

Portal to the Public: Research & Evaluation Highlights

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Highlights from Initial Project Research: 2010-11

In 2010-2011, the Institute for Learning Innovation conducted research examining the Portal to the Public (PoP) to understand whether the model had a positive net value for its stakeholders – ISIs, scientists, and the public. The full report of the research findings (Sickler, et al., 2011) is available.

A summary of the major conclusions and implications from this research, particularly key factors that were found to influence implementation of the framework:

- Overall, the stakeholders across the three original cases perceived the model to have a positive net value – that its benefits and value to them or their institution outweighed its costs or the challenges it presented.
- **Relationships:** Leveraging existing relationships with science professionals and organizations gives a strong foundation to begin implementation and ease start-up.
 - During implementation, building individual, personal relationships with scientists was critical to maintaining value. This included clear, frequent, and consistent communication about the program, purpose, and expectations.
- **Professional Development:** PD was best received when built from expertise and authority about informal education as a unique skill-set, and when it responded to needs and prior knowledge.
- **Public Programs:** Tended to have more success when: they actively engaged visitors (activity or dialogue); scientists were clearly identified; and there was a sufficient stream of visitors.
- **Institutional Assets & Readiness:** Leveraging and building from existing experience, program models, tools, and relationships held by the ISI were critical to easing the challenges of the implementation process.
 - In the long-term and short-term, creating efficiencies and integration with institutional infrastructure and goals was critical to sustainability and scale.
- **Time & Value Proposition:** The main cost of PoP for scientists is time. Making sure PD and Public Programs provide clear value to scientists – value they can recognize and desire – is critical to making the investment of time worthwhile.

Visitor Outcomes at Dissemination Sites

- **Most visitors knew they were interacting with scientists and recalled new facts learned.** 72% of visitors surveyed knew they had spoken with a scientist; most recounted specific facts from their interaction. A smaller number commented specifically on the learning experience of having an opportunity to interact with the scientist (rather than content learned). Visitors moderately (but not strongly) agreed that they gained a new insight on science.
- **Visitors were extremely satisfied with PoP programs** at dissemination sites (average rating of 6.5 on a 7-point scale). Visitors' highest satisfaction was with the overall experience and scientists' ability to communicate.
- **From a PoP experience, visitors most valued 1) experiencing hands-on materials** related to scientist's work, **2) having an authentic interaction with a real scientist.**
- **Visitors expressed very strong desire to have more opportunities to interact with scientists.** There was strong agreement with interest in this idea (average rating of 6.4 out of 7) and **61% reported that opportunities to interact with scientists would lead them to "definitely visit more often"** this or another museum.

Scientist Outcomes at Dissemination Sites

- **PoP helped remove several of scientists' major perceived barriers to public engagement:** 1) Lack of opportunities or a venue for engagement; 2) Lack of access to public audiences I want to engage; 3) Not feeling they have the skills to be effective.
- **PoP could not do much to address the barrier of available time and risk of loss-of-attention to one's work.** (See research finding regarding time-value proposition above, of how PoP programs should think about minimizing the impact of this barrier.)
- **There was a significant increase in scientists' feelings of preparedness with public engagement/communication skills after PoP.**
- **The biggest value PoP provides for scientists is providing a specific venue and opportunity to engage with the public** (39% selected this as the single main benefit). When selecting multiple/secondary benefits of PoP, scientists also valued:
 - The opportunity to interact with children or youth (85%)
 - Having a specific venue/opportunity (77%)
 - Giving back to my community (69%)
 - Connecting with my community around science (65%)
 - Having fun (62%)
 - Increased visibility of myself / my research (62%)
- In a set of attitudinal items, **scientists expressed their high value of the PoP program in a number of specific ways.** Scientists strongly agreed (average ratings of more than 4 out of 5) that:
 - They would choose to participate in another museum-based effort like PoP
 - They would recommend PoP to a colleague
 - PoP was worth the time and effort they put in
 - They will continue to be involved in PoP

PoP Network-Wide Findings: Commonalities and Differences in Programs

In a survey of the first 23 sites in the PoP Network (those completing a cycle before 2014), data about program structure and strategies revealed a snapshot of commonalities in how the Portal to the Public Guiding Framework has been applied across the network.

