

Expertise

I'm a learning scientist bridging theory and practice to build stronger education institutions and support equitable social futures for young people in the face of an evolving digital world. I engage in scholarly research, as well as organizational consulting and technical assistance, specializing in the intersection of three areas: digital culture and learning, youth pathways and cross-setting learning ecosystems, and organizational networks, collective action and institutional change. I work across these areas to generate new insights into social theory around learning, culture and institutions while also producing designs, principles and strategies that can drive impact. I approach applied research through lenses of collaborative design, democratic participation and fostering collective agency through joint work.

Education

Ph.D., *Learning and Developmental Sciences*, 2017. Indiana University, Bloomington, IN.

Dissertation:

Working Open in the Hive: How Informal Educational Organizations Learn, Collaborate, and Innovate in Networks

Dissertation Committee:

Dr. Kylie A. Peppler (Chair)

Dr. Joshua Danish

Dr. Karen Wohlwend

Dr. Mary Gray

Dr. William Penuel (CU-Boulder)

Bachelor of the Arts, 2004. New York University, Gallatin School of Individualized Study, New York, NY.

Concentration: Integral approaches to understanding the mind

Honors: Magna Cum Laude, Founders Day Honors Scholar

Professional Experience

2019-present	Principal, Telos Learning LLC
2017-present	Research Associate, CSforALL
2017-2018	Research Scientist, Educational Communication & Technology, New York University
2016-2017	Visiting Research Associate, Center for Research on Learning and Technology, Indiana University
2013-2017	Visiting Scholar, Educational Communication & Technology, New York University
2011	Summer Research Fellow, Frameworks Institute
2010-2016	Graduate Research Assistant, Center for Research on Learning and Technology, Indiana University
2008-2010	Senior Program Associate, Online Leadership Program, Global Kids
2006-2008	Program Associate, Online Leadership Program, Global Kids
2003-2004	Docent & Classroom Educator, Museum of Jewish Heritage
2000-2004	Literacy and Mathematics Classroom Tutor, America Reads/America Counts

Record of External Funding for Research, Evaluation and Technical Assistance

2019-2022	iCT: Developing a Teacher Micro-credential for Integrating Computational Thinking Across Disciplines \$1,733,861 Funder: National Science Foundation, award #1933933 <i>Role: Co-Principal Investigator, Aman Yadav (PI), Carlos Leon (Co-PI)</i>
2019-2020	Achieving Equity in K12 Computer Science: Strategies, Obstacles, and Opportunities at the District Level \$100,000 Funder: Google <i>Role: Principal Investigator, Leigh Ann DeLyser (Co-PI)</i>
2017-2019	CS-EDU Visions: Building Multi-Level Alignment in Local CS for All Implementations for Sustainability \$359,248 Funder: National Science Foundation, award #1738675 <i>Role: Project director with support of Dr. Leigh Ann DeLyser (PI) and Dr. June Ahn (Co-PI)</i>
2017-2018	Designing a Collaborative Knowledge-Building Network around Community-based Technology Learning \$332, 931 Funder: Susan Crown Exchange <i>Role: Project director with support of Dr. June Ahn (PI)</i>
2016	Formative Research and Technical Assistance for “Building Connected Credentials” Hive NYC Project \$25,000 Funder: Mozilla Foundation <i>Role: Principal Investigator, project co-director with Dr. Dixie Ching</i>
2016	Strategies for Measuring Network Health and Strength \$60,000 Funder: Mozilla Foundation <i>Role: Principal Investigator, project co-director with Dr. Dixie Ching</i>
2016	Brokering Future Learning Opportunities as a Strategy for Supporting Successful Youth Futures (part 2) \$25,000 Funder: Capital One <i>Role: Project co-director with Dr. Dixie Ching, with support of Dr. Kylie Peppler (PI) and Dr. Chris Hoadley (Co-PI)</i>
2016-2018	Hive Research Lab: Investigating and Supporting Youth Interest-driven Learning Pathways in Hive NYC \$370,000 Funder: Spencer Foundation <i>Role: Project co-director with Dr. Dixie Ching, with support of Dr. Kylie Peppler (PI) and Dr. Chris Hoadley (Co-PI)</i>
2015	Brokering Future Learning Opportunities as a Strategy for Supporting Successful Youth Futures \$25,000 Funder: Capital One <i>Role: Project co-director with Dr. Dixie Ching, with support of Dr. Kylie Peppler (PI) and Dr. Chris Hoadley (Co-PI)</i>
2013-2015	Hive Research Lab: Investing and Supporting Hive NYC as a Regional Learning Ecosystem \$350,000 Funder: Hive Digital Media and Learning Fund at the New York Community Trust <i>Role: Project co-director with Dr. Dixie Ching, with support of Dr. Kylie Peppler (PI) and Dr. Chris Hoadley (Co-PI)</i>
2012	Investigating Future Research Directions for Hive NYC Learning Network \$26,000 Funder: Hive Digital Media Learning Fund at the New York Community Trust <i>Role: Principal Investigator</i>

