New Hampshire

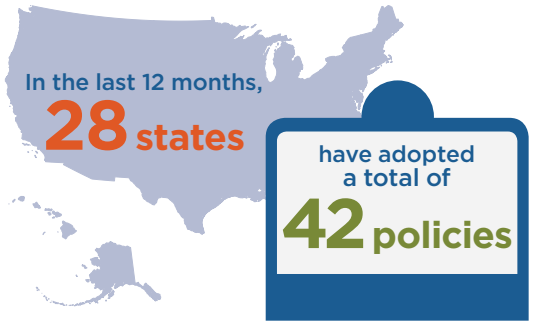
2020 State of Computer Science Education: Illuminating Disparities

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

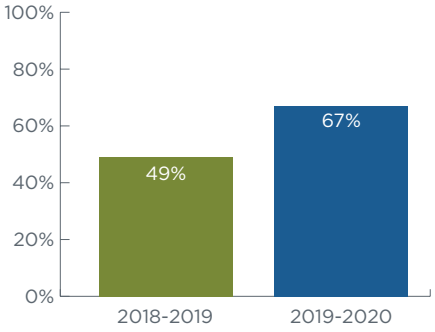
New Hampshire Computer Science Policy

State Plan Yes	New Hampshire developed a plan for expanding computer science in 2018.
Standards Yes	New Hampshire adopted K–12 computer science standards based on the CSTA standards in 2018. Standards within each grade band address concepts of equity, such as bias, accessible technology, and inclusivity.
Funding No	New Hampshire does not yet provide dedicated funding for rigorous computer science professional development and course support. Although funds may be available via broader programs, the state can strengthen its computer science programs by creating specific opportunities to bring computer science to school districts, such as matching fund programs.
Certification Yes	In New Hampshire, teachers with or without existing licensure can obtain certification by passing a national exam, holding a computer science teaching assignment prior to June 2019, or submitting evidence of skills, knowledge, and competencies in computer science content. Evidence could include coursework, professional experience, letters of recommendation, professional development, or other artifacts.
Preservice Yes	The New Hampshire Department of Education has approved teacher preparation programs leading to certification in computer science and lists these programs publicly.
CS Supervisor Yes	The New Hampshire Department of Education has a STEM Integration and Computer Science Administrator.
All HS Offer Yes	HB 1674 (2018) required all schools to create and implement computer science programs with a target goal of 2020 for full implementation.
Grad Credit District Decision	New Hampshire passed a permissive and encouraging policy to allow computer science to count as a mathematics or technology credit for graduation, but it is a district decision.
IHE Admission No	New Hampshire does not yet allow computer science to count as a core admission requirement at institutions of higher education. Admission policies that do not include rigorous computer science courses as meeting a core entrance requirement, such as in mathematics or science, discourage students from taking such courses in secondary education. State leaders can work with institutions of higher education to ensure credit and articulation policies align with secondary school graduation requirements.

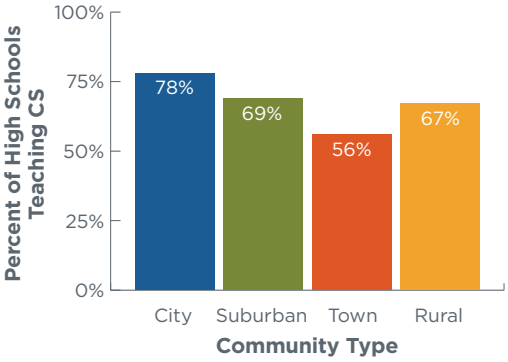
New Hampshire is a member of the ECEP Alliance and has a CSTA chapter.

