

2024 State of Computer Science Education

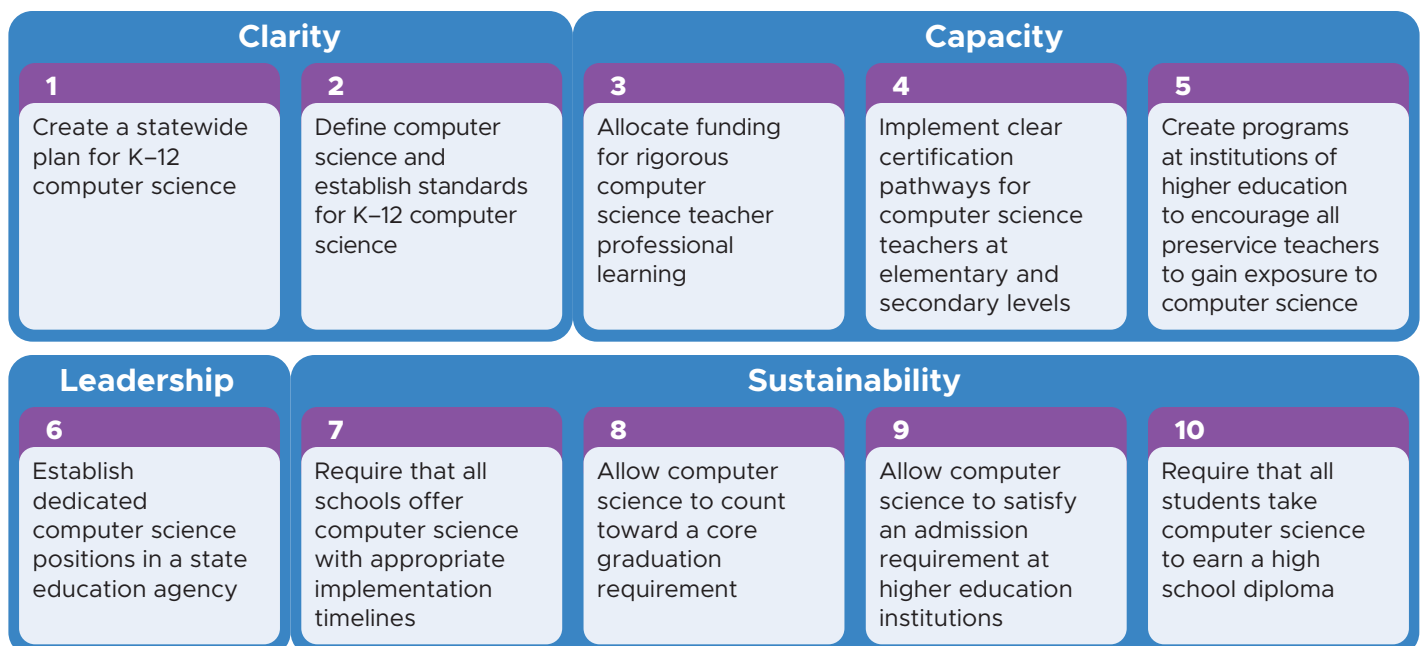
The United States is at a critical juncture in education policy: How do we prepare our students for a world increasingly driven by computing and generative artificial intelligence? Since the last edition of this report, there has been growing recognition among U.S. policymakers of the urgency of this issue, with 11 states now requiring students to earn credit in computer science to graduate from high school. The 2024 State of Computer Science Report urges policymakers to ensure that all students in every state learn computer science.

Over the last eight years, there has been significant progress, with more students than ever before taking computer science. Yet, millions of students still lack opportunities to engage in this essential subject. Only 60% of public high schools offer a foundational computer science course, and just 6.4% of high school students are enrolled annually. Young women, in particular, are far less likely to take computer science. This disparity underscores the urgent need for action.

The need for computer science education is understood worldwide. In 2023, the European Union called on all member countries to make computer science a required subject. Without decisive action, the United States risks falling behind on the global stage.

