennsylvania Chief Learning Officer Executive Doctoral Program. March 3, 2015.
- Invited keynote speaker, North American Montessori Teachers’ Association, annual meeting: “The adult’s role in adolescent creativity, collaboration and discovery”. February 14, 2015.
- Invited Plenary Speaker, CMS/ATMI annual lecture, College Music Society, St. Louis, MO. October 31, 2014.
- Invited speaker, Aspen Ideas Festival, Aspen Colorado. June 30, 2014.
- Invited participant, Lemelson Foundation Invention Education meeting, Washington DC. May 18-20, 2014.
- Invited speaker, Worcester Polytechnic Institute. January 29-30, 2014.
- Invited keynote speaker, New England Association of Schools and Colleges. December 4, 2013.
- Executive education workshop faculty, Washington University Olin School of Business executive education: “Creativity Leading to Breakthrough Performance.” December 5, 2013.

- Invited keynote speaker, The George Washington University Teaching Day. October 4, 2013.
- Invited speaker, University of Pennsylvania Chief Learning Officer Executive Doctoral Program. August 5-9, 2013.
- Invited speaker, Center for Advanced Studies in the Behavioral Sciences (CASBS) Summit on Innovation and Creativity. July 11, 2013.
- Invited speaker, The Paul Torrance annual lecture, University of Georgia. April 18, 2013.
- Invited speaker, SNAAP annual conference, Vanderbilt University. March 8, 2013.
- Invited speaker, University of Queensland, Faculty of Music. June 25-29, 2012.
- Invited speaker, Northwestern University, School of Education & Social Policy. May 11, 2012.
- Invited speaker, Northwestern University, School of Music. May 11, 2012.
- Invited keynote speaker, Johns Hopkins Engineering for Professionals annual conference. February 11, 2012.
- Invited keynote speaker, Making the Changes: Ethics and the Improvising Business, University of Guelph, Canada. December 2, 2011.
- Invited speaker, University of Missouri, Columbia, College of Business. "Emergent innovation." November 11, 2011.
- Invited plenary speaker, National Council of Arts Administrators (NCAA), Savannah, GA, "The arts as engine of innovation." November 3, 2011.
- Invited plenary speaker, International Performance Studies Network conference, University of Cambridge, UK. "Creativity in performance: Improvisation, ritual and collaboration." July 15-16, 2011.
- Invited keynote speaker, CSCL post-conference in Shanghai, China. July 11-12, 2011.
- Co-organizer and participant, Global Forum on Learning. July 4-5, 2011, University of Hong Kong.
- Invited participant, World Economic Forum, Davos, Switzerland. January 25-30, 2011.
- Invited speaker, Association of American Law Schools annual meeting, San Francisco, CA. "The eight stages of the creative process: Implications for fostering innovation through intellectual property law." January 8, 2011.
- Invited speaker, University of Hong Kong Faculty of Education. December 8, 2010.
- Invited Keynote Speaker, Learning Sciences Seminar, University Malaysia Sarawak, Kuching, Malaysia. "Learning sciences: Past, present, and future." December 6, 2010.

Invited Keynote Speaker, International Conference on Computers in Education, Putrajaya, Malaysia. "Creativity, Innovation, and the New Sciences of Learning." November 29-December 3, 2010.

Invited speaker, Notre Dame University Law School, Creativity and the Law Symposium. November 18-19, 2010.

Invited Keynote Speaker, Learning and the Brain conference, Boston, MA. November 21, 2010.

Invited Keynote Speaker, Illinois State Symposium on the Creative Process, Normal, Illinois. September 28-30, 2010.

Invited speaker, Brigham Young University, September 23-24, 2010. Department of Instructional Psychology & Technology (School of Education) and Department of Organizational Leadership and Strategy (School of Business).

Invited Keynote Speaker, Galway Symposium on Higher Education, Galway, Ireland: June 10-11, 2010.

Invited Plenary Speaker, 40<sup>th</sup> Annual Meeting of the Jean Piaget Society, St. Louis, MO: June 3-5, 2010.

Invited speaker, Georgia Tech, Creativity + Cognition + Computation seminar series. "Creative teaching and learning." April 22, 2010.

Invited keynote speaker, University of Illinois annual faculty retreat. "Creative teaching and learning." February 5, 2010.

Invited keynote speaker, Savannah College of Art and Design Winter Faculty Retreat, two talks: one in Savannah and one in Atlanta, January 15, 2010. "Creative teaching and learning."

*Invited talks given in Europe while a Visiting Scholar at the University of Cambridge, Fall 2009:*

University of Bath, England. Center for Sociocultural Activity Theory and Research. "Creative teaching and learning: A case study." December 17, 2009.

University of Aalborg, Denmark. UNESCO Chair in Problem Based Learning. "Creative teaching and learning: A case study." December 14, 2009.

European Commission Central Library, Brussels, Belgium. Invited lunchtime keynote in connection with *2009 European Year of Creativity and Innovation*: "Group Genius." December 7, 2009.

University of Gothenburg, Sweden. "Pretend play: Improvisation and emergence." December 4, 2009.

University of Gothenburg, Sweden. "Creative teaching and learning: A case study." December 4, 2009.

