

SENATE BILL REPORT

SB 5755

As of March 1, 2013

Title: An act relating to establishing a comprehensive initiative to increase learning opportunities and improve educational outcomes in science, technology, engineering, and mathematics through multiple strategies and statewide partnerships.

Brief Description: Establishing a comprehensive initiative to increase learning opportunities and improve educational outcomes in science, technology, engineering, and mathematics through multiple strategies and statewide partnerships.

Sponsors: Senators Litzow, McAuliffe, Kohl-Welles, Conway and Kline; by request of Governor Inslee.

Brief History:

Committee Activity: Early Learning & K-12 Education: 2/21/13 [DPS-WM, DNP].
Ways & Means: 2/28/13.

SENATE COMMITTEE ON EARLY LEARNING & K-12 EDUCATION

Majority Report: That Substitute Senate Bill No. 5755 be substituted therefor, and the substitute bill do pass and be referred to Committee on Ways & Means.

Signed by Senators Litzow, Chair; McAuliffe, Ranking Member; Rolfes, Assistant Ranking Member; Billig, Cleveland, Fain, Hill and Mullet.

Minority Report: Do not pass.

Signed by Senators Dammeier, Vice Chair; Brown.

Staff: Eric Wolf (786-7405)

SENATE COMMITTEE ON WAYS & MEANS

Staff: Elise Greef (786-7708)

Background: In 2010, the Legislature directed the Office of Superintendent of Public Instruction (OSPI) to convene a workgroup to develop a comprehensive plan for establishing educational pathways from elementary education through postsecondary education for careers in science, technology, engineering, and mathematics (STEM). The plan defined STEM literacy and made a number of recommendations regarding recruiting and retaining

This analysis was prepared by non-partisan legislative staff for the use of legislative members in their deliberations. This analysis is not a part of the legislation nor does it constitute a statement of legislative intent.

STEM educators; creating STEM pathways to boost student success; and using STEM education to close the opportunity gap and prepare students for career and college.

Examples of other STEM K-12 education initiatives currently supported by the state include the following: designation of a statewide STEM director within OSPI; provision of funds to support career and technical education in STEM and professional development for teachers to implement STEM curricula; designation of STEM lighthouse schools to serve as examples of innovation and best practices; support for a mathematics, engineering, and science achievement (MESA) program run through state colleges and universities to encourage students in underrepresented groups to gain skills and explore careers in STEM; and grants for high schools to implement advanced STEM curricula, such as Project Lead-the-Way.

Washington STEM is a nonprofit organization established in 2011 with the objective of identifying and supporting innovations in STEM education across the state. Since its inception, Washington STEM has invested in a variety of initiatives, including the following: support for regional networks of education institutions and community organizations to advance STEM education that is aligned with local economic development; entrepreneur awards to help educators test new ideas and innovations; and portfolio awards that support multi-year STEM education projects.

One of the responsibilities of the Washington Student Achievement Council (WSAC) is to propose educational attainment goals and priorities through a ten-year Roadmap. Strategies to be included in the Roadmap are outlined in statute. The first Roadmap is due December 1, 2013.

The Quality Education Council (QEC) is charged with recommending and informing the ongoing implementation of the program of basic education to be delivered by public schools. QEC also must identify measurable ten-year goals and priorities for the education system.

Summary of Bill (Recommended Substitute): STEM Literacy. A definition of STEM literacy is adopted as: the ability to identify, apply, and integrate concepts from science, technology, engineering, and mathematics to understand complex problems and to innovate to solve them. Four components of STEM literacy are also described as: scientific, technological, engineering, and mathematical literacy.

STEM Education Innovation Alliance. A STEM Education Innovation Alliance (Alliance) is established to advise the Governor and provide vision and guidance in support of STEM education initiatives from early learning through postsecondary education. The Governor's Office, in consultation with the Superintendent of Public Instruction, must invite representatives of businesses, education institutions, and organizations with expertise in STEM education to participate. The Governor's Office, OSPI, and other state education agencies are also represented.

The first task of the Alliance is to combine previous STEM education strategic plans into a comprehensive STEM Framework for Action and Accountability (Framework). The Framework must use selected measures that are meaningful indicators of progress in increasing STEM learning opportunities and achieving longer-term outcomes in STEM.