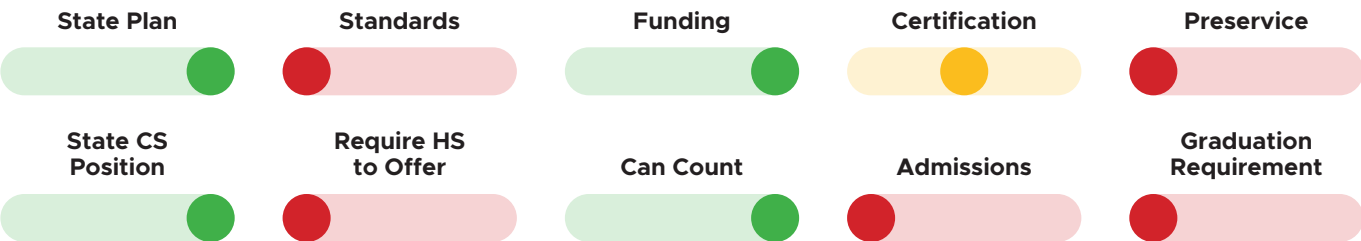
A recent University of Maryland study underscores the importance for all schools to invest in computer science education. The research reveals that offering just one computer science course in high school can increase students' earnings by at least 8% by age 24. The benefits are even more pronounced for low-income students, Black students, and young women.

The Code.org Advocacy Coalition recommends 10 policies to help build capacity and sustainability for K–12 computer science. When states take action and pass policies, students have more opportunities to benefit from computer science. This report provides updated policy, access, and participation data alongside examples and stories to guide policymakers and advocates in ensuring all students learn computer science.





