South Carolina

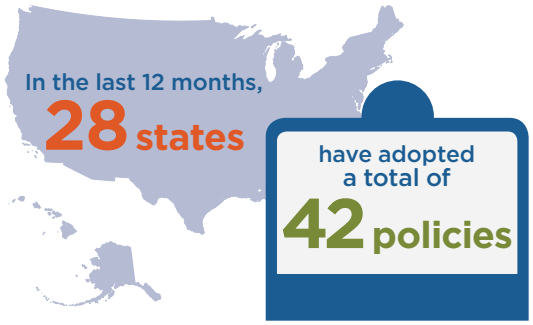
2020 State of Computer Science Education: Illuminating Disparities

Computer science education is more important than ever. The COVID-19 pandemic has highlighted our society's reliance on computing and its power to help businesses innovate and adapt, yet at the same time has surfaced greater disparities for students studying computer science. Computing is the number one source of all new wages in our economy, and there are currently 400,000 open computing jobs across the United States. Yet the U.S. education system does not provide widespread access to this critical subject.

Although access to computer science is key to addressing the equity issues in society, only 47% of our nation's high schools teach foundational computer science. In addition, students from marginalized racial and ethnic groups, students in Title I schools, and students from rural areas are less likely to attend a school that provides access to this critical subject.

States are working to broaden participation in computer science by passing policies to make computer science a fundamental part of the K–12 education system. In addition to adopting more policies, state education leaders extend and innovate on previously adopted policies: continuing to fund computer science education, supporting teachers and students, and providing leadership and guidance.

States that have adopted more of these nine policies have a larger percentage of high schools teaching computer science. States that have funded K–12 computer science professional learning have higher implementation rates than states that have not provided direct funding.



Pursuing an access agenda to K–12 computer science provides policymakers a rare opportunity to address equity, workforce, and education issues on a bipartisan basis. All nine policies can promote access to and equity within rigorous and engaging computer science courses when stakeholders make equity an explicit focus on policy development and implementation monitoring.

Nine Policies to Make Computer Science Fundamental

1. Create a state plan for K–12 computer science
2. Define computer science and establish K–12 CS standards
3. Allocate funding for CS teacher professional development
4. Implement clear certification pathways for computer science teachers
5. Create computer science preservice programs at IHEs
6. Establish dedicated state computer science positions
7. Require that all secondary schools offer computer science
8. Allow computer science to satisfy a core graduation requirement
9. Allow CS to satisfy admission requirements at IHEs

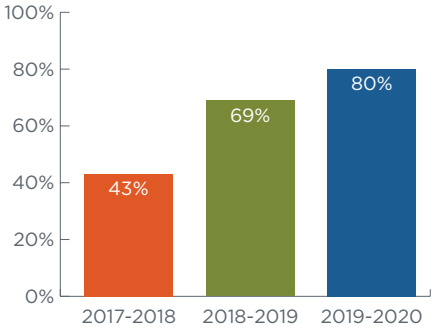
South Carolina Computer Science Policy

State Plan No	South Carolina has not yet created a state plan for K-12 computer science. A plan that articulates the goals for computer science, strategies for accomplishing the goals, and timelines for carrying out the strategies is important for making computer science a fundamental part of a state's education system.
Standards Yes	South Carolina adopted K–8 computer science and digital literacy standards in 2017 and high school standards in 2018. Standards address concepts of equity, such as bias, accessible technology, and inclusivity.
Funding Yes	H 4000 (FY 2020) allocated $500K to teacher professional development. H 3720 (FY 2018) allocated $400K to the Department of Education to implement the Computer Science Task Force's recommendations.
Certification Yes	In South Carolina, teachers with or without existing licensure can obtain 9–12 certification by completing an approved preparation program and passing the state content exam.
Preservice No	South Carolina has not yet established programs at institutions of higher education to offer computer science to preservice teachers. The computer science teacher shortage can be addressed by exposing more preservice teachers to computer science during their required coursework or by creating specific pathways for computer science teachers.
CS Supervisor In Progress	The South Carolina Department of Education is in the process of hiring a Computer Science Specialist.
All HS Offer Yes	The South Carolina Department of Education revised the list of courses that satisfy the computer science graduation requirement, effectively requiring all high schools to offer at least one computer science course by the 2018–2019 school year (with waivers available until the 2020–2021 school year) and requiring all students to take at least one credit of computer science to graduate.
Grad Credit Yes	In South Carolina, all students must take one credit of computer science to graduate. Multiple computer science courses are approved to meet the credit.
IHE Admission Yes	In South Carolina, computer science can count as the fourth mathematics credit required for admission at institutions of higher education, which aligns with the high school graduation policy. Further, students are strongly encouraged to take computer science as a high school elective.