- Open University, Milton Keynes, UK. "Creative teaching and learning: A case study." December 1, 2009.
- University of Cambridge, Faculty of Education. "What is creativity? Can one assess it? Can it be taught?" Guest lecture presented to Arts, Culture, and Education postgraduate program. November 30, 2009.
- University of Konstanz, Germany. "Improvisational action." Paper presented at the workshop *Analyzing action, interaction, and the emergence of micro-social orders within musical improvising*. November 26-27, 2009.
- University of London, Institute of Education, Knowledge Lab. "Creative teaching and learning: A case study." November 24, 2009.
- Manchester Metropolitan University, England, Center for Policy Modeling. "Emergence in creative groups." November 20, 2009.
- Kingston University, London, England. "Creative teaching and learning: A case study." November 18, 2009.
- Roehampton University, London, England. "Improvised innovation: Jazz, theater, collaborative creativity." November 17, 2009.
- Glasgow Caledonian University, Glasgow, Scotland. Scottish Pop Music Network. "Improvised innovation: Jazz, theater, collaborative creativity." November 13, 2009.
- University of Cambridge, England, Faculty of Education. "How does one teach creativity?" November 11, 2009.
- University of Exeter, England, Department of Psychology. "Creative teaching and learning: A case study." November 10, 2009.
- Tampere University of Technology, Finland, Faculty of Business and Technology Management. "The role of collaboration in creative work." November 4, 2009.
- University of Tampere, Finland, Work Life Studies Annual Conference, Symposium: Understanding Creative Work: Socio-Cultural Approaches. November 3, 2009.
- University of Jyväskylä, Finland, Faculty of Education. "The central role of collaboration in creative work." November 3, 2009.
- University of Helsinki, Faculty of Behavioral Sciences, and CICERO Learning, Helsinki, Finland. "Creative teaching and learning." November 2, 2009.
- Invited Keynote Speaker, The Old Brand New Lecture Series, Amsterdam: "What's New?" September 15, 2009.
- Invited Speaker, Mellon-Sawyer seminar series: "Improvised Innovation: Jazz, Theater, Collaboration." Washington University, St. Louis MO: September 3, 2009.

- Invited Panelist and Speaker, National Science Board Panel on STEM Innovators, “Teaching and Learning for Creativity.” Arlington, VA: August 25, 2009.
- Invited Keynote Speaker, Creative Problem Solving Institute, The Revolution of Creativity: “Group Genius.” Boston, MA, June 23, 2009.
- Invited speaker, Missouri History Museum and Academy of Science St. Louis, Perspectives on Science and History Lecture Series: “Group Genius: The Creative Power of Collaboration”. June 16, 2009.
- Invited Keynote Speaker, Learning and the Brain conference, The Creative Brain: Using Brain Research on Creativity & the Arts to Improve Learning: “Education for Innovation: Creative Teaching and Learning for the 21st Century.” Washington, DC, May 8, 2009.
- Invited speaker, University of Kansas: “Group Genius.” April 23, 2009.
- Invited speaker, Stanford University, The 4<sup>th</sup> Annual Symposium on Music and the Brain: “Improvisational Creativity: The Genius of the Group.” April 18, 2009.
- Invited Keynote Speaker, Alden B. Dow Creativity Center, Northwood University, Midland MI, 20<sup>th</sup> Annual International Creativity Conference: “Educating for Innovation”. April 2, 2009.
- Invited Keynote Speaker, Savannah College of Art and Design, MUSE Conference (Measuring Unique Studies Effectively). “The search for creativity.” February 9, 2009.
- Invited speaker, University of Paris (Sorbonne), “Conversation as mechanism: Emergence in creative groups.” October 17-18, 2008.
- Invited speaker, Harvard Business School, Technology and Operations Management seminar series. September 25, 2008.
- Invited speaker, San Francisco Exploratorium, “Meet the Minds” series: “Group genius.” September 18, 2008.
- Invited speaker, National Science Foundation, Washington DC: “Improvisation and learning.” At the workshop Art, Creativity, and Learning, June 11-13, 2008.
- Invited Keynote Speaker, Rochester Institute of Technology: “Creativity, Innovation, and the New Sciences of Learning.” At the Faculty Institute on Teaching and Learning, May 28, 2008.
- Invited Keynote Speaker, University of Padua: “Creative teaching and learning.” At the conference *Improvisation: Between Technique and Spontaneity*, May 20, 2008.
- Invited Speaker, Washington University, Institute for Innovation and Growth: “Teaching innovation.” At the *Innovation Exchange*, May 9, 2008.
- Invited Keynote Speaker, The Drexel Torrance Annual Lecture, Drexel University: “Collaborative Problem Solving.” May 5, 2008.
- Invited Keynote Speaker, Columbia University: “Improvisational innovation.” April 18, 2008.

