Lessons Learned from the APS/TFI Workshop on University/Science Center Collaborations: Outreach Strategies for Faculty Working with their Local Science Museum

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On May 31 – June 1, 2008, The Franklin Institute (TFI) hosted the American Physical Society/Franklin Institute Workshop on University/Science Center Collaborations.

Participants included forty leaders from:

- science centers
- universities
- federal funding agencies
The goal: to explore

- the outreach motivations of academic institutions
- the characteristics and needs of small vs. large science centers
- the goals for and outcomes expected from reaching out to the general public from the perspectives of universities and science centers.

The result:

- a convergence of viewpoints on how a good collaboration is established, built upon, sustained, and evaluated.
Participant Teams:

Israel National Museum of Science & Technion: Ronen Mir & Tal Berman – Mada Tech; Igor Verner – Technion

Adler Planetarium & U. Chicago: Randy Landsberg – U. Chicago; Mark SubbaRao – Adler Planetarium

Louisville Science Center & U. Kentucky: Jody Clasey – U. Kentucky; Molly Carpenter – Louisville Science Center

Exploratorium & U. Chicago: Charles Sowers – The Exploratorium; Sidney Nagel – U. Chicago
Participant Teams:

MSCOPE: Brenda Lopez-Silva – U. Illinois; Chicago, Panos Oikonomou – U. Chicago; Leo Kadanoff – U. Chicago; Jim Sweitzer – Science Communications Consultants

Maryland Science Center & U. Maryland: Roberta Cooks – Maryland Science Center; Mimi Blitzer, U. Maryland


The Franklin & Penn State U: Ron Redwind – Penn State U.; Jayatri Das – The Franklin
Participant Teams:

MRSEC – U. Wisconsin, Madison: Kimberly Duncan

NY Hall of Science: Eric Marshall

Pacific Science Center & U. Washington: Dennis Schatz & Lauren Russell – Pacific Science Center; Harry Stern – University of WA, Seattle

Sciencenter: Kathy Krafft

Science Museum of Minnesota: Karen Pollard – Science Museum of Minnesota, Phil Egen – UMN; Andrew Johnson – U. Ill, Chicago
Other participants:

Al DeSena & Uma Venkateswaran – NSF
Tony Beck – NIH
David Statman, Melissa Statman, Barbara Dunlap, and Matthew Kerr – Allegheny College
Karen Corbin – The Franklin Institute
Jessica Clark and Becky Thompson-Flagg - APS

Organizers:

Philip (Bo) Hammer & Steve Snyder – The Franklin
Leo Kadanoff – U. Chicago
Breakout Topics of Discussion:

- Characteristics of a good collaboration.
- Matching the needs & expectations of universities and science centers.
- NSF broader impacts and NIH education initiatives.
- Advice to scientists who want to get involved with their local science centers, and to science centers who want to build more productive ties to the science community.
Lessons Learned

- Initiating a collaboration
- Building and establishing a collaboration
- Sustaining a collaboration
- Funder issues: NSF broader impacts and NIH expectations
- Evaluating collaborations
A successful collaboration

- Seeks areas of overlapping interest.
- Recognizes and respects the different requirements of Science Centers and Universities (informal versus formal education).
- Builds relationships.
- Maintains mutual respect from both sides!
Advice to Scientists who want to get involved with their local science center:

- Take time to learn about the mission of the Science Center and how the Science Center operates. Learn about its culture. Visit the Science Center, take a tour!

- Be open to a wide range of opportunities and an exchange of intellectual content.

- Realize that goals will need to be adapted and aligned.
Initiating a Collaboration

Advice to Scientists who want to get involved with their local science center:

- If you writing a proposal, please don’t call at the last minute requesting support for a funding proposal.
Initiating a Collaboration

Advice to Museums who want to build more productive ties to the scientific community:

- Assign a staff person to be the liaison to local colleges and universities.
- Keep a data base of university contacts to ensure continuity.
- Establish internal communication and structures for initiating partnerships.
- Have site visits to campus – give colloquia.
- Start small.
Initiating a Collaboration

Needs and expectations of universities:

- The mission of the university is education and research.
- Science centers can assist in that mission through informal education and public outreach.
Initiating a Collaboration

Needs and expectations of science centers:

- The mission of the science center is *informal education* and public outreach.
- Universities can assist in that mission by making its resources easily available to the science center.
- Science centers need correct knowledge of the science.
- Science centers want scientists who can be role models for the public.
Building and establishing a Collaboration

- Collaborations don’t just happen.
- They need to grow and develop over time.
Building and establishing a Collaboration

- Allow time for relationship to develop.
- Both partners must exercise patience, as each environment has its own time scale for progress, hours of operation, when staff work, etc.
- Allow for experimentation and creativity.
- Establish long-term relationships.
Sustaining a Collaboration

- Clear and consistent communication is essential to maintaining a successful partnership.
Sustaining a Collaboration

- Each partner needs to understand the different culture and evolving circumstances of the other.
- Both partners must continue to exercise patience.
- Standards must be established for evaluating partnerships.
- Goals, sustainability, and funding should be discussed regularly.
- Partnerships should be sustained through multiple projects.
Funder Issues

- Broader impacts can include Science Center – University partnerships.
**Funder Issues**

- *Broader Impacts*: The concept of broader impacts can extend beyond benefits to graduate or undergraduate students, to outreach to the general public.

- *Administrative*: Institution administrations must be aware of the broader impact responsibilities of its research facilities. Broader Impacts = Education and Outreach (NSF).
Funder Issues

- Jr. faculty need to learn about broader impacts.
- Expose all university faculty to informal science education (ISE) opportunities.
- Get faculty to internalize their broader impacts obligation.
Funder Issues

- Outreach needs to be top notch visible.
- Collaborations must have science expertise (NIH).
- ISE’s can help with time constraints.
- Schedule events for underrepresented groups.
Evaluating Collaborations

- A clear assessment plan must be established.
Evaluating Collaborations

- Standards must be established for evaluating partnerships.
- Accountability is BIG for NSF.
- Consider formative versus summative evaluations.
- Find out what visitors enjoyed and learned.
- Establish follow-up on training of university volunteers.
Summary:

- Seeks areas of overlapping interest.
- Learn about your partner institution.
- Allow for experimentation and creativity.
- Exercise patience.
- Establish a clear assessment plan.
- Maintain mutual respect.