Computer Science Access and Participation in New Hampshire

High Schools Teaching CS



Percent of High Schools Teaching CS by Community Type

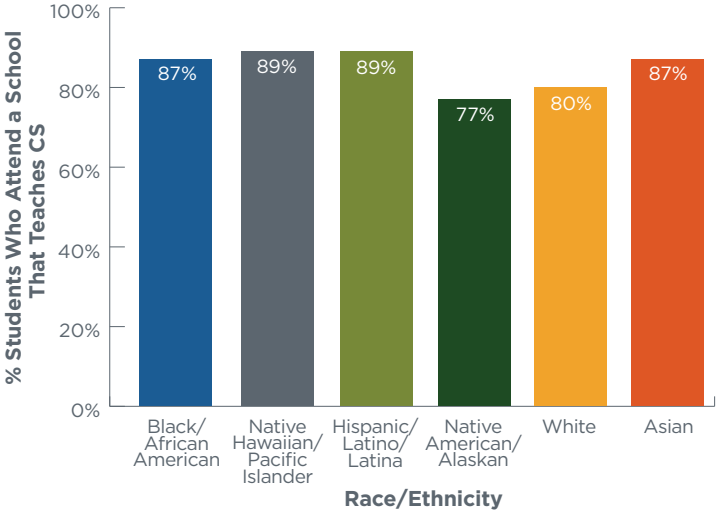


New Hampshire has averaged **1,670** open computing jobs each month*

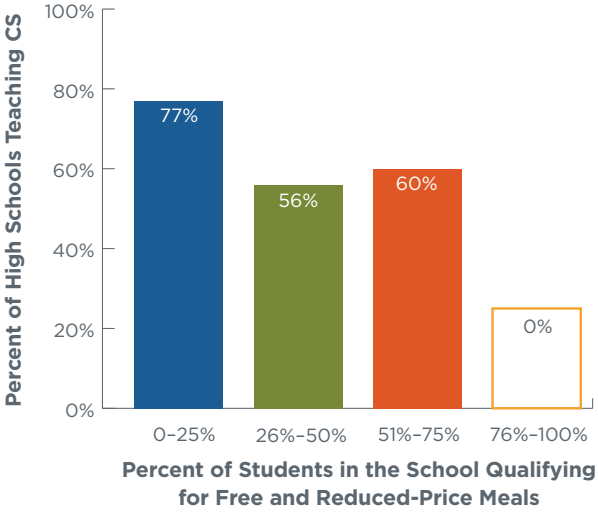
716 Bachelor's degrees in 2018 in New Hampshire*

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

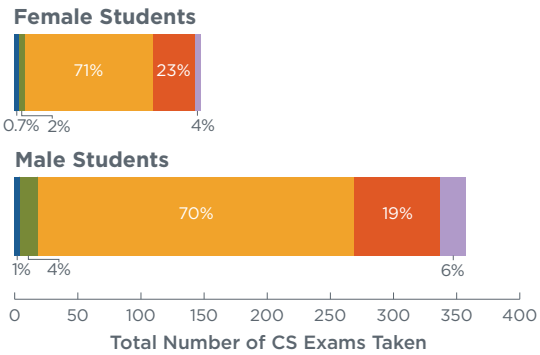
Race/Ethnicity and Access to Computer Science



Income Level and Access to CS



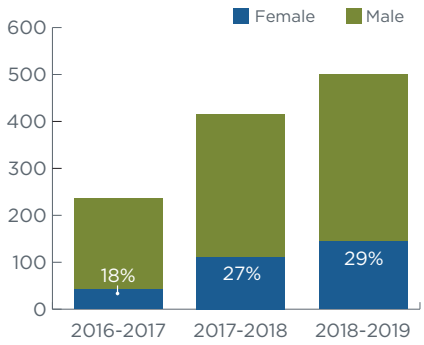
AP CS Participation by Race/Ethnicity and Gender



