Workshop 26: Recruiting Women

Schedule and outcomes

7:00-8:30  Identifying and locating “low-hanging fruit” and their influencers

8:30-9:30  Leveraging others’ work: Local programs, initiatives, and organizations that can help

9:30-10:00 Break

10:00-11:00 Developing messages that reflect women’s and girls’ values—and those of their influencers

11:00-12:00 Choosing media for communicating messages

12:00-1:00 Assessing your recruiting projects
Strategic Planning for Recruiting Women into Undergraduate Computing: Harvesting the Low-Hanging Fruit
An NCWIT Extension Services For Undergraduate Programs Workshop

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National Center for Women & IT
Identify “Low-Hanging Fruit”

Criteria

Largest majors

Contact possibilities already available

Your program and their interests
Majors with Demonstrated Math Competence
15 Largest Majors in the U.S.

Table 1: Bachelor's Degrees Awarded 2004-2005 in the U.S.

<table>
<thead>
<tr>
<th>Major</th>
<th>Degrees awarded</th>
<th>Major</th>
<th>Degrees awarded</th>
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<tbody>
<tr>
<td>Business</td>
<td>308,597</td>
<td>English language, literature</td>
<td>54,402</td>
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<tr>
<td>Social sciences</td>
<td>126,037</td>
<td>Computer and information sciences</td>
<td>51,291</td>
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<tr>
<td>Education</td>
<td>107,636</td>
<td>Liberal arts and sciences</td>
<td>45,006</td>
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<td>Psychology</td>
<td>85,997</td>
<td>History</td>
<td>31,493</td>
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<td>Visual and performing arts</td>
<td>78,955</td>
<td>Physical sciences, chemistry</td>
<td>18,970</td>
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<tr>
<td>Communication, journalism</td>
<td>73,146</td>
<td>Foreign languages, literatures, linguistics</td>
<td>18,473</td>
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<tr>
<td>Engineering</td>
<td>66,005</td>
<td>Mathematics, statistics</td>
<td>14,410</td>
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<tr>
<td>Biological, biomedical sciences</td>
<td>65,437</td>
<td>Source: National Center for Education Statistics, Data Digest</td>
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</table>
What About CS Might Interest Them?

Could they double major?
Do you have a minor?
Do you have tracks/emphases?
  • Computational biology
  • HCI
  • Media computation
  • Scientific computing
  • Graphics
  • Games

Other:
Do You Have Access to Students Already?

CS-Zero courses
Service courses (e.g., to engineering students required to take CS)
Literacy courses
Summer bridge

Other:
Locate Your Audience

**On Campus**
- Undecided students
- Introductory computing courses
- Computing service courses
- Student organizations
- Greek organizations

**Off Campus**
- High schools
- Community colleges
- Local businesses
Two audiences: Girls/women, their influencers

- Family
- Friends
- Teachers
- Guidance counselors
- Extracurricular group leaders
- Celebrities
- Boys
- Companies
Leverage Your Existing Assets

Tired of trying to do it all yourself?

Losing footing in your academic career?
Developing Your Recruiting Plan: 1

Answer questions on pp. 3-4

Review and add to pp. 6-7

Share your ideas for finding low-hanging fruit and who can help you get it
Tailor Message and Media

For Women and Their Influencers
Which Messages Do All Audiences Need to Hear?

Job projections (BLS): Computing and mathematical occupations will grow 25% by 2016
High salaries
Flexibility: industry, geographic
Social relevance
Work with others
Time with family
Go Beyond What Attracted Current Students

- Encouraged
- Math or logic confidence
- Enjoy programming
- View computing as communication
- Self-expression through computing
- Persuaded by friends
- Path to a helping occupation
- Defy stereotypes
- Focus on rewarding flexible career
- Men and Women

Women declared a computing major

Source: Focus groups with 182 CS students in 16 programs

More than Men
Specific Audiences’ Needs

What existing NEED or GOAL or INTEREST of the audience can be met by studying CS?

How will these be met?
Overcoming Objections, Biases

Cognitive dissonance: we attend to what we already believe or want to believe

Offer quality evidence

Assure them that they can be successful
What media do they pay attention to?

Direct contact (e.g., send students to high school classes)

Media (television, radio, newspapers)

Fact sheets

Posters (e.g., from Grace Hopper conference)
Make Your Message Stick

Use mnemonic devices
  • Images
  • Rhymes
  • Acronyms

Use multiple media
Will it Really Work?

Test with intended audience
Focus group, individuals
Encourage honesty
Ask them what your message means to them and whether it influences their intended behaviors

*If recycling existing materials, test these, too!*
Practice Tailoring Messages

In discussion groups, brainstorm messages for women and their influencers

- Advisors on campus
- Undeclared majors
- Teachers
- Biology majors
- Guidance counselors
- Undeclared engineering students
- Career services/financial aid
- Campus paper
- High school students
- Other
Track and Report Results

Women's Representation in Computer Science
Source: CRA Taulbee data and University enrollment data

- Taulbee CS bachelor degrees
- University CS declared majors
Measure Your Progress over Time

Evaluate & Report Your Results

- Evaluate progress based on evaluation and feedback.
- Record your activities, who you contacted, what you said, and who responded.

Progress

- Identify essential elements and barriers.
- Investigate your success to identify potential solutions.

Recruitment Goal:

Formative Evaluation:

Attract more women of all colors into computing.

Evaluate how your recruitment is progressing and changes in their interest and barriers faced.
Track Your Numbers

**Annual Summative Evaluation**

**Enrollment Yield from Recruitment Initiatives**

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<tr>
<th>Initiative</th>
<th>Date</th>
<th># Female Contacts</th>
<th># Subsequent Enrollees</th>
<th># Male Contacts</th>
<th># Subsequent Enrollees</th>
<th># Minority Contacts</th>
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**Calculate ENROLLMENT YIELD from each initiative for each sex as**

\[
\text{ENROLLMENT YIELD} = \frac{\text{# Subsequent Female Enrollees}}{\text{# Female Contacts}}
\]
For More…

www.ncwit.org

Extension Services for Undergraduate Programs

Feedback for us regarding the Workbook?