Welcome to the Computer Science Collaboration Project and National Girls Collaborative Project

Webinar:
Engaging Underserved Youth: Strategies for Family Involvement

We will begin at 11 AM Pacific/ 2 PM Eastern
Webinar Agenda

1. Overview of NGCP & CSCP
2. Engaging Underserved Youth: Strategies for Family Involvement: Neiri Carrasco, Director, Yakima Valley/Tri-Cities MESA & Vicky Raya, Diversity Program Manager, EdLab Group
3. Questions & Answers
4. Closing (webinar evaluation and upcoming webinar information)
National Girls Collaborative Project

The National Girls Collaborative Project (NGCP) brings together organizations that are committed to informing and encouraging girls to pursue careers in science, technology, engineering, and mathematics (STEM).

www.ngcproject.org
Project Goals

1. Maximize access to shared resources within projects and with public and private sector organizations and institutions interested in expanding girls’ participation in STEM.

2. Strengthen capacity of existing and evolving projects by sharing promising practice research and program models, outcomes and products.

3. Use the leverage of a network or collaboration of individual girl-serving STEM programs to create the tipping point for gender equity in STEM.
Project Focus
2011-2016

• Strengthen the capacity of girl-serving STEM programs to effectively reach and serve underrepresented girls in STEM.

• Increase the effectiveness of Collaboratives by providing professional development focused on sustainability, organizational effectiveness, and shared leadership.

• Maximize K-12 school counselors’ access to and use of relevant, high-quality resources that increase awareness of barriers to girls’ interest and engagement in STEM.
Computer Science Collaboration Project

The Computer Science Collaboration Project aims to efficiently increase participation of underrepresented groups in computer science opportunities and activities by effectively building collaborations between K-12, community-based organizations, higher education, and industry.

www.cscproject.org
Project Goals

• **Build collaborations** between CSC Project participants to increase participation and engagement of *underrepresented youth* in computer science opportunities and activities.

• **Maximize access to shared resources** among project participants that are interested in expanding and broadening participation in computer science.

• **Strengthen the capacity** of existing and evolving *K-12 formal and informal programs in computer science* by supporting the use of exemplary practices.
Engaging Underserved Youth: Strategies for Family Involvement

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Overview

- Underserved and Minority Student Statistics
- MESA and Acceso a la Ciencia Introduction
- Research-based Exemplary Practices for engaging underrepresented youth
- Examples and Success Stories
- Questions
Underserved and Minority Students

Broad Participation Matters

1) Our sources for the future Science & Engineering workforce are uncertain.

2) The demographics of our domestic population are shifting dramatically.

3) Diversity is an asset.
Underserved and Minority Students

• “In 2007, underrepresented minorities comprised 38.8 percent of K-12 public enrollment…”

• “At present (2009), just 2.7 percent of African-Americans, 3.3 percent of Native Americans and Alaska Natives, and 2.2 percent of Hispanics and Latinos who are 24 years old have earned a first university degree in the natural sciences or engineering.”
The YVTC MESA mission is to provide enriching opportunities in STEM for underrepresented students in grades 6-12. We accomplish this through a partnership of higher education, school districts, industry and business, government, community organizations, families, and alumni.
Participating students receive educational enrichment experiences and practical help needed to prepare for university-level studies in a variety of science and technology related fields. 90% of YVTC MESA students are underrepresented minorities.
Acceso a la Ciencia

Acceso a la Ciencia began as a four-year (2006-2010) NSF grant project funded by the National Science Foundation. Partners combined their expertise to create a bilingual informal science education resource for Latino communities in the Yakima Valley/Tri Cities area of Washington state.
Acceso a la Ciencia

The project focus is community engagement via bilingual (Spanish) exhibits and shows, parent involvement, a youth internship, and family science workshops. Grant-funded project partners included YVTC MESA, Washington State University Tri-Cities, and Pacific Science Center in Seattle.
Exemplary Practices for Engaging Underrepresented Youth in CS

