



# Arkansas

## 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

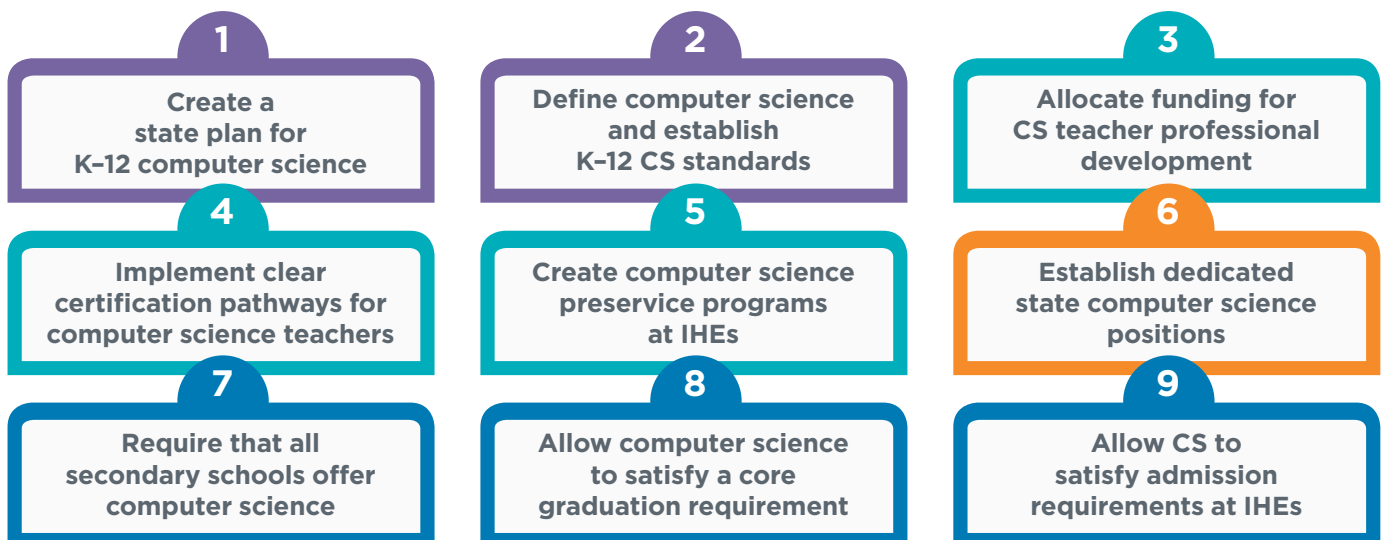
computer science education, supporting teachers and students, and providing leadership and guidance.

