NM EPSCoR Activity Evaluation Report by Kirk Minnick, External Evaluator
Activity Date: November 19, 2013   Activity Type: ISE Meeting
Title: "New Mexico Informal Science Education Network Meeting"
Activity Leads: Selena Connealy & Charles Walter

PROGRAM DESCRIPTION

This meeting was the first meeting in establishing the New Mexico ISE Network (NM ISE Net) to link research and informal education institutions with one another to build capacity for informal science education.

The one day meeting included sessions on:

- Overview of NM ISE Net's Mission and Grant Expectations
- Distributed Leadership and Partner Expectations
- Working Groups on:
    Network Meetings
    Exhibit teams
    Teacher Professional Development

PARTICIPANTS

The meeting was held at the National Nuclear Museum of Science and History in Albuquerque. There were a total of 25 individuals who participated in the 1-day meeting. Over four-fifths (85%) were representatives of informal science institutions, while the rest were from NM EPSCoR or working as consultants for the NM ISE Net.

PARTICIPANT FEEDBACK

An email invitation was sent the week after the meeting by the external evaluator using SurveyMonkey. The survey invitation was emailed to the 29 representatives who had been invited to the meeting, regardless of whether they attended. This was done so that all network members would be able to provide the perceived level of interaction between their organization and the others. Two-thirds (67%) responded to the survey, although not all the questions were answered by every respondent.

The survey asked respondents to:
- rate the information and meeting process;
- rate aspects of the meeting organization/arrangements.
- provide comments on what they found most and least useful about the meeting; and
- indicate the extent they felt their organization interacted with other informal science institutions in the state.

The first set of questions asked respondents to rate the information and meeting process:
    "Please rate the ISE meeting on each of the following"

Figure 1 presents the ratings on various aspects of the meeting.

Figure 1
ISE Meeting Information and Process
(Number responding=15)
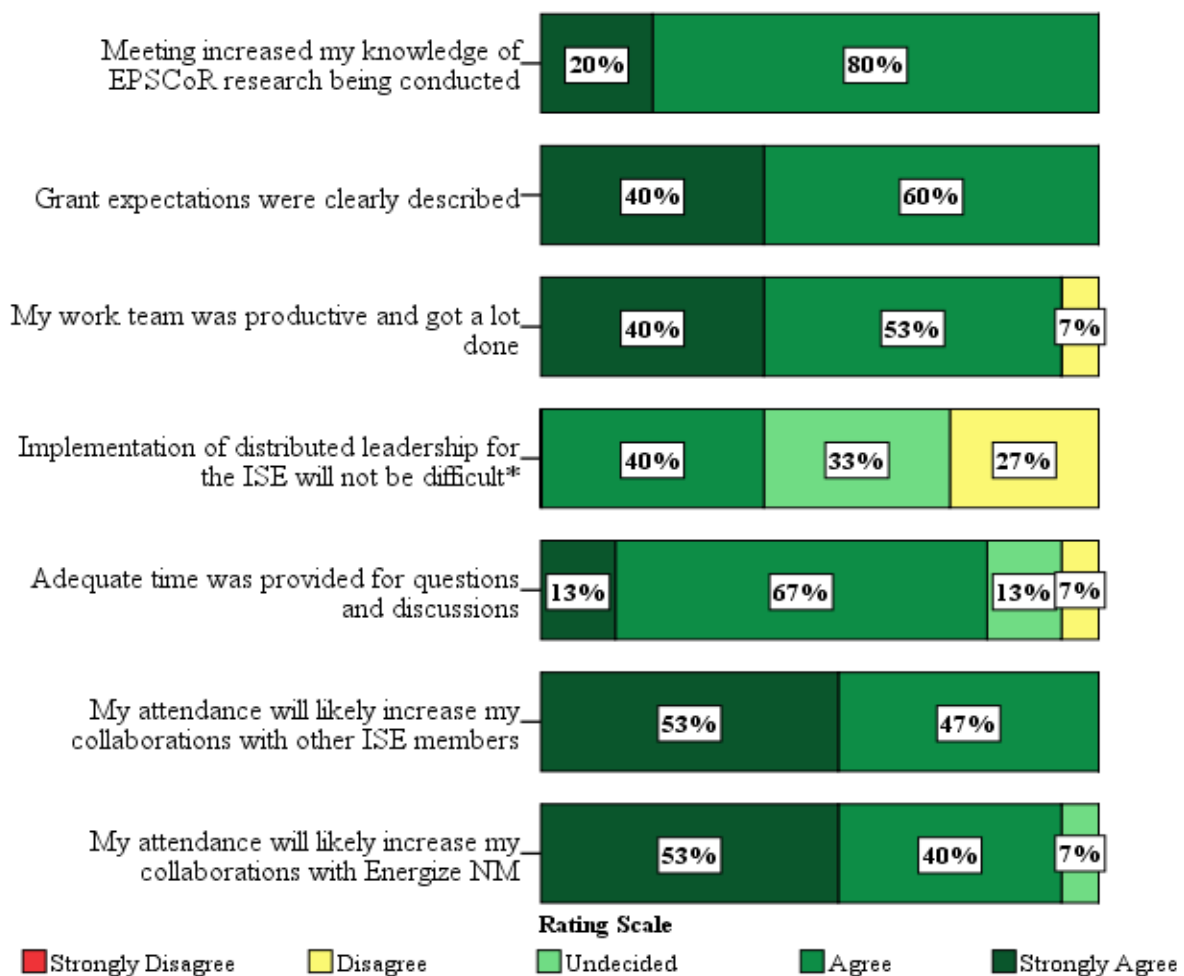
*The ratings and wording for this question was changed from '...will be difficult' to 'will not be difficult' to be consistent with other questions.

