



# Helping Girls Envision a Tech-Savvy Future

By Tamara Brown

*AAUW's new research report, Where the Girls Are, shows that students from low-income families are less likely than their peers from higher-income families to graduate from high school or college. Without a solid education, these students may face lifelong economic hardships. The Tech Savvy program helps students see the opportunities presented by careers in the traditionally well-paying areas of science, technology, engineering, and math.*

The concept of seeing new possibilities underlies the efforts of the AAUW Buffalo (NY) Branch's Tech Savvy conference. Inspired by the AAUW research report of the same name, the conference provides girls in western New York a fun way to explore careers in science, technology, engineering, and math (STEM). Three years since its inception, the program serves about 350 students and 170 parents, educational professionals, and other adults and is now the largest program of its type in the western New York area.

## Why Tech Savvy?

The Tech Savvy conference is a great asset to the Buffalo metropolitan area. According to the *Buffalo News*, more than one-third of the children in Buffalo live below the poverty level, and the *New York Times* reports that only about 45 percent of Buffalo-area students entering ninth grade go on to

graduate from high school. That graduation rate is even further reduced for students from the inner city and for racial and ethnic minorities. Thus, there exists a persistent need to encourage students to stay in school and reap the benefits of economic security that education affords. Through the Tech Savvy program, AAUW collaborates with local school districts, as well as with industry, university, and community partners, to provide that encouragement to students.



Research by the National Center for Education Statistics shows that, in fourth grade, the number of girls and boys who express a fondness for math and science is approximately equal. By eighth grade, twice as many boys as girls show an interest in these subjects. Moreover, among girls and boys who perform equivalently, girls typically display a lower level of confidence in their abilities, according to the *Report*

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*of the Congressional Commission on the Advancement of Women and Minorities in Science, Engineering, and Technology Development.*

In addition to these trends, other societal forces may reinforce girls' preconceptions about science and math. Data from the National Science Foundation indicate that women currently make up only about 25 percent of the science, engineering, and technology workforce, so media images and available female role models may be rare. And, as AAUW's *Tech-Savvy* report notes, the adults in girls' lives may send subtle, unintended messages that do not encourage girls to pursue STEM; in fact, adults' lack of familiarity with technology and STEM issues may create a gap in providing support to girls. Limited access to technology in many poor and distressed communities exacerbates this divide for girls from lower-income families.

### How the Conference Works

Tech Savvy is a one-day conference that encourages sixth- to ninth-grade girls to explore STEM careers and to begin considering their personal path to college. Because students need the support of parents, teachers, and other significant adults in their lives to succeed, the Tech Savvy conference also includes workshops for adults.

Students spend the day with engaging professionals—mostly women—in sessions they choose from a selection of twenty workshops. From architecture to zoology, these workshops endeavor to accomplish three goals.

First, the workshops illuminate an academic or professional principle. The Buffalo branch's Tech Savvy committee tries to balance the material presented in the conference to include both basic sciences and industry-relevant topics. For example, this year's workshop selections included "Six Sigma Bling," a workshop that reinforced

the use of statistics and principles from Six Sigma process improvement methodology in making jewelry, and each girl left with a bracelet she made using these principles.

Second, workshops provide career information. A hallmark of the student experience is the opportunity to interact with dynamic women at the height of their professions. Workshop leaders give students a chance to explore and ask questions about the pros and cons of various STEM-related careers. Students are often surprised at the diversity of career options available in the local area.

Perhaps most important, the workshops also help students appreciate the preparation needed for these careers, as well as optional career paths that they can pursue. At this year's conference, keynote speaker Camille Alleyne of NASA had a wonderful exchange with a ninth-grade student who wanted to pursue an aerospace career but didn't really like sciences. This thinking is not entirely uncommon. Connecting the dots between preparation and career goals may be particularly problematic for students from underserved populations or for those

whose family members have not attended college.

### Not Just for Girls

Tech Savvy is not just for girls. Subtle and direct messaging about stereotypical roles for girls and boys can affect girls' openness to STEM classes and careers. Because students receive their most frequent messages at home, the parent sessions are an important aspect of Tech Savvy. In the midst of today's many parenting demands, it is especially difficult for those who are unfamiliar with the educational system to help their children navigate the path toward higher education. For Tech Savvy participants to be successful, parents, grandparents, educators, and leaders must continue to reinforce the conference message well after the program ends.

The adult component of the program is growing. Parents explore issues such as academic and financial preparation for college and improving relations with teachers and counselors. Education professionals and other leaders can learn more about the latest AAUW research on girls in STEM, as well as AAUW's participation in



the National Girls Collaborative Project. This year's conference also included a public policy briefing, a separate training track for nonparents, and some fun—a scientific demonstration and experiment for the adults.

### **Savvy Recruiting**

Reaching students and the adults in their lives is increasingly important in populations where educational resources are limited, so recruitment is a major focus of the planning effort for each Tech Savvy conference. At the Buffalo branch, our recruitment strategy is, "If we invite them, they will come."

This year the branch distributed over 7,000 conference brochures to previous conference attendees, organizations that have partnered with the branch in the past, and other like-minded organizations. Groups such as the Girl Scouts, after-school programs, pregnancy prevention programs, and grassroots community organizations have proved invaluable in spreading the word.

The branch also reaches out to local school districts in many ways—through individual teachers and counselors, coordinated mailings, and other programs. In the city school district, the most diverse district in the greater Buffalo area, this close working relationship has yielded district-wide e-promotion of the conference to teachers, counselors, and administrative staff and has boosted both student and professional attendance.

The "wide brushstroke" approach applies to both geography and educational background. Participants come from the city, suburbs, and rural areas; some drive as far as two or three hours to attend. Their educational backgrounds are equally diverse. We target charter schools, private schools, parochial schools, and educational support services for the Native American community.

With additional help from print, television, and billboard advertising, the recruitment process continues to yield a large attendance. The program budget includes transportation grants and fee



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waivers so that there are few barriers to attendance for students. Because of our efforts to keep the program affordable—participants pay just \$5—waivers are rarely requested.

### **Building Community, Getting Results**

For the Buffalo branch, one of the most affirming aspects of the Tech Savvy program is seeing the women of the next generation working together. Schools have also reported positive effects from the program. Some past participants have used what they learned at the conference in science projects and career day presentations. As a result, many teachers and schools have begun to include the program in their yearly plans, and many school groups now regularly attend the conference.


Because of the conference, the Buffalo branch receives and accepts many invitations to talk about the importance of equitable education and STEM for girls. These events in turn offer us a great

chance to promote the program—and sometimes gain new AAUW members.

Since the start of the Tech Savvy conference, the branch has forged partnerships with others who want to get into the act. The branch funded the first conference with proceeds from an annual book sale and generous support from the Praxair Foundation, a partnership that is continuing. Since then, SUNY Buffalo has joined the effort, and each year new partners sign on.

But the best news for our branch, our partners, and our community is the response of the Tech Savvy participants: "I loved it. Thank you. You should do this again," said one Tech Savvy student in her evaluation.

Said another, "Now, I want to go to college."

Yes, we think we've opened a few eyes to some new possibilities. 

*Tamara Brown is president of the AAUW Buffalo (NY) Branch.*