

The Informal Science Education Landscape

A Preliminary Investigation

Executive Summary

This research study was designed to explore and document the current “landscape” of the informal science education community. The theoretical framework for the research was a *Community of Practice* (CoP) approach, a construct which describes the processes of social learning that occurs when people who have common goals interact while working to accomplish those goals. In applying this construct to the informal science education (ISE) community it is important to appreciate the very complex, multi-dimensional nature of the community. In this report the terms “ancillary” and “central” were used to describe participation in the community.

Two overarching goals framed the study:

- Determine the current state of the ISE community and the degree to which it functions as an effective multidisciplinary Community of Practice.
- Provide the background knowledge necessary to support decision-making that would help CAISE leadership determine how best to leverage their finite resources in support of the ISE community.

Data for this study were collected through in-depth telephone and face-to-face interviews with education leaders and professionals from diverse professional communities related to communicating science to the public. The final interview list included representatives from: Youth Community Organizations, Adult Community Organizations, Science Centers, Children’s Museums, Botanical Gardens, Natural History Museums, Zoos and Aquariums, Extension, Libraries, Environmental Organizations, Public Television and Radio, Journalists, Health Organizations, New Media Researchers, After-School Science, Science Societies and Film Producers. Participants included individuals with diverse work foci, expertise, from organizations of different sizes and from diverse locations; international participants were included in the sample. Most importantly, participants were prominent within each of the target sub-communities and were in a position to credibly represent their communities.

Since the design of the study was exploratory and intended as a qualitative, hypothesis-generating study, interview questions were open-ended in nature and a small sample size (n=35) was selected so that a detailed examination of each person interviewed and their community could be conducted. The goal of each interview was to better understand how individuals from a variety of communities described and positioned themselves and their particular community with respect to ISE, indicated the major challenges in their community, and discussed how CAISE might support their efforts.

As part of the analysis of results the ISE community space was disaggregated along two dimensions -- “promoting public STEM understanding” and “practicing informal education”. Utilizing this perspective it became clear that some communities currently perceive themselves

as tightly committed to the central tenets of an ISE CoP, for example the Science Center, Natural History Museum, Zoo and Aquarium and to slightly lesser degree, Children's Museum communities, while other sub-communities such as the Science Writer, Science Societies, New Media Researchers and Adult and Youth Communities view ISE as more ancillary to their work. The remaining groups – the Broadcast Media, Film Makers, Extension, After School Science, Parks and Gardens, Libraries, Health Education and Environmental Education communities – currently perceive themselves as somewhere in the midrange on these two dimensions. Although each sub-community was uniquely positioned relative to ISE, four striking and important similarities emerged:

- There was considerable agreement in the importance of promoting public STEM understanding and literacy.
- There was widespread convergence around the value of free-choice learning and commitment to the practice of informal education.
- By and large each sub-community seeks funding from the same pool of resources.
- Each sub-community uses very similar evidence and arguments for making the case for the value of what they do.

Based upon this admittedly preliminary and very exploratory investigation, currently the ISE community does not function as an effective community of practice. However, many of the pieces that are necessary for ISE to become a true community of practice are currently in place. The report raises the question of why these practices are currently not happening, what has prevented ISE from spontaneously becoming an effective community of practice. The answer to this question has important strategic implications.

Overall, results provided support for the immediate value of an entity like CAISE. Almost unanimously, research participants perceived one or more roles that an organization like CAISE could play to support their community in its work, in particular, CAISE could:

- Improve communication within and across the ISE field.
- Champion the importance of informal science education.

The report details a number of short-term tactical suggestions for supporting these two roles. Long-term strategic directions for CAISE are less clear. A major decision point for the future of CAISE revolves around whether to invest the organization's finite resources in trying to help the ISE field become a vibrant, effective Community of Practice or actively supporting multiple, more ephemeral entities such as a series of ISE Communities of Action, Communities of Inquiry, Communities of Interest, Communities of Position or Communities of Purpose (or perhaps some combination of these). The report concludes by recommending that the Executive Committee, with appropriate input from the larger community, and data from a Year Two Landscape study, grapple with the strategic issues raised and chart a focused course for CAISE that best leverages its impact on the ISE community.