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



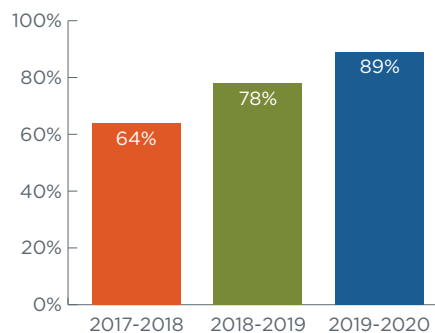


# Arkansas Computer Science Policy

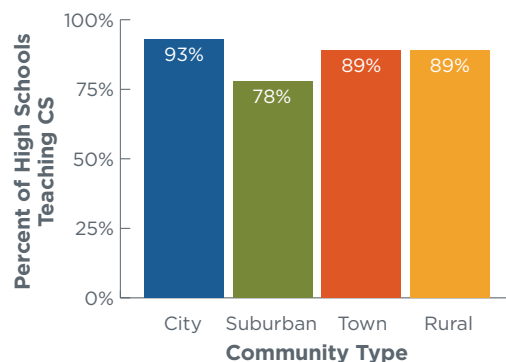
<b>State Plan</b>	The Arkansas Department of Education developed a state plan for computer science education on recommendations from the Computer Science and Technology in Public School Task Force in 2016. In October 2020, the Computer Science and Cybersecurity Force released a new set of recommendations.
Yes	
<b>Standards</b>	Arkansas adopted K-8 computer science standards in 2015 and 9-12 standards in 2016. All students learn the K-6 standards and take a coding block in 7th or 8th grade.
Yes	
<b>Funding</b>	Act 154 (FY 2021), Act 877 (FY 2020), Act 243 (FY 2019), Act 1044 (FY 2018), and Act 189 (FY 2016 and 2017) allocated \$2.5M annually for the Computer Science Initiative. One grant program for schools prioritizes programs that broaden participation in computer science courses.
Yes	
<b>Certification</b>	In Arkansas, teachers with existing licensure can add a 4-12 endorsement by passing the Praxis CS exam; teachers can also earn an initial license in computer science. Until the 2021-2022 school year, any teacher with a grade-appropriate license can obtain an approval code by completing one of the following: approved professional development, prior computer science teaching, coursework in computer science, or other department requirements. State funding for computer science can support credentialing for teachers.
Yes	
<b>Preservice</b>	Arkansas has approved secondary computer science preparation programs at several institutions of higher education and lists these institutions publicly. The state also requires all preservice elementary teachers to receive instruction in computer science education. ForwARd Arkansas scholarships are available for students studying to become licensed computer science instructors and commit to teaching in a ForwARd Community school district.
Yes	
<b>CS Supervisor</b>	The Arkansas Department of Education has an office of computer science with four staff members focusing on computer science, including the State Director of Computer Science Education. There are also multiple statewide computer science specialists.
Yes	
<b>All HS Offer</b>	Act 187 (2015) required all high schools to offer computer science by the 2015-2016 school year. Each school reports computer science enrollment by grade and race.
Yes	
<b>Grad Credit</b>	In Arkansas, any computer science course can count as a mathematics or science credit for high school graduation.
Yes	
<b>IHE Admission</b>	Any computer science course can count as a mathematics or science credit required for admission at institutions of higher education, which aligns with Arkansas's high school graduation policy.
Yes	

Arkansas is a member of the ECEP Alliance, has a CSTA chapter, and Governor Asa Hutchinson is a member of the Governors' Partnership for K-12 Computer Science.

## High Schools Teaching CS



## Percent of High Schools Teaching CS by Community Type



Arkansas has averaged  
**1,773**  
open computing jobs  
each month\*

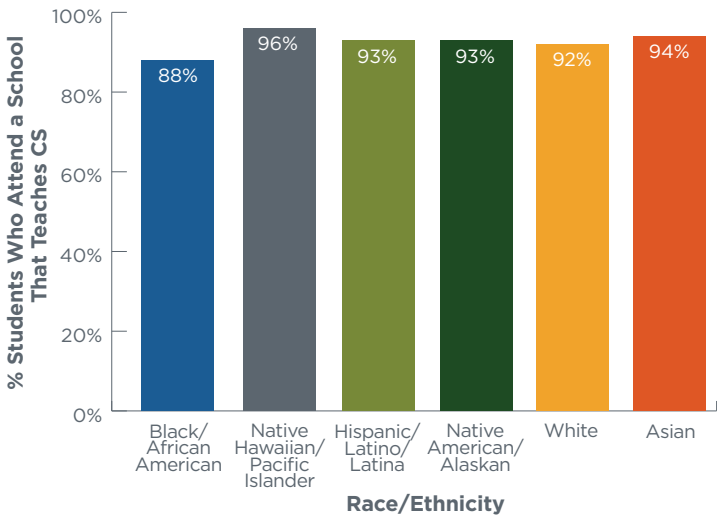
**410**  
CS bachelor's degrees  
in 2018 in Arkansas\*

