

States lead efforts to expand access to computer science for K-12 students

By Gov. Doug Burgum and Gov. David Ige

It may seem inevitable that the U.S. will always remain the world's tech leader. In reality, we stand underprepared to meet the demands of the 21st Century. That's why the nation's governors are driving bipartisan solutions to advance K-12 computer science education across the country.

As the governors of North Dakota and Hawai'i, we know all 50 states must focus on taking action to strengthen computer science education if we want to further technological advancements, bolster the future workforce, spur economic growth and protect ourselves from cybersecurity attacks.

While 44 other countries require computer science, only 51% of U.S. public high schools offer any such courses – surely a factor in a U.S. software engineer shortage the U.S. Bureau of Labor Statistics predicts will increase to nearly 1.2 million by 2026.

The U.S. must do more to close the digital divide and the opportunity divide for young people, including increasing broadband access and expanding student digital literacy.

Governors, in partnership with state legislatures, are making significant strides by implementing proven strategies, including:

- Increasing the number of high schools offering computer science courses,
- Allocating state funding to K-12 computer science education,
- Creating pathways to postsecondary success in computing and related careers and
- Providing equitable access to computer science for all students.

Computer science is no longer about training kids for jobs of the future. These jobs are here now.

Computing jobs are the largest source of new wages in the U.S., with more than 550,000 computing job openings nationwide. These jobs are in every industry and every state, and they are projected to grow 13% by 2030. What's more, 91% of open software jobs are outside of Silicon Valley – spreading opportunity to every state. With remote work taking on a larger share of the U.S. workforce, computing jobs are everywhere. And with global competition, every U.S. company – and government, too – needs to become proficient with productivity-increasing software solutions or they will be disrupted by a proficient competitor.

We're also seeing success stories in our home states, underscoring the value of taking action to address this challenge facing our country.

In North Dakota, we're proud to be the first state to integrate computer science and cybersecurity standards for K-12 students. North Dakota also passed legislation making it the first state to authorize a central, shared service approach to cybersecurity strategy across all aspects of state government including state, local, legislative, judicial, K-12 education and higher education sectors. Over the past three years, the percentage of public high schools statewide offering computer science classes nearly doubled. Almost 100% of North Dakota students have home access to high-speed broadband, which helped tremendously during the pandemic, and demonstrates the importance of closing any digital divide between rural and urban access.

In Hawai'i, we have a plan to implement computer science learning in all our schools. We've signed legislation to increase computer science education and teacher training to help ensure our students can succeed in a 21st Century economy. We have made remote learning resources for educators and parents a focus. We also signed legislation to provide funding to develop and implement a statewide computer science curriculum and ensure each public high school offers at least one computer science course each school year. These efforts have resulted in 87% of high school students attending a school that offers computer science classes, higher than the national average.

Ninety percent of parents report they want their child to learn computer science in school, and research backs them up. Six different studies show that learning computer science helps students perform better in school. Studying computer science in elementary school is correlated with higher test scores in math, science and English. Students who learn to code also demonstrate better executive, planning and problem-solving skills.

That's why Americans intuitively understand what research and test scores show us: We need to improve computer science education to create a brighter future for our children and country. We have an imperative to invest time and energy toward these efforts as our national security depends on computer science and cybersecurity experts. It's encouraging to see the growing bipartisan group of governors coming together to improve computer science education.

The successes we're seeing in North Dakota and Hawai'i reflect how smart policies can make significant progress, and we're hopeful more American citizens, nonprofits and businesses will join efforts to invest in our future by improving computer science education.