Nevada

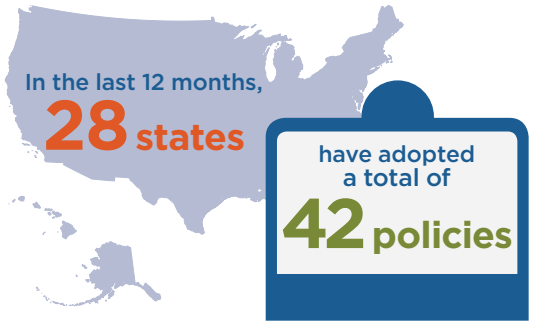
2020 State of Computer Science Education: Illuminating Disparities

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. States should enact or expand on all nine of these education policies in order to provide opportunities for all students regardless of where they live, their race/ethnicity, gender, or socioeconomic status.

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

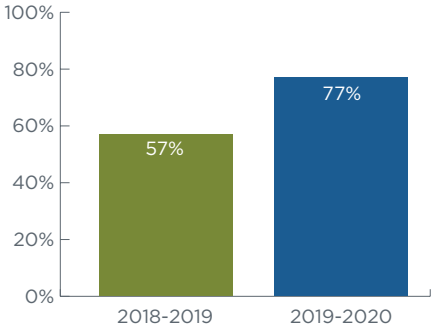
Nevada Computer Science Policy

State Plan Yes	The Nevada Department of Education developed the Computer Science Strategic Plan in 2018. The plan includes a section dedicated to diversity and strategies to build toward more equitable outcomes.
Standards Yes	Nevada adopted K–12 computer science standards in 2018. Standards within each grade band address concepts of equity, such as bias, accessible technology, and inclusivity.
Funding Yes	SB 313 (FY 2020 and 2021) allocated $700K and $933K, and SB 200 (FY 2018 and 2019) allocated $1M and $1.4M to expand computer science education.
Certification Yes	In Nevada, teachers with existing licensure can obtain a secondary endorsement in advanced computer science through academic coursework or passing the Praxis CS exam. Teachers can also obtain a secondary or middle school/junior high school endorsement in computer technology-based applications and computational thinking through academic coursework. Funding is available to offset the cost of certification.
Preservice Yes	SB 313 (2019) required training all preservice teachers in computer science and computer literacy. The bill also allowed the Nevada Board of Regents to apply for a grant from the computer science education fund to develop curriculum and standards for preservice computer science educators.
CS Supervisor Yes	The Nevada Department of Education has a Computer Science Education Programs Professional.
All HS Offer Yes	SB 200 (2018) required all high schools to make a computer science course available to all students by July 1, 2022, and required all students to receive instruction in computer education before 6th grade. Schools must make efforts to increase enrollment of female students, students with disabilities, and students from underrepresented racial and ethnic groups. The state publishes a biennial report which includes enrollment demographics on gender, race, and students with disabilities.
Grad Credit Yes	In Nevada, all students must earn one half-credit in computer education and technology in a course with half of the instructional time dedicated to computer science and computational thinking. Allowable courses include AP, CTE, or courses offered by a community college or university. A student who takes a computer education and technology course in middle school is not required to fulfill the half-credit in high school.
IHE Admission Yes	A computer science course can count as a mathematics or science credit required for admission at institutions of higher education, which aligns with Nevada's high school graduation policy.

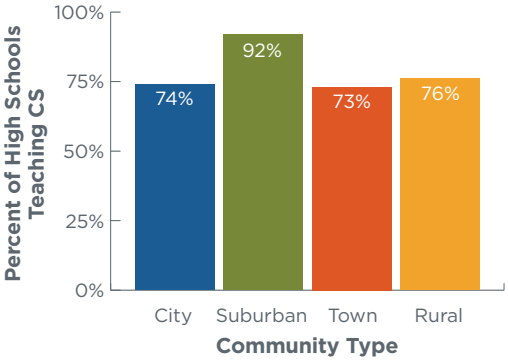
Nevada is a member of the ECEP Alliance and has a CSTA chapter.

