



Wyoming

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

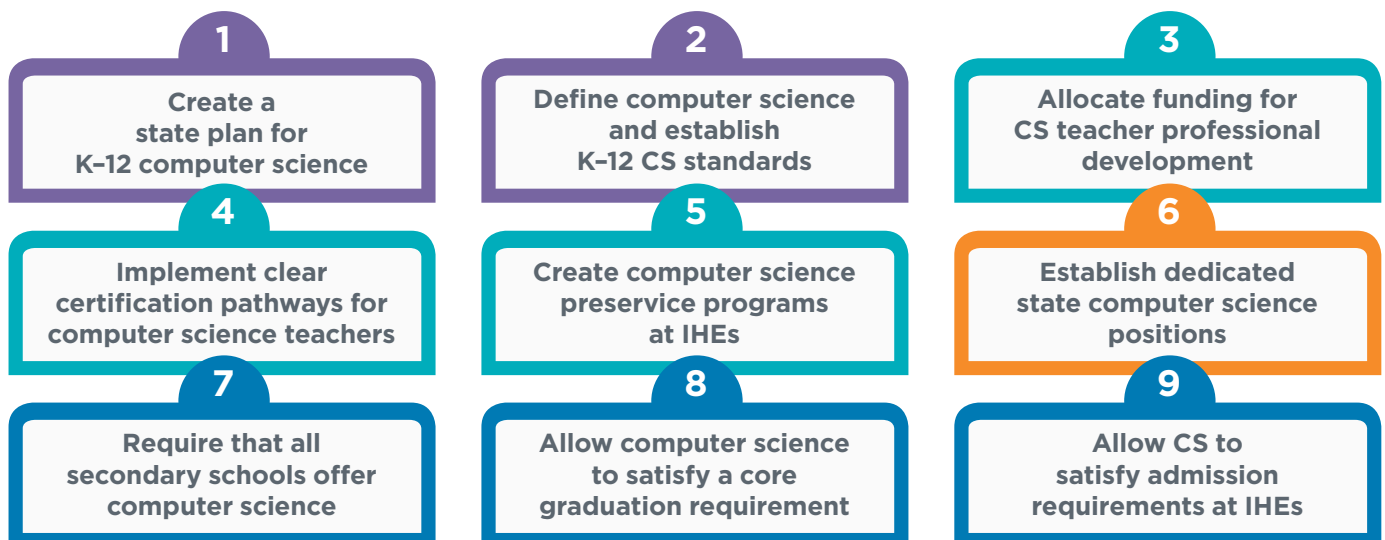
computer science education, supporting teachers and students, and providing leadership and guidance.

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





Wyoming Computer Science Policy

State Plan

Yes

The Wyoming Department of Education created a task force in 2017 to develop and implement a long-term plan for expanding computer science.

Standards

Yes

Wyoming adopted K-12 computer science standards in February 2020. Standards within each grade band address concepts of equity, such as bias, accessible technology, and inclusivity.

Funding

Other

Although Wyoming does not yet provide dedicated state funding, the Wyoming Trust Fund for Innovative Education prioritized computer science applications in 2018-2020. Wyoming can strengthen its computer science programs by creating specific opportunities to bring computer science to school districts, such as dedicated funding for rigorous professional development and course support.

Certification

Yes

In Wyoming, teachers with existing licensure can obtain a K-12 endorsement by completing a program that leads to licensure or a combination of coursework and passing the Praxis CS exam. Another pathway requires coursework and work experience. Teachers can receive authorization to teach some computer science courses through a state and district-approved professional development plan and passing the Praxis CS exam.

Preservice

No

Wyoming 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

Yes

The Wyoming Department of Education has a Math and Computer Science Consultant.

All HS Offer

Yes

SF 29 (2018) required all schools to include computer science and computational thinking by the 2022-2023 school year.

Grad Credit

Yes

In Wyoming, computer science courses aligned with the standards can count as a math or science credit for graduation.

IHE Admission

Yes

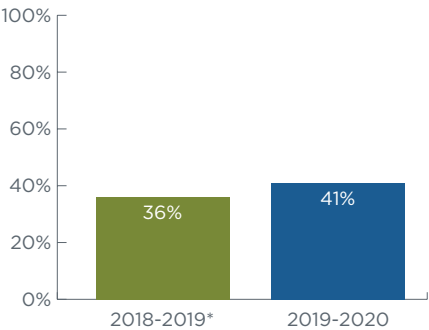
In Wyoming, computer science can count as one year of science, fourth year mathematics, or career credits required for admission at institutions of higher education, which aligns with the high school graduation policy.

