

National Living Laboratory 2014-15 Cohort Stipend Final Report

Bay Area
Discovery Museum

Center for
Childhood Creativity

University of
California at Berkeley

Who Are We?

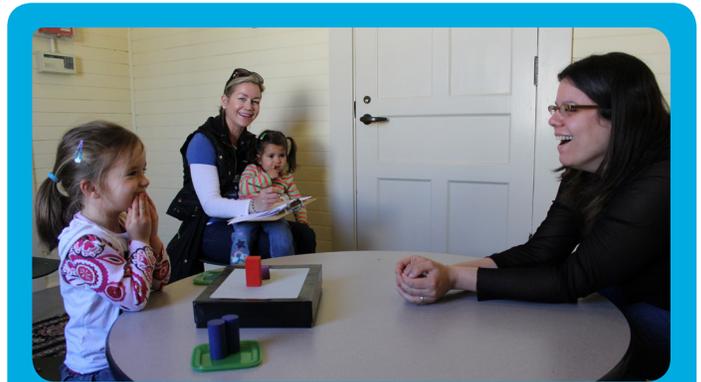
The mission of the Museum and our Center for Childhood Creativity (Center) is to ignite and advance creative thinking for all children. The Museum hosts more than 300,000 visitors annually and is located on 7.5 acres at the base of the Golden Gate Bridge in Sausalito, California. Children ages 6 months to 8 years, their caregivers, and teachers engage in open-ended and child-directed activities. In 2011, the Museum launched the Center to bridge the gap between academic research in the fields of neuroscience, education, and psychology, and the practitioners charged with raising a generation of future innovators.

We established the Creative Thinking Research Lab in early 2013 to provide a valuable resource for researchers seeking young study participants. The Lab is a quiet, enclosed space for researchers to conduct studies with our visitors, and also serves as a regular location for the Research Toys program. To date more than 1300 children have participated in studies at the Museum, and a further 1550 visitors have interacted with the Research Toy program.

Goals of the NLL Stipend Award

The goal of this award was to develop and implement a Research Toy Program at the Museum, including development and delivery of two training sessions focusing on research toys for Museum staff and utilizing research toys in Museum programming. The first training session introduced the staff to the concept of research toys and provided hands-on experience with two of the research toy interpretation guides available on the Living Laboratory website (e.g., Novel Toy and Stickers). The second training session introduced the staff to a new research toy focused on causal learning, which was developed and built by the Bay Area Discovery Museum and the Center in

collaboration with Caren Walker. Both of the research toy trainings were part of a broader institutional effort to provide robust professional development for the Museum's Educator positions.



"The Center at the Bay Area Discovery Museum has been such an incredible resource for conducting my research on young children's curiosity and probabilistic reasoning...the partnership that we have formed has helped our research endeavors tremendously. Close relationships with quality educational institutions like the Bay Area Discovery Museum are vital to the success of our research efforts as they provide the opportunity to interact with the community and foster interest in the developmental and cognitive sciences." – Graduate Student in Psychology, University of California at Berkeley

Enhancing the Visitor Experience

Living Laboratory has been part of a broader strategic effort to shift the perception of the Museum from a fun play space to an educational institution that is valuable to the community. Incorporating the ability to participate in research studies as well as research toy interactions into our visitor experience has been a surprising encounter for many visitors that makes early childhood development research transparent and illuminates the research behind Museum experiences. Training

and empowering Museum educators to be able to confidently share current early childhood research has also increased their capacity to communicate relevant research to visitors.

Living Lab Impacts	Research	Research Toy Interactions
Oct. 2014	40	91
Nov. 2014	80	291
Dec. 2014	13	210
Jan. 2015	5	272
Feb. 2015	66	222
Mar. 2015	45	208
Apr. 2015	36	257
TOTAL	285	1551

Mutual Professional Development

Our Living Laboratory team includes Amy Eisenmann, Associate Director of Museum Programming for the Bay Area Discovery Museum; Helen Hadani, Head of Research for the Center for Childhood Creativity; and Caren Walker, Doctoral Candidate at University of California at Berkeley. In addition, we have approximately 10 researchers from local universities collecting data at our onsite Lab. The Bay Area Discovery Museum and Center foster mutual professional development (MPD) between academic researchers and Museum staff by organizing monthly research talks. These informal gatherings give researchers an opportunity to present to a non-academic audience and provide an accessible way for Museum staff to learn about current research studies. Museum staff also invite student researchers to Museum Education team meetings to facilitate further dialogue. The researchers provide examples of how they debrief parents on study procedures, and Museum educators provide feedback on how to communicate clearly with parents, particularly to help researchers remove jargon. 5 researchers and 12 Museum educators have participated in MPD to date.

Research Happenings at Our Site

- ▶ Gopnik Cognitive Development Lab (UC Berkeley; PI: Dr. Alison Gopnik) – Can toddlers succeed on a causal reasoning task that focuses on the abstract relationships “same” and “different?”
- ▶ Berkeley Early Learning Lab (UC Berkeley; PI: Dr. Fei Xu) – How do school-age children form expectations about the probability of certain events?

- ▶ Language and Cognitive Development Lab (UC Berkeley; PI: Dr. Mahesh Srinivasan) – Are four- and five-year-olds capable of flexible use of words, like “shovel” or “hammer”, to label tools, as nouns, or functional uses of tools, as verbs, (e.g., “She hammered the nail”).
- ▶ Professor Carol Dweck (Stanford University) – Can simple reciprocal interactions trigger altruism in young children?
- ▶ Language Development Lab (Mills College; PI: Priya Shimpi) – Can toddlers learn new words from listening in on adults’ conversations?

“I really enjoy facilitating Research Toys in our space, because I think exposing parents to ECE research is in line with our institutional goals and mission...I’ve learned so much about how children interact with their environment and each other.”
 – Museum Education Facilitator

Outcomes and Future Goals

Living Laboratory has made research more visible at the Museum and we will continue expanding our research toy program and developing new research toys, including some based on research conducted in our Creative Thinking Research Lab. We plan to make research more visible to Museum visitors (with signage, or through monitors at Museum entrances showing children participating in research studies and interacting with research toys); and to continue staff training and mutual professional development.



“I’m going to work on giving my child more exploratory play opportunities by removing the instructions from their Legos. I see them following directions, not really creating. It will be interesting to see how they play with their Legos when there is more opportunity for open-ended play.” – Caregiver, after participating in “Novel Toy”