Books

- Peppler, K., **Santo, R.**, Gresalfi, M. & Salen, K., (2014). *Script Changers: Digital Storytelling with Scratch*. Cambridge, MA: MIT Press.
- Salen, K., Gresalfi, M., Peppler, K., & **Santo, R.** (2014). *Gaming the System: Designing with Gamestar Mechanic*. Cambridge, MA: MIT Press.
- Peppler, K., Gresalfi, M. Salen, K., & **Santo, R.** (2014). *Soft Circuits: DIY Crafting with E-Fashion*. Cambridge, MA: MIT Press.
- Peppler, K., Gresalfi, M. Salen, K., & **Santo, R.** (2014). *Short Circuits: DIY Crafting with E-Puppets*. Cambridge, MA: MIT Press
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Peer-Reviewed Publications

- Santo, R.**, DeLyser, L., Ahn, J., Pellicone, A., Aguiar, J. & Wortel-London, S. (2019). Equity in the Who, How and What of Computer Science Education: K12 School District Conceptualizations of Equity in 'CS for All' Initiatives. *In Proceedings of the 4th international conference on Research in Equity and Sustained Participation in Engineering, Computing, and Technology (RESPECT)*.
- Vogel, S., **Santo, R.**, & Ching, D. (2017). Visions of Computer Science Education: Unpacking Arguments for and Projected Impacts of CS4All Initiatives. *In Proceedings of the 48th ACM Technical Symposium on Computer Science Education*. ACM.
- Santo, R.**, Ching, D., Peppler, K. A., & Hoadley, C. M. (2017). Participatory Knowledge Building within Research-Practice Partnerships in Education. *SAGE Research Methods Case*. London: Sage Publications.
- Santo, R.**, Ching, D., Hoadley, C. M., & Peppler, K. A. (2016). Working in the Open: Lessons from Open Source on Building Innovation Networks in Education. *On the Horizon*, 24 (3). pp.280-295.
- Ching, D., **Santo, R.**, Hoadley, C., & Peppler, K. (2016). Not just a blip in someone's life: integrating brokering practices into out-of-school programming as a means of supporting youth futures. *On the Horizon*, 24(3). pp. 296-312.
- Andrade, A, & **Santo, R.** (2016). Advancing Learning Visualizations: Situated Action Networks as Scalable Representations of Learning in Social Settings. *Proceedings of the International Conference of the Learning Sciences ICLS 2016. Singapore, June 2016*.
- Santo, R.**, Peppler, K., Ching, D., Hoadley, C. (2015). "Maybe a Maker Space? Organizational Learning about Maker Education within a Regional Out-of-School Network." *Proceedings of FabLearn: Conference on Creativity and Fabrication in Education, Stanford, CA*.
- Santo, R.** (2013). Towards hacker literacies: What Facebook's privacy snafus can teach us about empowered technological practices. *Digital Culture & Education*, 5:1, 18-33.
- Davis, K., Katz, S., **Santo, R.**, James, C. (2010). Fostering Cross-Generational Dialogues about the Ethics of Online Life. *Journal of Media Literacy Education. Volume 2, Issue 2*.

Book Chapters, Reports and White Papers

Santo, R. (2019). Seeking Synergy: Strategic Partnership Development as Organizational Practice in Informal Education Organizations. In M. Semmel (Ed.) *The Partnership Imperative: Successful Models and Strategies for Museums*. Lanham, MD: Rowman and Littlefield.