The ISE meeting received high ratings from the respondents on the information provided and the meeting process. Over ninety-percent of the respondents 'Agree' or 'Strongly Agree' that 'The meeting increased my knowledge of EPSCoR research being conducted' (100%); 'Grant expectations were clearly described' (100%); 'My attendance will likely increase my collaborations with other ISE members' (100%); 'My work team was productive and got a lot done' (93%); ' My attendance will likely increase my collaborations with Energize NM' (93%). Over half (53%), 'Strongly Agree' that their attendance will likely increase collaborations with 'other ISE members' and 'Energize NM'. While almost three-fourth (73%) 'Strongly Agree' or 'Agree' that the 'Implementation of distributed leadership for the ISE will not be difficult' , more than one-fourth (27%) 'Disagree', although there were none that 'Strongly Disagree'.

Figure 2 presents the respondent ratings concerning various aspects of the meeting organization/arrangements.

Figure 2
Ratings of Various Aspects of Meeting Organization/Arrangements
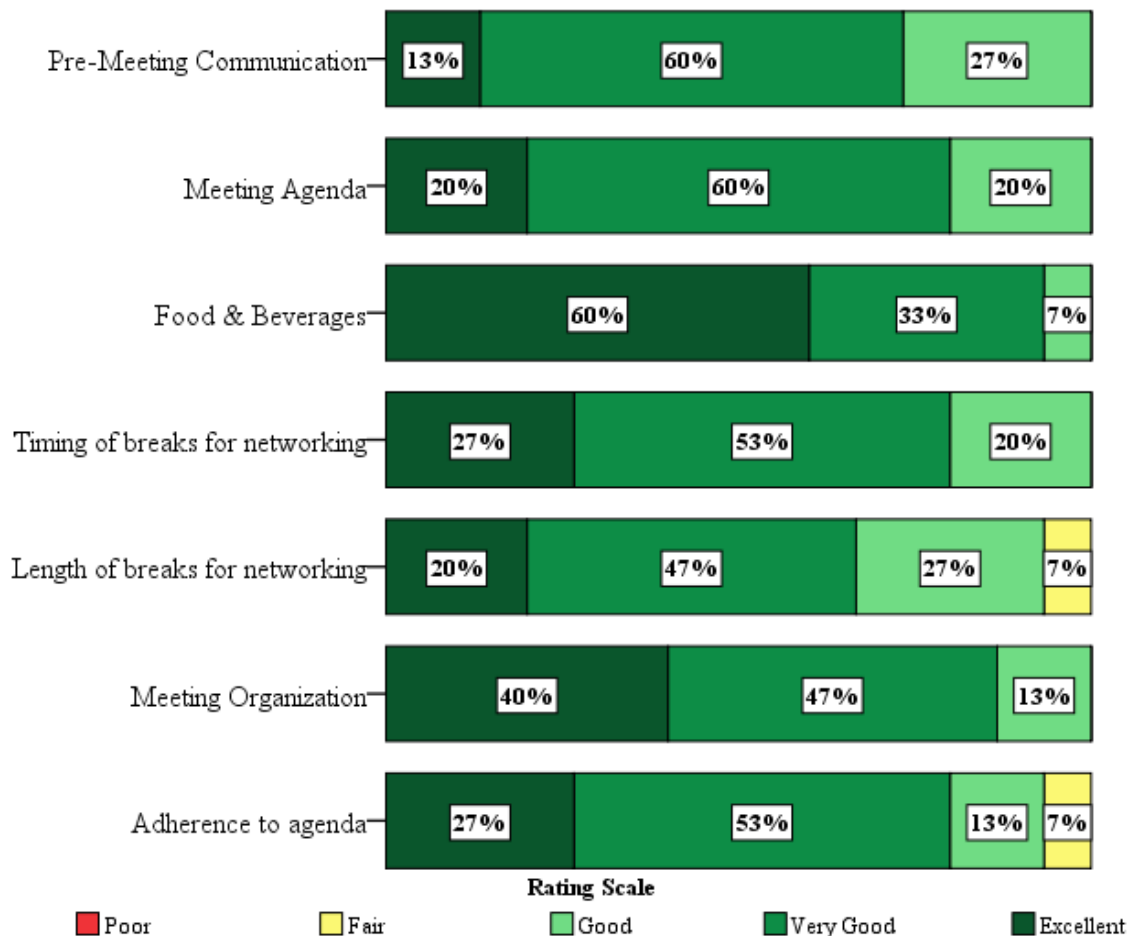
While 'Food and beverages' were rated 'Excellent' (60%) or 'Very Good' (33%) by respondents, a high percent (87%) of respondents rated 'Meeting Organization' as 'Excellent' or 'Very Good' . While most other aspects of the meeting were rated 'Excellent' or 'Very Good' by over 80% of respondents, the 'Pre-Meeting Communication' (73%) and 'Length of breaks for networking' (67%) were not.

In addition to the forced response questions, respondents were also asked to provide their feedback on the meeting on three open response questions which are provided on the following pages.

What did you find MOST useful about the meeting?
Time to delve a bit more deeply into exhibit area.
networking and the details of the grant
Discussions about the future of the organization.   Great tour of the Museum, Thank-You! Getting to know colleagues from across the state.
The learning I gained about the extensive and diverse scope of activity the group and grant activities are touching and aiming to improve statewide coordination on.