Computer Science Access and Participation in Nevada

High Schools Teaching CS



Percent of High Schools Teaching CS by Community Type

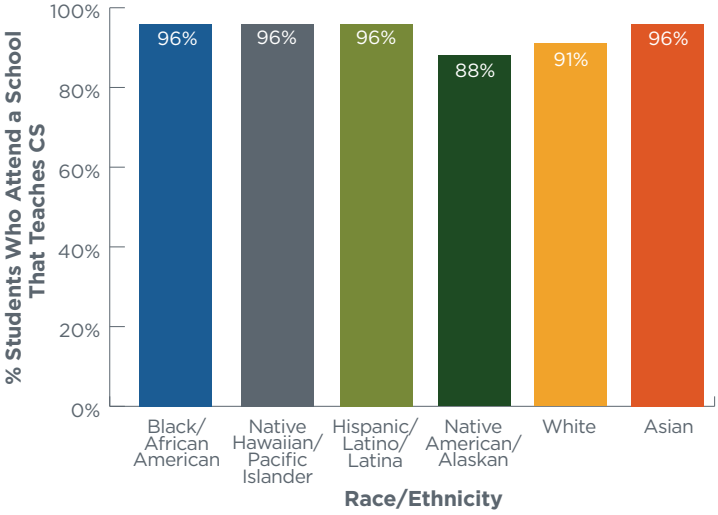


Nevada has averaged **3,360** open computing jobs each month*

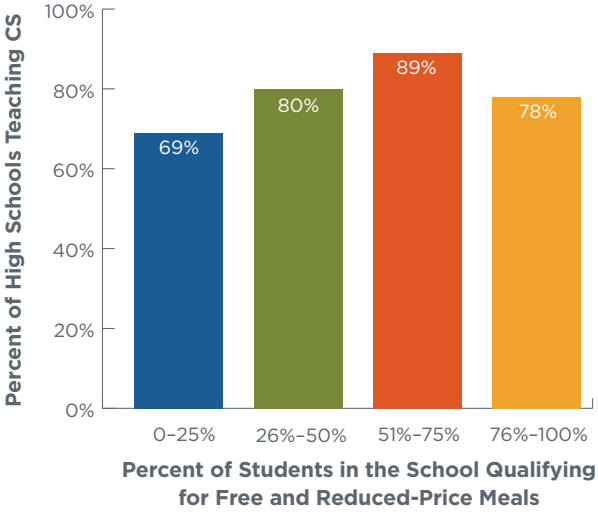
199 Bachelor's degrees in 2018 in Nevada*

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

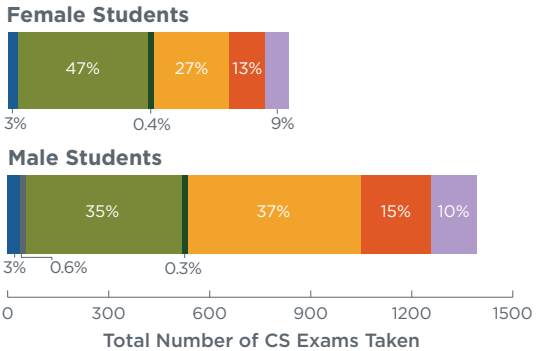
Race/Ethnicity and Access to Computer Science



Income Level and Access to CS



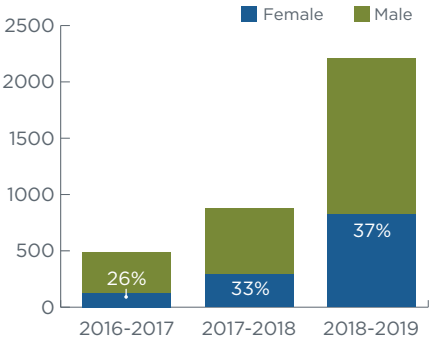
AP CS Participation by Race/Ethnicity and Gender



