From Technophobe to Computer Science Champion: One Counselor's Journey (Part 2)

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Do you have students who struggle with problem-solving skills? Maybe they need help breaking down problems into steps or practice learning to persevere when things don't go their way? This summer I learned that the computational thinking students learn in computer science study has a positive side effect of teaching them to effectively manage the challenges of everyday life. In CS class students develop a growth mindset useful not only in that subject but also in life.

"Computer science is no more about computers than astronomy is about telescopes"
Edsger W. Dijkstra.

This quote captures my experience at CSPdWeek, a three-day workshop I attended in July 2017 in Colorado. It was sponsored by Counselors for Computing (C4C), a program of the National Center for Women & Information Technology. The well-attended conference brought school counselors from sixteen states to Colorado School of Mines to learn about the enormous opportunities for our students in computer science and computing fields. Computer science and computing touches every career cluster.

As a high school counselor for 17 years, I give students as much information about careers as I can. My old mindset was that computer science was mostly about coding and primarily for males who enjoyed sitting in front of a computer writing code. I could not have been more mistaken! While careers in engineering, sciences, and mathematics are inclusive of computer science, so are careers in psychology, humanities, the arts, marketing, public safety, and more. However, students might not realize the role computer science plays in their major and/or career. Understanding that computer science is a language that helps computers to solve problems posed by people hit home the point that computer science should be taught in school at every grade level.

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Here are some suggestions for getting the ball rolling so more young women and other traditionally underrepresented students will know about computer science courses, majors, and careers:

1. Fill out this form, and C4C will send you one of their free kits with posters, career info cards, magazines, ideas to teach an "unplugged" lesson (you can teach CS without having any computer science background), and more.
2. Attend a free Counselors for Computing (C4C) workshop near you and if there is not one just contact C4C@ncwit.org and they can help you.

3. Attend CSPdWeek in 2018! It is even better when there is more than one individual attending from the same school or district.
4. Develop a Professional Learning Community at your school that focuses on computer science for students. A first step could involve reviewing the demographic data of students in CS classes and brainstorming strategies to engage underrepresented groups.
5. Investigate courses that could be taught at your school–courses already A-G qualified are AP Computer Science Principles, AP Computer Science A, and Exploring Computer Science.
6. Look into new courses, such as Bootstrap, which mixes beginning integrated math/Algebra with computing. Students who struggle in math will find success in this course, which teaches math in new ways that make math more understandable and fun!