Better understanding of the scope of the Energize NM project. Good chance to get some planning started for roles and responsibilities.
Work sessions with others in the group. I felt the Teacher PD group has a concrete purpose & we already have an outline for a series of successful programs. I look forward to continuing to work with them.
Small group sessions to plan strategies for each area.
Starting to plan actual activities.
Gaining a sense of the scope of the exhibit component part
Learning about EPSCOR. The size of the group. It felt large enough to share in duties and accomplish objectives. But it also felt small enough to speak individually with several people.
A large number of institutions participated
I think we made some good strides in discussing what (and how) we are going to do different elements of this grant. The exhibit is one of the topics I am most interested in and it was good to hear that we may have some flexibility in how it is put together.
Time to meet on specific agenda items
Clarifying the expectations of NM ISE and the grant requirements.
Learning in detail the scope of the grant and envisioning my museum's part in helping to fulfill it.

What did you find LEAST useful?
breakout session lacked facilitation
I felt we made real, concrete progress at this meeting.
I would have liked more explanation of the differences of the working groups prior to dividing up and more explanation of the goals of the working groups for that day. During working groups, there was a bit too much time, which allowed for circling philosophizing about direction rather than action steps.   But I appreciated working in small groups and given a chance to be a decision maker in the process.
The tour in terms of furthering the network agenda but still very useful in learning about another museum.
I was hoping to have some more concrete plans for the next steps, but I now realize how much work this will take.
It was very tightly scheduled, so there was little time for catching up and networking. I think this best will happen in the two-day meetings where we should have some evening time.