Wyoming has a CSTA chapter.



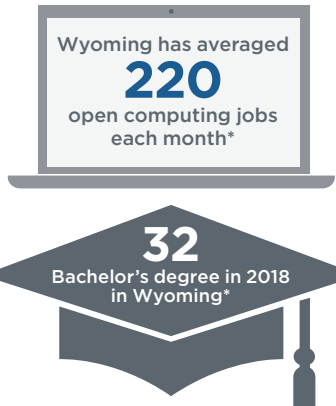
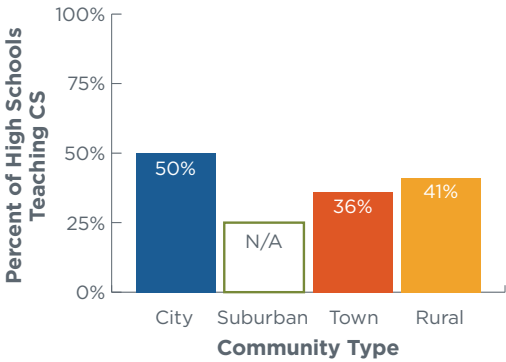
Computer Science Access and Participation in Wyoming

High Schools Teaching CS



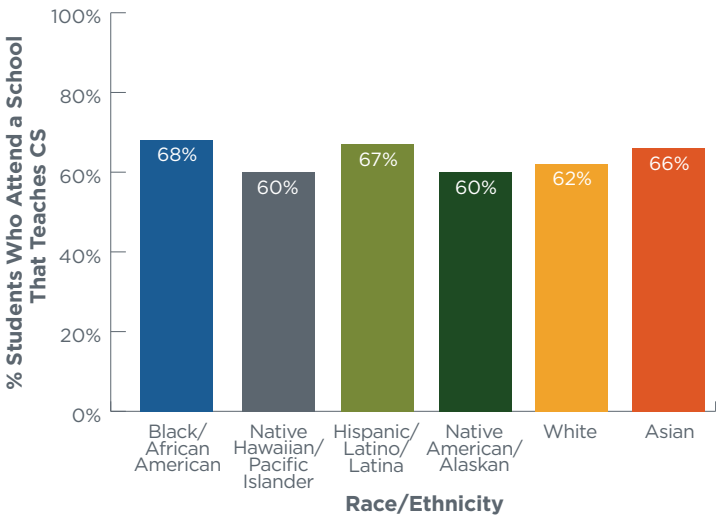
*Reflects a correction of last year's published number

