Living Laboratory®
Developed at the Museum of Science, Boston

Tips for Museums - Initiating On-site Research Collaborations

Establish goals for your collaboration effort, and know your needs and constraints, before you contact potential labs to collaborate with your museum.

Learn what you and your museum want to gain from collaboration with a research institution; possibilities include:

- ☐ Varied and dynamic programing for visitors
  - Museums are challenged to provide "fresh" programming for visitors, which can be difficult with static exhibits and limited staff for programming. Scientists typically have multiple studies they are running, each with a different set of materials for visitors to experience. Additionally, visitors have the opportunity to engage in conversations about the scientific process as it relates to the study, which can change monthly as the study progresses.
- ☐ Access to scientists and the cutting edge scientific research they conduct in the community
  - Museums often times serve as a community hub making the dissemination of local research an attractive offering to the public
  - Creating a community of researchers who you know are committed to disseminating their research to the public and embrace the mission of the museum may be helpful in multiple domains (i.e., exhibit advisory, lectures, podcasts, etc.)
- ☐ Professional Development (PD) for museum staff and volunteers
  - Museum staff and volunteers who directly interact with researchers and learn of the progression of a study may improve their ability to answer questions about the scientific process and describe the real-world implications of the research, which can benefit their overall interpretation skills.
  - Scientists can provide museum- or department-wide PD as necessary

Consider how a collaboration with an academic institution will support the museum's mission:

- ☐ How will on-site research activities complement the mission or content of an exhibition, or the museum as a whole?
- ☐ What types of research will support your institutional goals?
  - Are any topics especially relevant to your audiences/mission? Are any topics not appropriate for your audiences/mission? (e.g. polarizing topics could work against goals to highlight child development as an experimental science, if visitor interactions with scientists end up focused on a controversial study topic rather than 'scientific method')
  - Are any methods especially relevant to your institutional goals? Are any methods not appropriate for your audiences/mission? (e.g. surveys are not very conducive to visitor education goals; infant research often requires specialized equipment and/or spaces)

- ☐ How will you evaluate the success of the collaboration in meeting the needs of your institution and its audiences?
- ☐ What are museum staff interested in gaining from collaboration with scientists for on-site research?

Identify your staffing, space and financial needs.

- ☐ Who will train/support/supervise researchers on site?
- ☐ What kind of training can/will you provide to collaborating scientists?
- ☐ How will you monitor and track research activities, both day-to-day and long-term?
- ☐ Where can live research take place in the institution?
    - Can studies take place on the exhibit floor? Should visitors be asked to leave the exhibit floor to participate?
- ☐ Where can researchers store materials?
- ☐ How will you secure support for the needs above?
    - Can on-site research be supported with existing resources? What additional resources must be identified?

Consider the needs and goals of potential academic collaborators.

Learn what researchers want to gain from collaboration with the museum. Possibilities include:

- ☐ Access to deep and diverse, and affordable, participant pool
    - Scientists can recruit more participants from the museum floor per hour than in the traditional lab setting (e.g., researchers may be able to get many times the number of participants per hour than in a traditional lab)
    - Participants are compensated with an educational experience rather than with money/prizes given in the traditional lab
- ☐ Practice communicating research topics and methods to public audiences
    - Graduate and undergraduate students can gain comfort talking with a lay audience about their work, through orientation to and practice in interpretive practices with museum educators
    - Collaborating scientists improve their ability to answer questions and describe the real-world implications of their research, which can benefit their teaching, grant-writing, and manuscript-writing skills
- ☐ Access to unique museum resources (some museums may be experts in producing novel stimuli for future experiments, or providing novel settings for participant recruitment)
- ☐ Access to wide audience for dissemination (scientists' grants often require outreach to public)

Be specific in outcomes expected for museum visitors and staff you hope to impact with the collaboration; think about:

Visitor interests/needs

- ☐ What do you hope your institution's visitors will gain from the collaboration?
    - What learning outcomes do you have for participants (children, and/or caregivers)?
- ☐ How do you think visitors will respond to the opportunity to participate in real research, talk with cognitive scientists, and learn about child development?