I. Offer Culturally Targeted Recruitment and Programming
II. Foster Family Involvement
III. Carefully Select and Train Staff
IV. Include Computer Science-Related Content
V. Address the Image of Computer Science

Developed for NSF funded Computer Science Collaboration Project, 2012
Fostering Family Involvement

• Meaningfully Engage Families

• Educate Family Members

• Provide Culturally Competent Staff
Meaningfully Engage Families

- Student Recognition Events
- Field Trips
- Middle School Conference workshops
Meaningfully Engage Families

• Student Recognition Events for Families
Meaningfully Engage Families

• Middle School Conference workshops
Meaningfully Engage Families

- Field Trips (Oregon Museum of Science and Industry)
Educate Family Members

• Assess topics parents want to learn more about

• Connect with parents to talk about your program and its benefits

• Bring up students’ interests and strengths and bring these up with family members
Educate Family Members

• Assess topics parents want to learn more about
Educate Family Members

• Connect with parents to talk about your program and its benefits

Parents, partners and university faculty got to hear about program benefits in students’ own words.

I have been in the Acesso Program for almost two years. I heard about the Acesso Program through family and Acesso staff. I joined because it was a good learning experience for me to go through. I never pictured myself being in the position in which I had to make public presentations, and interact with kids with science activities.

2009-2011 Acceso Intern Lety Luna
Educate Family Members

- Bring up students’ interests and strengths and bring these up with family members

- First year at Columbia Basin Community College
- 2010-2011 Intern
- Current volunteer
Culturally Competent Staff

• Build trust and ask for input from families

• Demonstrate that participant feedback is key

• Be aware of challenges to parent participation and open to making changes that address these
Culturally Competent Staff

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• Be aware of challenges to parent participation and open to making changes that address these
Outcomes for Event Numbers
Outcomes for Participation

![Attendance Graph]

- **2007**: 1200
- **2008**: 3400
- **2009**: 3100
- **2010**: 6300
- **2011**: 10000

**Legend:**
- Attendance
Outcome: Student Success

Roman Lara:
• Junior Ambassador at Washington State University Tri Cities
• President and founder of Hispanic Cultures Club
• Continues to volunteer for Acceso events
Outcome: Life past the grant

Silvia Ramirez:
- Freshman at Washington State University Tri Cities
- NEW Acceso Program Coordinator
Parent Comments

Any other comments?

“Si porque seguimos aprendiendo cosas nuevas, interesantes, y a la vez compartimos con nuestros hijos.” (Yes because we keep learning new, interesting things and at the same time share with our children.) – Mother

“Me gusto y lo disfrute completamente todo. El que la maestra diera la presentación en una manera bilingüe me animo a venir otra vez.” (I liked it and enjoyed everything completely. The teacher’s bilingual presentation encouraged me to come back.) – Mother
Resources

- Exemplary Practices for Engaging Hispanic/Latino(a) Youth in Computer Science

- Harvard Family Research Project
  [http://www.hfrp.org/family-involvement/projects](http://www.hfrp.org/family-involvement/projects)

- Bridging Cultures Project
  [http://www.wested.org/cs/we/view/pj/26](http://www.wested.org/cs/we/view/pj/26)

- Family Science
  [http://www.familyscience.org](http://www.familyscience.org)
Questions?
Additional Project Resources

Program Directory
- www.ngcproject.org/directory (NGCP)
- www.cscproject.org/index.php?q=pd (CSCP)

Facebook
- National Girls Collaborative Project
- Computer Science Collaboration Project

Archived Webinars
- www.ngcproject.org/resources/webcastarchive.cfm (NGCP)
Additional Project Resources

Upcoming Webinars

*Bringing STEM Learning to Public Libraries: Collaboration and Resources for Librarians*
February 27, 2012, 11:00 AM - 12:00 PM Pacific
Register: [http://www.ngcproject.org/events/register.cfm?eventid=235](http://www.ngcproject.org/events/register.cfm?eventid=235)

*CSTA: Services and Resources to Engage Youth in Computer Science*
April 5, 2012, 11:00 AM - 12:00 PM Pacific