



## **Evaluation of *SciGirls Season Two* Outreach Program**

### **Executive Summary**

**Twin Cities Public Television (*tpt*)**

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**By**

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# Executive summary

With support from the National Science Foundation, Twin Cities Public Television's (*tpt*) *SciGirls Season Two* involved the creation of 10 new episodes and the expansion of web, outreach, and education activities, in part through the selection of 40 *SciGirls Season Two* partners. Each of these partners received a full day of training for 10-30 participants in their region, focused on the integration of inquiry-based science instruction with a commitment to gender equity, as well as educational support and resources. The independent evaluation team from Knight Williams Inc. conducted an evaluation of the implementation of the outreach activities, the findings of which are presented in the full report – and summarized below – in three parts.

## **Part 1: Educator feedback and reports on their *SciGirls* training and program implementation**

Part 1 presents the findings from training evaluation forms completed by 359 educators who completed a *SciGirls* training from October 2013 to March 2014 and the findings from program report forms completed by a subset of 49 educators who implemented *SciGirls* programs from October 2013 to May 2014.

### Educator feedback on training

The 359 educators who completed a training generally found the most valuable parts to be the focus on hands-on activities, the focus on *SciGirls* Seven, and the *SciGirls* resources. No one aspect stood out as least valuable for the majority of educators.

Overall, the educators were satisfied with the training, finding it well run and organized, a good use of their time, and fun. They also generally agreed that they felt prepared to implement the *SciGirls* activities, could describe the *SciGirls* Seven strategies, and planned to incorporate the strategies into other areas of their work.

### Educator reflections on their programs

#### *Overview of *SciGirls* programs*

The educators who completed program report forms represented a wide range of organizations, including schools, science centers, and non-profits. Of this group, the majority held afterschool *SciGirls* programs, as opposed to summer, evening, school, or weekend programs. Programs were generally ongoing or one-time events lasting between 1 to 3 hours, and most were held at a school.

When asked to describe program highlights, the educators most often pointed to the hands-on elements, the fun and engaging aspects, and/or the opportunities for teamwork/collaboration. Most indicated that their youth engaged in hands-on, open-ended projects and investigations and/or collaborated in groups, while other large groups of educators reported that their youth approached projects in their own way, expressed their individual viewpoints within a group setting, and/or received specific, positive feedback on their effort, strategies, and/or behaviors.

### *Participant background information*

Educator estimates of the number of youth participants who attended their programs ranged from 6 to 254, with a total of 1,618. The educators most often indicated that they served youth from urban communities, although suburban and rural communities were also frequently listed. The majority of youth who participated were White, female, and most were in upper elementary or middle school. Smaller groups of youth served (more than a tenth each) were of Hispanic or Latino origin, or were African-American or Black.

### Use and perceived value of *SciGirls* resources

#### *Activities*

The educators generally found the activities to be *very valuable*. Nearly half of programs reported using *Passion for Pixels*, making it the most used activity from *Season One*. The *Season Two* activities were generally used less widely than those from *Season One*, with the three most used being *The Awesome Game Race*, *Insulation Station*, and *Super Sleuths*. None of the educators reported using the *Season Two* activities in Spanish.

#### *Videos*

The educators generally found the videos to be *very valuable*. *Blowin' in the Wind* was the most used video from *Season One*. The *Season Two* videos were less widely used than the *Season One* videos, with the most used video being *Aquabots*. A few of the educators used the *Season Two* videos in Spanish.

#### *Web resources*

In general, the educators found the *SciGirls* CONNECT and PBS Kids websites *very valuable*. No information was gathered about the perceived value of the *SciGirls* Parents website. Of the educators who provided information about use, more than half used the *SciGirls* CONNECT website, just under half used the *SciGirls* PBS Kids website, and about one-sixth used the *SciGirls* Parents website.

## **Part 2: In-depth partner background evaluations**

Part 2 presents the findings from a more in-depth, pre-training evaluation of 9 *Season Two* partner organizations, including their expectations for the training and their outreach programs.

### Background information

Prior to their trainings, the 9 partner organization educators pointed to four main benefits of the *SciGirls* opportunity: additional resources and programming opportunities, program expansion, a new or expanded focus on young women, and/or a new or renewed focus on STEM.

Though most of the educators noted that their organizations already used gender equitable teaching strategies, they generally indicated that their staff members were *moderately knowledgeable* of gender equity and STEM issues, *slightly knowledgeable* of *SciGirls* Seven and *SciGirls* activities, and *not at all knowledgeable* of *SciGirls* videos.

### Expectations for *SciGirls* training

Prior to the training, the educators hoped to gain new knowledge about the *SciGirls* resources and strategies, and to be leaders within their organizations. They also hoped their staff would gain knowledge about *SciGirls* and STEM education, develop general professional skills, and come out of the training with increased commitment, understanding, and confidence. Finally, they expected their collaborating partners to provide support while gaining insight and knowledge.

### Outreach goals and expected use of *SciGirls* resources and strategies

The educators pointed to two main goals of their outreach efforts: educating and empowering young women interested in STEM, and using the opportunity to build on or strengthen their programs.

All but one of the educators intended to use the *SciGirls* activities. Many also noted that they planned to use the videos/clips and the *SciGirls* PBS Kids website.

When asked to approximate the number of girls they expect to reach with their programs, responses ranged from 20 to 10,000+, with the total number being 21,555. The majority of educators noted that they would primarily be working with underserved populations (such as economically disadvantaged, rural, and/or Hispanic/Latino youth, among others), while others said their programs would reach diverse groups.

## **Part 3: In-depth follow-up partner evaluation *SciGirls* training**

Part 3 presents the findings from the same 9 partner organizations' use of the *Season Two* resources, lessons learned from attending the training and using the materials, and the impact of the resources and training.

### *SciGirls* training

The trainings arranged by the 9 partner organizations were attended by a range of participants: coworkers/staff, collaborating partners, educators, afterschool educators, and volunteers, among others. Overall, the training met the expectations educators had for themselves and their staff, and about half of the group thought the training met their expectations for their collaborating partners.

When asked what they found most valuable about the training, educators pointed to the new materials and information, a chance to walk through the hands-on activities, and the low cost of activity implementation, among other aspects. They most often pointed to the review of resources that they are unlikely to use as the least valuable aspect.

The majority of educators noted that the training positively impacted their and/or their staff members' thinking about gender equity teacher strategies and thought the training prepared attendees to implement the *SciGirls* activities in their communities.

### *SciGirls* outreach program implementation and longer term outcomes

The educators used or intended to use the *SciGirls* materials with afterschool programs, camps, and science centers, among other uses. Details of the 9 groups' outreach efforts may be found in the full report.

Each educator used or planned to use a combination of video, print, and/or web resources as best suited his/her needs and access to facilities/equipment. In general, the educators were pleased with the resources

and thought they compared favorably to other materials they had used to address girls' science learning.

All of the educators felt that they were or would be able to apply the *SciGirls Seven*. Though most said that they did not intend to use any formal methods to assess the gains made by girls in their programs, a few noted that they informally saw positive changes in the girls, including increased confidence, openness to collaboration, and creativity.

When asked what a program like *SciGirls* could do to increase its chances for sustainability, the largest group of educators suggested that *tpt* continue to make new episodes and resources, both online and in print, among other ideas. On the subject of what *tpt* could do to support their efforts moving forward, the educators made a range of recommendations, including increased communication with *tpt*, additional funding, and new materials.