

# Making Waves in K-12 Perceptions of Computing

## The Evolution of Outreach Programs

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### Overview

Outreach programs are an excellent way for women in computing today to affect future generations of computer scientists. By showing young students the diversity and excitement of computer science, we can change their perceptions of computing, erase harmful stereotypes, and make it an appealing career path for young women and minorities. Participating in outreach programs also offers benefits to the presenters: practice at public speaking and an increased sense of confidence. Maintaining a successful outreach program, however, can require a tremendous amount of work. In this presentation, we offer practical advice on how to sustain an outreach program.

### Panel Discussion Topics

#### *Continual funding*

Continued funding is crucial for the success of outreach programs. Sources of funding may vary. Stakeholders must expect that success requires a long term commitment of ongoing support, and that success builds year after year.

#### *It's all about the people*

The success of the outreach program depends on identifying a core set of volunteers. The best outreach presentations teams are often those with a good mix of experienced and new students. Students tend to develop a stronger sense of belonging to their academic program, directly impacting retention. When an outreach program grows, it is crucial to have a fulltime coordinator to oversee outreach and retention efforts.

#### *Logistics and support*

An outreach program needs both faculty champions and staff who are devoted to the outreach efforts. The program must be incorporated into the faculty/department culture and not be a stand-alone program. Senior administrators must go beyond simple financial support in order for the program to be successful. There is also a need for budgeting, bookkeeping and accounting, clerical help and scheduling.

Ideally, an administrative person is devoted to the outreach program, thus providing other institutions a reliable contact person. This person would also be in charge of visits, travel, webpage, publicity, etc.

#### *Improve the presentation – tune it to feedback*

Organizers should always look for ways to improve the presentation and keep it up to date and exciting by adding new material and most importantly by tuning the presentation to feedback from previous audiences, new presenters and others.

#### *Build a supportive community*

Building a sense of community is crucial because it creates a naturally supportive environment for the outreach program, computing departments, and local K-12 schools. Communities can help increase the volunteer base from both faculty and students, retain first year students, support current students, and make female students feel more comfortable in the computing departments. Mechanisms to create a community include: setting up events with speakers, group games, sponsoring events with food, and encourage faculty to attend and support events. Building a strong relationship with K-12 school principals, counselors and teachers is also important

#### *Evaluate your success*

Quantitative and qualitative analysis of success and progress can be done through surveys, focus groups, comparison of graduation data, increased media coverage, identifying new university students who have attended outreach events. Outreach organizers must find ways to articulate their success to administrators and sponsors.

#### *Expand the playing field*

Besides high schools, it is important to also consider other groups such as middle schools, colleges, summer camps, teachers, community outreach programs, special interest groups (school for the deaf), and science tech fairs.