Santo, R., Ahn, J. and Sarmiento, J. (2019). *Reclaiming Digital Futures: Lessons to Help Youth Thrive Through Informal Learning with Technology*. Irvine, CA: UC-Irvine.

Ching, D., **Santo, R.,** Pepper, K., & Hoadley, C. (2018). "He saw I had a loving for it": Youth Interest Signaling as a Means of Generating Social Support in Technology Pathways. New York, NY: Hive Research Lab.

Ching, D., **Santo, R.,** Pepper, K., & Hoadley, C. (2018). *Brokering Youth Pathways: A toolkit for connecting youth to future opportunity*. New York, NY: Hive Research Lab.

Santo, R. (2018). Open Source Culture as Inspiration for Design of Educator Learning Networks. In Yoon, S.A., & Baker-Doyle, K. (Eds.), *Networked by design: Interventions for teachers to develop social capital*. New York, NY: Routledge.

Santo, R., Ching, D., Peppler, K., & Hoadley, C. (2018). Messy, sprawling and open: Research-practice partnership methodologies for working in distributed inter-organizational networks. In B. Bevan & W. R. Penuel (Eds.), *Connecting research and practice for educational improvement: Ethical and equitable approaches*. New York, NY: Routledge.

Ching, D., **Santo, R.,** Hoadley, C., Peppler, K. (2015). *On-ramps, Lane Changes, Detours and Destinations: Building Connected Learning Pathways in Hive NYC through Brokering Future Learning Opportunities*. New York, NY: Hive Research Lab.

Penuel, B., Van Horne, K., York, A., **Santo, R.,** Ching, D., Podkul, T. (2015). *Connected Learning: From Outcomes Workshops to Survey Items*.

Santo, R., Ching, D., Peppler, K., Hoadley, C. (2014). *What does it mean to "Work Open" in Hive NYC? A Vision for Collective Organizational Learning*. New York, NY: Hive Research Lab.

Levine, M. & **Santo, R.** (2013). Upgrading Afterschool: Common Sense Shifts in Expanded Learning for a Digital Age. In Peterson, T. (Ed.) *Expanding Minds and Opportunities: Leveraging the Power of Afterschool and Summer Learning for Student Success*. Washington, DC: Collaborative Communications Group.

Santo, R. (2012). Hacker Literacies: User-Generated Resistance and Reconfiguration of Networked Publics. In J. Avila & J. Zacher-Pandya (Eds.) *Critical Digital Literacies as Social Praxis: Intersections & Challenges*. New York: Peter Lang.

Santo, R. (2012). Hacker Literacies: Synthesizing Critical and Participatory Media Literacy Frameworks. *International Journal of Learning and Media*. Vol. 3, No. 3, Pages 1-5

Arvizu, S., **Santo, R.,** Arena, D., Wardrip, P., Johnson, B.Z., Simon, A., et al. (2012). *The Stories We Are Telling: How Digital Media and Learning is Communicated by Education Reformers*. Washington, DC: FrameWorks Institute.

Santo, R. with James, C., Davis, K., Burch, L., Katz, S. & Joseph, J. (2009) *Meeting of Minds: Cross-Generational Dialogue on the Ethics of Digital Life*. New York, NY: Global Kids; Cambridge, MA: Harvard University; San Francisco, CA: Common Sense Media.

Santo, R., Joseph, B., Nataf, Z., & Feldman, L. (2007) *Virtual Worlds, An Educational Medium for a New Century* published in the *Journal of Media Literacy*, Volume 54.

Peer Reviewed Posters and Presentations

Santo, R., Ching, D., Levinson, E., White, G., Cordero, M., Peppler, K. & Hoadley, C. (2018). When is it safe enough? Considering diversity and equity when brokering pre-professional opportunities to youth of color. Poster presented at the 13th International Conference of the Learning Sciences (ICLS). London, UK: International Society of the Learning Sciences.

Santo, R., Sarmiento, J., & Ahn, J. (2018). Projected Worlds: How Informal Digital Learning Organizations Conceptualize Organizing Youth Futures. Poster presented at the 13th International Conference of the Learning Sciences (ICLS). London, UK: International Society of the Learning Sciences.