What kind of follow-up to this meeting will be most helpful to you or your organization?
More time is needed to organize and build relationships
We have many decisions about how the network will be organized into the future--who can be a member, what are their expectations--those sorts of questions need to be sorted and answered. I assume that the working teams will need to make progress on their tasks of teacher professional development or creating exhibits.
Opportunity for the sub-teams to communicate, have Contact info for one another, and work together between meetings.   A year + out, as simple as possible Master Calendar, to keep track of key Network and related partners milestones, events, etc. It was a bit overwhelming as I was new to the Network.
Logistics of Teacher PDs - Timelines for when Teacher PDs will happen. Organization of PDs. Responsibilities for developing PDs. Communicating and recruiting for PDs...
I'm looking forward to the Exploratorium PD meeting & really enjoyed the evaluation meeting a couple months ago. These skill building workshops are very helpful.
Continued small group meetings Anything about teacher professional development
Monthly or semi-monthly telecons to keep things moving along.
Emails or social platforms with save the dates for next meetings.
I think we need to have another more indepth meeting on the meat and potatoes of what we need to do and when we need to have certain deliverables finished.
Follow-up to move Teacher PD forward since we are behind in getting a workshop together for next summer. Follow-up with setting meeting dates for all of 2014 so that they are on my calendar ASAP.
I think our plans for follow up meetings are clear and will be useful.
Notes on the work of the three teams; communication from my team (Network) on specific areas needing elucidation so that I can contribute most effectively

In addition to the questions regarding the meeting, survey respondents were also asked to rate the extent to which they feel their organization interacts with other informal science organizations in the state.   Figure 3 presents the respondent ratings of other partners to the following question:

"Using the scale provided, please indicate the extent to which you feel your organization currently interacts with each of the listed organizations involved in the programming of informal science in New Mexico. (Please leave the line for your organization blank). "

Please use the following descriptions of five levels of collaboration (based on the work of Frey et al (2006), Measuring Collaboration Among Grant Partners, American Journal of Evaluation, 27(3), 383-392).

NETWORK : Aware of organization; Loosely defined roles; Little communication; All decisions are made independently
COOPERATION: Provide information to each other; Somewhat defined roles; Formal communication; All decisions are made independently
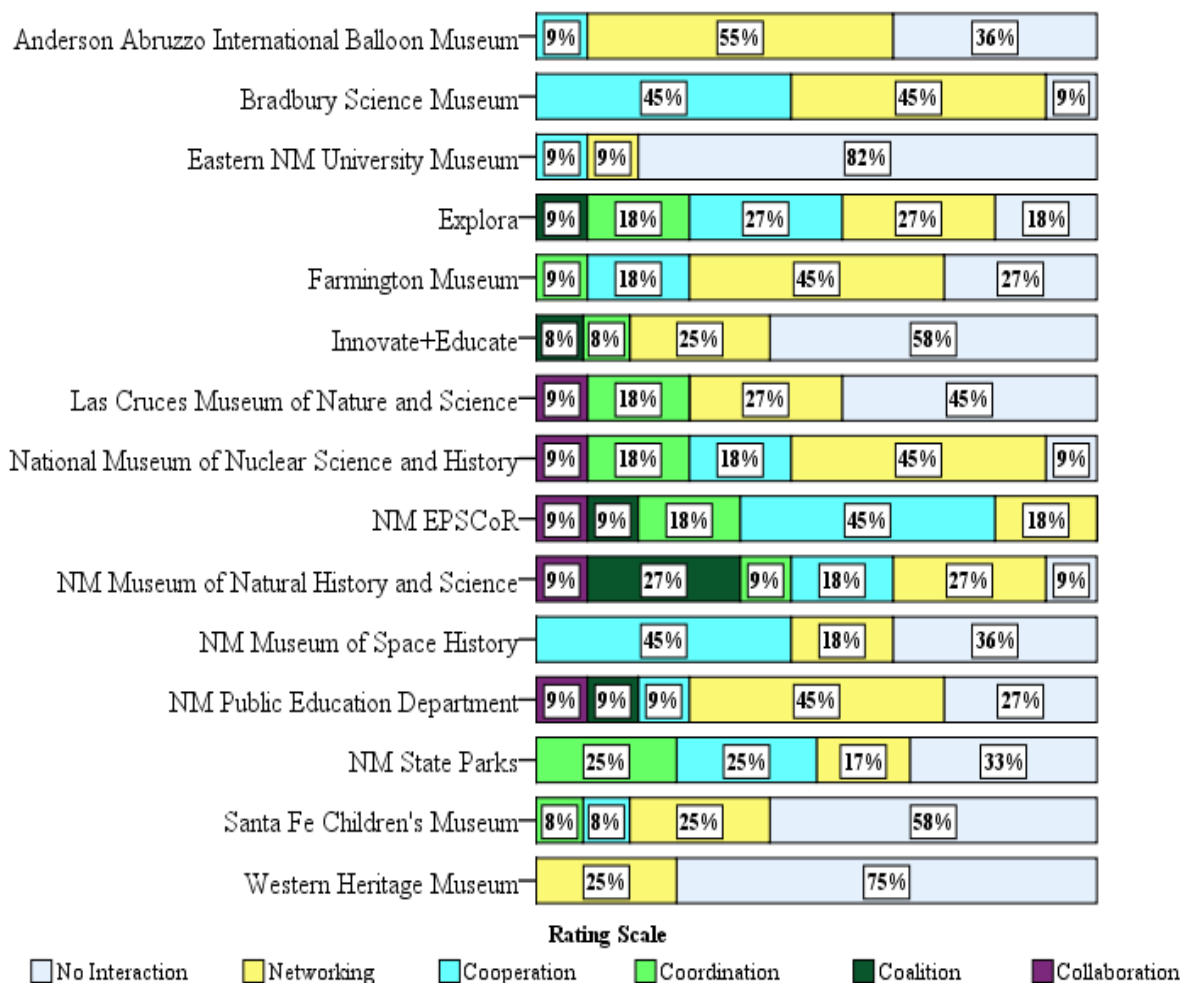COORDINATION: Share information and resources; Defined roles; Frequent communication; Some shared decision making
COALITION: Share ideas; Share resources; Frequent and prioritized communication; All members have a vote in decision making
COLLABORATION: Members belong to one system; Frequent communication is characterized by mutual trust; Consensus is reached on all decisions

