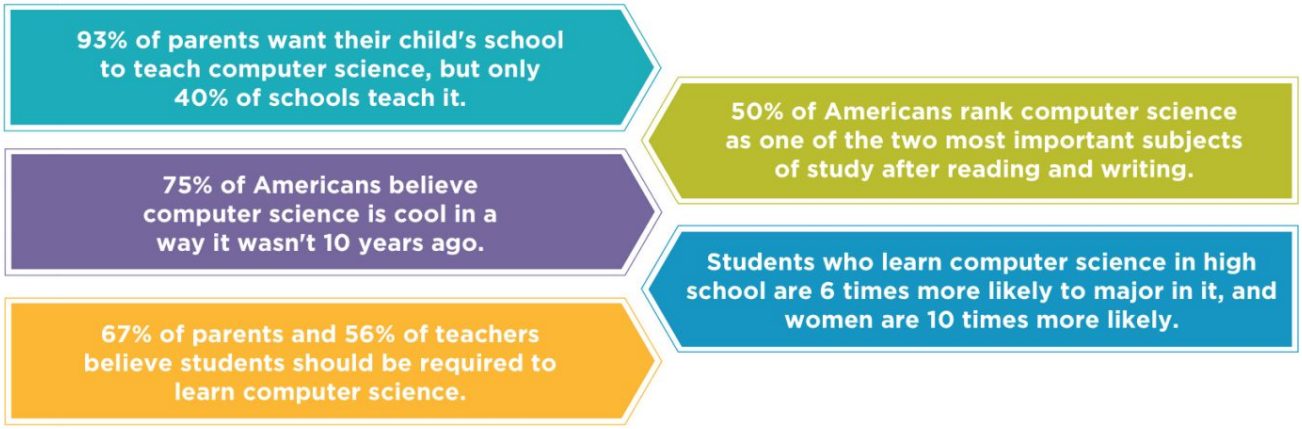
K-12 CS Access Report

Introduction

Computing occupations are the number one source of new wages in the US (16% of new wages)[1] and over 90% of parents want their kids' schools to offer computer science[2], but does your school offer computer science? The most comprehensive survey to date estimates that 40% of schools in the US offer computer science,[3] but there is no existing national data set that measures access at a school-by-school level. This data is crucial to state departments of education and organizations that work to expand access to computer science education opportunities. Put simply - we believe that more schools should be offering computer science, but we don't know which schools need support.

This year, the Computer Science Teachers Association (CSTA) and Code.org are partnering to create an open database of computer science access in K-12 schools across the US. For the first time, stakeholders will have information about computer science education at a school-by-school level. This open community resource will combine data from multiple sources, including a national teacher survey, state departments of education, and the College Board. With all of these data sets combined - and with your help - we plan to accumulate data from 100% of US schools. The data we collect will be shared publicly to help the hard-working individuals and organizations working to bring computer science to every school achieve their goal.

Why computer science?



We need your help!

Our goal is to get data from every school in the country. As of January 2018, we have 28,000 survey responses, and data from the College Board and 3 state departments of education. In total, we have responses for about 15% of schools. **We need your help getting data from every single school**. Here's how you can help:

- As an individual, please fill out our survey for your school or your child's school at code.org/yourschool
- Share the page to Facebook, Twitter, and to your networks
- If you work for a state agency, please help us gather data for your entire state. (Details below)
- If you work for a school district, please help us gather data for your entire district (Details below)

[1] Code.org http://blog.code.org/post/144206906013/computing-occupations-are-now-the-1-source-of-new

[2] Google - Gallup https://services.google.com/fh/files/misc/searching-for-computer-science_report.pdf

[3] Google - Gallup https://services.google.com/fh/files/misc/searching-for-computer-science_report.pdf

Frequently asked questions

What is your timeline for publication?

Timeline for publishing data about the 2017-2018 school year:

- June 2017 - data collection kicks off
- September - December 2017 - survey distributed to thousands of teachers in the US through Hour of Code
- September 2017 - May 2018 - data collection open for state departments of education
- May 2018 - deadline for submitting data for 2017-2018 school year
- Summer 2018 - database made public

We will continue to collect data on a rolling basis after the 2017-2018 school year.

How can I add my school to the database?

Go to code.org/yourschool and fill out the survey!

I have data about a lot of schools - do I need to fill out the survey for each one?

We don't currently have a way to collect data about multiple schools at once, but are planning to build resources for this. If you are interested in learning more, please reach out to accessreport@code.org

Can I give you data about every school in my state?

Please do! If you have data about an entire state, or even about every high school in your state, please reach out to accessreport@code.org

I can't find my school in your dropdown, can I add it?