Santo, R. (2018). Open Source Culture as Inspiration for Design of Educator Learning Networks. Poster presented in symposium *Networked by Design: Interventions for Teachers to Develop Social Capital at the 13th International Conference of the Learning Sciences (ICLS)*. London, UK: International Society of the Learning Sciences.

Ching, D., **Santo, R.**, Davis, L., Hoadley, C., & Peppler, K. (2017). "Enacting Research-Practice Partnerships Within Decentralized Organizational Networks: A Case Study of Hive Research Lab and Hive NYC Learning Network" poster presented in session *Crossing Boundaries and Increasing Impact: Lessons From Successful Research-Practice Partnerships* at the American Educational Research Association Annual Meeting, Washington, DC, April 28.

Ching, D., **Santo, R.**, Peppler, K. & Hoadley, C. (2017). "Youth Signaling as a Means of Generating Social Support Around Interest-Driven Learning With Technology" poster presented in session *Innovations in Methods and Approaches to Tracing Youth Pathways Into STEM* at the American Educational Research Association Annual Meeting, Washington, DC, April 28.

Santo, R., Ching, D., Peppler, K. & Hoadley, C. (2017). "Going Further Together: A Framework for Innovation-Focused Collaborations in Informal Learning Organizations" poster presented in session *Fostering Networks and Collectives in the Out-of-School Sector: Achieving Equity, Innovation, and Learning Ecosystems Through Large-Scale Collaborations (organizer)* at the American Educational Research Association Annual Meeting, Washington, DC, April 28.

Vogel, S., **Santo, R.** & Ching, D. (2017) "CSed Visions: A Framework for Considering the Underlying Rationales for and Purposes of CS Education", poster presented in symposium *CS4All, But Why? Exploring How Visions, Motivations and Ideologies of Computer Science Education Impact Implementation (organizer)* at the American Educational Research Association Annual Meeting, Washington, DC, April 28.

Ching, D., **Santo, R.**, Pinkard, N., Levinson, E. (2016). "Increasing Equitable Access to Digital Learning in Informal Contexts: Connecting Micro, Meso and Macro Level Factors." Presented at the annual Digital Media and Learning Conference, Irvine, CA, October 23.

Santo, R., Vogel, S., & Ching, D. (2016). "CS4All, But Why? Visions and Ideologies of Computer Science Education." Presented at the annual Digital Media and Learning Conference, Irvine, CA, October 23.

Santo, R., Ching, D., Peppler, K. & Hoadley, C. (2016). "Enabling Equitable Knowledge Building in Research-Practice Partnerships through Community White Paper Routines" poster presented in symposium *Strategies for Promoting and Studying Equity in Design-Oriented Research-Practice Partnerships* at the American Educational Research Association Annual Meeting, San Antonio, TX, April 9.

Santo, R., Peppler, K., Ching, D., & Hoadley, C. (2016). "A City-wide Laboratory: Scaling Digital Learning through Inter-organizational Collaboration in the Hive NYC Learning Network" presented on panel *Scaling Up Digital Media Innovations at the American Educational Research Association Annual Meeting*, San Antonio, TX, April 11.

Peer Reviewed Posters and Presentations

Santo, R., Peppler, K., Ching, D., & Hoadley, C. (2016). "A City-wide Laboratory: Scaling Digital Learning through Inter-organizational Collaboration in the Hive NYC Learning Network" presented on panel *Scaling Up Digital Media Innovations* at the American Educational Research Association Annual Meeting, San Antonio, TX, April 11.

Ching, D., **Santo, R.**, Hoadley, C., & Peppler, K. (2016). "Brokering Learning Opportunities within an Out-of-School Network: A Conceptual Model for Supporting Youth Interest-Driven Learning" poster presented in symposium *Brokering Future Learning Opportunities: Theoretical and Practical Considerations for Linking Youth to Out-of-School Time Opportunities* at the American Educational Research Association Annual Meeting, San Antonio, TX, April 12.

Santo, R., Ching, D., Peppler, K. & Hoadley, C. (2016). "Maybe a Maker Space? How an Out-of-School Center Engaged in Organizational Learning around Maker Education" paper presented in roundtable at the American Educational Research Association Annual Meeting, San Antonio, TX, April 12.