The vast majority of PoPNet sites can be characterized by a set of similar approaches:

- Funded primarily through institutional funds;
- Have retained at least some staff who participated in original PoP training;
- Use a rapid cycle (under 6 months) of progressing from recruitment to programming;
- Mainly draw scientists from local research universities; largely draw upon graduate students;
- Do not charge scientists fees for participating in the PoP program;
- Require professional development for scientists;
- Connect with family audiences in small-group interactions that use materials-based activities/demonstrations on the museum floor;
- Primarily implement add-on "spotlight"-style events; also add some large-scale "special events."

In other components of the Guiding Framework, however, there is far more site-by-site variation. In these elements, institutions have done more to adapt details to their capacity, interests, and beliefs about what is effective or efficient. **At present, there is a high degree of Network-wide variability in:**

- Use on institutional vs. individual relationships to recruit scientists;
- The size of an active pool of scientists;
- The size of an individual cohort to be trained;
- The duration, number of workshops, and number of hours spent in PD workshops;
- The frequency of PoP programs at the ISI;
- Whether events can include non-PoP-trained scientists (in addition to PoP-trained scientists);
- Whether PoP scientists or PoP-style PD have been transferred into other areas of the ISI;
- Whether the institution is offering (and charging for) external scientists to receive PoP-style PD training (without becoming part of the PoP programming at the ISI);
- The number of staff-hours perceived as being spent implementing PoP.

In terms of long-term sustainability of PoP within an institution, two key areas of emphasis were revealed:

1. **A concrete strategy for financial support.** There was no single path or model for financial sustainability. Examples from the Network ranged from creating a self-sustaining, fee-for-service model to leveraging sponsorship underwriting to integrating the funding needs into existing operating activities. The key was clearly articulating how staff time and direct costs are covered in a way that aligns with institutional budgeting processes/priorities.
2. **Alignment with institutional priorities.** If the values of the PoP model do not align with institutional priorities or needs, it is extremely difficult to sustain. At sites where the program stalled/ended, shifts in institutional focus were often contributing factors. Evidence suggests that creating more integrated PoP programming (such as embedded programs, rather than one-off events) may relate to better sustainability over time, as it creates internal pathways and habits of PoP being part of "what the institution does."

Highlights from Network Expansion Evaluation: (2015)

Initial results from 21 additional dissemination sites (IMLS PoPNet: ENN) were very similar to the Network-Wide 15 sites. The key differences stem from the increased diversity of site types (i.e. more non-traditional science centers/museums). New learnings include the following:

Unique Adaptations of the PoP Framework

In general, sites' patterns of implementation reflected the majority of Network sites, but were interested in exploring future program modifications based on need.

- For their first iteration, most sites stuck to the well-established models and patterns of others in the Network. They begin from replicating the common models to simply get the basics of the program established
- Variations were more likely in subsequent iterations and included more interest in and assessment of the feasibility of a fee-based model for PoP participation by scientists or different types of public engagement programs.
- The more diverse a cohort (i.e. more non-traditional science-based organizations like zoos, botanic gardens, etc.), the more they believed their implementations were unique.

Program Sustainability

Sustainability considerations are a critical issue for these sites going forward, and may be an area for a continued role of mentors or communication with the Network. Most of the sites seemed enthusiastic and highly committed to further advancing their PoP programs in support of institutional missions. Evidence that most sites have begun to articulate financial sustainability strategies (or at least clear, concrete financial options) is promising, as Network-wide evidence suggests that concrete and intentional strategies are most connected to sustainability. Each institution needs to find a path that fits within institutional priorities and structures, continued support, mentoring, or advice-sharing within the PoP Network is advised with an understanding that solutions are not prescriptive but need to reflect the goals and resources of each site.

Site Characteristics

University-based PoP sites have demonstrated success and brought forth new ideas and opportunities to the Network. Four sites were closely affiliated with universities and were able to take advantage of pre-existing infrastructures for their public outreach and engagement effort. Sites leveraged the opportunity to recruit scientists from their local universities and build programs around existing outreach initiatives or through an existing community program. While they saw the PoP initiative as enabling them to better align to their institutional mission and were successful in attaining ongoing funding for their PoP efforts, they are still trying to determine how the program fits into their larger institutional outreach strategy. A landscape as large and active as a university with many outreach activities, it may be too much to expect that the PoP initiative on its own would become central or dominant to the organization.