

Dimensions of Public Engagement with Science



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Project Overview

This pathways project builds on the 2009 NSF-funded Center for Advancement of Informal Science Education (CAISE) Inquiry Group report on "public engagement with science" (PES) in informal science education. In comparison to Public Understanding of Science (PUS), where the emphasis is on a one-way transmission or translation of knowledge from experts to the public, the PES model calls for activities, events, or interactions characterized by mutual learning among people of varied backgrounds, scientific expertise, and life experiences, where perspectives, ideas, knowledge, and values are articulated and discussed.

The two-year project explores the possibility of new large-scale collaborative PES activities, topics and approaches that are of broad interest with the ISE community, identifies potential partners and advisors, and develops future project plans and proposals.



Primary Audience

Informal science education professionals were recruited to participate in project deliverables which included a case summary catalog and workshop.

Case summary catalog recruitment methods allowed for the broadest participation of ISE professionals possible. Those methods included the following:

- Industry broadcasts
- Targeted invitations
- Key informants
- Snowball sampling

Workshop participants were primarily chosen from among the case summary respondents though professionals from related fields were also included. Participants were chosen in order to ensure a diversity of:

- Professions
- Institutions
- Geographic locations
- Project types



Project Deliverables

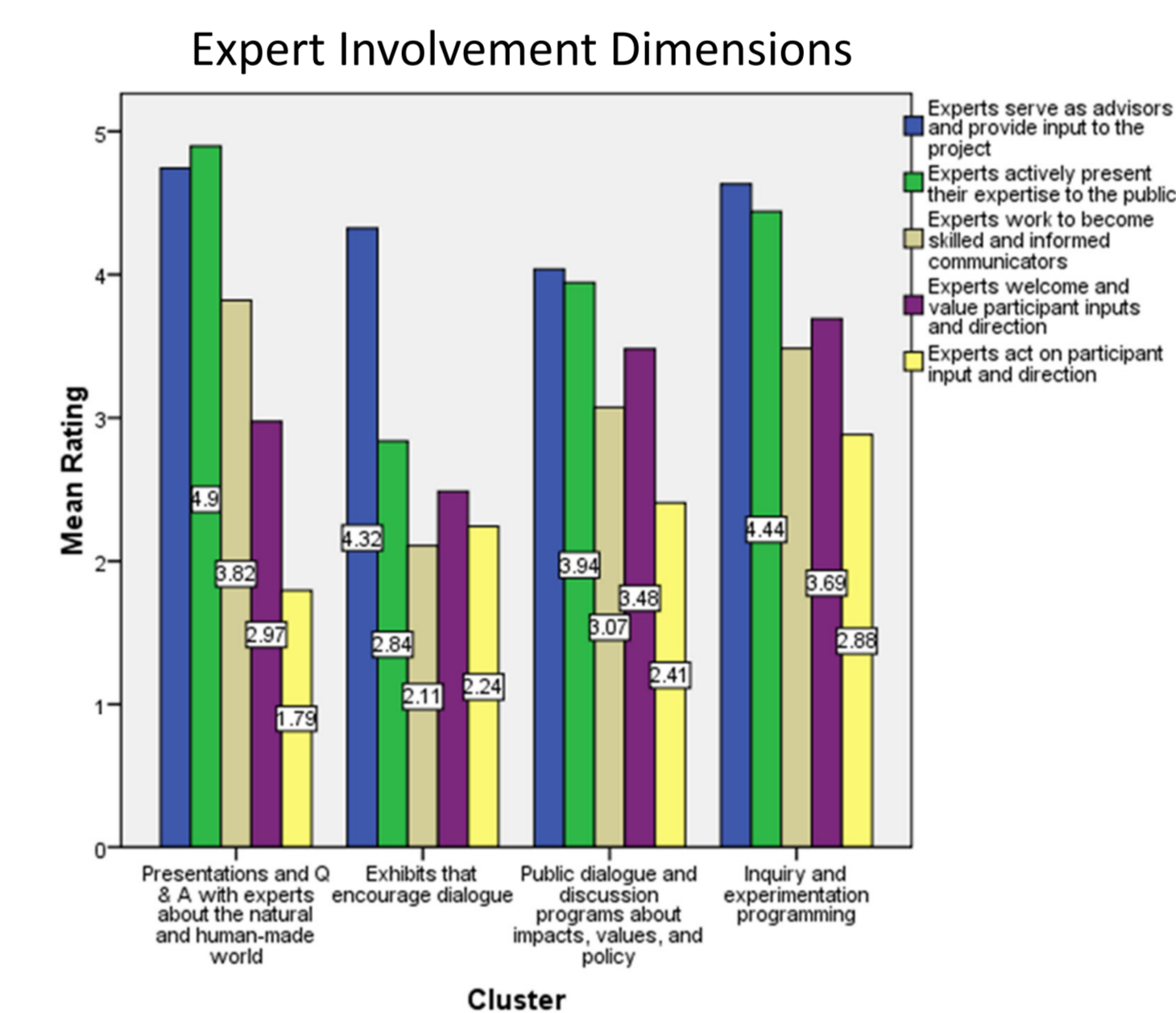
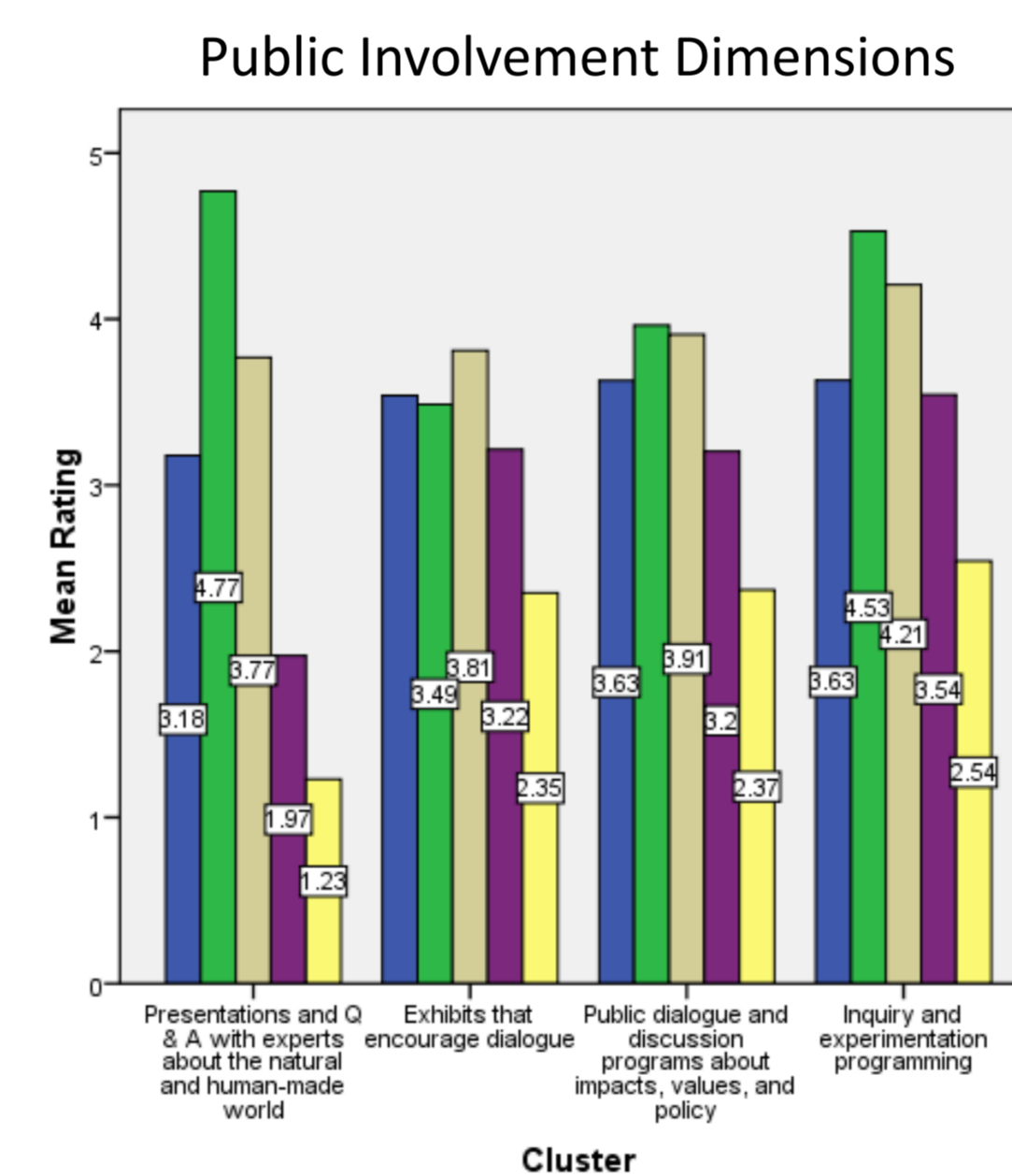
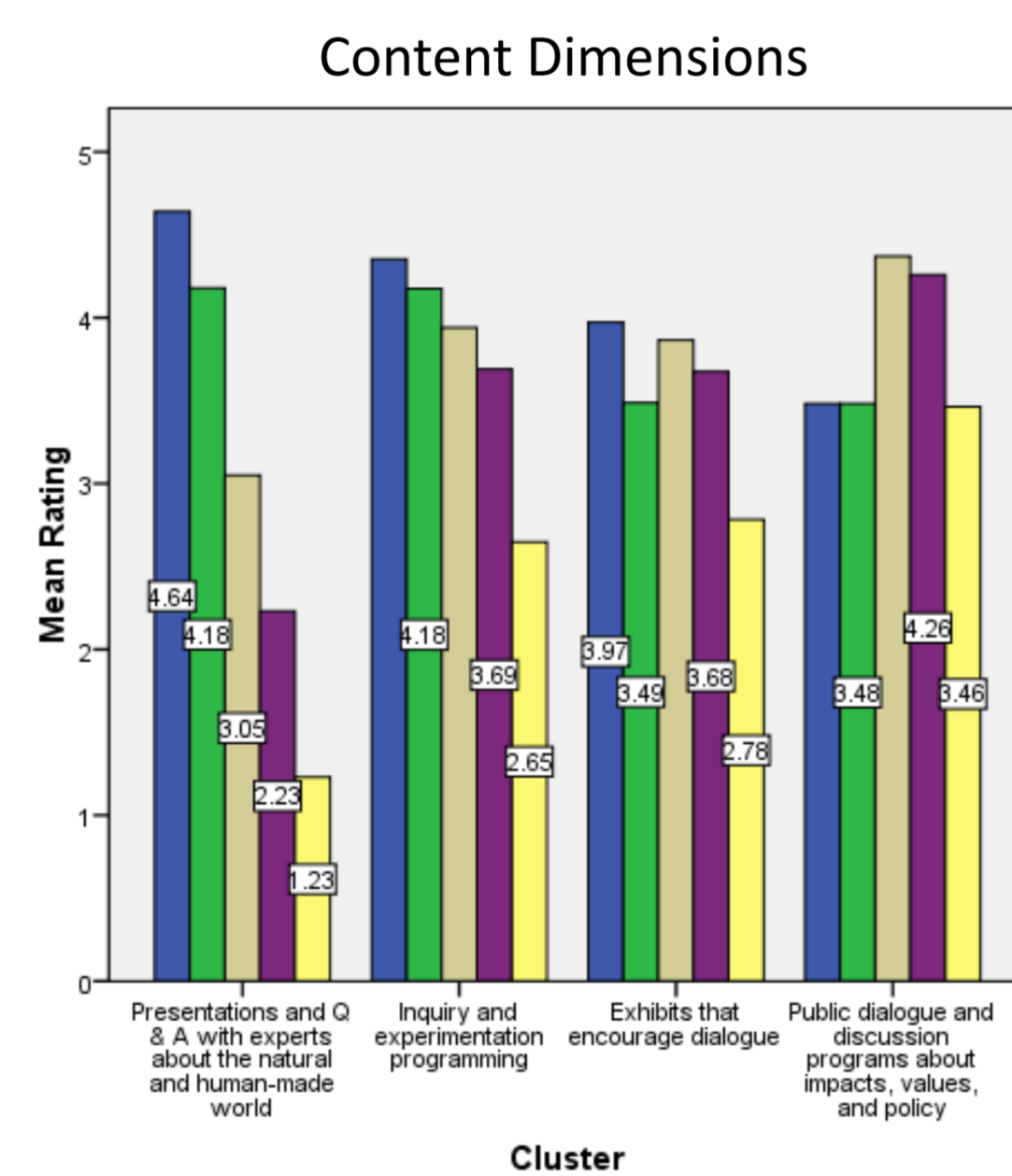
PES Case Summary Catalog and Analysis