- Invited Keynote Speaker, Washington University School of Law: “The Collaborative Nature of Innovation.” *Open-Source and Proprietary Models of Innovation: Beyond Ideology*, April 5, 2008.
- Expert participant, OECD CERI project “Alternative Models of Learning” workshop. Bruges, Belgium. February 21-23, 2008.
- Invited Speaker, Vanderbilt University, Department of Teaching and Learning: “Do groups exist?” February 1, 2008.
- Keynote Speaker, World Intellectual Property Organization, *International Conference on Intellectual Property and the Creative Industries*, Geneva, Switzerland. October 29-30, 2007.
- Invited Speaker, Center for the Application of Information Technology, St. Louis, MO. October 18, 2007
- Invited Speaker, Illinois College, Jacksonville, IL: “From Small Sparks to Big Ideas.” October 11, 2007.
- Invited Speaker, Lewis & Clark College Law School, Portland, OR: “Creativity, Innovation, and Nonobviousness.” *Nonobviousness: The Shape of Things to Come*, October 5-6, 2007.
- Keynote Speaker, University of New Mexico School of Engineering: “Creativity, Innovation, and the New Science of Learning.” Presented at *The Presidential Inauguration Symposium Series: Educating for Innovation: Connecting UNM to the World’s Challenges*, Albuquerque, NM: October 2, 2007.
- Keynote Speaker, National Science Foundation: Schools of the Future: The Importance of Creativity in Today’s Global Innovation Society. Presented at *Discovery Research K-12 PI Meeting*, Washington, DC, September 10, 2007.
- ERM Distinguished Speaker, American Society for Engineering Education Annual Meeting, Honolulu, Hawaii: “Creativity, Innovation, and the New Sciences of Learning.” June 24-27, 2007.
- Invited participant, Mini-Conference on Opportunity Discovery, Olin School of Business, April 30-May 1, 2007. Paper title: “Collaborative webs.”
- Invited speaker, Conference on Emergence, Reduction, and the Explanation of Complex Structures, ZiF, University of Bielefeld, Germany: “Toward a New Social Science.” January 24-26, 2007.
- Invited speaker, National Academies Center for Education, Washington DC: Identifying and Developing Talent in Science, Technology, Engineering, and Mathematics. September 26, 2006.
- Invited participant, National Science Foundation workshop, Washington DC: The Role of NSF in Advancing Informal Science Education for the General Public, and for K-16 Students and Teachers. June 12, 2006.

- Invited participant, National Science Foundation workshop, Washington DC: How do scientists and engineers discover and innovate? Division of Behavioral and Cognitive Sciences. May 17-18, 2006.
- Invited address, National Science Foundation, Washington DC: The schools of the future. Directorate for Education and Human Resources. March 31, 2006.
- Invited participant, LIFE Center Hot Topics Workshop, Stanford University. April 30-May 1 2005.
- Invited keynote address, Annual Meeting of Sempre, the Society for Education, Music, and Psychology Research, The Open University, Milton Keynes, UK: Group creativity: Musical performance and collaboration. April 2004.
- Invited speaker, New Directions in the Study of Musical Improvisation, University of Illinois. April 2004.
- Invited speaker, Challenges in Social Simulation (Agent2003) Conference, Chicago, IL: Assessing agent communication languages. October 2003. Published in Charles Macal, Michael North, and David Sallach (eds.), *Agent 2003: Challenges in Social Simulation* (pp. 273-296). Argonne, IL: Argonne National Laboratory.
- Invited participant, Peer Interaction and Pragmatic Development exploratory seminar, Radcliff Institute for Advanced Study. May 2003.
- Social Agents: Ecology, Exchange, and Evolution (Agent2002) Conference, Chicago, IL: Moderator and discussant for "Varieties of emergence in social simulation," keynote talk by Nigel Gilbert.
- Central Institute for the Deaf, St. Louis, MO: Sociodramatic play as a rehearsal for adult conversation. April, 2002.
- University of Missouri, Columbia: Creating Conversations: Improvised Dialogues and Classroom Discourse. April, 2002.
- Invited keynote address, Storytelling Workshop, Kidstory project, Swedish Institute of Computer Science, Stockholm: Improvisation and narrative. June, 2000.
- Washington University, Program in Philosophy, Neuroscience, and Psychology: Bidirectional causation: Reconciling reductionism and emergence. February 2000.
- Indiana University, Department of Sociology: The collaborative creation of an improvised play: Emergence and downward causation across two levels of analysis. November 1999.
- Sociocultural science: Beyond reductionism and interpretivism. Paper presented at four locations during a sabbatical leave in Fall, 1999:
- Clark University, Department of Psychology, October 1999.
  - Lehigh University, Department of Psychology, October 1999.
  - CUNY Ph.D. Program in Developmental Psychology, October 1999.
  - University of Pennsylvania, Graduate School of Education, November 1999.

- Invited Keynote address, Annual Meeting of the Society of Research in the Psychology of Music and Music Education, University of Reading, Reading, UK: Improvised conversations: Music, collaboration, and development. March, 1999.
- Parents as Teachers National Center, St. Louis, MO: Pretend play as improvisation. June, 1997.
- University of Wisconsin, National Center for Improving Science Education: The interdisciplinary study of group performance. November 1996.
- Central Institute for the Deaf, St. Louis, MO: Metacommunicative strategies in social pretend play. October 1996.
- Northwestern University, Institute for Advanced Study & Research in the African Humanities: Pretend play as improvisation: Practicing for everyday life. Zora Neale Hurston Fellow lecture. March, 1996.
- Xerox PARC, Human interaction reading group: Improvisational processes in musical performance and in conversation. December 1995.
- Stanford University, Knowledge Systems Laboratory: Patterns of interaction in preschool play and improvisational theater. December 1995.
- Clark University: Creativity as mediated action. Presented at the conference “Discourse and Mind: A workshop conference honoring Courtney Cazden,” May 1995.
- Clark University, Discourse and Mind workshop: Pretend play as improvisation. March 1995.
- CUNY Graduate Center, Developmental Psychology program: Pretend play as improvisation. March 1995.
- University of Pennsylvania, Department of Psychology: The performance of pretend play. January 1994.
- Indiana University, Sociolinguistics workshop: A chorus of little voices: The intersection of language and social context in nursery school peer play. October 1993.

