

ASA Praises Bipartisan Introduction of Data Science and Literacy Education Bill

American Statistical Association leadership applauds the [bipartisan introduction](#) of the Data Science and Literacy Act by representatives Haley Stevens (D-MI), Jim Baird (R-IN), Don Beyer (D-VA), and Young Kim (R-CA).

“Statistics and data science are fundamental to production, innovation, and discovery, so there is a high demand for a workforce with statistics and data science skills,” said Katherine B. Ensor, 2022 ASA president and Noah G. Harding Professor of Statistics at Rice University. “Everyone receives data-driven information and faces data-driven decisions daily. The Stevens-Baird-Beyer-Kim Data Science and Literacy Act brings attention to the tremendous job opportunities for data-savvy students. It helps schools provide statistics and data science education that meets workforce and society demands and prepares future researchers.”

“Ensuring early and equitable access to high-quality data science and literacy education is vital to elevating American students and helping develop a modern STEM workforce, which is a cornerstone of 21st-century competitiveness,” added ASA Executive Director Ronald Wasserstein. “The bill would expand access to STEM education and careers for communities of color and other underrepresented groups, including at two-year colleges and minority-serving institutions.”

The [Data Science and Literacy Act of 2023](#) supports a voluntary program at the Department of Education through which educational entities (pre-K–12 and two- and four-year colleges) could apply for funding to increase access to data science and literacy education. The bill would authorize \$10 million annually for this program. Eligible entities such as states, local educational agencies, tribal schools, and institutions of higher education could use grant funding to do the following:

- Ensure access to data science, data literacy, and statistics education for all students served by the eligible entity

- Promote data science, data literacy, and statistics through professional development for teachers and developing learning material
- Expand access to STEM classes, using data science and literacy as a catalyst for increased interest in STEM more broadly
- Address equity gaps in access to STEM courses

Improved access to data literacy education would prepare students for the growing opportunities in data-driven and technical careers, help them understand uncertainty in their daily lives, and allow them to make more informed decisions. “Data-driven roles, such as data scientist and statistician, are among the fastest-growing positions in the United States,” says ASA Director of Science Policy Steve Pierson, pointing to the Bureau of Labor Statistics’ top 10 fastest-growing occupation projections, which have included statistician continuously since the [2014–2024 projection](#). The [2021–2031 projection](#) estimates a 33 percent increase in employment for statisticians and—for the second consecutive time—includes the closely related occupation data scientist in the top 10 list.

“Given the growth of data-intensive jobs and the rising use of data across a variety of fields, data science and literacy education is critical for building America’s STEM workforce,” Pierson added.

The ASA has been documenting the rapid growth in the number of bachelor’s and master’s degrees in statistics—[a six-fold increase for the former and 2.5 for the latter](#)—and related fields awarded annually and the number of universities granting those degrees, the most recent report appearing in this ASA [article](#).

The four sponsors issued the following statements in a [joint release](#):

“To compete in a 21st-century economy, we need a 21st-century STEM workforce that reflects the diversity that makes the United States the greatest nation on earth,” said Rep. Haley Stevens (MI-11). “Ever since Michigan’s 11th District sent me to Congress, I have been laser-focused on increasing access to STEM education for more young women and low-income communities. The Data Science and Literacy Act is a critical part of that mission. Data touches everything we do. Data education is integral to bolstering our global competitiveness, unlocking good-paying jobs, and fostering a well-informed society. I am proud to introduce this legislation that helps ensure, no matter their background or zip code, that all students are equipped with the necessary tools and knowledge to prepare them for a career in the STEM fields.”

“We live in a world full of data – from the logistics information collected to streamline supply chain operations, to the tracking done by the public health industry to halt the spread of diseases, to the data collected by our smartphones about our everyday lives. As the use of data to optimize operations across industries increases, so does the demand for data literacy in America’s workforce,” said Rep. Beyer. “Our bill would provide educators with the resources necessary to expand access to a quality data science education and prepare students for 21st century jobs.”

“STEM education expands opportunities for students, grows our economy, strengthens our workforce across industries and boosts our nation’s global competitiveness,” said Rep. Kim. “The Data Science and Literacy Act will equip educational institutions with the tools they need to teach students of all ages and across all regions of the country the skills needed to get good-paying jobs and help our nation win the future. I will always support opportunities for students to access a quality education and achieve their dream.”

“As world leaders in technological advancement, it’s essential that we create programs that increase access to data science and literacy education so students from an early age can earn a well-rounded STEM education,” said Rep. Baird. “Improved access to these tools is essential for building tomorrow’s workforce, and I look forward to working with Congresswoman Stevens to get this bipartisan investment in STEM education across the finish line.”

The need for a greater focus on statistics and data science skills in K–12 education is highlighted in a recent report from Data Science 4 Everyone, “[Data Science Is Vital to Student Success. So Why Are Outcomes Going Down?](#)” Studying results from the National Assessment of Education Progress (“The Nation’s Report Card”), they found, for example, a significant decline in student achievement in data literacy skills, including a full grade level drop in data analysis, statistics, and probability for 8th-grade students.

“It’s essential all children leave high school able to live and work in a data-driven world,” said Donna LaLonde, ASA director of strategic initiatives and outreach, also highlighting the ASA’s guidance for pre-K–12 statistical education: [Guidelines for Assessment and Instruction in Statistics Education \(GAISE\)](#). She also pointed to the 2022 [Joint ASA-National Council of Teachers of Mathematics Position Statement on Preparing PK–12 Teachers of Statistics and Data Science](#).

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The American Statistical Association, founded in 1839, is the oldest professional society in the US and represents 15,000 statisticians working across industry, government, and academia. For additional information, please visit the ASA website at www.amstat.org.