

Building Supports Memo Report: Takeaways from Listening Sessions

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Background

The *Building Supports Towards a Useful, Usable, and In-Use Framework of Professional Competencies in the Informal STEM Learning Field* (AISL #2215274) project is working toward creating professional learning and development tools for those who engage the public in informal STEM learning (ISL). This work builds on the prior funded project, *Collaborative Research: An Evidence-based Informal STEM Learning (ISL) Professional Framework* (AISL #1514815, #1514884, #1514890, #1515315), which developed the Informal Science Professional Learning Framework (hereafter, Framework).

Eight Listening Sessions were conducted between April and July 2023, and a total of 71 ISL professionals participated. The sessions each focused on one of the four Framework domains, and were split between ISL professionals representing Level 1 & 2 roles (e.g., coordinators, managers) and those in Level 3 roles (i.e., executive leadership). The purpose of the Listening Sessions was to hear from ISL professionals' reactions to the Framework and suggestions for supports. Through a form developed and managed by the Association of Science and Technology Centers (ASTC) team, interested ISL professionals responded to questions about themselves and how they would like to engage with the project. COSI's Center for Research and Evaluation (CRE) and ASTC then named the shared priority of identifying from this pool a group of participants whose perspectives would reflect a range of job roles, institution types, institution sizes, demographic profiles, and lived experiences.

CRE identified a systematic, blinded approach to selecting individuals from ASTC's list of interested participants according to these criteria. For each listening session, ASTC and CRE both reviewed a version of the contact list with personal details removed and identified potential individuals using the same set of filters. The ASTC team then reconciled the ASTC and CRE lists of suggested participants for each session and selected the final invitees. The general purpose of this process was to ensure each of the levels and domains in the Framework could be reviewed by groups of individuals who could reasonably speak to the content, with as much diversity within each session as possible. The team sought to mitigate the possible effects of individual biases by ensuring that at least two people from ASTC and two people from CRE participated in this process for each listening session.

In order to qualify for stipends, participants were required to watch a webinar (live or recorded) that introduced them to the Framework prior to attending a Listening Session. The Listening Sessions themselves were virtual, with participants joining on Zoom. The sessions consisted of individual reflection using Miro (a digital whiteboard platform) and group discussion. Project team members from ASTC facilitated the sessions, and researchers from

CRE observed the sessions and took notes on the discussion. The findings in this report reflect themes and points of interest from the Miro responses and group discussions as identified by CRE.

Findings

General responses to the Framework

On the Miro board for each session, participants were asked to share their initial, general responses to the Framework. Their responses tended to center around ways the Framework could be helpful, challenges they saw with the Framework, and how the Framework might interact with their role in their institution.

Listening Session participants identified several potential use cases for the Framework. They noted it could be a tool for individuals to support their own growth and as a tool for self-advocacy. For managers, participants shared that the Framework could be a useful tool for onboarding and for continued support of their staff members' growth. However, some participants clarified that they would prefer that it remain a career resource, and that it not become a set of standards to be evaluated against (e.g., in job performance reviews). With respect to career pathways, the tool was identified as particularly helpful for those who do not hold a degree, those who have switched careers, and those who may be unfamiliar with the ISL field before starting their position. Participants explained that it is especially important for these groups to be able to identify and communicate their competencies to others in their institution or to potential employers. Having a tool that is consistent within and across institutions was noted as another benefit of the Framework.

Participants did raise a few general concerns about the Framework. While consistency can be helpful, a few participants cautioned that organizations are different and that those differences need to be acknowledged and accommodated in the supports for the Framework. This was especially noted for smaller museums. Some participants also questioned where the Framework fits within the day-to-day “go go go” realities of museum work. While they saw lots of potential in using the Framework, they wondered if they would be able to continue to use it in an intentional way alongside all of their other job responsibilities. This is an area where the supports may be particularly helpful, and it suggests that the supports need to be simple and easy to use and maintain. Participants also discussed the importance of informal science learning (ISL) professionals approaching this work with shared values, and in doing so, they raised the questions of what those values are and how to operationalize them.