This figure shows how others see the degree of collaboration between their organization and others, and is subject to the individuals' interpretation of the scale provided. When an organization had more than one respondent, the median, rounded to the next highest scale point was used

Figure 3
Degree of Collaboration Among ISE Partners in Programming of Informal Science
**(n=12)**

More than one-third (36%) of the partner representatives rated their organization's interactions with the NM Museum of Natural History and Science as a 'Collaboration' (9%) or 'Coalition' (27%); while about one-fifth (18%) rated NM EPSCoR and NM Public Education Department as 'Collaboration' (9%) or 'Coalition' (9%). One-fourth (25%) of the partners viewed their relationship with NM State Parks as one of 'Coordination', while almost one-half (45%) used the term 'Cooperation' to label their relationship with Bradbury Science Museum; NM EPSCoR; and NM Museum of Space History.

A 'Networking' relationship was used by about half of the respondents to describe the interaction between their organization and Anderson Abruzzo International Balloon Museum (55%); Bradbury Science Museum (45%); Farmington Museum (45%); National Museum of Nuclear Science and History (45%) and NM Public Education Department (45%).

Finally, 'No interaction' was reported by more than three-fourths (82%) between their organization and Eastern NM University Museum; three-fourths (75%) with the Western Heritage Museum; and more than half (58%) with 'Santa Fe Children's Museum' or 'Innovate + Educate'.

Another way to look at these same data is by using a visual network map of the interactions from the perspective of each organization. Since the map is drawn from the organization's perspective, it does not include a node for the four organizations that did not respond.   Figure 4 provides a NetDraw map from UCINET Software for Social Network Analysis, version 6.

