



Project Overview

Latina SciGirls will test the hypothesis that the *SciGirls* program, when augmented to address specific barriers to STEM engagement of Latinas, ages 8-13, and their families, will promote the development of positive STEM identities.

The program's objectives are to:

- Develop a six-episode Spanish-language television series following groups of middle school Latinas and their Latina STEM professional mentors
- Develop and evaluate a series of 12 Spanish-language role model video profiles of Latina STEM professionals
- Provide the *SciGirls* network of Latino-serving partner organizations with resources to connect Hispanic girls and families with Latina STEM professional role models.
- Investigate the development of positive STEM identities for Latinas, ages 8-13, and their families.



On Air: *Latina SciGirls* includes six half-hour television episodes of *SciGirls* filmed in Spanish, showing groups of girls and their Latina STEM mentors investigating culturally relevant science and engineering problems. Mentors and girls will be filmed in diverse communities across the U.S. and represent various cultural backgrounds and ethnicities. Episodes will air on PBS and Univisión.

Online: We will also create a series of family and girl-friendly online video profiles of Latina STEM professionals showing the daily life of a female scientist or engineer. These will be used in outreach programs with Hispanic youth and families.

On the Ground: We will provide opportunities to connect girls and their families with in-person Latina role models via community outreach in diverse communities across the country. Because family participation is crucial, outreach partners will engage siblings, parents, grandparents and other caretakers in *Familia Fiestas*, opportunities for hands-on activities, media viewing, role modeling and general STEM celebrations. We will help partner organizations recruit at least local Latina STEM professionals to speak to girls and families about their work and everyday lives in outreach programming and at *Familia Fiestas*.

SciGirls

Latina SciGirls: Addressing Barriers to Promote Middle School-Age Hispanic Girls' Positive STEM Identity Development through Media, Outreach and Role Models

NSF Award No. 1515507

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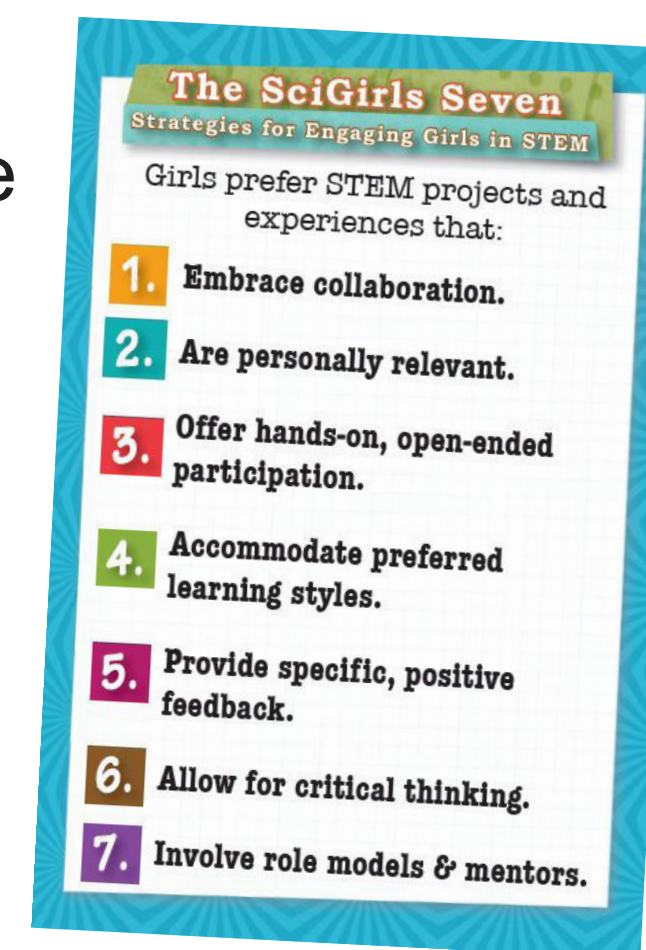
Latinas Underrepresented in STEM: Barriers to STEM Engagement

The Hispanic population is the largest ethnic minority group in the U.S. By mid-century, the Hispanic population is expected to reach 98 million, one-fourth of the total U.S. population. Hispanics account for one in four people under the age of 18. Hispanic children represent the largest segment of the nation's early childhood population, so their academic and professional success is crucial to the U.S. economy. Six million Hispanic children are living in poverty. Of these children, two-thirds have immigrant parents. STEM education addresses the cycle of poverty, giving Hispanics a path towards attaining a living wage, and providing a bridge to success. *Latina SciGirls* will confront these challenges by addressing specific barriers to STEM engagement among Hispanic girls including: gender and ethnic stereotypes, low exposure to STEM role models and professions, lack of knowledge of STEM fields. These barriers affect the ability of girls to forge deeper and more personally relevant STEM connections, key indicators of positive STEM identities.



