Can Libraries Provide STEM Learning Experiences for Patrons? Findings from the STAR_Net Project Summative Evaluation

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Overview

STAR_Net (the Science, Technology, Activities and Resources Library Education Network) was developed by the Space Science Institute’s National Center for Interactive Learning with funding from the National Science Foundation. Core partners included the American Library Association, the Lunar and Planetary Institute, and the National Girls Collaborative Project.

STAR_Net brought inquiry-based STEM learning experiences to 18 public libraries through two traveling exhibits, associated programming for library patrons, and a virtual community of practice for library staff and others interested in bringing STEM programming to libraries.

Evaluation & Research Associates (now part of Education Development Center) evaluated the implementation of the project and its impact on library staff and patrons. The evaluation found that the project had a positive impact on participating librarians, library staff, and library patrons.

Evaluation Question 1

Does the professional development delivered by the STAR_Net project help Discover Earth and Discover Tech librarians deliver informal science education programming?

Librarians and library staff reported that the project increased their knowledge, interest, and confidence in offering STEM programming in their libraries.

Evaluation Question 2

Do host libraries develop and/or implement informal science activities for the targeted audiences?

Many libraries reached out and developed connections with organizations and individuals they had not worked with previously. Two thirds of the libraries reported that they continued to offer STEM programming after the exhibit had left their libraries.

Evaluation Question 3

To what extent do library patrons at the host libraries become more interested in, knowledgeable about, and engaged in the STEM topics presented in the exhibits and related programming?

The exhibits appeared to spark the interest of many patrons to learn more about science and engineering.

Evaluation Question 4

What, if any, are the unanticipated consequences of STAR_Net (positive or negative) on librarians, libraries, patrons, and others?

- The exhibits supported free-choice learning. Unlike a typical science museum, the exhibits and programming were free. Adults and children could look at the exhibits whenever they chose. Patrons could easily return to interact with different parts of the exhibit again.
- The exhibits scaffolded school learning. Libraries hosted school field trips and provided teachers with supplemental materials. Teachers and parents reported that the exhibits helped to support what students were learning at school. Several libraries said that the exhibits helped to attract home schooling groups.
- The exhibits supported intergenerational learning. Multiple generations—grandparents, parents, and their young children—interacted with the exhibits together. Children frequently were the ones to draw their parents in to look at the exhibits. Parents also drew their children in and helped them stay focused on the learning.
- Some libraries hoped to leverage their STAR_Net experience into seeking additional partners or other funding.

Evaluation Methods

- Library Staff Pre-Exhibit Survey & Six-Month Follow-up Survey
- Library Post-Exhibit Report Form
- Library Patron Survey
- Circulation records (1 year before exhibit, during, 1 year after exhibit)
- Interview library staff
- Site visits to 5 libraries
- Metrics re: Community of Practice website use