

ABSTRACT

This summer Educate Maine's Project>Login ran a pilot Girls Who Code program in collaboration with the University of Southern Maine. This week-long, half-day camp brought together students identifying as females for coding activities, Women in Tech guest speakers, sisterhood activities, and a field trip to see women in tech at work.

This paper will summarize the pilot program, providing an overview of the goals and design, execution, and lessons learned, and next steps.

Goal

The goal of the pilot is to determine feasibility and best practices of running a "seed" GWC camp each summer, which would lead to the creation and promotion of GWC clubs during the school year as participants return to their communities. Attending students and teachers will gain familiarity with what GWC is and how clubs work, as well as getting a one-week exposure to coding, women in tech, what careers are available in technical fields, and how to get there.

Lessons learned from the pilot will be used to run an expanded version of the camp next summer, reaching more communities, students, and teachers.

Funding

Corporate and private sponsors funded the pilot camp. It was crucial that the camp be provided at no-charge to attendees, to ensure equitable access for attendees. Sponsorship levels were used to ensure adequate funding. Participants received "tech" goodie bags, which included a Microbit processor. Funding was also used to assist with the launch of camps within the students' communities.



"... (the camp) gave me an overview of what it would be like if I went to work in tech, how it would really be." Sarah – rising Senior at Deering High School

Design

To expose students and teachers to GWC, the camp was run using an agenda as close to GWC club meeting agendas as possible. Lessons learned from the pilot will be used to run an expanded version of the camp next summer, reaching more communities, students, and teachers.

The main components of the agenda were Sisterhood Activities, Project Work, Women in Tech Spotlights, and daily stand-ups at the end of each day. The middle day of the camp featured a field trip to System's Engineering, a local tech company and one of the sponsors of the camp. The camp concludes with students demonstrating their work to each other and guests.

Execution

The camp was held at the University of Southern Maine's Maker and Innovation Studio (MIST) lab. The lab provided netbooks for students to use if they did not arrive with their own equipment. Project>Login staff served as facilitators for coding, set-up and tear-down, and registration.

The students used the GWC tutorials, Microbit sample projects, and their own learning goals to select project work for the week.

Women in Tech Spotlights

Three separate events provided the opportunity for students to hear from and interact with local Women in Tech. Two speakers attended, and a panel of near peers consisting of Interns from camp sponsor System's Engineering.

Abby Eon, SVP and General Manager of PTC/Keypare, and Torey Penrod-Cambra, Chief Marketing Officer and Co-founder of Highbyte spoke with the students. Abby and Torey provided an overview of their journey to their current careers, as well as providing examples of how they used the four core strengths of GWC: Bravery, Resilience, Creativity and Purpose.

Three System's Engineering interns served as the panel of near peers, moderated by the company's internship manager. This round-robin panel allowed the panel members to speak about their experiences as college students majoring in technical fields, their internship experiences, and advise they had to offer for the students.



Field Trip!

Camp sponsor System's Engineering welcomed the camp attendees to their Portland office on the Wednesday of camp week. The students heard from System's Engineering technical staff about their paths as women working in technology. The students toured the office facilities, giving them the opportunity to see up close what a local tech company looks like.



Project Work

Students selected their own project work for the week on Monday. There was a variety of background levels in CS, as well as interests. Two students work using the Microbit devices – one to create a series of animations set to music, and one to create a Slapjack-style game using sensors and two Microbits. Several students used GWC tutorials to create games and animations using JavaScript or Scratch. One student chose to learn more about Python and CSS and created a website.

Demo Day!

On Friday the student's setup their creations at a table, so other students and guests could try out their code. Family members were welcomed to attend, to see what their loved ones had created during the week.



Local Coverage

Two Portland television stations reported from the camp during the final day – [WGME Channel 13](#) and [WMTW Channel 8](#). Students were interviewed about their experience in the camp and got a chance to show off their creations.



Lessons Learned

As a pilot program we retrospectively analyzed the camp, to celebrate things that went well, and learn from things that could be better next time.

Celebrate	Learn
Women in Tech, near peer panel, and Field Trip – students got a lot from these	Obtain commitment from additional schools/communities to attend
Microbit – students enjoyed these and used them for learning	Facilitators go through GWC facilitator training
Planning and agenda paid off	
USM MIST lab – great facility	

Next Steps

To expand the camp for next year, early planning will be required. This will involve obtaining adequate funding for a larger-scale camp, soliciting, and obtaining commitment from additional communities to attend, and ensuring adequately trained staff is available to accommodate a higher number of students.

The pilot proved that the format of the week-long camp is effective in introducing students to both coding, and the GWC format.