Ten Policies to Make Computer Science Foundational



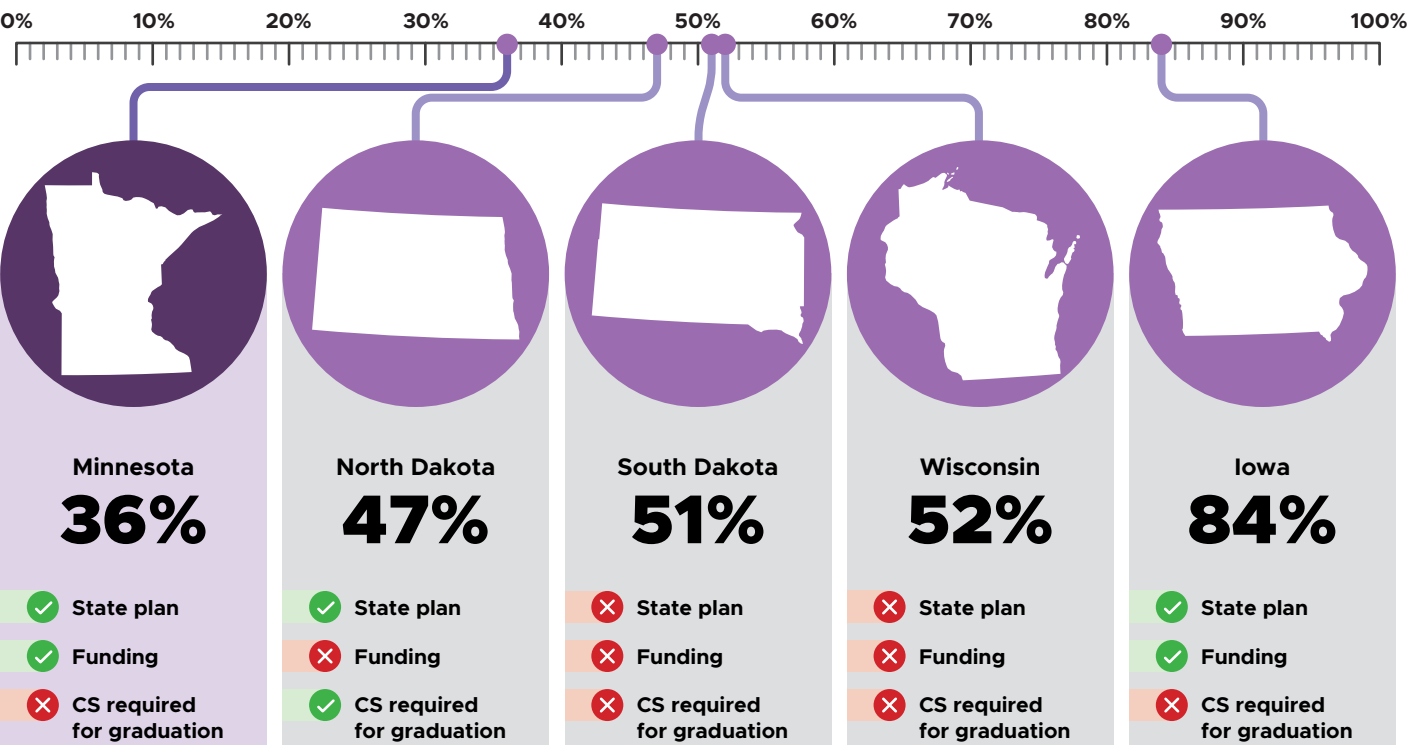
Policy Implementation

The Minnesota Computer Science Working Group published its state plan in March 2024, which includes 10 recommendations to expand access to computer science in the state; recommendations include establishing an advisory committee, flexible teacher certification pathways, grant programs, requiring integration of computer science in grades K–8, and requiring all high schools to offer computer science.

We encourage the state to begin to implement this plan in the upcoming year, with a particular focus on getting more schools to teach computer science.

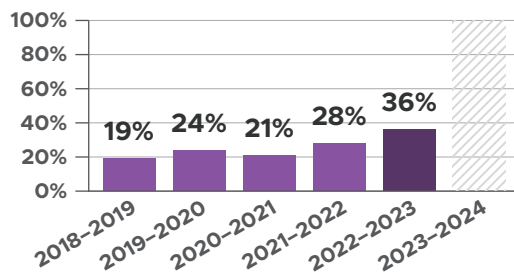
Minnesota had the largest increase of high schools offering computer science among all states.

Comparative Access to Computer Science Courses (% of HS offering)

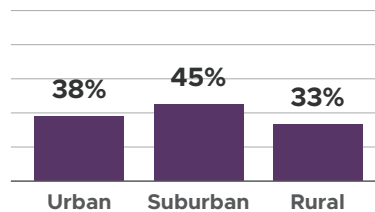


Percentage of Public High Schools Offering Foundational Computer Science

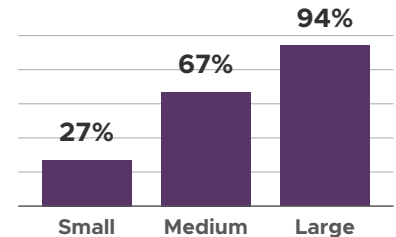
Access by School Year



Access by Geography*



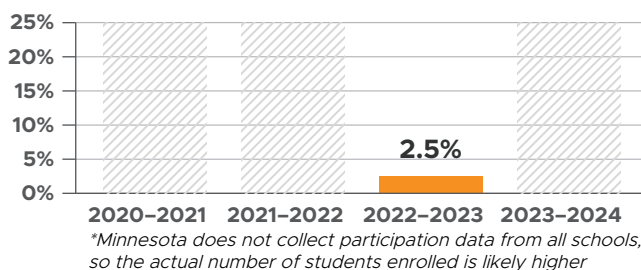
Access by School Size*



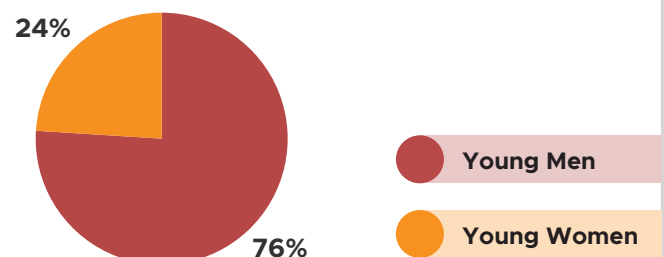
*Data is from the most recent data school year 2022-2023

Participation in Foundational High School Computer Science

Participation by School Year*



Participation by Gender



Student Groups That Reached or Neared Parity

Black students, Hispanic/Latino students, students with 504 plans

Student Groups That Are Underrepresented

Young women, Native American students, economically disadvantaged students, students with IEPs, English language learners

Computer Science Prior to High School

The Minnesota Department of Education is working with districts and charter schools to define expectations for reporting K-8 computer science data, including defining courses, classifications, and integrating this information into student information systems.

30%* of middle schools offer computer science and 4% of students are enrolled.

*This percentage is based on data received from 64% of middle schools in the state, therefore the actual number of schools teaching may be higher.

States ranked by their percentage of offering

