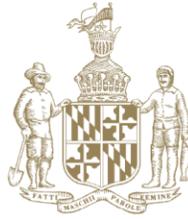


APRIL ROSE  
Legislative District 5  
Carroll County

Ways and Means Committee

Education Subcommittee

Finance Resources Subcommittee



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THE MARYLAND HOUSE OF DELEGATES  
ANNAPOLIS, MARYLAND 21401

**Support House Bill 820**

**County Boards of Education– Computer Science Courses**

House Ways and Means Committee

Chair Kaiser, Vice Chair Washington and Members of the Committee:

Thank you for the opportunity to introduce HB 820 entitled “County Boards of Education – Computer Science Courses.”

This bill will require county boards of education to submit a report annually to the State Board of Education and the General Assembly that will provide data on the computer science courses being offered and which students are taking them. The specific data to be reported includes:

- The total number, substance and advanced placement status of computer science courses offered in each public school in the county;
- The number and percentage of students enrolled in each computer science course disaggregated by key metrics including grade, gender, race/ethnicity and special education status, etc.;
- The number, gender and educational attainment of computer science instructors at each school

According to Code.org there are currently more than 400,000 open computing jobs nationwide. We have heard testimony several times over the years that there are anywhere between 15 – 20,000 open computing jobs in Maryland. These jobs are high paying jobs well over double the average annual salary of other positions. There is a gender gap in this field. Women make up a quarter of tech workers.

There are studies from companies such as Microsoft and Intel that show 47 percent of girls in middle and high school express an interest in computer science fields, but only 23 percent actually take a computer science class.

The ACCESS Act we passed was a great step toward addressing the goal of providing opportunities to our students in this field. However, currently we do not see any sub data on what students are taking these classes.

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This bill will provide important data so that we can ensure all of our students are getting access to these classes and to identify any gaps so that we can improve participation by all of our students.

We live in a technology driven society and almost every aspect of our personal and professional lives require computer skills. Exposing our children to computer science and programming will provide them with options and exciting career paths that will equip them for success.

**I think we can all agree that the past year of online learning has proven how important these skills are for our children. Implementation of these classes should be potentially less expensive for local boards to implement due to the number of laptops that have been provided due to the pandemic. These skills are essential both now and for our children's future success.**

I have worked as a technical recruiter for almost 12 years. Without question the hardest positions to fill are in those in the computer science and programming arena. The average salary for these positions can range from the mid 60's at the entry level up to \$160,000 or more at the senior level in the defense sector. Those numbers have been trending higher in the commercial sector. It is important to be sure that all of our students are provided the option of getting access to these classes.

Thank you for your time and consideration in this matter, and again I ask for a **favorable** report on **HB 820**.

Respectfully,

Delegate April Rose

**Items of Note – Source is Code.Org:**

## Code.org blog posts

### The importance of computer science

- Computing occupations are the #1 source of new wages in America (that's 16% of all new wages).
- The majority of Americans want schools to teach computer science.
- Computer Science is the 4th most popular STEM major for college-bound students.
- More high school students like computer science classes than other academic subjects.
- In manufacturing, openings for software jobs outpace production jobs for the first time.
- Computer science jobs account for the majority of "skilled worker" immigration (H1B Visas).
- Computer science accounts for the majority of new STEM jobs.

[Type here]

- A school's participation in the Code.org professional learning program [results](#) in an estimated five times increase in AP CS Principles participation, and a ten times increase among Black students.
- Computer science counts as a core requirement in [95% of BS degrees](#) in the University of California system.

## Diversity in computer science

- We compiled and analyzed data on student participation in CS by race/ethnicity and gender (in Code.org's courses, in AP CS, and in bachelor's degrees earned in CS). View our blog post [here](#), our summary [here](#) and download the data set [here](#).
- Women who learn computer science in high school are [10 times](#) more likely to study it in university.
- When computer science counts for graduation, [diversity increases](#).
- The [underrepresentation of students from marginalized racial and ethnic groups in computer science](#) isn't about lack of interest but lack of access.
- Girls set AP Computer Science record: skyrocketing growth outpaces boys in [2017](#) and in [2018](#).
- [Maryland makes a simple policy change to boost diversity in computer science](#).
- [20% more high school girls like computer science after an Hour of Code](#), and both boys and girls show improved self-efficacy and attitudes towards computer science after an Hour of Code.
- [Reporting on Code.org's successful efforts to increase diversity in computer science](#).
- [Representation of young women and students from marginalized racial and ethnic groups in Code.org courses \(2017\)](#).