Santo, R., Ching, D., Peppler, K., Hoadley, C., Gilliam, L. (2015). "Networks for Learning and Networks that Learn: Findings from Hive Research Lab" presented at the annual Digital Media and Learning Conference, Los Angeles, CA, June 12.

Ching, D., **Santo, R.**, Bar-Zemer, T., Forsyth, J., Hoadley, D. (2015) "From Half-Pipe to Full-filment: Leveraging Interest-Driven Identities as a Strategy for Technology Learning." Paper presented at the American Educational Research Association Annual Meeting, Chicago, IL, April 18.

Ching, D., **Santo, R.**, Peppler, K., & Hoadley, C. (2015). "Affordances of Social Learning Ecology Maps for Examining the Importance of Social Support in the Pursuit of Digital Media Making Activities." Poster presented at the American Educational Research Association Annual Meeting, Chicago, IL, April 17.

Ching, D. & **Santo, R.** (2015). "Investigating and Supporting a Regional Out-of-School Network through a Research-Practice Partnership Model" presented at the 8th Annual Subway Summit on Cognition and Education Research, New York, NY, January 23.

Erickson, I., **Santo, R.**, Hoadley, C., & Reynolds, R. (2013). "Make, Do, Engage: Hacker Literacies and Civic Participation" presented at the annual Digital Media and Learning Conference (DML), Chicago IL, March 14-16.

Santo, R. (2012) "Towards Hacker Literacies: What Facebook Privacy Snafus have to Teach us About Empowered Digital Practices" presented at the Annual Meeting of the American Educational Research Association (AERA), Vancouver BC, April 13-17.

Peppler, K. & **Santo, R.** (2012) "Informal Learning Environments as 21st-Century Preservice Learning Spaces for Teachers" presented at the Annual Meeting of the American Educational Research Association (AERA), Vancouver BC, April 13-17.

Santo, R. (2012) "Fostering Systems Thinking Through Digital Storytelling in Scratch" presented at the Annual Meeting of the American Educational Research Association (AERA), Vancouver BC, April 13-17.

Santo, R., Peppler, K., Gresalfi, M., Barnes, J. & Volk, C. (2012). "Prior Gaming Knowledge and Collaborative Board Game Design" presented at the Annual Meeting of the American Educational Research Association (AERA), Vancouver BC, April 13-17.

Santo, R., McWilliams, J. Puckett, C., & Achonolu, U. (2011) "*Participatory Culture Reconsidered: Moving Beyond Rainbows, Unicorns & Butterflies*" panel organized and presented at the Digital Media and Learning conference, Long Beach CA, March 4th.

Invited Colloquia, Keynotes & Conference Presentations

Santo, R. (2017). "Mapping and Visualizing Partnerships to Support Strategic Planning." Keynote presented at the NASA Science Mission Directorate Science Activation Annual Principal Investigators Meeting, Alexandria, VA, November 16.

Santo, R. (2017). "Research-Practice Partnerships with Informal Learning Organizations." Invited presentation at NASA Science Mission Directorate planning meeting organized by the National Academies of Science, Washington, DC, May 23.

Santo, R. (2016). "Building an Inclusive, Coordinated Computer Science Learning Ecosystem in New York City." Keynote presented at the Cornell Tech To Code & Beyond Symposium, New York, NY, November 10.

Ching, D. & **Santo, R.** (2016). "Geeking out in the Hive: Investigating learning and identity building across social, temporal and geographical landscapes in New York City." Presented at the Theories and Philosophies of Teaching and Learning Lecture Series at the New York University Steinhardt School of Education, New York, NY, April 27.

Santo, R. (2015). "The Role of Context and Qualitative Understanding in Data Visualization." Presented in New York University masters course in Data Visualization, Arlene Ducao instructing, New York, NY, November 18.

Ching, D. & **Santo, R.** (2015). "Towards City-Wide Learning Pathways in New York City: Informal Learning Organizations' Role in Brokering Future Learning Opportunities." Presented at the Annual Partnership for Afterschool Education Conference, New York, NY, July 27.

Santo, R. (2014). "Roles for Research Evidence in a Distributed Network - Community "Tuning" and Empowering Practitioner Inquiry", invited Presentation to special workshop on Research-Practice Partnerships, led by Bill Penuel (CU-Boulder) and Phil Bell (University of Washington), presented at the International Conference of the Learning Sciences, Boulder, CO, June 23-24.

