



# ASTC Forum Workshop Evaluation

Formative Evaluation

By Amy Grack Nelson & Elizabeth LaPorte

*October 2008*

## Acknowledgements

Thanks to the members of the data collection, analysis, and reporting team that has been part of the NISE Network evaluation efforts for the SMM Department of Evaluation and Research in Learning: Sarah Cohn, Saroeun Earm, Kirsten Ellenbogen, Melissa Fitzenberger, Katonya Gillard, Amy Grack Nelson, Amy Gramsey, Beth Janetski, Jane Miller, Stephanie Nelson, Al Onkka, David Ordos, Claire Phillipe, Murphy Pizza, Stacie Redemacher, James Satter, KC Smith, Patrick Smith, Levi Weinhagen, and Scott Van Cleave. Additional thanks to the many and various participants and developers of the NISE programs, exhibits, forums, and other activities.

### THIS IS A FORMATIVE EVALUATION REPORT

Formative evaluation studies like this one often:

- **are conducted quickly**, which may mean
  - small sample sizes
  - expedited analyses
  - brief reports
- **look at an earlier version** of the exhibit/program, which may mean
  - a focus on problems and solutions, rather than successes
  - a change in form or title of the final exhibit/program

This report was based on work supported by the National Science Foundation under Grant No. ESI-0532536. Any opinions, findings, and conclusions or recommendations expressed in this report are those of the author(s) and do not necessarily reflect the views of the Foundation.



Amy Grack Nelson  
Science Museum of Minnesota  
120 West Kellogg Boulevard  
St. Paul, MN 55102  
agnelson[at]smm[dot]org  
(651) 221-4575



## Table of Contents

---

Overview .....	4
Results & Discussion .....	4
Overall Workshop Experience .....	4
Future Forums .....	5
Awareness of NISE Net Resources .....	7
Conclusion & Recommendations .....	8
Appendix.....	10
Forums Workshop Agenda .....	10

## Overview

The NISE Network held a pre-conference workshop titled, “Dialogue and Deliberation: Building a Better Forum,” at the 2008 Association of Science -Technology Centers Conference (see Appendix for agenda). The workshop had three overarching goals.

1. Integrate new and existing partners into the NISE Network.
2. Present NISE Net’s catalog of existing products.
3. Provide professional development resources and support to increase informal science educators’ capacity to carry out programs that engage the public in discussion, dialogue, and deliberation about societal and environmental issues raised by nanotechnology and other new and emerging technologies.

In addition to the four-hour workshop, a two and a half hour forum was held the night before at The Franklin Institute. The forum covered the topic of nanotechnology and privacy. The forum was not advertised in the ASTC materials along with the workshop, however after individuals signed up for the workshop they received an email from a member of the NISE Net forum team encouraging them to attend the forum.

The workshop was a mix of nine registered participants and 13 NISE Net staff. Two-thirds of the registered participants also attended the forum. All workshop participants and six NISE Net staff completed a post-workshop survey to provide feedback on the workshop in relation to the workshop’s goals.

## Results & Discussion

### Overall Workshop Experience

All participants felt the workshop was a valuable experience and would recommend it to others (See Table 1). Participants were asked which aspect of the workshop they found to be the most valuable. Participants mentioned a variety of things including learning about the forum format and talking to others who are interested in forums (see list below).

**Table 1: Workshop Value to Participants (n=9)**

	Strongly Disagree	Disagree	Agree	Strongly Agree
The workshop was a valuable experience.	0	0	5	4
I would recommend this workshop to others.	0	0	5	4

### Most Valuable Aspects of the Workshop (n=8)

- I finally have a better understanding of nanotechnology, a forum, and purpose of a forum.
- Attending the forum and learning from different models.
- Opportunity to hear experiences from organizers and to witness forum events.

- I am leaving feeling confident about my ability to develop forums at my institutions.
- Meeting my colleagues and hearing the tales. Discussions with group.
- Meeting others who are in the forum movement.
- I got more knowledge.
- All of it.

NISE Net staff also commented on their overall impression of the workshop. Four staff mentioned that they felt the workshop went well. However, two staff wished there would have been more non-NISE participants at the workshop. Staff were then asked what they felt were indicators of workshop success. Staff most frequently mentioned the lively discussion.

