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**Education Committee**

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**HB 1906**

**Brief Description:** Improving mathematics and science education.

**Sponsors:** Representatives Hunter, Anderson, Wallace, Seaquist, Eddy, P. Sullivan, McDermott, Ormsby, McIntire, Pedersen, Rolfes, Barlow, Goodman, Rodne, O'Brien, Kenney, McDonald, Morrell, Newhouse, Roach, Hurst, Skinner, Wood and Bailey.

**Brief Summary of Bill**

- Creates an after school mathematics support program with community based organizations.
- Creates a mathematics and science instructional coach demonstration project.
- Directs an independent review of the mathematics and science learning standards.
- Requires the Superintendent of Public Instruction to identify three mathematics and science curricula for each grade span and directs the State Board of Education to identify conditions under which school districts will be required to use the curricula.
- Creates two new alternative routes to teacher certification for mathematics and science teachers.

**Hearing Date:** 2/8/07

**Staff:** Barbara McLain (786-7383).

**Background:**

The Washington Learns comprehensive education study, chaired by Governor Gregoire, issued final recommendations in November 2006. The Governor proposes implementation of a number of the recommendations regarding mathematics and science education through her proposed budget for the 2007-09 biennium and proposed legislation.

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*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.*

After School Support. One of the Washington Learns report recommendations was that the state should work with local community organizations and partnerships on student activities to reinforce mathematics and science concepts and skills.

Instructional Coaches. Another recommendation was to create training programs for mentors and instructional coaches who would teach alongside classroom teachers to provide encouragement, ideas, feedback, and examples related to effective practice. The report recommended that an initial focus be on mathematics coaching.

The Legislature currently supports mathematics coaches through the Math Helping Corps (MHC), which provides assistance to schools with low student performance in mathematics. The 13 MHC facilitators are employed by the Superintendent of Public Instruction (SPI) and are typically assigned to work directly in one school. They spend the rest of their time providing training and assistance to MHC cadre members who are other teachers in the region selected and paid by their schools to implement a mathematics coaching model.

Mathematics and Science Review. The SPI is responsible for developing and periodically revising the Essential Academic Learning Requirements (EALRs) and Grade Level Expectations (GLEs) that form the state's learning standards. The State Board of Education (SBE) has responsibility for developing a state accountability system to improve student achievement.

In January 2007, the SBE endorsed a charge for them to contract with a national consultant to conduct an independent review of Washington's mathematics standards. The SBE also intends to develop recommendations to the Legislature regarding an accountability system by December 2007.

Alternative Routes to Teacher Certification. There are several alternative routes for individuals to earn a teaching certificate other than completing a traditional teacher preparation program. Alternative route programs must be approved by the Professional Educator Standards Board (PESB). Route One is designed for paraeducators with an associate's degree seeking certification in special education or English as a Second Language (ESL). Subject to funding, alternative route candidates are eligible for conditional scholarships of up to \$8,000 per year, with the condition of two years of school service for every year of scholarship.

The PESB has also adopted pathways for currently certificated teachers to add a subject area endorsement. One of these pathways allows the teacher to pass the state subject area assessment (Praxis II) and have their instructional performance in that subject evaluated by a college or university teacher preparation program. Some teachers may need to take additional coursework in the subject to pass the assessment.

One of the Washington Learns report recommendations was to expand the alternative route programs to prepare more mathematics and science teachers.

### **Summary of Bill:**

After School Support. An after school mathematics support program is created. The SPI provides grants to community-based nonprofit organizations that demonstrate the capacity to provide assistance in mathematics learning, with priority for proposals to serve middle and junior high school students. Grant applicants must:

1. identify the mathematics content and instructional skills of staff or volunteers;

2. identify proposed learning strategies to be used in the program, such as computer-based practice and tutoring;
3. articulate a plan for connecting with school mathematics teachers to coordinate assistance for students; and
4. articulate a plan for assessing student and program success.

The SPI evaluates program outcomes and makes recommendations regarding continuation, modification, sustainability, and possible expansion. An interim report is due November 1, 2008, with a final report due December 1, 2009.

Instructional Coaches. A mathematics and science instructional coach demonstration project is created. The project includes an initial coach development experience for new coaches that is provided through an institute setting, coaching support seminars, and additional coach development services. In developing the project the SPI must draw upon research and the experiences of coaches in other programs.

Participating schools and districts select the individuals to perform the role of coach, based on characteristics of a successful coach. The coach's role is to support teachers as they apply knowledge, develop skills, polish techniques, and deepen their understanding of content and instructional practices. Each coach is assigned to two schools.

Project participants ensure that coaches participate in the coach development institute and support seminars, practice coaching activities according to their defined role, collect data, and participate in program evaluation activities.

The Washington State Institute for Public Policy evaluates the project. Findings include evaluation of the coach development institute and other support activities, recommendations regarding characteristics of coaches, changes in teacher instruction related to coaching, and satisfaction with the coaching by teachers and administrators. An interim report is due November 1, 2008, with a final report due December 1, 2009. The project expires September 1, 2010.

Mathematics and Science Review. By December 2007, the SBE, in cooperation with the SPI, must complete the process of an independent review of the mathematics and science standards and EALRs. The results of the review must provide findings and recommendations regarding changes to the standards and must address incorporation of international performance standards that may be benchmarked to the content of other international examinations.

Also by December 2007, the SBE must incorporate into the state accountability plan the conditions under which school districts will be required to use a state-identified curricula in mathematics or science, including conditions for exceptions to the requirement. The SBE must amend high school graduation requirements to include a minimum of three credits of mathematics and describe the required content. The SBE must also consider whether required mathematics content should include Algebra II, whether students should be required to take mathematics in their senior year, and ways to demonstrate competencies in mathematics.

By July 2008, the SPI must identify no more than three curricula each in mathematics and science for elementary, middle, junior high, and high schools that align with the new mathematics and science standards. The SPI must also begin revising the WASL to align with the new standards.

Alternative Routes to Teacher Certification. Two new alternative routes to teacher certification are created. The Pipeline for Paraeducators program is for individuals with at least three years of classroom experience but without a college degree. A conditional scholarship of up to \$4,000 per year for no more than two years is provided for candidates to enroll in a direct transfer associate degree program in mathematics education. Upon completion of the program, the candidate is eligible to enroll in a Route One alternative route program to obtain a mathematics and special education or a mathematics and ESL teaching certificate.

The Retooling to Teach Mathematics and Science program is for current teachers and individuals who are not employed as teachers, but who have an elementary teaching certificate. A conditional scholarship of up to \$3,000 per year is provided for these individuals to pursue a middle level or secondary mathematics or science endorsement through one of the PESB's pathways to endorsement. Candidates with an elementary teaching certificate who are not employed as teachers can seek only a middle level endorsement.

**Appropriation:** None.

**Fiscal Note:** Requested on January 31, 2007.

**Effective Date:** The bill takes effect 90 days after adjournment of session in which bill is passed, except section 3 pertaining to the review of mathematics and science standards and curriculum which contains an emergency clause and takes effect immediately.