Santo, R. (2013). "Hacker Literacies: Empowering Kids to Critically Read and Re-Write Technology" presented at the annual Preemptive Education Conference, New York NY, September 28.

Santo, R., Bence, J., Hodgson, K., Moore, S. (2012). "Changing the Game with Game-Based Learning" presented at the annual meeting of the National Writing Project (NWP), Las Vegas NV, November 15th.

Santo, R. (2012) "Why Kids Need to Know How to Hack: Technological Citizenship and the New Civic Education" Ignite talk presented at the Digital Media and Learning conference, San Francisco CA, March 1st

Santo, R. (2011) "Why the Question 'Are people making change or is technology making change?' is the Wrong One to Ask" presented at the Global Kids Annual Youth Conference, New York NY, May 13th

Erickson, E., **Santo, R.** (2010) "*Using New Media for Digital Storytelling in Neighborhood Contexts*" presented at Mozilla's Drumbeat: Learning, Freedom and the Web festival, Barcelona, November 2nd

Santo, R. (2009) "*Using Digital Portfolios to Promote Metacognition: Media Masters Case Study*" presented at the National Writing Project's Digital Is conference, Philadelphia PA, November 18th

Santo, R. (2009) "*Technology for the Global Classroom*" presented at Asia Society Partnership for Global Learning Annual Forum, Washington DC, July 10th

Invited Colloquia, Keynotes & Conference Presentations

Santo, R. & Rosenzweig, S. (2009) *"Program Case Study: Media Masters"*, presented at MIT's Learning in a Participatory Culture Conference, Cambridge MA, May 2nd

Santo, R. (2009) *"Wikipedia in the Classroom"*, panel presented at MIT's Learning in a Participatory Culture conference, Cambridge MA, May 2nd

Santo, R. (2008) *"Networked Collaborative Education"* guest lecture presented at Parsons – The New School for Design, Networked Collaboration Course, November 20th

Santo, R. & Fouad, A. (2008) *"Teaching New Media Literacies through Second Life"* presented at the annual Second Life Community Convention, Long Beach CA, September 6th

Santo, R. (2008) *"Education in the Digital Age"* presented at the Covenant Foundation Symposium, New York NY, October 28th

Santo, R., & Koester, J., (2008) *"Fireside Chat: Gaming and Learning in Second Life"* presented at the annual Games, Learning and Society conference, Madison WI, July 10th

Santo, R., Bachhuber, J., & Joseph, B. (2008) *"A Short History of Social Issue Games"* presented at the annual Games, Learning and Society Conference, Madison WI, July 11th

Santo, R. (2008) guest lecture presented at Parsons – The New School for Design, Virtual Learning Environments Course, July 7th

Santo, R., Fouad, A., & Joseph, B. (2008), *"Youth Engagement through Technology"* keynote presented at Calworks Association Annual Youth Conference, Long Beach CA, January 15th

Santo, R. & Fouad, F. (2007) *"Virtual Worlds, Real Skills"*, presented at MIT/Home Inc. Creating and Learning in a Media Saturated Environment Conference, Cambridge MA, October 27th

Santo, R. (2007) *"Media, Afterschool and Beyond"*, panel presented at MIT/Home Inc. Creating and Learning in a Media Saturated Environment Conference, Cambridge MA, October 27th

Santo, R. (2006) *"Games as a Documentary Form"* panel presented at the annual Margaret Mead Film and Video Festival, New York NY November 11th

Service, Advisory, & Governance Roles

National Academies of Science, Engineering and Medicine Committee on Assessing the NASA Science Activation Program, Committee Member (2019-present).

The Knowledge House, Board Trustee (2019-present).

Hive NYC Learning Network, Governance Council Member (2018-present).

Scope of Work, Advisory Board Member (2017-present).

Digital Culture & Education, Editorial Board Member (2015-present).

Global Kids, Advisory Board on Digital Media Member. (2011-2013).

Flowfinder, Advisory Board Member (2011-2013).

DML Mentors program liaison and organizer, annual Digital Media and Learning Conference (2011-2012).

Indiana University Learning Sciences Graduate Student Association - Treasurer (2011-2012).

Indiana University Learning Sciences Graduate Student Association - Secretary (2010-2011).