#### **REFEREED CONFERENCE PRESENTATIONS**

- Discussant, ICLS 2021 Symposium, “Towards bringing human-centered design to K-12 and post-secondary education.” June 8, 2021.
- Co-author of Emmanuel, G. R. (et al.), “The art and science of science and technology: A workshop review.” Poster presented at the Atlanta Conference on Science and Innovation Policy, September 17-19, 2015.
- Organizer and presenter, CSCL 2015 preconference tutorial, “The learning sciences and CSCL: Past, present, and future.” June 8, 2015.
- Co-organizer (with Gerry Stahl, Heisawn Jeong, Sten Ludvigson, and Daniel Suthers), ICLS 2013 Preconference Workshop, “Across levels of learning: How resources connect levels of analysis.” June 15, 2013.



- Arts and the Learning Sciences in the New Media Age. (Co-organizer and discussant.) Session presented at AERA, San Francisco, CA, April 27-May 1, 2013.
- Learning how to create: Toward a learning sciences of art and design. Full paper presented at the International Conference on the Learning Sciences (ICLS 2012), Sydney, Australia, July 2-6, 2012.
- Co-organizer (with Gerry Stahl and Heisawn Jeong), ICLS 2012 Preconference Workshop, "Analyzing Collaborative Learning at Multiple Levels." July 2, 2012.
- Data presenter and participant, ICLS 2010 Preconference Workshop, "Productive Multivocality in the Analysis of Collaborative Learning." June 28-29, 2010.
- The learning sciences as a setting for learning. Discussant on this symposium, with presentations by Michael Evans, Martin Packer, Reed Stevens, Cody Maddox, and Jorge Larreamendy. Presented at the International Conference of the Learning Sciences, Chicago, IL, June 29-July 2, 2010.
- What Are They Talking About? Findings from an Analysis of the Discourse in Peer-Led Team Learning In General Chemistry. Paper presentation co-authored with Patrick Brown and Regina Frey. Presented at the International Conference of the Learning Sciences, Chicago, IL, June 29-July 2, 2010.
- Distributed creativity for creative language learning. Paper presented at a one-day conference of the British Educational Research Association (BERA), joint conference of the Language and Literacy SIG and the Creativity SIG. University of Cambridge, November 23, 2009.
- Distributed creativity (with Stacy DeZutter). Paper presented on the panel "Creativity in collaborative activity: a sociocultural perspective". EARLI 2009, Amsterdam, August 2009.
- Organizer and chair of panel "Educating for innovation." American Educational Research Association annual meeting, Chicago, IL, April 2007.
- Improvisation in everyday life. American Educational Research Association annual meeting, Chicago, IL, April 2007.
- Organizer and chair of panel "Moving forward: The learning sciences and the future of education." International Conference of the Learning Sciences, Bloomington, IN, June-July 2006.
- Organizer and chair of panel "The learning sciences and the future of education." American Educational Research Association annual meeting, San Francisco, April 2006.
- Organizer and chair of panel "Improvisational teaching." American Educational Research Association annual meeting, Montreal, April 2005.
- "Learning as we go": A study of teacher learning and leadership (with Sheldon T. Watson and Jay P. Scribner). American Educational Research Association annual meeting, Montreal, April 2005.

Talk among teacher leaders: Illuminating distributed leadership through the application of discourse and conversation analysis (with Jay P. Scribner, Sheldon T. Watson, and Vicki L. Myers). American Educational Research Association annual meeting, Montreal, April 2005.

Music and conversation. International Conference on Music Perception & Cognition, Northwestern University, Evanston, IL, August 2004.

Teacher teams and school leadership: A study of group creativity and collaboration (with Jay Paredes Scribner). American Educational Research Association annual meeting, San Diego, April, 2004.

Emergence and complexity: A new approach to social systems theory. American Sociological Association annual meeting, August, 2003.

How collaboration works: Collaborative discourse and effective group learning. American Educational Research Association annual meeting, April, 2003 (accepted but unable to attend).

Inseparability and emergence: Toward a new perspective on the relation between individuals and contexts. American Educational Research Association annual meeting, April, 2003 (accepted but unable to attend).

The languages of emergence. Lake Arrowhead Conference on Computational Social Science and Social Complexity. May, 2002.

Emergence in collective behavior: A case study of improvisational theater performance. American Sociological Association annual meeting, Washington, DC, August, 2000.

Simulating Emergence and Downward Causation in Small Groups. Workshop on Multi-Agent Based Simulation, Boston, July, 2000.

Script-think, classroom discourse, and curriculum design. American Educational Research Association annual meeting, Montreal, April 1999.

How do groups contribute to development? Collaborative emergence and levels of analysis in developmental research. Society for Research in Child Development biennial meeting, Albuquerque, NM, April 1999.

Riffing on the text: The improvisational element in performance. Annual Conference on Holidays, Ritual, Festival, Celebration, and Public Display, Bowling Green, OH, May 1998.

Creativity as collaborative performance: The semiotics of social interaction. Semiotic Society of America conference, Louisville, KY, October 1997.

Chair of the panel "Metaphor." Semiotic Society of America conference, Louisville, KY, October 1997.

Chair of the panel "Anthropology and music." The Sound of Culture: Anthropological Theory and Ethnographic Methods in the Study of Western Music. Washington University in St. Louis, September, 1997.

