RECRUITING MESSAGES FOR
MORE AND DIFFERENT STUDENTS

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WHAT IS WOMEN’S REPRESENTATION IN YOUR DEPARTMENT?
Actively Recruit Diverse Students

Consider students & their influencers

Use messages that persuade
Your audience is students & their influencers

Influencers
- Family
- Friends
- Other teachers
- Counselors
- Coaches
- Group leaders
- Celebrities
- Boys

Girls
- College-bound girls
- Vocational track
- Honor Society
- Math class
- Math club
- Chess club
- Sports teams
- Music & Art
- Friendship groups

Think broadly about potential audiences
Go beyond geek
ANALYZE YOUR AUDIENCE
For teen girls, think about

What they value
- How you can fit their values / meet their needs

What their competing goals are
- Interest in saving the planet
- Desire to spend time with friends

What influences their behavior

How you can overcome objections like,
- CS is too hard and will jeopardize my GPA
Interest/values and expectation affect choice

Interest is crucial for career-oriented choices

Interest + Expected positive outcome → Achievement activity choices
RELATE COMPUTING TO THEIR INTERESTS
Males and females have mostly similar interests

Women are more interested than men in protecting the environment

Men are more interested than women in war & military technology

Women will work for less pay than men

So explaining how computing can help the environment might especially appeal to girls
Young Girls’ Career Interests

<table>
<thead>
<tr>
<th>Career code</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicine</td>
<td>104</td>
<td>16%</td>
</tr>
<tr>
<td>Don't know</td>
<td>94</td>
<td>14%</td>
</tr>
<tr>
<td>Veterinarian</td>
<td>60</td>
<td>9%</td>
</tr>
<tr>
<td>Law</td>
<td>47</td>
<td>7%</td>
</tr>
<tr>
<td>Arts (singer, painter, etc)</td>
<td>45</td>
<td>7%</td>
</tr>
<tr>
<td>Science (e.g., chemist, foren)</td>
<td>43</td>
<td>6%</td>
</tr>
<tr>
<td>Engineer</td>
<td>31</td>
<td>5%</td>
</tr>
<tr>
<td>Sports</td>
<td>27</td>
<td>4%</td>
</tr>
<tr>
<td>Law enforcement</td>
<td>27</td>
<td>4%</td>
</tr>
<tr>
<td>Teacher</td>
<td>23</td>
<td>3%</td>
</tr>
<tr>
<td>Architect</td>
<td>15</td>
<td>2%</td>
</tr>
<tr>
<td>Work with technology</td>
<td>14</td>
<td>2%</td>
</tr>
</tbody>
</table>

These goals appear to compete with computing but you could align them with computing.

Source: 715 survey responses from middle school girls at a science, technology, engineering recruiting event.
What typically influences teen girls?

Belonging, with potential to have status in the group
  » So, recruit groups instead of individuals

Role fulfillment - conforming to expectations
  » So, talk about ways computing is social, helps people, lets you give back to your community
CS majors were attracted by...

- Path to a helping occupation
- Defy stereotypes
- View computing as communication
- Self-expression through computing
- Persuaded by friends
- Positive computing experiences
- Encouraged
- Rewarding flexible career
- Math or logic confidence
- Enjoy programming

Source: Focus groups with 182 CS students in 16 programs
TAILOR YOUR MESSAGE CONTENT TO YOUR AUDIENCE
Important Messages for Students

Tell them you want them to study computing
Tell them why they would want to
Dot Diva market research identified appealing messages

We're idealistic .................
Dot Divas dream of a better world. We imagine:
- devices to track endangered dolphins
- GPS systems for people who are blind
- digital medical records in every emergency room
We're passionate about the big picture—improving life.

We're about style ..............
Think of your favorite phone app—a Dot Diva may be behind it! Logical and intuitive, visionary and practical, we can create:
- a virtual fashion show for a hot new designer
- video games for girls by girls
- a digital gallery for local artists
We design things people love.

... and down-to-earth.
Everyone has dreams about making a difference. Computing makes ours come true. We design amazing things:
- smart phones that are smarter
- software to help archaeologists decode ancient languages
- mobile forensics labs for instant analysis at crime scenes
It's a great feeling knowing we're part of the solution.