Our list of schools comes from the National Center for Education Statistics. It can occasionally be out of date or incomplete. If you are having trouble finding your school, please use the following steps below:

- If you can't find a school **matching your school name**, make sure you've searched all the names your school may be known by. For example, if your school is named "Ben Franklin Academy of Miami," try searching by just "Ben Franklin Academy," "Benjamin Franklin" and other iterations. You can also search by city name or zipcode to pull up all the schools in your area.
- If your search pulls up **too many results**, you can filter by adding your city name or zipcode. For example, "Roosevelt" returns many search results, but "Roosevelt Mesa" returns only Roosevelt Elementary School in Mesa, AZ.
- If you still cannot find any school matching your school name, check the box for "I cannot find my school above" and enter your school name

How can I send the survey to teachers and school administrators in my network?

- Share the page to Facebook or Twitter
- Include a link to the code.org/yourschool page in an upcoming newsletter or email to your networks (see language below)

Sample letter:

Dear [Teacher/Counselor/Principal],

The Computer Science Teachers' Association and Code.org are working to gather data from every school in the country about the types of computer science activities offered. This data will help schools get the help they need by allocating resources and efforts, in both organizations' mission to provide equitable access to computer science for all students. Can you please help by filling out the 5-minute survey for your school at code.org/yourschool?

Code.org also has great resources to help expand computer science in our schools at no cost in most regions. They offer:

- Curriculum for a full K-12 computer science pathway
- Workshops to prepare a teacher of any subject to begin teaching computer science.
- Resources to help administrators plan to add computer science to the school day

There are also a variety of options offered by other organizations.

Thank you,

How do you define what it means to teach computer science?

Our definition of computer science was developed by the Computer Science Teachers Association (Tucker, 2003) and later reaffirmed in the K-12 Computer Science Framework:

Computer science is the study of computers and algorithms, including their principles, their hardware and software designs, their implementation, and their impact on society.

Computer Science is about how to create new technologies, not simply use them. While many schools offer their students some exposure to computer science in a limited capacity such as an Hour of Code, this report focuses on schools that teach computer science in a class. These are schools where students learn computer science during the school day (not in after school clubs) and spend a minimum amount of time per semester applying learned concepts through programming (at least 20 hours of programming for high schools and at least 10 hours of programming for elementary and middle schools) While computer science is broader than programming, some direct programming experience is integral to learning the fundamental concepts.

What is your study methodology?

We gather data from the following sources:

1. Survey responses from teachers, and administrators collected on Code.org
2. The College Board's list of schools that are authorized to use the AP® designation and offer AP Computer Science A or AP Computer Science Principles.
3. State Departments of Education with which we are collaborating to identify high schools offering computer science. If you work with your State Department of Education and would like to submit data for your entire state, please reach out to accessreport@code.org.
4. The International Baccalaureate's list of high schools offering IB computer science classes

We then categorize schools based on the data we've gathered. Each school can fit into one of four categories:

1. **Need information.** This means we don't have information yet for this school. If your school is in this category, please fill out the survey or send the survey to someone at the school who can fill it out.
2. **Offers a computer science class**. This means that we have data for this school that indicates that it offers a computer science class.

3. **Offers limited or no computer science**. This means that we have data for this school indicating the school does not offer any computer science classes during the day that include minimum requirements as defined above. This school may offer other computer science education opportunities, like after school programs, clubs, or Hour of Code events.
4. **Inconsistent data**. This means that we have conflicting data points for this school that we have not resolved. If your school is in the category, it may help to get more data. Please fill out the survey fill out the survey or send the survey to someone at the school who can fill out the survey.

Will I be able to see the data you've collected?

Yes, we are targeting Summer 2018 to release the data to the public. If you would like early access to data and are willing to help us get more responses from schools in your area, please reach out to accessreport@code.org.

Is this a one-off study this year, or do you plan on collecting data next year as well?

This is a long-term effort! We plan on continuing to collect this data year over year.

What information are you sharing with the public?

The purpose of gathering data for this study is to make it accessible to the public so that hard-working individuals and organizations working to bring computer science education to schools can identify the schools that need support. We plan on sharing the data we collect openly, however to respect the privacy of our respondents, we will not share their names or emails without their permission.

Data we may share from the code.org/yourschool survey:

Responses to these questions:

- How many students do an Hour of Code?
- How many students do computer programming in an after-school program?
- How many students take at least 10 hours of computer programming integrated into a non-Computer Science course (such as TechEd, Math, Science, Art, Library or general classroom/homeroom)?
- How many students take a semester or year-long computer science course that includes at least 20 hours of coding/computer programming?
- Does this school offer any computing classes that do not include at least 20 hours of coding/computer programming. (For example, learning to use applications, computer literacy, web design, HTML/CSS, or other)
- What topics does this course include?
- How many times per week does this class meet?
- What is the respondent's connection to this school?

Data we won't share from the code.org/yourschool survey:

- Your email*
- Your name

*We will share email addresses only if respondents enter "Yes" for this question: Share my contact information with the Code.org regional partner in my state so I can be contacted about local professional learning, resources and events." If Code.org has a regional partner in that area, we'll share the respondent's email with them. They will only ever contact the respondent about local computer science professional learning, resources, and events.