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

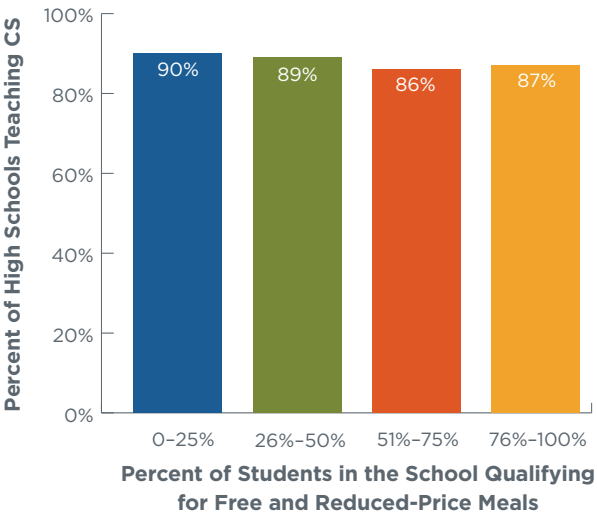


# Computer Science Access and Participation in Arkansas

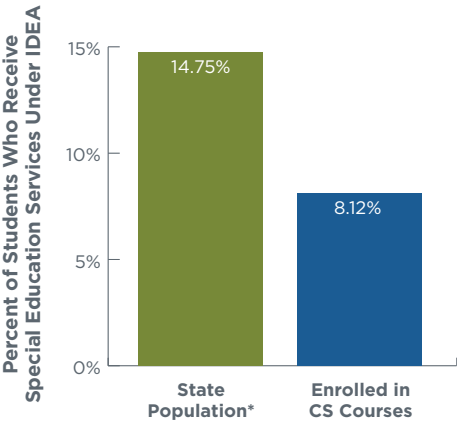
## Race/Ethnicity and Access to Computer Science



## Income Level and Access to CS

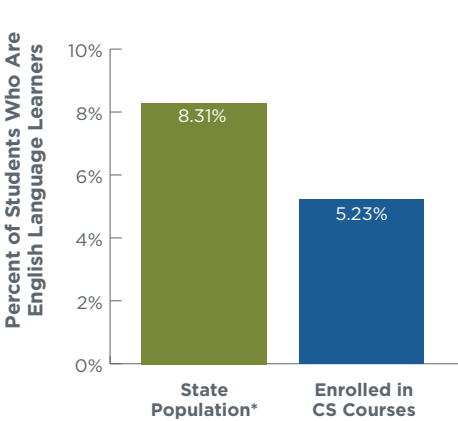


## Students with Disabilities and Participation in CS



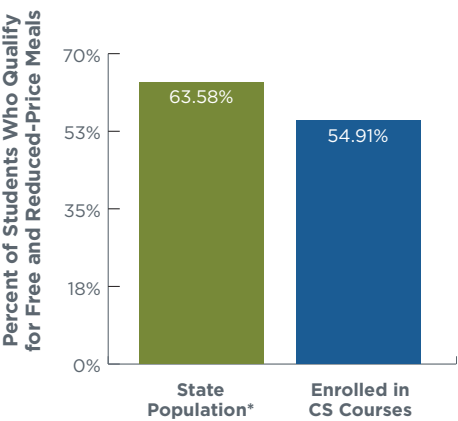
\* U.S. Department of Education, Digest of Education Statistics Table 204.70, 2017-2018

## English Language Learners and Participation in CS



\* U.S. Department of Education, Digest of Education Statistics Table 204.20, fall 2017

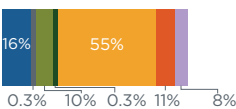
## Economically Disadvantaged Students and Participation in CS



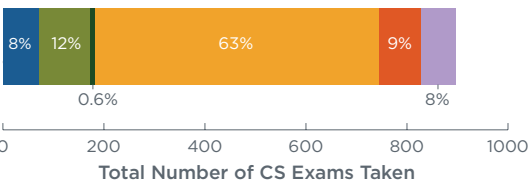
\* U.S. Department of Education, Digest of Education Statistics Table 204.10, 2016-2017