Museum staff interest/needs

- ☐ What do you hope your staff and volunteers will gain from the collaboration?
    - What learning outcomes do you have for museum staff through the collaboration?
    - What specific skills could they acquire from the scientists?
- ☐ What professional development opportunities can collaborating researchers provide to museum staff?

Contact collaborators who can support your goals, and whose goals you can support; try to:

Make contacts with post-doctoral students or graduate students.

- ☐ Why? These are the individuals in the labs who are typically have an urgent need for research participants. In addition, if your attempt to start a collaboration with the lab is successful, you will be working closely with these students, so it is helpful to start communicating with these individuals early. PIs/professors are typically less available and less motivated to seek out new venues for recruitment or dissemination as they have established protocols for their labs.
- ☐ How? Contact information for all members of a lab is typically found on the department/lab websites. Contact department offices at local universities; contact individual labs that have research topics that fit with your educational goals; network via staff alma maters.

Identify research and staffing needs.

- ☐ Do studies require particular settings, materials, lighting conditions, equipment? Do they need privacy or quiet? Do they require lengthy experimental sessions? Are they willing/able to compromise on any of these constraints?
- ☐ How many postdocs, graduate students, or undergraduates would contribute to studies taking place at the museum? Would they have sufficient supervision?

Remember that effective collaboration takes time and work on both sides; think about:

Communication between collaborators

- ☐ How, and how often, will you communicate with collaborating scientists?
- ☐ Who will be responsible for maintaining this communication between the museum staff (including museum educators, evaluation team and upper management) and the research group (including principal investigators, research assistants, and lab managers)?
- ☐ What role will the various members of the education staff and volunteers have in this communication?

Training for Collaborating Researchers

- ☐ What kind of orientation to the museum environment should you provide to collaborating scientists?
    - What customer service policies/expectations should be shared with researchers? (e.g. common visitor questions about bathrooms/other amenities; educating the public about one's research area and common research-related questions)
    - What other institutional policies/procedures should researchers know about and abide by? (e.g. dress code, food & drink, emergency procedures)

- ☐ What kind of interpretive/educational training will you provide to collaborating scientists?
    - How will museum staff train researchers to share their work with the public using lay-language and real-world applications?
    - What museum staff members have the expertise to train researchers as interpreters?
- ☐ How will you share what collaborating researchers need to know about the museum? (e.g. a handbook, an orientation session, etc.)
    - How will you provide feedback to collaborating scientists? Who will provide this feedback?
    - How will you inform museum staff of the expectations for researchers in the museum?

Educational expectations

- ☐ How often will researchers be at the museum, and how long should they stay each time?
    - Will research activities happen on a regular schedule, or as "special events"?
    - How will you let visitors know when researchers are available?
- ☐ What kinds of information do you want researchers to share with participants?
- ☐ What expectations do you have for educating non-parental care-givers/other non-participants about the research?
- ☐ How and when will researchers share their results with previous participants, and/or with museum staff?
- ☐ What kinds of materials need to be developed to convey all of this information to participants and others?
- ☐ What kind of connections (if any) do you wish to make between the on-site research topics/methods and other educational materials or programs at your institution?

Policies for conducting research with your visitors

- ☐ How should visitors be approached/identified for participation?
    - Where and how will researchers recruit their subjects?
    - Who can sign consent forms? (e.g. generally, only parents, not other care-givers can consent to participation)
    - How will researchers interact with non-parental caregivers/ other non-participant visitors?
    - How will researchers interact with children who are not eligible to be participants in a particular study? (e.g., if they are outside of the required age range for a study)
- ☐ How long should visitors' interactions with a researcher take?
    - How much time should paying visitors be asked to take out of their visit to participate?
    - How much time should collaborating scientists spend de-briefing visitors about their experience?