Georgia

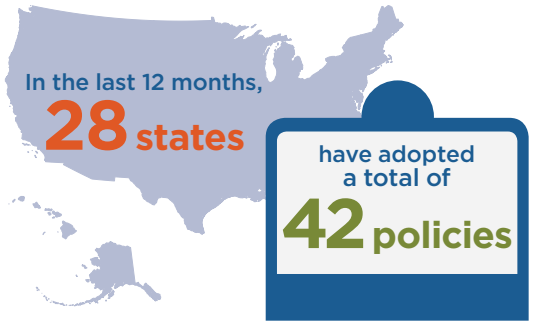
2020 State of Computer Science Education: Illuminating Disparities

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

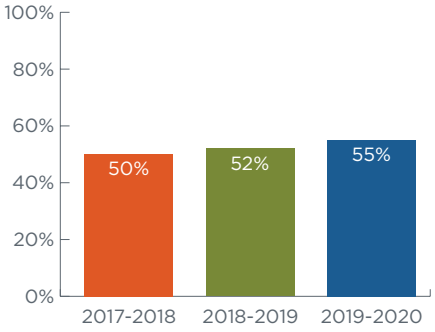
Georgia Computer Science Policy

State Plan Yes	The Georgia Department of Education developed a state plan for expanding computer science in 2018. The plan includes strategies to build diversity in computer science education, which includes rural and economically challenged communities.
Standards In Progress	Although Georgia does not yet have a discrete set of rigorous computer science standards across K–12, K–8 computer science standards were adopted in 2019. The state could strengthen its computer science programs by publicly adopting discrete standards for computer science focused on both the creation and use of software and computing technologies at all levels of K-12 education. These standards can be guided by the concepts, practices, and recommendations in the K-12 Computer Science Framework, found at http://www.k12cs.org.
Funding Yes	HB 793 (FY 2021) and HB 31 (FY 2020) appropriated $656.5K and $750K for the grant program established by SB 108 (FY 2019). HB 683 (FY 2018) appropriated $500K for middle school coding and teacher professional development. In FY 2016, the Governor's Office of Student Achievement Innovation Funds allocated $250K for the expansion of computer science.
Certification Yes	In Georgia, teachers with existing licensure can obtain a 6–12 academic endorsement by passing the Georgia GACE Computer Science Assessment. An initial license in computer science requires completing a state-approved program.
Preservice Yes	The Georgia Department of Education has approved teacher preparation programs leading to certification in computer science and lists these programs publicly.
CS Supervisor Yes	The Georgia Department of Education has a Computer Science Education Program Specialist.
All HS Offer Yes	SB 108 (2019) required all high schools to offer computer science beginning in the 2024–2025 school year. The state set incremental requirements for each year, requiring that at least one high school in each local school system offers a course by the 2022–2023 school year, and half of all high schools offer a course by the 2023–2024 school year. Further, all middle and elementary schools must offer instruction in exploratory computer science by the 2022–2023 school year.
Grad Credit Yes	Of the approved computing courses in Georgia, nine can count as the fourth mathematics credit or the fourth science credit for graduation.
IHE Admission Yes	Computer science can count as a science or foreign language credit required for admission at institutions of higher education, which aligns with Georgia's high school graduation policy.

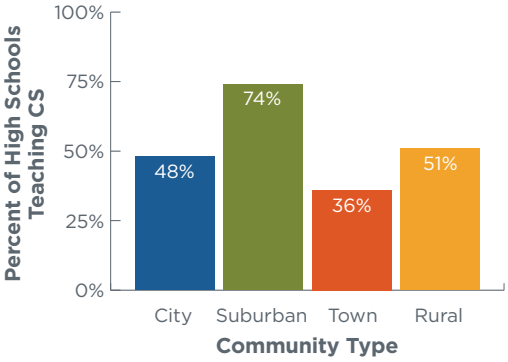
Georgia is a member of the ECEP Alliance and has a CSTA chapter.