About SciGirls

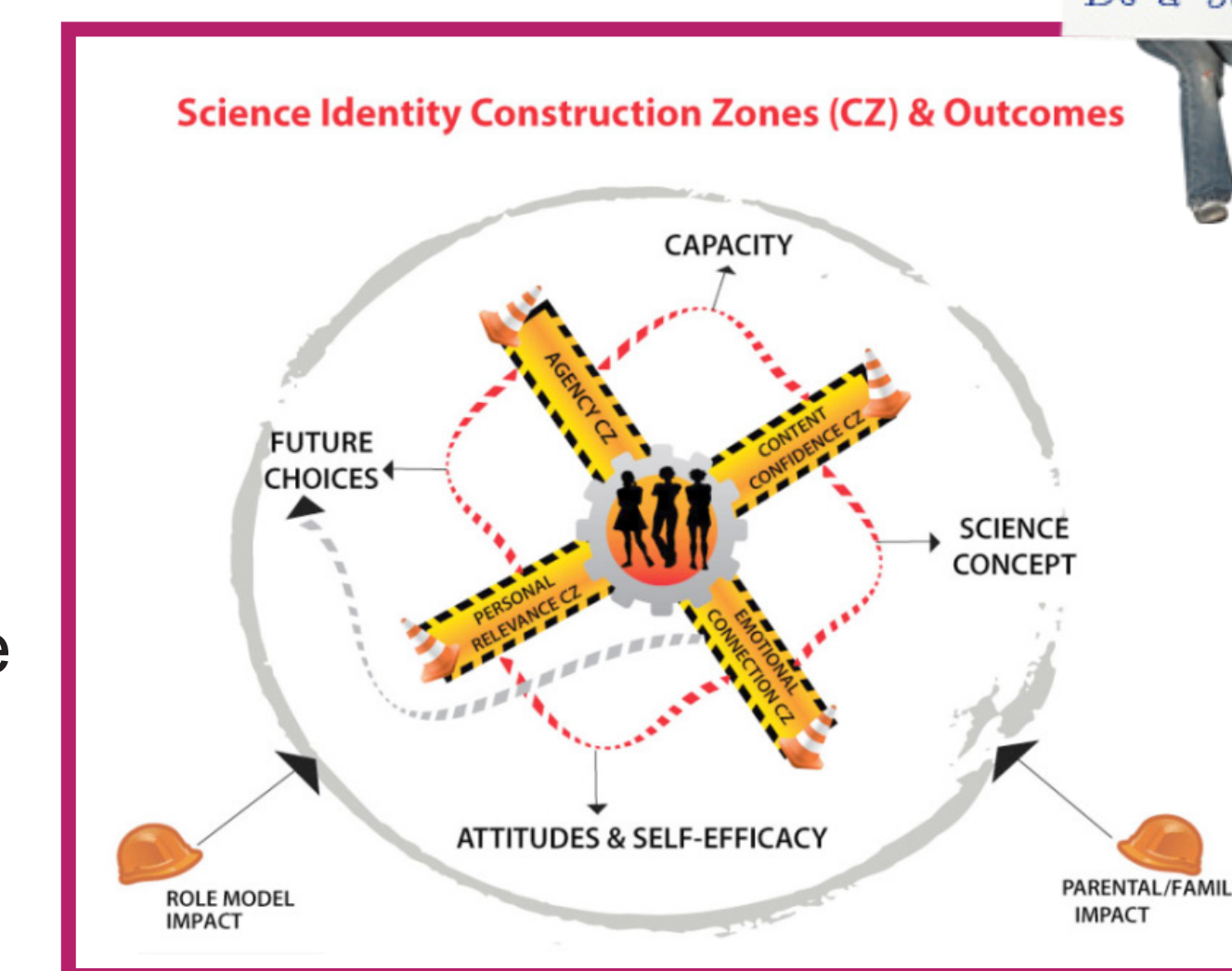
SciGirls is a groundbreaking project designed to engage girls ages 8 -13 in science, technology, engineering and math, or STEM. At the heart of *SciGirls* is an Emmy Award-winning PBS television series, website and outreach initiative produced by Twin Cities Public Television in St. Paul, Minnesota. Each half-hour *SciGirls* episode follows the STEM adventures of real-life middle school girls mentored by female STEM professionals. *SciGirls* episodes have been broadcast over 55,000 times on 492 PBS channels garnering an estimated 25.2 million gross viewer impressions and reaching 92% of U.S. TV households.



The NSF projects *SciGirls en Español* and *SciGirls en la Familia* engaged 1200 Hispanic girls and 1000 family members in STEM using research-based inquiry strategies and dubbed Spanish-language videos. Evaluation showed the programs positively influenced participants; raised families' awareness of opportunities available to their daughters; and increased awareness of Latino families' needs related to their daughters' science education and careers. Evaluation also indicated a strong desire for episodes featuring Spanish-speaking girls from Latino communities.