### ***Indicators of Workshop Success (n=6)***

- How engaged the workshop attendees were. The conversation never paused.
- Lively discussion.
- Good discussion and people said the info was useful.
- People talked right up to the end.
- Presentations were well done, summarized key information from forum experience and evaluations. Spirited discussion in small groups.
- Interest in following up/pursuing. Good questions.

NISE Net staff were asked to gauge how fully the workshop's three goals were addressed. As illustrated in Table 2, only a few staff members felt the goals were fully addressed. Two staff shared their thoughts regarding specific successes or failures of the workshop in achieving its goals: "Low attendance of NEW participants. (Goal 1) Brad did a good job of walking through the website. (Goal 2)" "Don't think Goal 1 was a priority. However, forum team was very welcoming as usual."

***Table 2: How Well Workshop Goals Were Addressed (n=5)***

	Not Addressed	Minimally Addressed	Moderately Addressed	Fully Addressed
<b>Goal 1</b>	0	2	2	1
<b>Goal 2</b>	0	0	4	1
<b>Goal 3</b>	0	0	3	2

## **Future Forums**

One of the workshop's goals (Goal 3) was to increase museum professionals' capacity to carry out a forum or similar program at their institution. Only two of the participants had previously held a forum at their institution, with one of the forums related to nanoscale science, technology, and engineering. A majority of the participants said there was at least some likelihood that they would hold a form at their institution in the future, with some related to nano topics (see Table 3). Two participants had already thought about possible forum topics, "climate change, nanotechnologies and current (local) research," and "flooding and land development."

**Table 3: Likelihood of Holding a Future Forum**

	Unlikely	Somewhat Unlikely	Somewhat Likely	Likely
<b>Will hold a forum on any topic. (n=9)</b>	1	1	3	4
<b>Will hold a forum around the topic of nano. (n=7)</b>	2	1	2	2

Individuals' comfort and confidence in their ability to carry out a forum can influence their likelihood of holding one. As illustrated in Table 4, all participants felt familiar with the purpose and goals of forums and felt more comfortable with the idea of holding a forum at their institution. All but one participant said they felt familiar with methods to evaluate a forum. Over three-quarters of the participants indicated learning more about societal and ethical issues of nano (Goal 3). The societal and ethical issues information was delivered through the forum the night before and all of the workshop participants did not attend, which may explain the disagree ratings by two of the participants.

**Table 4: Feedback on Preparedness for Conducting a Forum (n=9)**

	Strongly Disagree	Disagree	Agree	Strongly Agree
<b>I am familiar with the purpose and goals of forum programs for adults.</b>	0	0	5	4
<b>I feel more comfortable with the idea of presenting forum programs for adults at my institution.</b>	0	0	5	4
<b>I am familiar with the methods that can be used to evaluate a forum.</b>	0	1	6	2
<b>I now know more about societal and ethical issues in nanoscale science, engineering, and technology.</b>	1	1	4	3

Participants were then asked how prepared they felt to carry out a forum at their institution. As illustrated in Table 5, a third of the participants felt prepared, stating, "I'm impressed with the resources available," "I know where to find resources I need," and "I feel like I have the essential concept from attending the workshop." Two of the participants that felt "somewhat prepared" explained that they needed to review the NISE Net materials first and get the right people together at their institution.

**Table 5: Level of Preparedness to Carry out a Forum (n=9)**

Number of Participants	
Prepared	3
Somewhat prepared	4
Somewhat unprepared	2
Unprepared	0

Additional barriers, beyond personal confidence and comfort, may influence the likelihood that someone might hold a forum at their institution. Participants most often mentioned issues with community interest and staff involvement.

#### **Barriers to Holding a Forum (n=5)**

- Community buy-in.
- Culture. Finding the right target audience.
- The willingness of our audience to deliberate in English.
- Dedicated staff.
- Staff capacity. Building a participant database.
- Financial return for the museum.

