Welcome to the NGCP and CS for All Teachers National Webinar

Building Bridges: How to Partner Across In-School and Out-of-School

October 20, 2017
Agenda

• NGCP vision and goals
• Benefits of creating bridge between in-school and out-of-school
• Exemplary practices from a program provider
• Exemplary practices from a teacher
• Questions and discussion
• Closing
NGCP Vision

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).
NGCP Goals

1. **Maximize access** to shared resources within organizations interested in engaging girls in STEM.

2. **Strengthen the capacity** of programs by sharing exemplary practice research and program models.

3. **Use the leverage of a network** to achieve gender equity in STEM.
National Network of Collaborative Teams
Speakers

Melissa Rasberry
Principal Investigator
CS for All Teachers

Cathy Law
Director
STEM Academy at Oregon State University

Deepa Muralidhar
Teacher
Computer Science
Roswell High School
Bridging the Gap

• Connecting in-school and out-of-school learning reaps huge benefits for kids.
• It also benefits the adults working in both programs.

  - Improved academics and attendance
  - Enhanced social/emotional learning
  - Higher employability rates
SONYC Program in NYC

• School’s Out New York City (SONYC) program expanded in 2014, more than tripling its enrollment from 18K to 58K students.
• An evaluation in 2014-15 found:
  – Youth participated in a total of 13 million hours during the school year, averaging 236 hours per student.
  – Program and school staff reported improvements in youth’s social/emotional development and their leadership skills.
  – Nearly 100% of parents would recommend the program to other families.
After School Matters in Chicago

- The After School Matters program in Chicago offers high school youth opportunities to participate in apprenticeships at the beginner, intermediate, and advanced levels.
- Research on the program discovered:
  - Youth developed content knowledge from their apprenticeship.
  - They also improved their employability skills, such as problem-solving, communications, and workplace mindsets.

Beyond the Bell

- AIR released a series of briefs and tools on how to better support students for success in school, work, and life.
  - Overview of work in afterschool and school-based settings to define social/ emotional learning
  - Self-reflection took for afterschool staff to reflect on their competencies and their abilities to support students

STEM Academy
Oregon State University

- In-School Outreach
- Summer Camps
- Girls Science and Engineering Clubs
- Workshops and Internships
CS Outreach at Garfield Elementary School

- **K-2**: Four 75-minute Lego robotics sessions; 2nd grade field trip to OSU; 10-12 mentors per session
- **3-5**: 4-8 sessions/year of CS activities
- Tech Club
- Parent Nights
Successes

• Increased confidence and interest in CS (all involved)
• Soft skill changes
• Greater acceptance of opportunities
• School-level changes
• Worked with PTA
• Built relationships and developed high level of trust with all parties
• Expanding to Middle School
Challenges and Lessons Learned

**Challenges**: Time (worked into the school SLOWLY); finding volunteers; space for materials; funding

**Lessons learned**: PLAN; think carefully about your goals; consider your unique population; reevaluate/modify often; **TAKE YOUR TIME**; involve the whole community (including parents and industry)
PROVIDING STUDENTS WITH OPPORTUNITIES by Partnering with Higher Education Faculty

- Partnering with Ga Tech
  - Retrain IT folks into teaching Computer Science into the classroom

- Piloting the early CS Principles – Big Ideas and Computational Thinking Practices

- Inviting Speakers in the classroom
  - Clubs – GATES (Girls having Access to Technology and Engineering
  - Competitions – Judges and Award Ceremonies

- NCWIT Aspiration Awards – Winners at the Local and National Level
Impact of GATE and NCWIT

- Industry and HigherEd speakers
  - Organized by the members (girls) in the club
  - Topic picked by the members of the club

- Aspirations Award
  - Work with the local college – Ga Tech – Recognize winners and runner-ups
  - Building an interesting portfolio
Successes

- Increased the number of girls taking computer science
- Feedback from the talks was that the students were inspired
  - had role-models to look up to
- NCWIT – all round incredibly inspiring experience
  - Resume builder
  - Lots of certificates
  - Recognition
Challenges & Lessons Learned

**CHALLENGES**
- Time – fitting this one “extra thing” into their Schedules
  - gotten better with CS courses now counting as a core graduation subject
- Funding

**LESSONS LEARNED**
- Promote the work you do
  - Flyers.
  - Advertise on the school website,
  - announcements
- Get the administrators involved
- Ask for help
  - Avoid burnout
Discussion Questions
Want to Connect with Other CS Teachers?

• Become a member of the CS for All Teachers virtual community of teachers (www.csforallteachers.org).
• All teachers from PreK through 12th grade are invited to join.
• Activities include:
  • Small discussion groups
  • Live webinars
  • HelpSquad support
• Follow us on Twitter @CSforAllTchrs.
Get Involved with NGCP

• Follow us on social media, @NGCProject.
• Attend local events and national webinars.
• Join your local Collaborative leadership.
• Collaborate to serve more girls in STEM.
Upcoming NGCP Webinar

November 2, 2017: Universal Design for Learning: Strategies for Teaching to Students of All Abilities

http://ngcproject.org/events
Thank you for joining us today!