- Chair and organizer of symposium “Improvisation in Education.” American Educational Research Association annual meeting, Chicago, March 1997.
- Learning how to improvise. American Educational Research Association annual meeting, Chicago, March 1997.
- Chair and organizer of symposium “Metacommunication, conflict, and intersubjectivity in pretend play.” Association for the Study of Play annual meeting, Washington DC, April 1997.
- Styles of play character enactment influence children’s metacommunicative speech. Association for the Study of Play annual meeting, Washington DC, April 1997.
- Gender differences in participant frameworks and footing in preschool play discourse. Georgetown Linguistics Society, Washington DC, October 1996.
- Metacommunicative strategy selection in pretend play is affected by discourse sequence. American Psychological Society, San Francisco, June/July 1996.
- The preschool classroom as discourse community: Learning metapragmatics through pretense. American Association for Applied Linguistics annual meeting, Chicago, March 1996.
- Learning interactional skills through nursery school pretend play. American Educational Research Association annual meeting, New Orleans, April 1994.
- Experience as improvisation: Dewey’s aesthetic theory applied to nursery school pretend play. Midwest Philosophy of Education Society annual meeting, Chicago, November 1993.
- Creativity in later life. Chicago Academy of Sciences symposium, “Science and art: Creativity, motivation, and the joy of learning,” October 1993.
- Semiotic mediation in group improvisation. Society for Phenomenology and Existential Philosophy annual meeting, New Orleans, October 1993.
- The cocreation of a symbolic space: How children collectively construct a pretend world. American Sociological Association annual meeting, Miami Beach, August 1993.
- Social influences on the creative process: An autobiographical memory study of creativity through the lifespan. (With M. Csikszentmihalyi). Henry B. and Jocelyn Wallace National Research Symposium on Talent Development, University of Iowa, May 1993.
- Social influences on creativity in the lifespans of gifted individuals. (With M. Csikszentmihalyi). Esther Katz Rosen Symposium on the Psychological Development of Gifted Children, University of Kansas, February 1993.
- Interaction in children’s social play. Spring Institute, University of Chicago Sociology Department, April 1991.
- Citiexpert: Artificial intelligence applied to banking. (With K. Sahin). National Computer Conference, Chicago, 1987.

## **ADMINISTRATIVE EXPERIENCE**

### **University of North Carolina at Chapel Hill**

- 2021-2024: Member, Educational Policy Committee of the UNC Faculty Council
- 2022-2024: Member, Subcommittee on University Approved Absence Policy of the Educational Policy Committee
- 2021-present: Member, post-tenure review committee, School of Education
- 2019-2025: Member, Administrative Boards of the General College and the College of Arts and Sciences. Responsible for reviewing new programs, course proposals, and advising the dean on educational policies and administrative matters
- 2019-present: Member, Course Subcommittee of the Administrative Boards of the General College of Arts and Sciences. Responsible for reviewing course syllabi and requests for new course designation in the IDEAS in Action general education curriculum
- 2020-2022: Member, General Education Oversight Committee (GEOC) for the new IDEAS in Action curriculum, College of Arts and Sciences. Responsible for reviewing courses, overseeing assessment, examining results, and proposing curricular changes
- 2019, Spring: Interim Program Director for the MA in Educational Innovation, Technology, and Entrepreneurship (MEITE)
- 2018-2019: Search Committee Chair, Program Director for the MA in Educational Innovation, Technology, and Entrepreneurship (MEITE)
- 2018-2019: Search Committee Chair, Open-Rank, Tenure-track/Tenure-eligible Professor in the Learning Sciences and Psychological Studies (LSPS)
- 2017-2020: Program Coordinator, Ph.D. in Learning Sciences and Psychological Studies (LSPS)
- 2017-2019: Area Chair, School of Education, “Learning, Development, and Psychological Sciences” (LDPS) area. Responsible for coordinating seven degree programs
- 2017-2019: Member, School of Education Faculty Executive Council (FEC). Ex-officio as Area Chair of LDPS
- 2017-2019: Member, School of Education, Appointment, Promotion, and Tenure (APT) Committee
- 2017-2018: Search Committee Chair, Program Director for the MA in Educational Innovation, Technology, and Entrepreneurship (MEITE)
- 2017-2018: Member of UNC’s Faculty Council, as an elected representative of the School of Education
- 2017-2018: Search Committee Chair, Open-Rank Professor in Learning Sciences and Psychological Studies (LSPS)

- 2016-2017: Member, Provost's Educational Innovation Working Group
- 2016-2017: Member, Program Review subcommittee, School of Education Graduate and Undergraduate Research and Policy Programs (GURP) leadership group
- 2016-2017: Search Committee Chair, Program Director for the MA in Educational Innovation, Technology, and Entrepreneurship (MEITE)
- 2015-2016: Member, The Graduate School's Weiss Urban Livability Faculty Board
- 2014-2017: Executive Director, Chancellor's Faculty Boot Camp, "The Entrepreneurial Mindset: Maximizing Faculty Impact." An annual one-week intensive faculty development program open to faculty at all 17 UNC system campuses
- 2014-2017: Member, School of Education International Programs Advisory Committee
- 2014-2015: Invited participant, Faculty Administrator Development Program (FADP), UNC Center for Faculty Excellence
- 2014-2015: Member, post-tenure review committee, School of Education
- 2014-2015: Member, Faculty committee to develop core PhD course "Development and Learning"
- 2014-2015: Reviewer, grant program "Expanding the Reach and Impact of Technology-Enhanced Course Redesign" for the 17-campus University of North Carolina system, administered through UNC General Administration
- 2013-2017: Creator and Founding Director of the Master's in Education degree in Educational Innovation, Technology, and Entrepreneurship (MEITE).
- 2013-2017: Member, School of Education Graduate and Undergraduate Research and Policy Programs (GURP) leadership group, a governing body of all program directors for research and policy programs. Ex officio as Program Director of the MEITE degree program.
- 2013-2014: Member, search committee, School of Education, Assistant Professor in Literacy Education