LEGEND

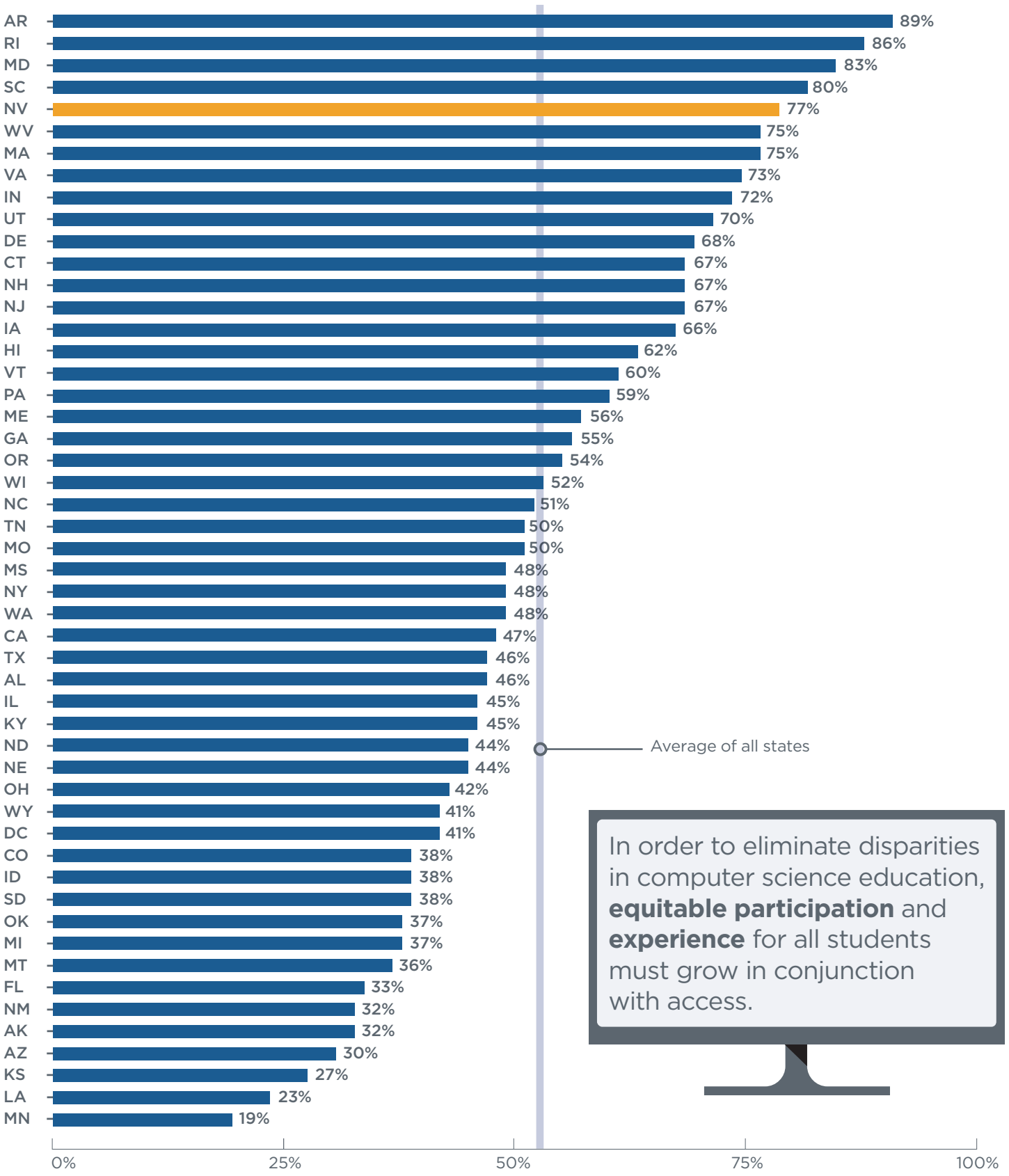
- Black/African American
- Native Hawaiian/Pacific Islander
- Hispanic/Latino/Latina
- Native American/Alaskan
- White
- Asian
- 2+ Races/Other

AP CS Student Participation



Black/African American students are 4 times less likely, Native Hawaiian/Pacific Islander students are 6 times less likely, and Native American/Alaskan students are 2.7 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