

Commission: Expand K-12 computer science education

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SREB News



## SREB Commission Urges Expanding K-12 Computer Science Education

*Members challenge states to help more students pursue degrees and careers in computing fields*

Atlanta, December 6, 2016 — As schools celebrate Computer Science Education Week, the Southern Regional Education Board today released the report of its [Commission on Computer Science and Information Technology](#).

*Bridging the Computer Science Education Gap: Five Actions States Can Take* spotlights the widening gulf between the limited computer science learning experiences available to American students and the millions of good jobs open to individuals with high-level computing skills.

The report offers states five actions to help more students master the core concepts and practices of computer science and develop the essential problem-solving skills — known as computational thinking skills — that drive success in college, careers and life.

[Read the report](#)

“Like reading, writing and math, knowledge of computer science can no longer be considered optional in our innovation-driven economy, where data and computer technology are central to our lives,” said SREB President Dave

Spence.

## **Five Actions**

*Bridging the Computer Science Education Gap* challenges states to:

- Develop rigorous standards for computer science and adopt standards-based curricula, instructional strategies and activities from kindergarten through high school.
- Help students master the foundational literacy, math and problem-solving skills they need to learn computer science.
- Build career pathways that blur the line between high school and college and speed students' progress toward degrees and jobs in computing fields.
- Prepare computer science teachers with a passion for inspiring diverse learners.
- Promote career awareness in every school, and build parent, business and community partnerships that promote computer science.

## **Creating K-12 Computer Science Standards**

Nationwide, only six states have fully developed K-12 computer science standards. The report highlights tools states can use to develop these standards, including the [K-12 CS Framework](#), created by states, districts, employer partners and computer science educators, as well as the Computer Science Teachers Association's [newly revised K-12 standards](#).

*Bridging the Computer Science Education Gap* also offers examples of standards-based, low- or no-cost computer science courses that engage elementary, middle grades and high school students in using computer hardware, software and algorithmic processes to design solutions to real problems in their schools and communities.

“Since passing legislation in 2015 requiring all public high schools to teach computer science, Arkansas has achieved great success enrolling thousands more students, including girls and students of diverse ethnic backgrounds, in rigorous computer science courses,” said Arkansas Governor Asa Hutchinson, the Commission’s chair. “We are also investing in training teachers.”

## **Preparing Great Computer Science Teachers**

For states facing a computer science teacher shortage, the Commission report notes that great teachers can come from any discipline, so long as they have inquiring minds and a knack for technology. The report advises states to embed computer science content into postsecondary teacher training programs and offer intensive professional development to existing teachers.

### **Building Pathways to Computing Careers**

Career pathways empower students to earn college credentials and degrees and secure good jobs that put their computing know-how to work in fields like animation, fashion, game design, manufacturing or medicine. SREB is now partnering with states to build pathways to degrees and careers in cybersecurity and software development, complementing SREB's existing [Advanced Career](#) pathways in informatics and health informatics.

“In the near future, a million or more high-paying jobs that require computing skills may go unfilled because our youth do not hold the right credentials and degrees,” said SREB Senior Vice President Gene Bottoms. “SREB is committed to helping states develop computing pathways that bridge the gap between high school, two- and four-year colleges and the workplace.”

[Executive Summary and Full Report](#)



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