Percent of High Schools Teaching CS by Community Type

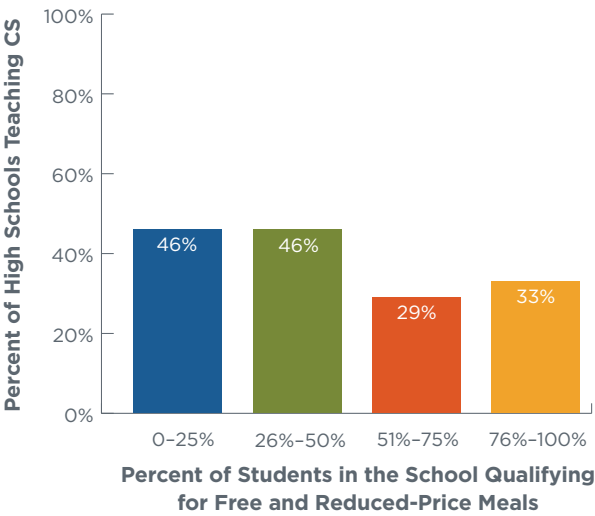


*Sources: The Conference Board and the National Center for Education Statistics

Race/Ethnicity and Access to Computer Science

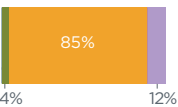


Income Level and Access to CS

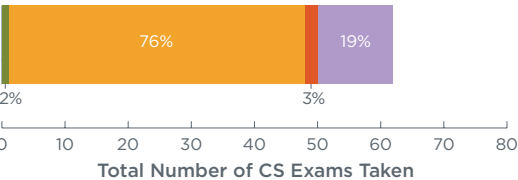


AP CS Participation by Race/Ethnicity and Gender

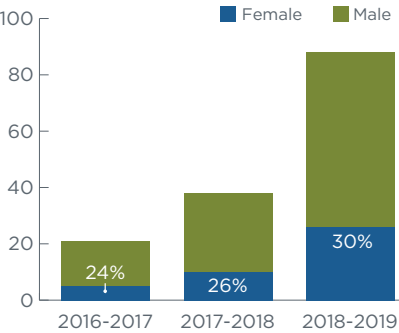
Female Students



Male Students

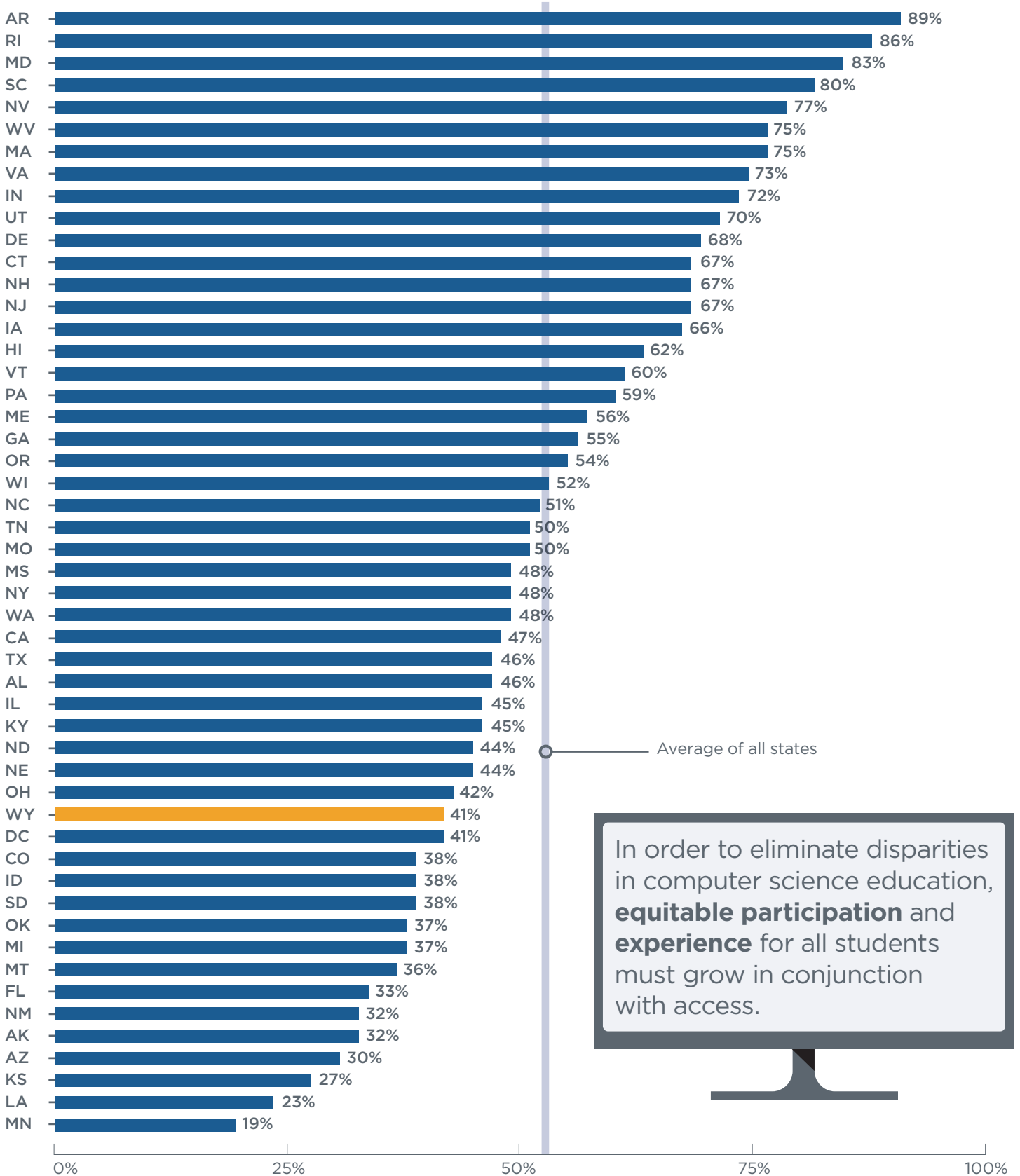


AP CS Student Participation



Native American/Alaskan students make up 4% of the overall student population, but no Native American/Alaskan students took an AP CS exam. Hispanic/Latino/Latina students make up 14% of the overall student population, but only 2 Hispanic/Latino/Latina students took an AP CS exam.

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