

Educating Museum Visitors via Living Lab

Introduction

Scientists working in Living Lab engage and educate all visitors interested in learning about your research or scientific field, whether they can contribute to your study as a Participant or engage with you as an Educational Opportunity. In a dynamic museum environment, you will encounter many different types of visitor groups that may vary in size, age range, adult caregiver role (parent, grandparent, nanny), and time constraints. The most successful Living Lab educational experiences are tailored to the visitor or visitor group interested in learning about your work. Below are a few examples of visitor group types and circumstances common to Living Lab, followed by some strategies to effectively engage these visitors in an educational experience and notes to assist you in recording Participant and Ed Op interactions. For more information regarding who is eligible to be a Participant in your study, please reference “Tracking Your Impact: Participants & Educational Opportunities”.

Adult with child that meets the study criteria and can serve as a Participant

Once a parent or legal guardian signs the consent form indicating that they agree to allow their child to serve as a Participant, invite the parent to sit so that they can observe their child participate in the study (without interfering). Run the child through your study. At the end of the study, start a conversation with the parent about what they observed their child do. Connect their child’s behavior and responses in the study to how participants as a whole react to the different study materials. This discussion can be helpful in explaining the study design and purpose to the caregiver in a clear, jargon-free way during debriefing.

Note: A visitor group with one parent or legal guardian and one child who is eligible to participate should be recorded as 1 Participant (each Participant includes the child participant and the consenting adult’s educational experience).

Adult with child that does not meet the study criteria (e.g. not in study age range, adult is not the parent or legal guardian).

While the child does not meet the study criteria, you can still have them do a mock or “demo” version of the study. You can use the child’s responses to the study materials to begin a discussion of how eligible Participants have been behaving similarly or differently from their child (e.g. study is looking at younger children). These responses can assist in explaining the study design, purpose and findings to the accompanying adult in a clear and jargon-free way.

For children who are older, and still interested in the study, they can work with their adult to act like scientists and make predictions about what younger children would do.

Note: Any person who learns about some part of the study or the scientific method should be counted as an Ed Op. For example, a visitor group with one adult and one child who is not eligible to participate for some reason should be recorded as 1 Ed Op if the adult learns about the study or the scientific method, but the child simply plays with the study materials. However, if the child also learned about the study design or process of science, it should be recorded as 2 Ed Ops.

School groups/camp groups/friend groups

If one chaperone is the parent/legal guardian of a child who is an eligible Participant, that child could be a Participant (providing data for the study) while the chaperone and school group learn about the study.

Note: Each non-Participant student learning about the study should be recorded as an Ed Op. The chaperone and Participant student will each be recorded as one Participant. For example, if you run a child whose parent is the chaperone in a school group and the other four students observe and learn about the study alongside the chaperone, the group should be recorded as 1 Participant and 4 Ed Ops.

Siblings in a family group where one sibling is participating in the research study.

For siblings older than the study's age range, a second researcher in the team might engage the sibling in what their brother/sister is doing in the study. Have them make predictions about what they see their sibling doing. Or they can try out the study for themselves (without collecting their data) to see how their responses differ from someone who is younger. Include them in your discussion with the adults in the group about the results of the study and specific study methods and design.

For siblings only slightly older than the study's age range, they can try the study out for themselves as a participant or simply to engage with the study materials in a fun way.

Note: Older siblings can be Ed Ops if they are learning about the study design, process or child development as a science. If the child is playing with the study materials but not learning about the process of science or the study itself, then they should not be recorded as an Ed Op.

Other adults in a family group (e.g., aunts, uncles, grandparents, nannies) where one child is participating in the research study.

Engage all adults in what the child is doing by inviting them to watch the study, and discussing the study with them about it afterwards. The child's responses can assist in explaining the study design, purpose and findings to everyone in a clear and jargon-free way.

Note: Each additional adult counts as an Educational Opportunity. For example, if Mom, Dad and two grandparents accompany one child, this should be recorded as 1 Participant and 3 Ed Ops. If Dad signs consent form for child, he should be recorded as 1 Participant; the other three adults count as 3 Ed Ops.

Other adults, not with a child, who are interested in the Living Laboratory/research.

Explain to the adult what the purpose of the Living Lab is and what your study is trying to find out. If they are interested, they can participate in a "mock" study and learn about the study's methods and findings. They may also be interested in other studies and Living Lab materials and can be shown any of our other resources.

Adults and their children who are told about the study during the recruitment process but choose not to participate due to time constraints or other factors.

Often, visitors need to leave before they are able to participate in the Living Lab or they are engaged in an exhibit they are not ready to leave yet in order to participate. These adult visitors may be counted as an Ed Op if you have shared any new information about a) your study (including your research question, hypothesis, methods or preliminary results), b) why you are exploring this line of

research including background research, c) why your research is relevant to the public, or d) your scientific field as a whole.

Note: If in the recruitment, you have explained the purpose of the research materials and the study's question to a visitor, and the visitor learned something new about the child development or the scientific method, then they should be recorded as an Educational Opportunity.

Example: you approach Mom and child in the exhibit and give them your recruitment pitch: "Hi, my name is Jen from Boston University and I'm running a study looking at how children develop critical thinking skills. We're asking children to solve a fun puzzle after listening to a very short story. Would you be interested in learning more or trying out my fun game?" The Mom says it sounds like an interesting study, but they are running to an Omni and can't participate right now. You should still count this as an Ed Op because you gave this visitor new information about your research question and methods.

Other NLL Toolkit resources related to this one:

- Tracking Your Impact: Participants & Educational Opportunities
- Participant Recruitment in the Museum – Tips for Research Assistants