Computer Science Access and Participation in Georgia

High Schools Teaching CS



Percent of High Schools Teaching CS by Community Type

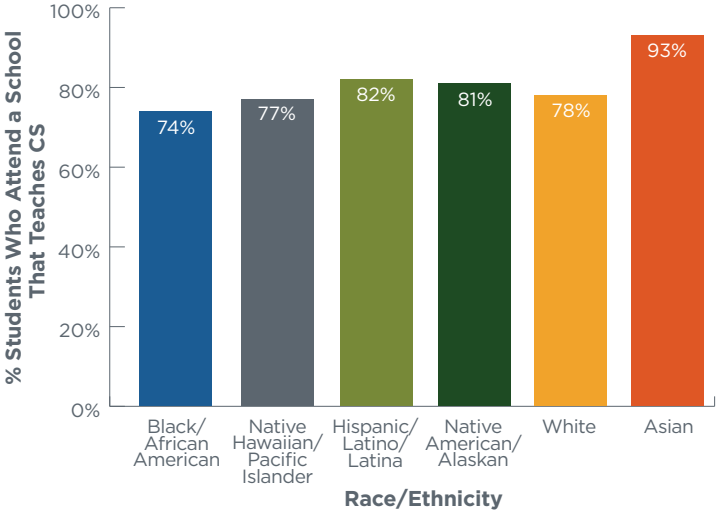


Georgia has averaged **18,895** open computing jobs each month*

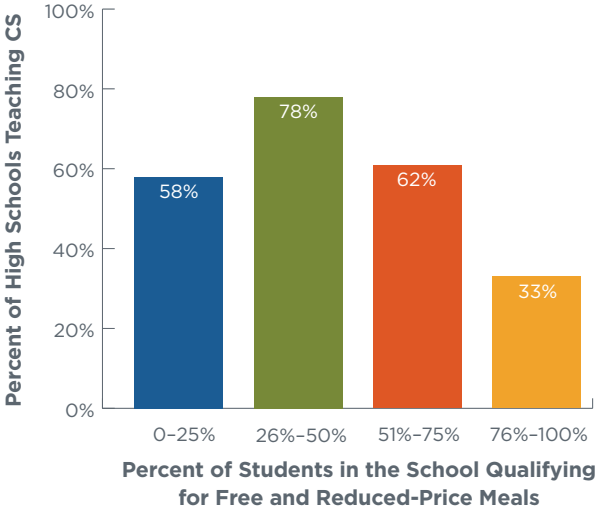
2,730 CS bachelor's degrees in 2018 in Georgia*

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

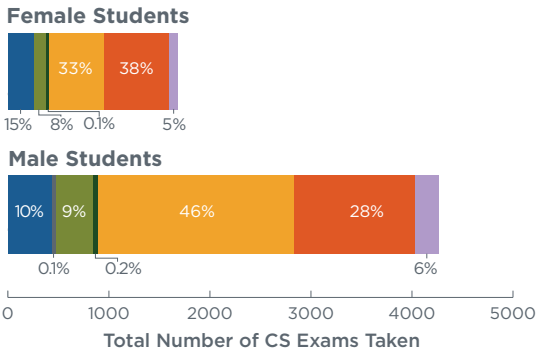
Race/Ethnicity and Access to Computer Science



Income Level and Access to CS



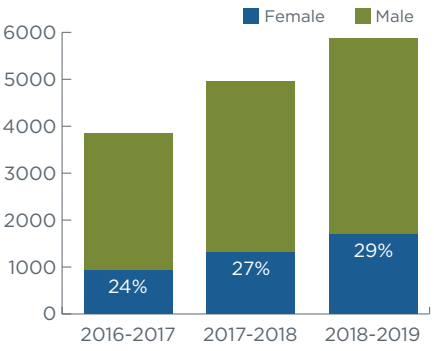
AP CS Participation by Race/Ethnicity and Gender