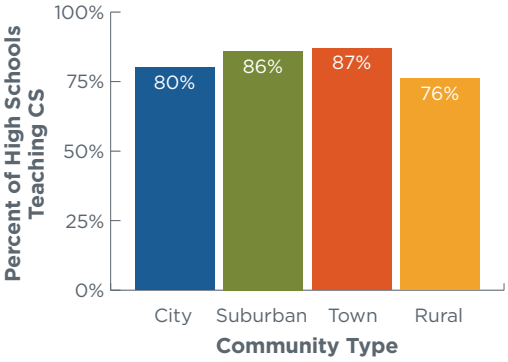
South Carolina is a member of the ECEP Alliance and has a CSTA chapter.

Computer Science Access and Participation in South Carolina

High Schools Teaching CS



Percent of High Schools Teaching CS by Community Type

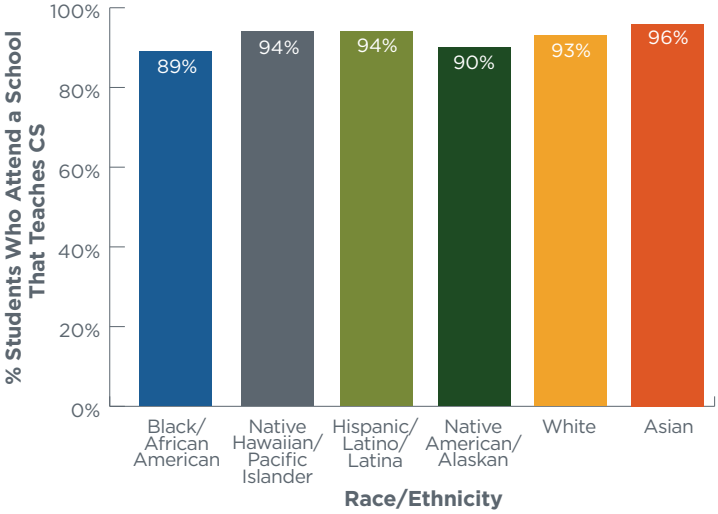


South Carolina has averaged **3,462** open computing jobs each month*

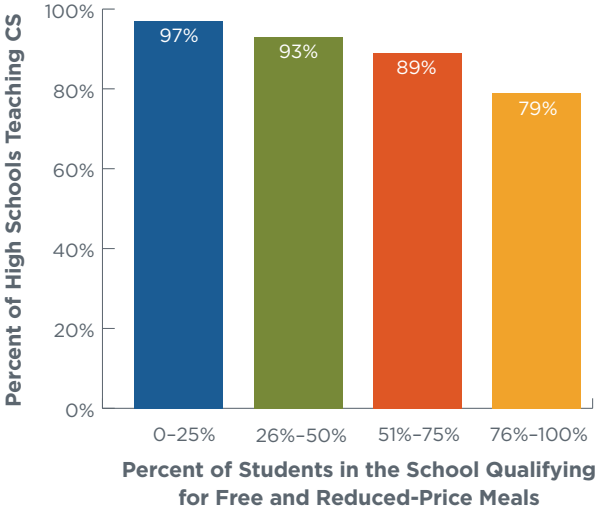
739 Bachelor's degrees in 2018 in South Carolina*

*Sources: The Conference Board and the National Center for Education Statistics

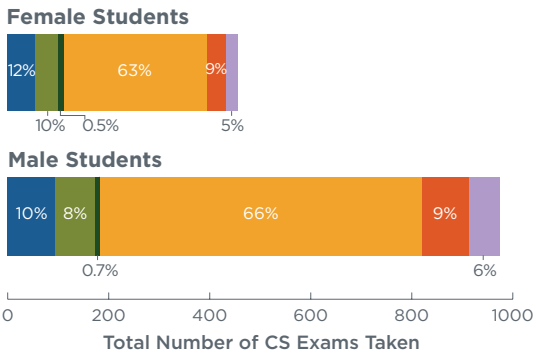
Race/Ethnicity and Access to Computer Science



Income Level and Access to CS



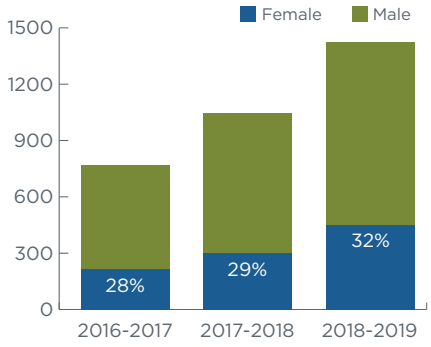
AP CS Participation by Race/Ethnicity and Gender