... and function
Almost every breakthrough in medicine, communications, and going green depends on computing. Dot Divas develop:
- better ways of scanning DNA for childhood diseases
- e-readers that hold an entire library of books
- satellite reforestation technology to reduce our carbon footprint
We're leading the way to the future.

We're passionate about our work .................
It stretches our imaginations, calls upon our problem-solving skills, and takes the power of teamwork. One of the best rewards of being a Dot Diva is working with lots of great people.

... and always in demand.
Computing is the wave of the future, and tons of exciting new jobs are being created all the time. Plus, the pay is great—the average starting salary for a computer science major is $57,693!*

*National Association of Colleges and Employees Salary

www.dotdiva.org
Take care what you communicate

**Beware** of communicating or reinforcing stereotypes

**Avoid** comparisons with other groups

e.g., girls v. boys

Do most 15 year-old girls want to grow up to be Dilbert???

**Do not** perpetuate stereotypes by repeating them

**Refrain** from implying only geniuses succeed in CS
What messages influence parents?

Research shows that parents have different career expectations for their sons and daughters:

- Want sons to persevere for the sake of future family responsibilities
- Want daughters to “be happy” in their career

So, tell parents that computing careers are enjoyable and offer financial independence.
What messages influence counselors?

Positive forecasts for
Job openings
Career trajectories
Pleasant work
Which Messages Do All Audiences Need to Hear?

- Strong job projections
- Great salaries
- Flexibility: industry, geographic
- Social relevance
- Work with others
- Time with family
Help them see they’ll succeed with hard work

- Interest
- Expected positive outcome

Expectation of success is crucial

→

Achievement activity choices
Stereotypes affect performance

Educational Testing Service Study:
Asking Gender Before AP Calculus Test
Hurts Girls, Helps Boys

Make it possible to succeed through effort
- Tell them that!
Convey Your Message

Go where the capable girls are

Recruit friendship groups so girls won’t be isolated

Personally extend invitations – “You’d be great at this”
Introductory courses are crucial

Use the course as a recruiting tool

- Inclusive pedagogy
- Tie concepts to interesting uses
- Inhibit grandstanding
- Collaborative learning
  - Encourage!!

See practice sheets on Harvey Mudd & UVA successes
Try tailoring your message content

Brainstorm ideas for effective messages

What will you say to young women to draw them into your CS classes?

Pair and share
What to Do If Talented Students Object

- CS is Boring
- Hard
- Machine-focused
- No jobs
- Who knows what it is?
College women say they avoid computing majors because

- Coursework seems uninteresting
- Coursework seems difficult
- Associated careers do not seem enjoyable
Overcome objections and biases

Have 1-1 conversations use student’s name
Listen & acknowledge student’s beliefs – “I understand why you think that CS is …”
Offer persuasive evidence – “… can I show you the actual numbers?” or “can I tell you about my former students?”
Assure the student s/he can succeed
Don’t let refusal be permanent

“Can we talk again before you choose your courses for next year?”

“If not now, consider CS in college”
Too much to do all by yourself?

LEVERAGE YOUR ASSETS
What assets do you have?

Alumni
Parents of former students
After-School Programs
  » e.g., Girl Scouts
Recruiting Materials from National Sources (e.g., NCWIT, CSTA)
NCWIT Award for Aspirations in Computing
NCWIT Award for Aspirations in Computing

» Identify, recognize, and encourage young women for their aspirations and achievements in computing

» A national award with local affiliate system

» Peer networking through Facebook group – mitigating the isolation girls experience

» Connect girls interested in computing with universities and employers
NCWIT Award for Aspirations in Computing
2010-2011 ASPIRATION AWARD AFFILIATES BY STATE

20 more local Awards in 2012
How do I participate?

Visit www.aspirationsaward.org for details.

Encourage girls to apply 9/15 – 10/31

Get involved with your local Affiliate.

Contact Ruthe Farmer (aspirations@ncwit.org) for more information.
Don’t forget to track your outcomes!

Do students in your classes go on to take more CS? Do they want to?

Is it similar for boys and girls?

Tell us, so we can invite you back as a speaker.
Questions?