Some of the projects in the case summary catalog.

Analysis revealed that the 206 case summaries collected between January and March 2011 fell into the four clusters described in the table below:

Clusters:	Presentations and Q & A about natural and human-made world	Exhibits that encourage dialogue	Programs incorporating inquiry and experiments	Dialogue programs about values, impacts, and policy
% of projects (n=198)	20%	19%	34%	27%
Information presentation to the public	Expert presentations	Media & written presentations	Expert & educator presentations	Expert presentations & panel discussions
Public and expert interaction	Participants and experts ask questions of each other	Little to no interaction	Participants ask questions & informal conversation	Participants ask questions & informal conversation
Methods used to promote PES	Dialogue & games / activities	Dialogue & games / activities	Dialogue & experiments or research	Dialogue



Mean rating for each of the Content, Public Involvement, and Expert Involvement Dimensions of PES split by cluster.

Workshop about Future Directions of PES in ISE



On May 12 & 13, 2011, 55 ISE professionals from around the world came to the Museum of Science to discuss future directions for PES in ISE and plan projects and collaborations.

Strategic Directions for Advancing PES within the ISE Community

1. Philosophy of practice – PES embedded in community
2. Keeping PES going – community impact beyond the event
3. Infrastructure for readiness to implement PES
4. Diverse goals and new evaluation strategies for PES
5. Engaging scientists in PES
6. Engaging under-represented audiences in PES
7. Building PES perspectives into existing activities
8. Financing PES
9. Dissemination of PES

Copies of the project deliverables can be found at: <http://dimensionsofpes.wikispaces.com/>

For other questions about the project, contact: lbell@mos.org or ekollmann@mos.org

Intended Impacts

1. Awareness, knowledge, or understanding. ISE educators will have an increased understanding of PES practices.
2. Awareness, knowledge, or understanding. ISE educators will have an increased awareness of current and recent PES activities and practitioners.
3. Engagement or interest. ISE educators will have a renewed interest in implementing PES activities at their institutions.
4. Behavior. ISE educators will plan PES activities.

Evaluation Findings

Case summary respondents and workshop participants reported an increase in their understanding that PES is a diverse field which needs to be further explored.

Additionally, workshop participants reported:

- An increase in their awareness of current and recent PES projects, specifically those using theater and art.
- A renewed interest in adding PES elements to ongoing and future projects.
- An interest in further collaboration with other participants.
- Being likely to implement PES activities at their institutions in the future. Follow-up data suggest that several have already acted on these plans.

Challenges

- Reaching ISE institutions outside of museums
- Continuing conversations after the workshop
- Figuring out the best way to get the word out about the PES Case Summary Catalog

Connections

Interest in making connections with people who want to:

- Integrate PES elements into their programming
- Understand mutual learning that occurs between scientists and the public
- Explore methods for evaluating PES programming in ISE

Acknowledgements

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