The NISE Network plans to provide workshop participants with support to carry out a forum. Most participants (7 of 9) knew how to contact their regional NISE Network Forum Team member to obtain support. Participants also provided ideas of how the NISE Network could support them. Participant suggestions included access to resources on nisenet.org, small stipends to cover forum costs, and evaluation assistance. A third of participants still had questions about forums for the NISE Net staff. *“What steps or process should be used to encourage a diverse audience to attend a forum?” “Good facilitation techniques. Knowledge about other kinds of forums. Knowledge about forums and more accessible and more controversial issues - how to handle the latter.” “Funding. Partnerships to reach other communities.”*

## **Awareness of NISE Net Resources**

Workshop participants indicated a high level of awareness of how to acquire NISE Network resources (Goal 2). All participants knew how to access resources about forums and NanoDays materials, while most felt they knew how to find resources about programs (7 of 8) and exhibits (6 of 8). Two-thirds of participants also expressed interest in using the NISE Network Collaborator Database to find scientists to help with forums.

## **Suggestions for Improvement**

Participants and NISE Network staff offered suggestions to improve the workshop. One staff member commented, *“More general public. Could have accommodated many more people. Many NISE people. Needed more museum people not already in NISE.”* Staff also commented on the workshop agenda, *“Would shorten or tighten up presentations and*

*expand discussion.” “The presentations at the beginning went a bit long. Good info, but maybe break up somehow?”* Participants suggested changes to the content, structure, and amenities of the workshop.

***Participants’ Suggestions to Improve the Workshop (n=5)***

- I am interested in forums in general, not only on the topic of nanotechnology. There is a strong focus on nano as a result of NISE - but overall there was a nice balance.
- Reduce amount of time spent on explaining how you evaluated the project. Just repeat the results. Also, practice the format.
- A little more interactivity? Or video examples.
- Tell us to eat ahead.
- Food of some sort should be provided when sessions are more than 2 hours!

---

## **Conclusion & Recommendations**

The workshop was a beneficial experience for participants. They valued learning how to carry out a forum and having the opportunity to talk with others who are interested in engaging visitors in dialogue and deliberation. The value of the conversations was echoed by NISE Net staff who mentioned the lively discussions as an indicator of the workshop’s success. All participants left familiar with the goals and purpose of a forum, aware how to acquire resources through [nisenet.org](http://nisenet.org), and comfortable with the idea of presenting a forum at their institution. Over three-quarters felt at least somewhat prepared to lead a forum and stated it was likely they may hold one at their institution in the future. To help ensure these partners have the support needed to carry out a forum, it is recommended that regional NISE Network Forum Team members follow up with workshop participants, especially since two participants were unsure how to contact these individuals in the NISE Network.

Although the workshop was valuable to those who participated, the workshop only reached nine individuals. Only six of the 24 pre-registered individuals attended, along with three participants who had not pre-registered. This issue was discussed with NISE Net Forum Team members at the workshop debrief. To increase participation in the workshop, it was suggested to hold the workshop during the ASTC conference as a double session rather than a pre-conference workshop.

The forum the night before the workshop also had lower than anticipated attendance. The expectation of the NISE Network Forum Team members was that workshop participants would go to the forum and structured the workshop under that assumption. However, only two-thirds of the participants attended. Since the information regarding societal and ethical issues of nanoscale science, engineering, and technology was only covered through the forum, a third of participants were not exposed to this information, which was part of workshop Goal 3. It is highly recommended to require participation in the forum as part of attending the workshop. This will ensure that all participants come to the workshop with the same understanding of the NISE Network’s forum model and increased content knowledge of societal and ethical issues of nanoscale science, engineering, and technology. Additionally, the forum should be included in ASTC’s workshop description



so individuals are aware of the forum when they pre-register and can plan accordingly to ensure they can attend.

## Appendix

---

### Forums Workshop Agenda

12:00 Introductions

- Name/Institution
- Your interest in Forums
- Did you attend the forum last night?

12:30 NISE Net and Forums Overview

- Intro to the NISE Network
- What are Forums, and why should your museum/institution be interested?
- Goals and benefits of Forums

12:50 Forums Manual and NISE Net Catalog

- Forums How-To Manual
- Catalog overview and NISE Net Forums
- Getting involved in the NISE Net

1:15 Summative and Formative Forums Evaluation

2:15 Break

2:25 Breakout Group Discussion

3:35 Next Steps - Future of Forums in your museum/institution

- Connect with your Regional NISE Net Partner

3:50 Workshop Evaluations

4:00 Workshop ends