Equity & Inclusion

One theme that came up repeatedly across Listening Sessions was equity and inclusion, above and beyond the “Equity & Diversity” competency described in the Institutional Impact domain. One concern participants shared was that both the structure and content of the Framework expresses a hierarchy. They suggested reconsidering how the Framework reflects and may further traditional perspectives of influence and power. A question that emerged was that as ISL institutions try to “un-silo” departments and their work, how can the Framework support these efforts? Continuing the discussion of values, participants also shared

the importance of and nuance in articulating values, and they raised the question of how individuals' values might align (or not align) with the values of an institution. Participants highlighted the need for transparency within institutions and thought that transparency should be promoted in the Framework.

Participants also emphasized that competencies depend on opportunities, and that those opportunities are not always provided equitably. They noted discrimination and associated barriers some people experience before even reaching level 1 of the Framework. Some participants felt that the Framework seems to place the responsibility of developing competencies on the individual rather than the organization. This was seen as an issue because people at lower levels of the Framework might not have the autonomy or ability in their role to pursue professional development. Participants also raised questions such as, who gets opportunities? Is there equity in who an institution is helping to progress?

Levels

Across domains, participants also volunteered thoughts on the three levels of the Framework. Some participants questioned how someone might determine the level in which they belong. This was especially the case between levels 1 and 2, which were discussed together for each domain). There may be a perceived gap in the Framework among professionals who hold varying degrees of responsibility or who are transitioning to different scopes of responsibilities. Another example of participants struggling to place themselves in the Framework were some individuals with significant responsibility, but who did not manage staff. They viewed themselves and their careers as being more advanced than level 1, but they could not see themselves in levels 2 and 3 because they were not managers or executive leadership. This suggests that ISL professionals may read unintended meaning about quality in the levels (e.g., that level 1 is not as good as level 3) rather than seeing them as having different scopes of focus. Furthermore, these comments suggest that it might be important to more clearly communicate the possibility and expectation that individuals will likely fit into different levels across different competencies.

Participants in the Level 3 Listening Sessions shared some concerns about the field-level focus. Some participants questioned what this emphasis would mean for institutions that do not have field-level impact or do not have the resources to be able to focus on it. This seemed to be of particular concern among small or struggling museums. One participant described this concern by saying “being a financial leader is not equitable to all sizes of institutions; some smaller [institutions] don’t want to connect to the field or beyond the internal focus of survival,” also calling it a “challenge of goals and time.” Other Level 3 participants questioned the external focus of this scope being on the ISL field rather than local communities, and some did not think the focus of level 3 should be external at all, but rather on an institution’s health and well-being.

On the Miro boards, there were some differences in responses from participants in the Level 1 & 2 sessions as compared to those in the Level 3 sessions. Level 1 & 2 participants were more likely to focus on their individual roles in relation to the Framework, whereas the Level 3 participants took a broader focus and shared more overall challenges with the Framework. In terms of what was missing from the Framework, Level 3 participants more frequently mentioned mentorship/knowledge-sharing, strategy, personal qualities, accountability, and values. Something that Level 1 & 2 participants identified as missing that Level 3 participants

rarely did was the need for specific indicators or examples. Taken together, these patterns suggest that certain supports may be of more use to those in particular roles.

Domains

During the Listening Sessions, much of the feedback and discussion about the individual domains were in relation to what competencies look like in practice. Those data will be separately used to inform the development of indicator statements (one of the supports). This discussion will instead look at reactions to the Framework that were specific to the individual domains.

Institutional Operations

The competency categories for the Institution Operations domain are Mission, Vision, and Goals; Structure; Policies; and Finances.

When asked what was missing in this domain, participants mentioned relationship-building and networking, as well as community engagement. Participants also wanted more specifics about institutional policy and managing institutional change.

Institutional Impact

The competency categories for the Institution Operations domain are Audiences, Role, Equity and Diversity, and Evaluation and Research.