### **Washington University**

- 2007-2013: Olin School of Business, Institute for Innovation and Growth, Faculty Steering Committee
- 2007-2008: Social Change Grant Advisory Board member
- 2007-2008: Faculty Achievement Awards Committee
- 2007-2008: Undergraduate Life Committee of the Board of Trustees
- 2007-2008: Medical School Strategic Planning Committee, Medical Education subcommittee

2003-2013: Member, Washington University Human Subjects Committee,  
Behavioral Sciences

### **Washington University College of Arts & Sciences**

Spring 2013: Curriculum Committee

2006-2013: Program Director, Graduate Certificate in the Learning Sciences

2008-2009: Member, New Curriculum Review Committee

2007-2009: Chair of the Curriculum Committee

2006-2009: Curriculum Committee

### **Washington University Department of Education**

2011-2013: Department of Education Honors Thesis Coordinator

2011-2013: Department of Education Study Abroad advisor

2006-2013: Program Director, Learning Sciences undergraduate minor

2006-2013: Chair, Educational Studies Undergraduate Major Committee

2003: Conference Organizer and Chair, Department of Education Spring Forum

1997-2005: Chair, Technology Committee

1996-2013: Educational Studies Committee

1996-2013: Doctoral Program Committee

1998-2000: Chair, Human Subjects Committee

1998: Conference Organizer and Chair, Department of Education Spring Forum

### **OTHER PROFESSIONAL EXPERIENCE**

#### **Senior Consultant, August 1994 - August 1995**

Culpeper Consulting Group, New York, NY. Project manager at Citicorp for CCMP, a custom software application for tracking global securities, with team members in London and in New York.

#### **Principal Manager, March 1984 - September 1990; part-time consulting 1991-1993**

Kenan Systems Corporation, Cambridge, MA; New York, NY. Information technology management consulting, with expertise in artificial intelligence, transaction processing, and decision support systems. Responsibilities included marketing, client relations, system design, and project management.

At Kenan Systems, successful leadership roles and project completions include:

- CitiExpert (CitiCorp). Lead Consultant, System Designer, and Project Manager, for this custom natural-language processing system, delivered in 1986. CitiExpert was the first application of artificial intelligence in a money-center bank (described in the book chapter cited above: Sahin and Sawyer, 1999)
- Original consultant and first Project Manager, ARBOR (U.S. West), 1988: This custom billing system was later productized as Arbor/BP and become the leading Unix-based telecommunications billing system. In 1998, Lucent Technologies purchased Kenan Systems for a \$1.5 billion stock swap, largely to acquire the Arbor/BP billing system.

### **Videogame Designer, January 1982 - March 1984**

General Computer Corporation, Cambridge, MA. Videogame design for Atari. Creator and lead designer of *Neon* and *Magician* (arcade games not produced); lead designer of *Food Fight* (7800 home cartridge adaptation of original arcade game); credit on *Ms. Pacman* (2600 home cartridge adaptation).

### **FELLOWSHIPS, GRANTS, AND AWARDS**

Fall 2013: Andrew W. Mellon Foundation Vertical Seminar series at Washington University: Arts Practice in the Research University. PI and Seminar Director. \$100,000 (Seminar cancelled due to relocation to UNC)

2010 – 2012; 2012 – 2015: **Honorary Visiting Professor**, University of Exeter, UK.

2009: **Osher Fellow**, San Francisco Exploratorium.

2009 – 2010: Andrew W. Mellon Foundation Sawyer Seminar series: How Deep Is the Ocean: The Rise and Fall of Jazz as Popular Music. Co-PI with Dr. Gerald Early, Department of English, Washington University. \$150,000

2007 – present: Social Sciences and Humanities Research Council, Canada: Improvisation, Community, and Social Practice. Research Collaborator. PI Ajay Heble, Department of English, University of Guelph. CAN\$2,488,619.

2007 – 2012: National Science Foundation, Solicitation Number NSF-06-608: CPATH T: Active Learning for Transformation of the Undergraduate Experience. Co-PI with Dr. Kenneth Goldman, Department of Computer Science, Washington University. \$562,987

2007 – 2010: National Science Foundation, Solicitation Number NSF-06-536: An Analysis of Discourse in Peer-Led Team Learning. Co-PI with Dr. Regina Frey, Department of Chemistry, Washington University. \$150,000.

2006: Graduate School of Arts and Sciences, “Special Recognition for Excellence in Mentoring, 2005-2006.”

2005: Kauffman Foundation. Delegate Fellow to the Experiential Classroom, Syracuse University. \$3,000.