Research Study

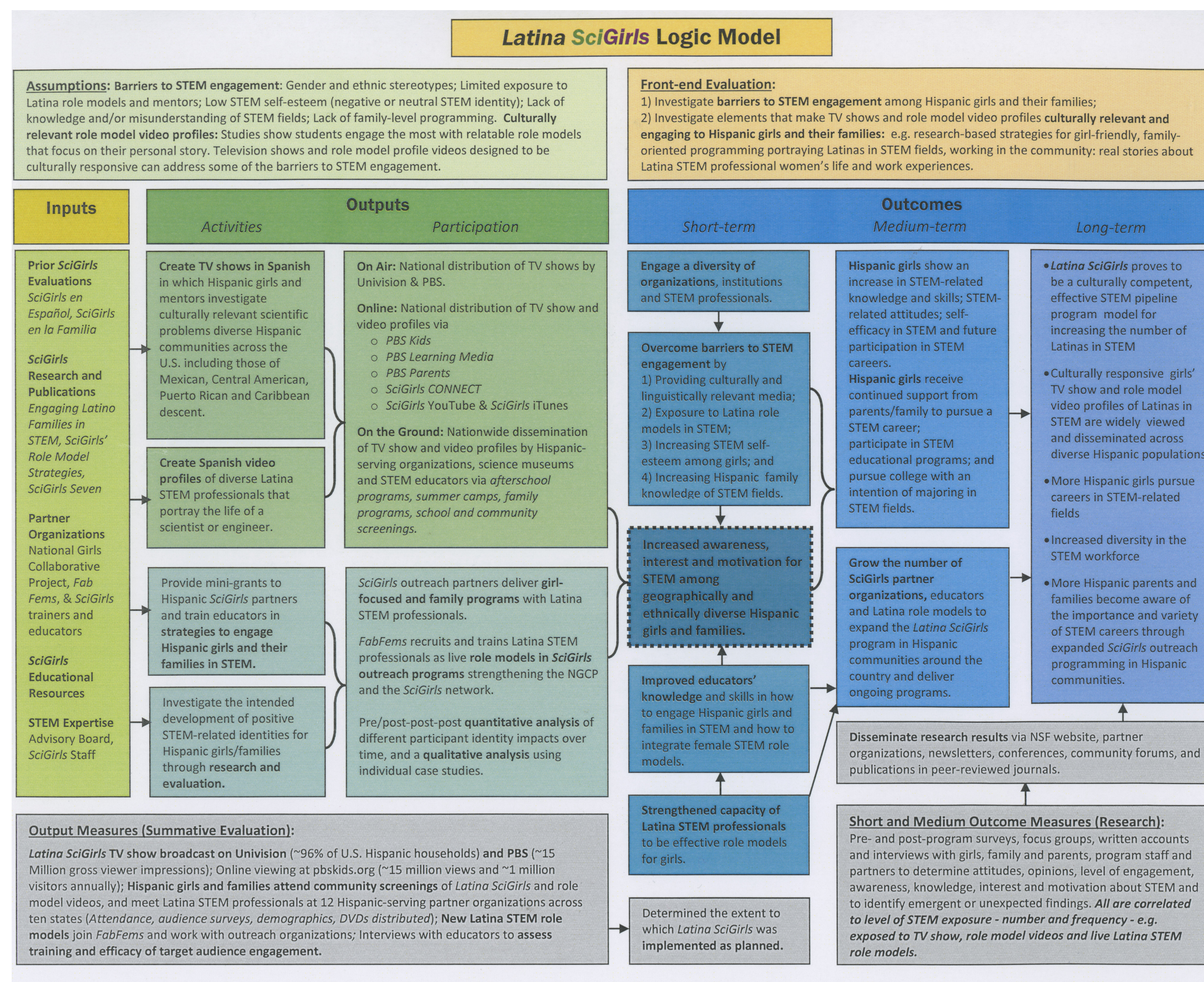
The research study conducted by the University of Colorado-Boulder will investigate the hypothesis: The *SciGirls* model, when augmented to address specific barriers to STEM engagement of Latinas ages 8 to 13 and their parents, will promote the development of positive STEM-related identities. In this capacity, *Latina SciGirls* will investigate the girls' personal experiences engaging with the project deliverables and how those experiences contribute to their STEM-related identity development against cultural and gender-based stereotypes and within the context of prevalent anti-science attitudes among American youth.



Project Evaluation

An external evaluation by Knight Williams, Inc. will include front-end, formative and summative phases. The front-end evaluation will involve stakeholders in the development of a Spanish language program. Formative evaluation will include focus groups of girls offering their reactions to the program. Summative evaluation will capture the reach of the broadcast, online components and community events. Evaluation questions include:

- 1) To what extent do the girls and their family members find the girls and STEM professionals featured in the episodes, profiles and in-person events to be effective role models?
- 2) Do they find the programs' selected topics relevant to their everyday lives?
- 3) To what extent does the outreach program increase STEM awareness, interest and motivation such that the girls and their family members feel motivated to further explore some aspect of STEM or STEM careers as a result of participating?



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