LEGEND

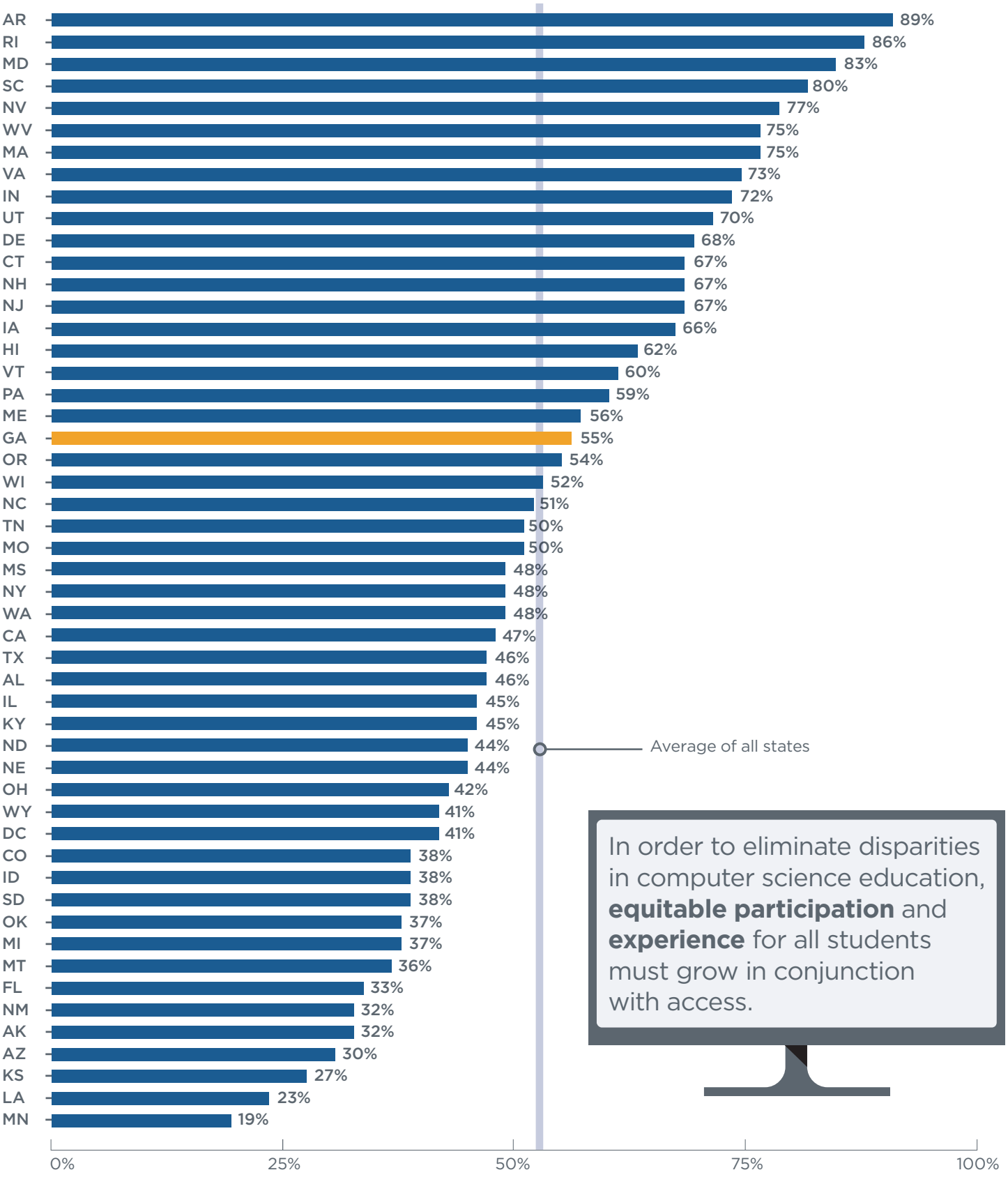
- Black/African American
- Native Hawaiian/Pacific Islander
- Hispanic/Latino/Latina
- Native American/Alaskan
- White
- Asian
- 2+ Races/Other

AP CS Student Participation



Black/African American students are 1.5 times less likely than their white and Asian peers to attend a school that offers AP CS, and 3.6 times less likely to take an AP CS exam when they attend a school that offers it. Hispanic/Latino/Latina students are 3 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