LEGEND

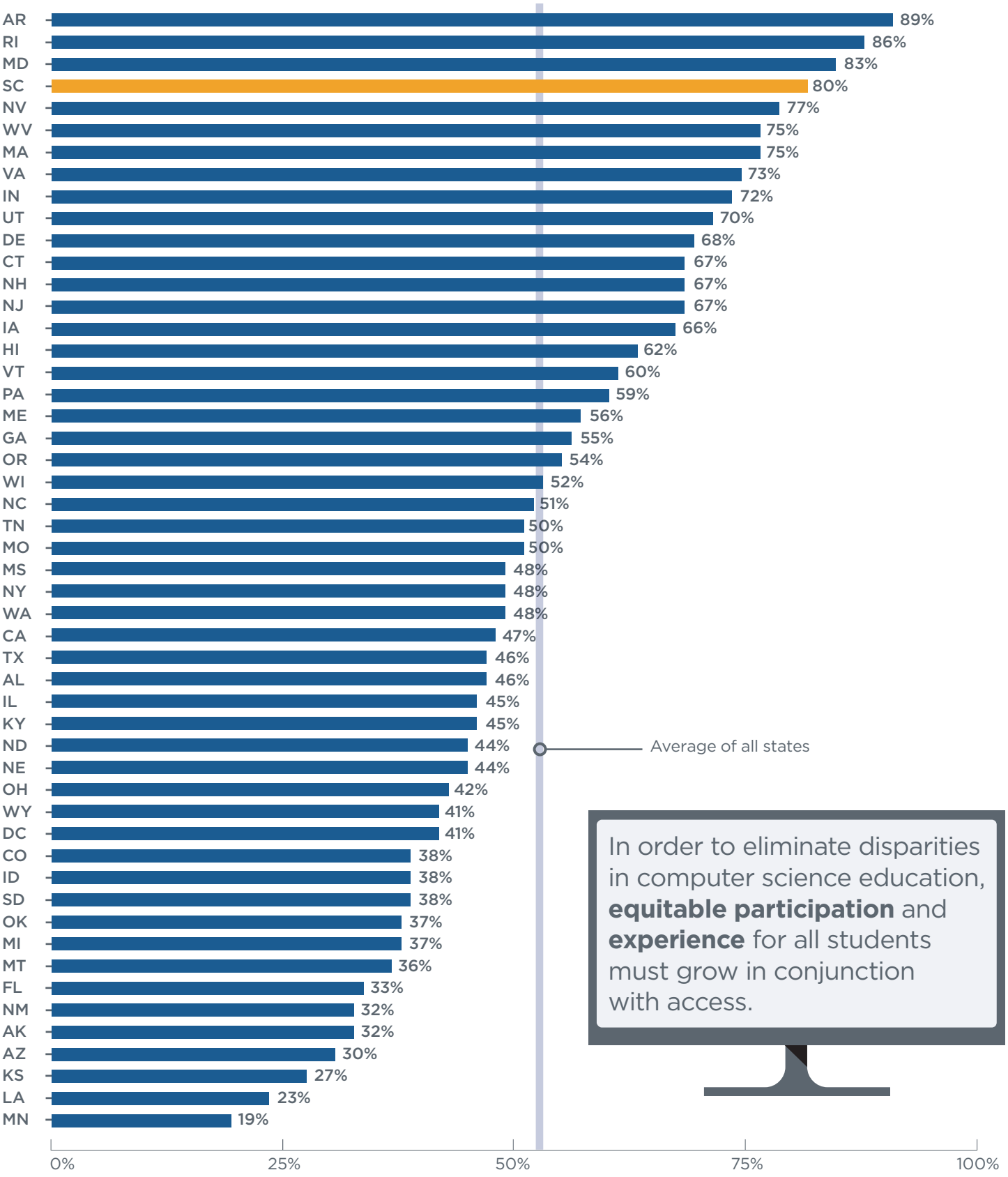
- Black/African American
- Native Hawaiian/Pacific Islander
- Hispanic/Latino/Latina
- Native American/Alaskan
- White
- Asian
- 2+ Races/Other

AP CS Student Participation



Black/African American students are 3 times less likely and Hispanic/Latino/Latina students are 1.4 times less likely than their white and Asian peers to take an AP CS exam when they attend a school that offers it.

Percent of High Schools Teaching Computer Science by State



In order to eliminate disparities in computer science education, **equitable participation** and **experience** for all students must grow in conjunction with access.

For more details on policy, access, and participation, see the full 2020 State of Computer Science Education report at advocacy.code.org/stateofcs

Advocacy Coalition

ECEP Expanding Computing Education Pathways

CSTA