Leading Girls in Technology
...a transformative solution for libraries

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Macalester College
DeWitt Wallace Library
The forces at play

• Desire to be an active participant in changing the demographics of our profession

• Drive to more deeply connect the work of the library to the college’s broader mission in new and expanded ways
The catalyst

Kimberly Bryant

Libtech 2013
The catalyst

Kimberly Bryant, Founder Black Girls Code

**Our Vision:** To increase the number of women of color in the digital space by empowering girls of color ages 7 to 17 to become innovators in STEM fields, leaders in their communities, and builders of their own futures through exposure to computer science and technology.
Lack of racial/ethnic diversity in librarianship

Lack of gender diversity in technology

Lack of diversity in library IT positions

Goal:
Create technology skill-building opportunities for K-12 students from historically underrepresented populations. Provide an emphasis on librarianship as a viable professional option as a small contribution to changing the demographics of our profession.
What we know:
women in computing
What we know: diversity in librarianship

Membership remains largely unchanged since ALA began collecting these characteristics. Not dissimilar from the library profession overall, ALA members are:

- Predominantly white (87.1%). 3.9% of the membership listed their ethnicity as Hispanic or Latino. In describing their race/family origin, members selected the following responses:
  - 87.1% White
  - 4.3% Black or African American
  - 3.7% Other
  - 3.5% Asian
  - 1.1% American Indian or Alaska Native
  - 0.3% Native Hawaiian or Other Pacific Islander
What we know: diversity in librarianship

ALÁ Gender Distribution

- Female: 81%
- Male: 19%

http://www.ala.org/research/initiatives/membershipsurveys
What we know: diversity in library IT

“At present, the library has a dichotomized workforce of female librarians and male IT workers.” - Lamont

<table>
<thead>
<tr>
<th>Year</th>
<th>Gender</th>
<th>Department Heads</th>
<th>Salary</th>
<th>Years in Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004–5</td>
<td>Women</td>
<td>32</td>
<td>76,764</td>
<td>18.9</td>
</tr>
<tr>
<td></td>
<td>Men</td>
<td>60</td>
<td>76,060</td>
<td>16.9</td>
</tr>
<tr>
<td>2005–6</td>
<td>Women</td>
<td>32</td>
<td>78,767</td>
<td>19.4</td>
</tr>
<tr>
<td></td>
<td>Men</td>
<td>52</td>
<td>79,680</td>
<td>18.4</td>
</tr>
<tr>
<td>2006–7</td>
<td>Women</td>
<td>26</td>
<td>81,435</td>
<td>18.2</td>
</tr>
<tr>
<td></td>
<td>Men</td>
<td>52</td>
<td>82,409</td>
<td>17.6</td>
</tr>
<tr>
<td>2007–8</td>
<td>Women</td>
<td>27</td>
<td>87,107</td>
<td>18.8</td>
</tr>
<tr>
<td></td>
<td>Men</td>
<td>51</td>
<td>87,136</td>
<td>18.8</td>
</tr>
</tbody>
</table>

The library profession is not immune to the gendered nature of technology just because it is a female-intensive profession. There is no doubt the popular image of librarians rarely includes images of librarians as technologically adept. More men work with technology or in tech-related areas (in libraries), they earn more while in these positions, and they publish in more technology-focused journals.

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Our vision

Logo credit: Gozong Lor and AdvanceIT MN
Getting our ducks in a row
Laying the groundwork

27 months from “the spark of the idea” to fruition.

- Wrote a concept piece. Revised as I learned.
- Partnership with BGC.
- Talked to everyone and anyone who I thought would be interested or concerned.
- Got involved in the STEM movement in K-12 in my community.
- Volunteered at events like Microsoft Digigirlz, Grace Hopper, Black Girls Code.
- Sat in on AdvanceIT MN meetings.
Partnership

Macalester

&

Advance IT Minnesota
Enhancing career and business success
Making it happen - guiding principles

• Invite all who identify as girls and/or young women to participate.
• Have women leading as much of the program as possible.
• Historically underrepresented populations, students of color, and would-be first generation college students especially encouraged.
• Keep costs low, waive costs as needed.
• Remove unnecessary barriers.
• Make it a week-long experience.
• Build community.
What **DETERS** girls from computing?

- Irrelevant curriculum and reliance on lecturing instead of hands-on projects
- Teaching styles that discourage collaboration
- Lack of opportunities to take risks and make mistakes
- Limited knowledge or inaccurate perceptions about computing careers
- Lower confidence than boys, even when actual achievement levels are similar
Making it happen - curricular components

• Take a liberal arts approach to exploring technology & related career opportunities
• Provide self-esteem and confidence building exercises
• Offer training in skills, such as coding, game development, app development, person-centered design, etc
• Build community among young women interested in technology
• Emphasize the importance of women and diversity in the technology workforce
• Reinforce that passion + technology is the key
79 volunteers including

- High school teachers
- College faculty
- Macalester students and alumni
- Library staff
- IT staff
- Community and industry partners
26 participants from area schools

- Great River High School
- Apple Valley High School
- Duluth East High School
- Eagan High School
- Wayzata High School
- Nova Classical Academy
- Minnetonka High School
- Central High School
- Creative Arts Secondary High School
- Washington Tech Magnet School
- Fine Arts Interdisciplinary Resource (FAIR)
- MTS Minnesota Connections Academy
Assessment

• 96% would recommend SPARCS@Mac to a friend.

• 92% liked that SPARCS@Mac was for young women only.

• 100% of the people who supported SPARCS@Mac 2015 want to be involved in 2016.
Assessment

- “I learned that there are fields you can go into that combine technology with any of your other passions.”
- “I think that everything was important. Learning to code, program, make games, use excel, and learn how to use technology in new ways.”
- “The most important things I learned at SPARCS@Mac was opening up to people. I met LOTS of such great, kind, smart, funny, helpful people here, and I didn’t think I’d be as comfortable as I am. I’ve learned more how to open myself up within a week.”
Reflections

Cody Molho

Gozong Lor
What we learned

• Supporting girls in tech is an idea that a lot of people are enthusiastic about.

• A LOT of people want to help, but need help in figuring out how.

• Connect with the folks in your community engaged in this work.

• Finding a partner might be a critical component.

• Libraries are well suited for leading this work.

• This can be a bit daunting, but worthwhile work.
Parting thoughts

And share that our profession is a rewarding one in which to apply their gifts and skills...

What can YOU do?

- Talk with girls about why they should consider a computing career.
- Talk with girls and others about unconscious biases and how to handle them.
- Talk with school personnel about the need for computing education.
- Provide girls with early technology and computing experiences.
- Provide ongoing encouragement. Never underestimate the power of this simple effort.
- Don't mistake prior experience for ability.
- Advocate for CS certification and the adoption of CS curriculum standards.
- Ensure that your own organization employs inclusive practices that will retain young women who choose computing.

https://www.ncwit.org/infographic/3435
SPARCS@Mac
2016

DeWitt Wallace Library

SPARCS @ Mac
Tech camp for Minnesota girls
June 20-24, 2016 9am-4pm
Macalester College, DeWitt Wallace Library, St. Paul MN

We invite you to come learn about a wide variety of technologies while engaging with college faculty, students, and staff, IT employers and fascinating professionals. Enjoy beautiful Macalester College in St. Paul where your summer learning and fun intersect! Beginners and experienced techies are welcome.

Participants will:

- Learn a variety of technologies and their applications.
- Build skills and confidence through experimentation, creativity, and problem solving.
- Increase awareness and understanding of technology career opportunities.
Thank you & questions

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