## AP CS Participation by Race/Ethnicity and Gender

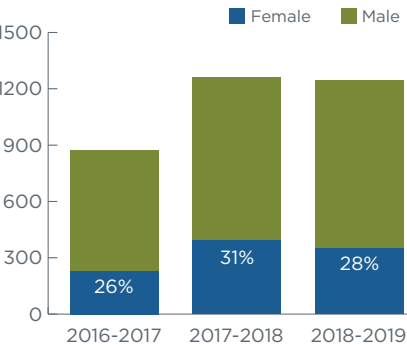
### Female Students



### Male Students



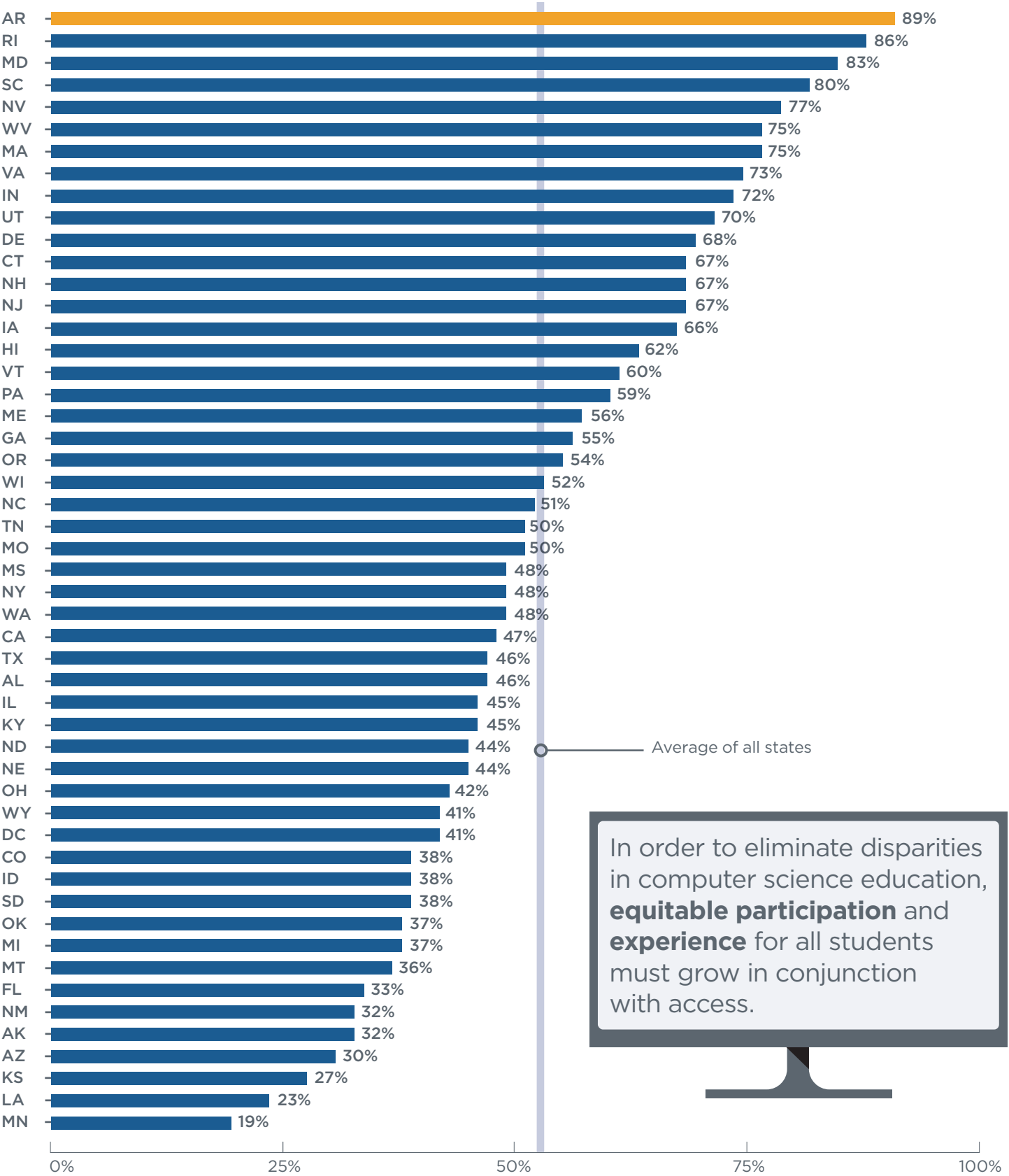
## AP CS Student Participation



Students of all racial and ethnic groups have access to AP CS on par with their state population, but Native American/Alaskan students are 1.5 times less likely, Hispanic/Latino/Latina students are 2 times less likely, and Black/African American students are 2.5 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](https://advocacy.code.org/stateofcs)