

Collaborative Research: An Evidence-based Informal STEM Learning (ISL) Professional Framework (2015-17)

Overview:

OSU's Center for Research on Lifelong STEM Learning (OSU) in cooperation with University of Washington (UW), the Pacific Science Center (PSC), Lifelong Learning Group (LLG), and Association of Science-Technology Centers (ASTC) developed a Framework, designed for ISL professionals at any stage in their careers that lays out the skills, knowledge and characteristic needed to guide their professional growth. The Framework is the first of its kind to detail expectations for job-specific and general skills, and abilities to influence institutional operations and impact. The Framework is currently focusing on those working in science and nature centers, or science, natural history and children's museums. It was developed through a series of empirical studies conducted by LLG, UW and OSU.

Scope of Work:

Over the course of the last two years, OSU supported the creation of the Framework for ISL professionals by serving on the design and development team, conducting a series of empirical validation studies on various drafts of the study, and (currently ongoing) collecting and analyzing feedback from potential users of the Framework to determine its usability, potential usefulness and future use by individuals and institutions. As part of OSU's contribution to the project, the research team developed surveys instruments and interview protocols and collected feedback on the Framework. The data were jointly interpreted with other project teams in order to ensure that progress in developing and refining the Framework were guided by empirical evidence.

Broader Impacts:

The project promises to help professionalize the field of informal science learning. In general, professional fields that developed guidance for growth and excellence tend to attract and retain professionals more successfully than those who do not, in part because expectations are transparent. The Framework that will result from this stage of the project will still be limited in scope, but nonetheless is expected to influence professional development offerings by national ISL association such as ASTC or the Association of Children's Museums; curricula and continuous education of university-based museum education, museology, or free-choice learning programs; support and mentoring strategies within ISL institutions; and career planning of individuals who are currently employed in relevant ISL institutions or are planning to engage in initial training.