Creating a Mentoring Pipeline into STEM, Health, and Teacher Education

5th Annual Bridging the Gap Conference
Mckimmon Conference and Training Center
Raleigh, NC
Tuesday, Oct. 25, 2016
Room 7A, 3:50pm
Overview

• Learn about a summer program that uses a formalized mentoring system to provide support for participants (ages 10-14) with older students (UNCW and high school) and community volunteers in an effort to increase students’ activities and career choices in STEM, health, and education areas.
About Junior Seahawk Academy

• First Academy - July 2005
• For Summer 2016, the Academy hosted two separate sessions for children ages 10-14.
• The first session, June 27-July 1st, had 30 students registered to participated in the one week session of the program.
• For session 2, there were 20 middle school students participating in this two-week session of the program.
• Participants engaged in 30+ hours of academic enrichment: mathematics, science, and technology (STEM, Health care education, Teacher education)
BIOGEN FOUNDATION Support

- This year through grant sponsorships the Junior Seahawk Academy participants were able to engage in numerous hands-on activities and visit informal science centers in the region.
- The Biogen Foundation NC: Ignite the Power of STEM awarded the academy support for hiring of staff, travel to STEM local sites and health activities, project supplies, and food. See new release:
  

- Each field experience was aligned with the theme of the Academy, students’ career interests and offered instructional tasks for students to engage in during the visits.
- The STEM activities and sites included:
  - Cape Fear Museum, Wilmington, NC, Fort Fisher Aquarium, and Cape Fear Community College, Downtown Wilmington, NC,
  - CFPUA water/sewer treatment facility, Yoga by Wilmington Yoga and Cardio Exercise at UNCW Recreation Center. The camp participants had expert professionals from STEM, Health, and Education communities, serving as mentors and presenters throughout each of the sessions.
Focus: Vertical Mentoring

- Mentoring was added to the program because it provided an opportunity to learn new skills and share ideas without participants feeling intimidated.

- It also provides essential functions, such as acceptance, guidance, protection, challenge, coaching, information-sharing, modeling and counseling that help persons to develop skills and confidence in their current or future career or position.

- We took this opportunity to explore the role mentoring has on both the mentor and mentee in STEM/Health settings by implementing our version of Mentoring toolkit (Vertical Mentoring) with an existing STEM program for middle school aged students.
Structure of Our Mentoring Process

• Vertical Mentoring Model:

  - This project focused on children as they interacted with peer and adult mentors throughout the program.

  - We wanted to see if this vertical mentoring approach would increase students' interests and confidence in these areas as well as build their social skills.
Be a Volunteer/Mentor Project

- We will have special guest and volunteers assisting with this program
  - Mentoring will take place in a group setting, not one on one with the students
  - Mentors will assist the students with the project and any concepts they are having trouble with
  - General supervision and assisting with camp activities
Assignment of Mentors

- Total high school student mentors: 6
- Total college student mentors: 6
- Both high school and college students participant in the program served dual roles as volunteers and student mentors

- Due to the small number of mentors in comparison to middle school participants in the program greatly influenced how we assigned/tagged student mentee.
- Some mentoring activities mentioned by mentors: career readiness; goal setting; preparing them and informing them about middle school and high school courses in their desired interest area; field trips to museums; solar oven construction; experiments during the camp.
Activities/Summary of Tasks

- Speed Meeting activity
- Take about 40 sec-1 min to find out information about your peers (Things you can share: Name, interests, career or job interest, what you want to be when you grow up)
- Overview of program and role of mentors/volunteers
- Campus tours, field visits
- Solar Oven design and development
- Planting Task
- Financial Topics
- Exercise and Relaxation tips
- Career Planning Time/Advising for future courses
Comments/Feedback

• Mentees:
  – I should try new things
    be cool and ability to remake project idea
  – Toothpaste is cool
  – Everything involves science
  – ....you have to be focused, follow directions...planning ahead
  – Always try
  – There is more to engineering then the design
  – Helping with project ideas
  – Completing worksheet

• Mentors:
  – I did not get a chance to mentor one on one with the students.
  – Helped with making sure materials for the sessions were distributed and students were on task and engaged
  – Went on field trips
  – Built solar ovens
  – I went on field trips with them. I also helped with some experiments.
What aspects of the mentoring experiences with the Junior Seahawk Academy would you change?

- The amount of time volunteers spent with the campers.
- I would spend more time with the kids. I didn't spend much time with them other than during the field trips.
Thank you for your time!

Presenters:
Angelia Reid-Griffin, Jr Seahawk Academy Coordinator
Amanda R Thompson, MAT Candidate, Elementary Education

For more information:
Angelia Reid-Griffin
g riffina@uncw.edu