- 2005: Skandalaris Center, Washington University, course enhancement grant (funded by the Kauffman Foundation): \$12,082.
- 2005: Washington University Center for Inquiry in Science Teaching and Learning: Grant to support editorial work on the *Cambridge Handbook of the Learning Sciences*. \$7,313.
- 2005: Graduate School of Arts and Sciences, “Special Recognition for Excellence in Mentoring, 2004-2005.”
- 2004: Department of Education “Chair’s Choice Award for Department Service.”
- 2004: Nominee for the Arts and Sciences Student Council Faculty Award.
- 2003 – 2006: National Science Foundation, Solicitation Number NSF-02-082: An Interactive Learning Environment for Introductory Computer Science. Co-PI with Kenneth Goldman, Computer Science Department, Washington University. \$595,338.
- 2001: Washington University Faculty Research Grant. \$5,840.
- 2000: National Academy of Education/Spencer Postdoctoral Fellowship. \$45,000.
- 1998: Lilly Fellowship for new course development for Spring 1998 semester “Educational Psychology.” Washington University Teaching Center.
- 1996: Mouton d’Or Award for the best article in *Semiotica* in 1996 for “The semiotics of improvisation: The pragmatics of musical and verbal performance.”
- 1996: AERA Division E Outstanding Dissertation Award (Human Development).
- April, 1996: Zora Neale Hurston Fellowship, Institute for Advanced Study and Research in the African Humanities, Northwestern University.

#### **ADVISORY BOARDS, EDITORIAL BOARDS, AND COMMITTEES**

- 2020-2024: Advisory Board, MakerStudioPeda project, funded by the Academy of Finland. University of Helsinki, Finland.
- 2020: Scientific Committee Member, Improviser l’enseignement/Enseigner l’improvisation, University of Montpellier, France, June 17-18.
- 2019-2022: Series co-editor, Routledge Advances in Learning Sciences (with Chee Kit Looi, National Institute of Education, Singapore, and Mike Sharples, The Open University, UK).
- 2019: Associate Chair, ACM Creativity & Cognition, San Diego, CA, June 23-26.
- 2018-2021: Editorial Board, *Educational Research Review*.**
- 2017: Scientific Committee Member, Tracking the Creative Process in Music conference (TCPM), University of Huddersfield, UK, September 14-16.
- 2016: Program committee, Seventeenth International Workshop on Multiagent Based Simulation (MABS 2016), held at AAMAS, Singapore, May 9-13.



- 2014-2019: Advisory Board Member, NSF Cyberlearning Program Design and Implementation Project “Connecting Idea Threads Across Communities for Sustained Knowledge Building.” PI Jianwei Zhang, University of Albany, New York.
- 2015: Program committee, Sixteenth International Workshop on Multiagent Based Simulation (MABS 2015), held at AAMAS, Istanbul, Turkey, May 4-8.
- 2015: Scientific Committee Member, Tracking the Creative Process in Music conference (TCPM), Paris, France, October 8-10.
- 2014-2017: Series Editor, Cambridge Handbooks in Psychology, Cambridge University Press**
- 2014-2016: Board of Directors, Public School Forum of North Carolina.
- 2014: Program committee, Fifteenth International Workshop on Multiagent Based Simulation (MABS 2014), held at AAMAS, Paris, France, May 5-9.
- 2013-present: Research Team Member, International Institute for Critical Studies in Improvisation (IISCI). Canadian SSHRC-funded grant centered at the University of Guelph, Canada. CAN\$2.6 million (over seven years, through 2020).
- 2013-present: Editorial Board, *Mind, Culture, and Activity*.**
- 2013-2017: Advisory Board Member, NSF Cyberlearning Transforming Education Project “Exploring Social Programming Environments in Early Computing Courses.” PI Christopher Hundhausen, Washington State University, Pullman, WA.
- 2013-2014: Special Issue Guest Editor (with Kian-Sam Hong, Malaysia, and Kwok-Wing Lai, New Zealand), “Optimizing learning: Technology meets learning sciences” published in July 2014 issue of *Research and Practice on Technology-Enhanced Learning (RPTEL)*, Vol. 9, No. 2.
- 2013: International Steering Committee, the First International Conference on the Science of Creative Thinking, Bologna, Italy, Sep. 29-Oct. 1, 2013.
- 2013: Programme Committee of the Thematic Track on Social Simulation and Modelling during EPIA 2013, the 16th Portuguese Conference on Artificial Intelligence, Açores, Portugal, 9-13 September, 2013.
- 2013: Program committee, Thirteenth Creativity & Cognition conference (C&C 13), Sydney, Australia.
- 2013: Program committee, Fourteenth International Workshop on Multiagent Based Simulation (MABS 2013), St. Paul, MN, USA, May 6-10, 2013.
- 2012: Proposal Reviewer for Research Foundation Flanders (Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO).
- 2012: Steering committee and Program committee, Thirteenth International Workshop on Multiagent Based Simulation (MABS’12), Valencia, Spain, June 4-8, 2012.

2011-present: Technical Program Committee, Conference on Creative Education (CCE), Shanghai, China.

**2011-present: Editorial Board, *Thinking Skills and Creativity*.**

2011: Program committee, Eighth ACM Conference on Creativity and Cognition (C&C 2011), Atlanta, Georgia, November 3-6, 2011.

2011: Program committee, Twelfth International Workshop on Multiagent Based Simulation (MABS'11), Taipei, Taiwan, May 2-6, 2011.

2010-present: Advisory Committee, translation book series "Education, Creativity, and Social Development," published by East China Normal University Press.