While participants overall were supportive of DEAI efforts, some noted challenges beyond their personal control. For example, a participant from Florida explained that recent legislation means there can be consequences (e.g., losing a liquor license) for institutions that do certain types of DEAI work. They requested resources for how to continue engaging DEAI within these constraints. Some participants in levels 1 and 2 shared that they do not always have the decision-making authority to implement initiatives they would like to see happen (e.g., acknowledging tense histories with surrounding communities).

General Expertise

The competency categories for the General Expertise domain are Intrapersonal Knowledge and Skills, Interpersonal Knowledge and Skills, Communication, and Creative and Analytical Thinking.

When asked what they thought was missing from this domain, participants were more likely to reference strategy and decision-making than were participants in Listening Sessions about the other domains.

There was some concern amongst participants that the General Expertise domain feels like a catchall domain, and this raised the question of whether it might feel less useful as a result. Participants also felt that the Communication competency category needed more specifics about communication practices.

Job-Specific Expertise

The competency categories for the Job-Expertise domain are Effective Practice, Efficient Practice, Evidence-based Practice, and Professional Learning.

When asked what was missing in this domain, participants again often mentioned mentorship and strategy.

There was pushback on the “Efficient Practice” competency category from participants in the Job-Specific Expertise Listening Sessions. In the Level 1 & 2 session, a participant explained how they were trying to move out of a “survival mindset” coming out of the COVID-19 pandemic, so doing the “maximum” with “minimum resources” did not resonate with them. Another shared how a “scarcity mindset” meant they had to justify the resources necessary to reach desired outcomes. One suggestion was for the category to focus on “best practices” rather than “efficient practices.” In the Level 3 session, participants also noted the importance of having an overarching strategy beyond just efficiency and evidence-based practices.

Suggestions for supports

Participants were asked to share tools or resources they found helpful in their careers or ideas for ones they wished they had access to. A common theme across Listening Sessions was participants appreciating or wanting specific, concrete examples. The indicator statements of what competencies look like will likely be particularly helpful in addressing this need.

Several of the suggestions for supports had to do with connecting to other people. Participants shared the value of networking with others doing similar work, as well as with others doing different work so they could learn new things. Mentorship was also highlighted as an important support. Participants were interested both in being mentored and in receiving support on how to become a good mentor. Coaching was also mentioned as a valuable support.

Another support participants expressed interest in was a repository of resources that could be used as a starting point. This aligns with the Framework being identified as particularly useful for those without degrees, those switching careers, and those that happened about ISL. Participants also described clear job descriptions as a helpful resource, both to understand what is expected of them in their jobs and to see what is expected from other positions. These other job descriptions could be used to identify areas of growth in their current position or for “next step” jobs as they move forward in their career. Examples of career pathways were also identified as something that would be helpful in understanding how one can move through the field. Relatedly, participants wanted professional development plans, both for themselves and as a way for managers to support their teams.

Looking Ahead

After the final Listening Session, the CRE team shared preliminary findings with the larger project team, as well as with the project’s participant advisors. Those findings, also reflected in this report, generally resonated with the project team’s experiences and understandings from facilitating or sitting in on the sessions and received positive affirmation from advisors. Notably, participants’ suggestions for supports also align well with some of the potential supports the project team had already brainstormed, such as a more developed suite of indicator statements (which Listening Session data will directly inform), concrete examples of competencies applied within careers, and tools for helping people identify and describe their competencies.

The findings from the Listening Sessions also suggest some ways that the project team can better communicate about the Framework itself. In many cases, challenges or potential gaps raised in the Listening Sessions identified ideas that were also reflected in project team deliberations and in other forms of data collection (e.g., the Transference Panel held in March 2023). These include a need for clarity around what levels indicate and how individuals should place themselves in relation to levels. They also indicate ways that the developers’ intent for specific areas can be clarified or specified in better detail, especially in relation to specific competencies. Particularly in light of the significant time and systematic process used to develop the Framework, these data do not appear to suggest specific or significant changes to the Framework itself; instead, they offer some guidance in how to package and share the Framework so that it is accessible and legible to more users.

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