Figure 4
Network Map of Interaction Among ISE Partners
(n=12)

Level of Interaction

☐ Networking   ☐ Cooperation   ☐ Coordination   ☐ Coalition   ☐ Collaboration
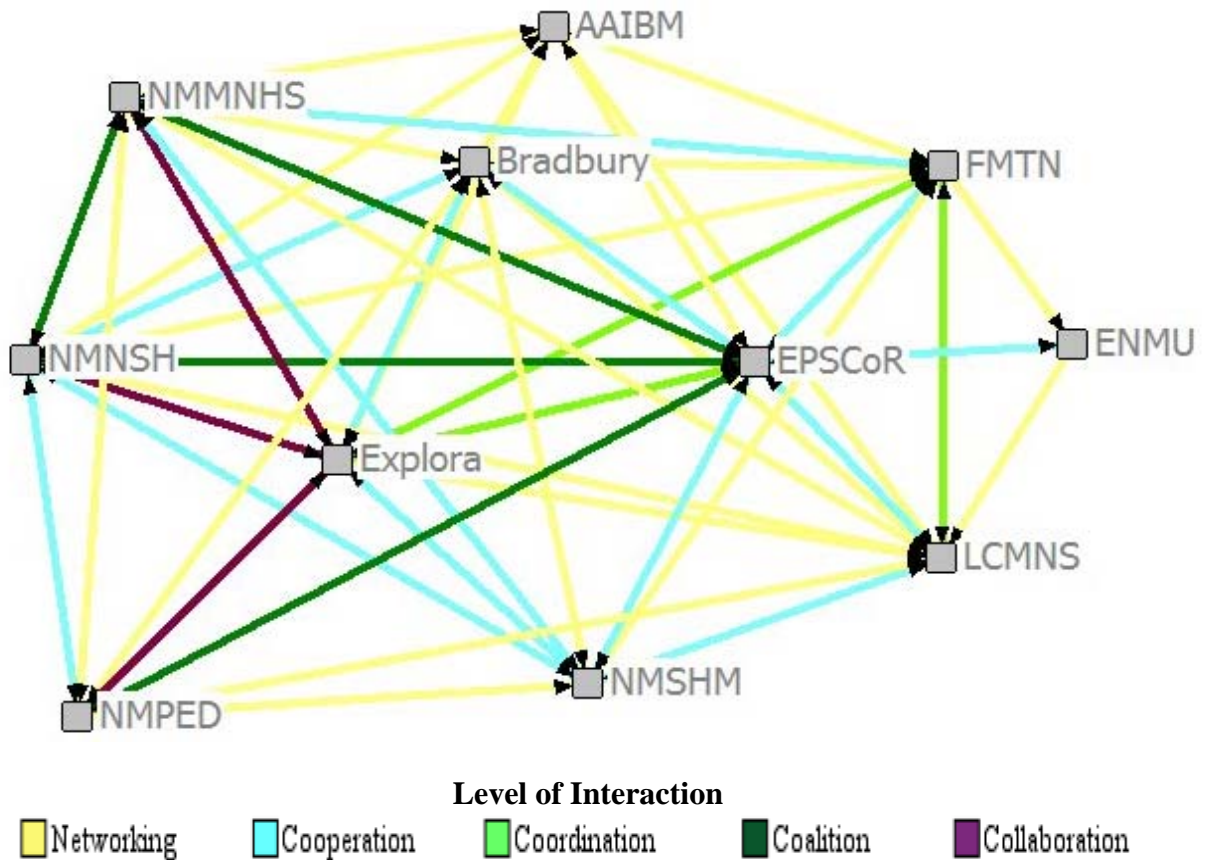
Similar to the prior chart, the highest levels of collaboration were reported between NM Museum of Natural History and Science and NM EPSCoR;   Explora, and the NM Museum of Nuclear Science and History. Explora, NM PED and NM EPSCoR also reported strong ties. However, 'Networking' is the most common form of interaction between the ISE partners at this point in time.

FINDINGS

The ISE meeting received high ratings from the respondents on the information provided and the meeting process. Over ninety-percent of the respondents 'Agree' or 'Strongly Agree' that 'The meeting increased my knowledge of EPSCoR research being conducted' (100%); 'Grant expectations were clearly described' (100%); 'My attendance will likely increase my collaborations with other ISE members' (100%); 'My work team was productive and got a lot done' (93%); ' My attendance will likely increase my collaborations with Energize NM' (93%). Over half (53%), 'Strongly Agree' that their attendance will likely increase collaborations with 'other ISE members' and 'Energize NM'. While almost three-fourth (73%) 'Strongly Agree' or 'Agree' that the 'Implementation of distributed leadership for the ISE will not be difficult' , more than one-fourth (27%) 'Disagree', although there were none that 'Strongly Disagree'.