2010-2011: Advisory Board, *Cambridge Handbook of Engineering Education*, edited by Barbara Olds and Aditya Johri.

2010: Proposal Reviewer for Agence Nationale de la Recherche, France.

**2010-2014; 2014-2017: Associate Editor for the United States, *Educational Research Review* (one of two official EARLI journals).**

2010-present: Editorial Board, *Contemporary Educational Technology*.

2010: Program committee, Second Brazilian Workshop on Social Simulation (BWSS), Sao Bernardo do Campo, Brazil, 23-28 October 2010.

2010: Program committee, Eleventh International Workshop on Multiagent Based Simulation (MABS'10), Toronto, Canada, May 10-14, 2010.

2010: Program committee, First Portuguese Workshop on Social Simulation (a thematic track for the Portuguese Conference on Artificial Intelligence).

2010: Co-Chair for the Minitrack "Knowledge Management for Creativity and Innovation" at the Hawaii International Conference on System Science, Waikoloa, Big Island, Hawaii, January 2010.

2009: Program committee, Tenth International Workshop on Multiagent Based Simulation (MABS'09), Budapest, Hungary, May 10-15, 2009.

2009: Program Committee, Social Simulation workshop at the International Joint Conferences on Artificial Intelligence (IJCAI 2009). Pasadena, CA, July 11-17, 2009.

2009: Program Committee, 6th European Social Simulation Association Conference (ESSA 2009). University of Surrey, Guildford, UK.

2009: Program Committee, Eighth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-09). Budapest, Hungary.

2009: Co-Chair for the Minitrack "Knowledge Management for Creativity and Innovation" at the Hawaii International Conference on System Science, Waikoloa, Big Island, Hawaii, January 2009.

2008: Program committee, Ninth International Workshop on Multiagent Based Simulation (MABS'08), Estoril, Portugal, May 12-16, 2008.

2007-2011: Member, Engineering Education Academic Advisory Council, Purdue University School of Engineering Education.

2007: Program Committee, Third Edition of Epistemological Perspectives on Simulation (EPOS), which will be held in Lisbon, ISCTE, Portugal, October 2-3, 2008.

2007: Program Committee, Second World Congress on Social Simulation, George Mason University, July 14-17, 2008.

2007-2020: Editorial Board, *International Journal of Creativity and Problem Solving* (from 2007-2008 was titled *Korean Journal of Thinking & Problem Solving*).

2007: Program Committee, ACM Annual Symposium on Applied Computing, on the track "Advances in Computer Simulation," Fortaleza, Brazil, March 16-20, 2008.

**2007-present: Editorial board, *Psychology of Music*.**

2007: Panel reviewer, National Science Foundation.

2007: Organizing committee, Fall AAAI Symposium "Emergent agents and socialities: Social and organizational aspects of intelligence." Washington DC, November 8-11, 2007.

2007: Program committee, Eighth International Workshop on Multiagent Based Simulation (MABS'07), Hawaii.

2006-2008: Annual Meeting Program Co-Chair, Cultural-Historical SIG, American Educational Research Association.

2006: Panel reviewer, National Science Foundation.

2006: Program committee, First World Conference on Social Simulation (WCCS'06), Kyoto, Japan.

2006: Program committee, Seventh International Workshop on Multiagent Based Simulation (MABS'06), Future University-Hakodate, Japan.

2006: Program committee for the 28th Annual Meeting of the Cognitive Science Society.

2005: Program Committee, Sixth International Workshop on MultiAgent Based Simulation (MABS'05) conference, Utrecht, The Netherlands.

**2004-2006: Consulting editor, *American Journal of Sociology***

2004: Program committee, Fifth International Workshop on Multiagent Based Simulation (MABS'04).

2004: Grant reviewer, The Marsden Fund, the Royal Society of New Zealand.

2003: Grant reviewer, Social Sciences and Humanities Research Council of Canada.

2003-2006: Editorial board, *Journal for Computational and Mathematical Organizational Theory*

2003: Program committee, Fourth International Workshop on Multiagent Based Simulation (MABS'03), Melbourne, Australia.

2003: Scientific committee, Simulating Social Systems: Theoretical and Empirical Foundations for Agent Architectures (Simsoc VI), Groningen, The Netherlands.

2002: Program committee, Third International Workshop on Multiagent Based Simulation (MABS'02), Bologna, Italy.

Book reviewer (partial list): Cambridge, Continuum, Oxford, Routledge, Springer, Taylor & Francis, Teachers College Press, University of Pittsburgh

Ad-hoc journal reviewer (partial list): *American Journal of Sociology, American Educational Research Journal, American Political Science Review, American Sociological Review, Artificial Life, Cambridge Journal of Education, Child Development, Cognition & Instruction, Creativity Research Journal, Cultural Anthropology, Design Studies, Early Childhood Research Quarterly, Ecology and Society, History of Psychology, Human Development, Intelligence, International Journal of Education Research, International Journal of General Systems, Journal of Artificial Societies and Social Simulation, Journal of Creative Behavior, Journal of Cognitive Development, Journal of the Learning Sciences, Journal of Linguistic Anthropology, Journal of Teacher Education, Management Science, Mind, Culture, and Activity, Organization Science, Pragmatics, Psychology of Music, Research Studies in Music Education, Semiotica, Social Development, Sociological Theory, Synthese, Systems, Man, and Cybernetics*