LEGEND

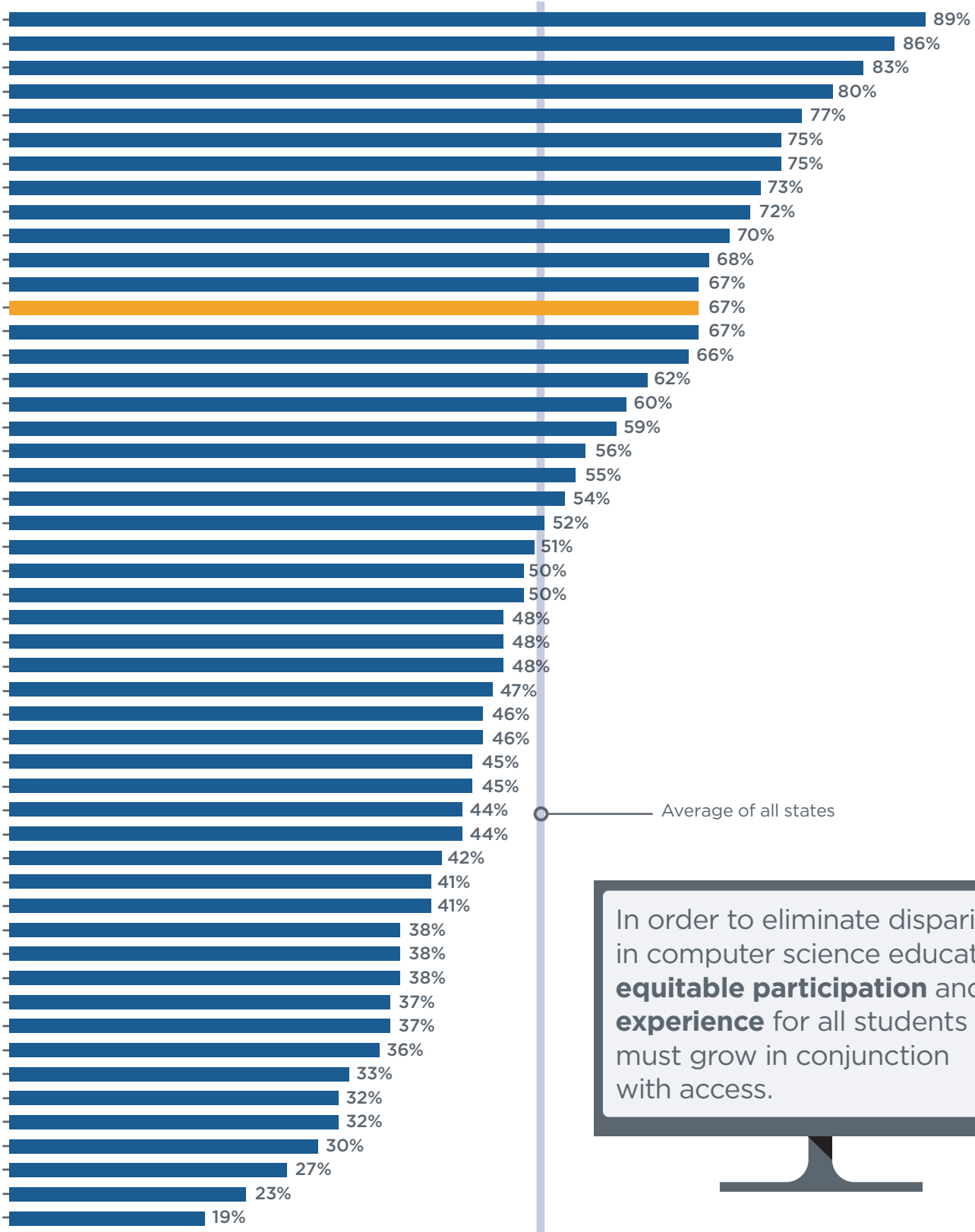
- Black/African American
- Native Hawaiian/Pacific Islander
- Hispanic/Latino/Latina
- Native American/Alaskan
- White
- Asian
- 2+ Races/Other

AP CS Student Participation



Hispanic/Latino/Latina students are 2 times less likely and Black/African American students are 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