STEM Education in America: A Bold Vision for Fostering Lifelong Learners

Robust STEM education programs are needed to foster successful career pathways for America's current and future learners.

Innovative technologies are accelerating worldwide, creating highly technical jobs across the globe. As today's youth advances toward the workforce, schools need help developing comprehensive Science, Technology, Engineering, and Mathematics (STEM) programs that inspire young people to pursue scientific and technical careers.

In a recent report, the National Science and Technology Council crafted a vision for STEM education in America with a five-year plan. The plan paints a picture where every American has lifelong access to superior STEM education, with the United States leading the way in STEM literacy, innovation, and employment worldwide.

Three Goals to Promote STEM Success

The vision demands a collaborative call-to-action for families, educators, employers, and students. The plan outlines three ambitious goals to set a foundation of success for the STEM community:

- **Build Strong Foundations for STEM Literacy:** STEM-literate communities are prepared to tackle the rapidly evolving technological landscape. Every learner will have opportunities to master digital literacy and basic STEM concepts.

- **Increase Diversity, Equity, and Inclusion in STEM:** Historically, a lack of access to proper STEM education has left some groups underrepresented in STEM fields. Every American will have lifelong access to inclusive STEM education.

- **Prepare the STEM Workforce for the Future:** A pool of diverse, talented Americans who discover and expand innovative technologies bolster the nation's economy. Both college-educated practitioners and skilled trade workers will engage in learning experiences that equip them for STEM careers.

A Holistic Approach

What strategies will bring this vision to realization? The Council identified four pathways for cultivating a diverse pool of STEM talent.

- **Develop and Enrich Strategic Partnerships:** Fostering an environment that envelops every learner in STEM education isn't limited to the school classroom. Academic institutions, employer-educator partnerships, schools, and nonprofits will unite to create rich, blended STEM experiences. As a result, Americans will be empowered with increased access to internships, apprenticeships, work-based learning experiences, and more.

- **Engage Students where Disciplines Converge:** Learners become creative and take initiative when they are exposed to complex, real-life challenges. Interdisciplinary learning events such as science fairs, robotics clubs, and gaming workshops encourage participants to solve problems using various disciplines and entrepreneurial thinking.

- **Build Computational Literacy:** Technological advances such as digital devices and the internet have transformed modern society. With over 500,000 open jobs across the United States, computing jobs are the top source of new wages in our current economy. First-class STEM programs will go beyond teaching people how to operate digital devices – they will continuously engage students in computational thinking. Individualized instruction suited to each learning style (such as virtual reality experiences) will teach students to solve problems using data and logic.

- **Operate with Transparency and Accountability**: The federal government is committed to transparency with open, evidence-based practices in all STEM programming and investments.

Making Accessible STEM Programs a Reality for All

When exposed to quality programs, today's youth is clearly attracted to the STEM field. Forty-one percent of middle schoolers and 46 percent of high schoolers expressed interest in exploring a STEM career after taking at least one computer programming class.

In 2015, the National Bureau of Labor Statistics said the United States was prepared to create a million STEM workers in the next decade. However, high-quality STEM education is expensive, and many school districts face a lack of funding and resources. Students who leave the K-12 system without STEM skills often lose out on the career opportunities they deserve.

Leaders in education must advocate for rapidly evolving classroom technologies and robust professional development programs to bring the bold vision for STEM education to fruition.

Vinson Consulting Group helps school districts across the country secure funding for educational programs that they are entitled to under the law. For example, federal funding is partly determined by how many hours students spend in extracurricular programs vs. normal

curriculum activities. If they don't report the correct amount, a state audit could put their STEM program funding at risk – and reap consequences for school leaders.

Vinson's CheckPoint EMIS platform allows schools to quickly and easily measure where students spend their time, track mistakes, and identify which people need to correct errors. District leaders who adopt the platform ensure they can receive every dollar of STEM funding available – with confidence that their district data is accurate and audit-ready.

Invest in CheckPoint EMIS and secure the funding your schools deserve to build a 21st century STEM education ecosystem.

Tweets:

1. As the demand for #STEM professionals grow, how do #K12 districts prepare students for scientific and technical careers? Here's the bold vision. <link to blog>

2. A bold vision for #STEM education in America aims to prepare students for success in a highly technical workforce. Read about the plan: <link to blog>

3. #STEM jobs aren't only here to stay; they're growing at a rapid rate. Learn about the bold vision for developing tomorrow's innovative leaders. <link to blog>

Facebook Post:

How do we prepare today's students to meet the growing demand for STEM professionals worldwide? Learn more about the bold vision to inspire learners to pursue scientific and technical careers. <link to blog>

LinkedIn Post:

A bold vision for STEM education sets a high bar for developing a generation of learners eager to meet the demand for scientific and technical talent. Learn about the collaborative call-to-action. <link to blog>