STEM Benchmark Report Card. The Alliance must also develop a STEM Benchmark Report Card (Report Card) based on the Framework. The Report Card must be posted online and contain the following: the most recent data for the measures and indicators of the Framework; information from state education agencies on how activities and resources are aligned with the Framework; and data regarding STEM job openings.

The Education Data Center in the Office of Financial Management (OFM) coordinates data collection and analysis to support the Report Card. State education agencies must annually report on how their policies, activities, and expenditures align with and support the Framework. The Employment Security Department must create an annual report on current and projected job openings in STEM fields for the Report Card.

The first Report Card must be published by January 10, 2014, and updated annually thereafter.

Statewide STEM Organization. To the extent funds are appropriated for this purpose, OFM must contract with a statewide nonprofit organization with expertise in promoting and supporting STEM education from early learning through postsecondary education. The purpose of the contract is to identify, test, and develop evidence-based approaches for increasing STEM learning opportunities and improving outcomes that are aligned with the Framework.

The activities conducted under the contract are negotiated between the Governor's Office, OFM, and the selected organization, and include the following: a communications campaign about the importance of STEM literacy and the opportunities presented by STEM education and careers; expansion of regional STEM networks; competitive grants to support innovative practices in STEM education, including models of interdisciplinary instruction and project-based learning; professional development opportunities, including technology-enabled learning systems, to support state learning standards; and opportunities to extend STEM into early learning.

Other Initiatives. OSPI, in consultation with the Alliance, must identify and disseminate resources and materials to elementary, middle, and high schools to encourage interdisciplinary instruction and project-based learning in STEM.

WSAC must consult with the Alliance in order to align the Roadmap with the Framework and must include strategies in the Roadmap to strengthen the education pipeline and degree production in STEM fields. QEC must include strategies to increase STEM learning opportunities in the goals and priorities for the education system.

EFFECT OF CHANGES MADE BY EARLY LEARNING & K-12 EDUCATION COMMITTEE (Recommended Substitute): STEM Education Innovation Alliance Membership. The Governor's Office must invite one STEM educator each from the elementary, middle, and high school grade levels to participate in the Alliance.

Appropriation: None.

Fiscal Note: Available.

Committee/Commission/Task Force Created: No.

Effective Date: Ninety days after adjournment of session in which bill is passed.

Staff Summary of Public Testimony on Original Bill (Early Learning & K-12 Education): PRO: Washington is rich in STEM career opportunities; the number of STEM-related jobs is projected to grow 24 percent by 2018. This bill will align education with future STEM opportunities for children. A big part of the bill is aligning the multitude of different strategic plans related to STEM education into one framework. Another attractive part of the bill is that the private sector will provide matching funds and support for the program. This bill does not indicate that Governor Inslee is prioritizing STEM programs over the arts in schools. The bill creates a shared set of metrics that will allow the state to craft best practices. Polls show that Washington voters are highly supportive of the bill.

Persons Testifying (Early Learning & K-12 Education): PRO: Ted Sturdevant, Governor's Office; Baca Bernal, AFT WA; Lucinda Young, WA Education Assn.; Patrick D'Amelio, WA STEM; Jerry Bender, Assn. of WA School Principals; Tim Knue, WA Assn. for CTE.

Staff Summary of Public Testimony (Ways & Means): PRO: There has been a recent proliferation of STEM programs and initiatives and, although it is gratifying to see so much interest and investment, it is also important to have a common vision, spread best practices, and increase the impact of our work. If well implemented, the tools in this bill will create a true coherent P-20 system. Talent development is a number one priority for economic development strategies in our state. This bill will help us achieve a strong education pipeline and improve postsecondary graduation rates. It addresses the immediate challenges of STEM proficiencies needed by industry. There are job vacancies that are not being filled because we do not have the proficiencies in the workforce. Project-based learning is a very effective approach. It motivates the students and they see the value of the education they are receiving.

Persons Testifying (Ways & Means): PRO: Jim Crawford, OFM; Caroline King, WA STEM; Egils Milbergs, WA Economic Development Commission.