

## *SciGirls en Español*

### **Summative evaluation plan**

**April 5, 2008**

**Submitted by**

**Knight-Williams**

## **Background**

Supported by a grant from the National Science Foundation's Program for Gender Equity, *Dragonfly TV SciGirls* (*SciGirls*) is a national outreach program designed to encourage girls' interest in science by building capacity among outreach professionals in the area of gender-equity teaching and learning. Since 2005, Twin Cities Public Television (TPT), the PBS affiliate station in St. Paul/Minneapolis, has awarded 24 organizations ("grantees") with outreach grant awards, multimedia resources, and training to help outreach staff implement *SciGirls* initiatives in their local communities. To assess the impact of the *SciGirls* grantee program, Knight-Williams, an independent evaluation firm specializing in informal science education media projects, conducted a summative evaluation of the program's first three years. Relevant findings from the evaluation are discussed within the *SciGirls en Español* proposal narrative.

For the *SciGirls en Español* project, Knight-Williams will implement a similar evaluation to understand the impact of the grantee program on the 10 participating organizations. As with *SciGirls*, the evaluation will utilize secondary data sources and direct accounts from the principal staff responsible for administering and implementing the grantee activities. Unlike *SciGirls*, however, which was solely retrospective (occurring after grantee organizations completed their projects), *SciGirls en Español* will include a baseline evaluation prior to when the grantees commence their projects. This will enable the evaluators to provide TPT with formative feedback relating to grantees' initial expectations, as well as a summative comparison with actual project outcomes.

## **Evaluation Team**

The evaluation team will be co-directed by Valerie Knight-Williams, Ed.D., and Divan Williams Jr., J.D., with assistance from Guiliana Esparta. The team has collaborated previously on the evaluation of informal science education projects targeting Spanish speaking audiences, including current initiatives associated with the *Pulse of the Planet* radio program and the Exploratorium's *Evidence* website project. Knight-Williams has

also collaborated on more than thirty multimedia science education projects funded by the National Science Foundation's Informal Science Education program since 1990.

The firm is based in Sacramento with associates located in San Francisco, Washington DC., New York, Miami, Portland, and Seattle. The firm's projects are frequently national or regional in scope, target public and professional audiences in diverse settings, and typically incorporate one or more of the following media: television programs, giant screen films, radio programs, museum exhibits, websites, interactive multimedia, and curricula or other print materials.

## **Evaluation Design and Questions**

The evaluation will address whether and how the *SciGirls en Español* grantees accomplish the goals of the grantee program in their local communities, comparing grantees' initial expectations with their actual experiences in three areas: administering their grant awards, participating in and applying the training, and using the multimedia resources. The evaluation will specifically explore the questions outlined below.

### **SciGirls grant award**

- How did grantees learn about the *SciGirls en Español* outreach program and why did they apply? Did they have previous experience with girls' science initiatives? Did grantees have previous involvement in *Dragonfly TV* educational programs or activities?
- What kinds of individuals were targeted by the grantees' projects? Was the target audience reached? About how many girls were served? Did grantees attract Spanish speaking audiences as outlined in their grants? How were the grantees' outreach programs similar to and different from one another?
- How successful were grantees' partnerships? What were the highlights and challenges? To what extent were new vs. existing partnerships formed? To what extent did the program strengthen proposed community partnerships?
- Were the grant awards of \$7000-\$10,000 adequate to accomplish the project goals?
- To what extent did the grantees deliver hands-on science encouragement and career guidance to girls in their communities in creative and dynamic ways?
- What is the potential for sustainability upon grant completion? What modifications are in order?

### **SciGirls training**

- To what extent did the training prepare grantees to coordinate and implement activities in their local communities?
- Did grantees feel the training was well-organized and run?
- What did they find most and least valuable?
- To what extent did the training increase awareness within grantees' departments of issues in gender-equity teaching and learning? In particular, did the training raise staff awareness of how girls learn, experience, and enjoy science?

- Did the training adequately address issues relating to Spanish speaking audiences targeted by the program?
- Did grantees have suggestions for improving the training experience?

**SciGirls resources (video, print, and web resources)**

- Which of the video, print, and Web resources did grantees engage and why?
- How satisfied were grantees with the resources? How do they compare with other informal science resources they've used to address girls in science issues?
- What did grantees find to be the main challenges and highlights of implementing the resources they chose to use?
- In the grantees' opinion, what did the girls gain from their experience with the resources? What methods if any, were used to assess these gains?
- Did grantees use the resources in ways that took advantage of the inquiry-based and authentic investigation approaches reflected in *Dragonfly TV*?
- How did grantees fare in extending use of the resources to families?
- In implementing the resources, did grantees apply the key research findings built into the *SciGirls* materials?

**Procedure**

Using a combination of online surveys and telephone interviews administered at two time points (prior to and after the projects are conducted), the evaluation will seek feedback from the lead representative from each organization that participates in the grantee program. The representatives will be informed that their feedback is confidential and will help guide the direction that TPT takes in planning future outreach activities. They will also be provided an honorarium as an added incentive to complete the evaluation tasks in a timely manner.

The evaluation will occur in 3 phases, as outlined below.

**Phase 1: Baseline evaluation**

Knight-Williams will conduct telephone interviews with the 10 grantees to assess their prior experience with similar programming and their expectations for: administering their grants, conducting activities in their local communities, and accomplishing their project goals. Grantees will also complete an online survey that focuses on their experience with the grant application process and how they learned of the *SciGirls en Español* grant opportunity.

The evaluators will also compile and review all pertinent secondary data sources for the purpose of documenting the outreach program as a whole and informing the data collection phase summarized below. Secondary data sources will include: the grant proposal submitted to the NSF; the RFP on which the proposal is based; the training agenda; the 10 grantee proposals; the grantee final reports (once available near the end of the grant period); and the *SciGirls en Español* activity guides and DVDs.

### Phase 2: Evaluation of grantees' project implementation, and outcomes

Knight-Williams will conduct in-depth telephone interviews with grantees to explore the grantees' partnerships, use of *SciGirls en Español* resources, and plans for sustaining their programs. Grantees will also complete an online survey, similar to the version prepared for the *SciGirls* grantee program

[http://www.knightwilliams.com/sci\\_girls/intropost.htm](http://www.knightwilliams.com/sci_girls/intropost.htm) to report on their experience as a *SciGirls en Español* grantee and their reactions to the grantee training program.

### Phase 3: Analysis and reporting

Given the small number of participants in the evaluation, limited descriptive statistics will be conducted on the quantitative data generated. Content analyses will be performed on the qualitative data generated in the open-ended questions and will be conducted by two independent coders. Any differences that emerge in coding will be resolved with the assistance of a third coder. To preserve grantee confidentiality in the reporting, where quotes are provided by grantees, unique identifying information will either be removed or rephrased in the more general form.

The completed evaluation reports will be posted online at [www.tpt.org/DragonflyTV/evaluations](http://www.tpt.org/DragonflyTV/evaluations) and [www.informalscience.org](http://www.informalscience.org). Additionally, working with TPT's partners, such as The Self-Reliance Foundation and their network of organizations (e.g., Community Science Workshops, National Council of La Raza, and Aspira) the evaluators will also ensure the evaluation is included in online communities or conferences focused more specifically on informal science education programming for Spanish speaking audiences.