While 'Food and beverages' were rated 'Excellent' (60%) or 'Very Good' (33%) by respondents, a high percent (87%) of respondents rated 'Meeting Organization' as 'Excellent' or 'Very Good' . While most other aspects of the meeting were rated 'Excellent' or 'Very Good' by over 80% of respondents, the 'Pre-Meeting Communication' (73%) and 'Length of breaks for networking' (67%) were not.

The following selected comments from respondents to the question regarding what participants found 'Most Useful' mostly focused on how the meeting provided information on the grant, exhibits, EPSCoR and how the network is going to proceed.

- I think we made some good strides in discussing what (and how) we are going to do different elements of this grant. The exhibit is one of the topics I am most interested in and it was good to hear that we may have some flexibility in how it is put together.
- The learning I gained about the extensive and diverse scope of activity the group and grant activities are touching and aiming to improve statewide coordination on.
- I think we made some good strides in discussing what (and how) we are going to do different elements of this grant. The exhibit is one of the topics I am most interested in and it was good to hear that we may have some flexibility in how it is put together
- Learning about EPSCOR. The size of the group. It felt large enough to share in duties and accomplish objectives. But it also felt small enough to speak individually with several people.

The comments to what survey respondents found 'Least Useful' was the function of the working groups, tour and too tight an agenda.

- breakout session lacked facilitation
- It was very tightly scheduled, so there was little time for catching up and networking. I think this best will happen in the two-day meetings where we should have some evening time.
- I would have liked more explanation of the differences of the working groups prior to dividing up and more explanation of the goals of the working groups for that day. During working groups, there was a bit too much time, which allowed for circling philosophizing about direction rather than action steps.   But I appreciated working in small groups and given a chance to be a decision maker in the process.
- The tour in terms of furthering the network agenda but still very useful in learning about another museum.

Suggestions for follow-up made by respondents were wide and varied. They included providing opportunities for sub-teams to communicate; membership and expectation questions; and moving teacher professional development project forward.

- We have many decisions about how the network will be organized into the future--who can be a member, what are their expectations--those sorts of questions need to be sorted and answered. I assume that the working teams will need to make progress on their tasks of teacher professional development or creating exhibits.
- Opportunity for the sub-teams to communicate, have Contact info for one another, and work together between meetings. A year + out, as simple as possible Master Calendar, to keep track of key Network and related partners milestones, events, etc. It was a bit overwhelming as I was new to the Network.
- I'm looking forward to the Exploratorium PD meeting & really enjoyed the evaluation meeting a couple months ago. These skill building workshops are very helpful.
- Monthly or semi-monthly telecons to keep things moving along.
- Logistics of Teacher PDs - Timelines for when Teacher PDs will happen. Organization of PDs. Responsibilities for developing PDs. Communicating and recruiting for PDs...
- Follow-up to move Teacher PD forward since we are behind in getting a workshop together for next summer. Follow-up with setting meeting dates for all of 2014 so that they are on my calendar ASAP.

In addition to the questions regarding the meeting, survey respondents were also asked to rate the extent to which they feel their organization interacts with fifteen other informal science organizations in the state. More than one-third (36%) of the partner representatives rated their organization's interactions with the NM Museum of Natural History and Science as a 'Collaboration' (9%) or 'Coalition' (27%); while about one-fifth (18%) rated NM EPSCoR and NM Public Education Department as 'Collaboration' (9%) or 'Coalition' (9%). One-fourth (25%) of the partners viewed their relationship with NM State Parks as one of 'Coordination', while almost one-half (45%) used the term 'Cooperation' to label their relationship with Bradbury Science Museum; NM EPSCoR; and NM Museum of Space History.

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RECOMMENDATIONS
The meeting was very successful and provided useful information for the participants regarding the ISE Network grant and information about NM EPSCoR. It is clear from the network 'Collaboration' data that NM Museum of History and Science in partnership with NM EPSCoR is the right team to build a network of informal science partners. However, the baseline data on the degree of interaction among ISE partners raises some concern regarding the level of 'Collaboration' that can be achieved among all the partners. It is clear that many of the organizations have little interaction with some of the network partners, which may be the result of different levels of staffing, support and missions. This poses a challenge for NM ISE Net which will need to be addressed.