
Education Committee

HB 2000

Brief Description: Providing a coordinated approach to creating an adequate supply of well-qualified mathematics and science teachers.

Sponsors: Representatives Priest, Wallace, Anderson and Sullivan.

Brief Summary of Bill

- Directs the Professional Educator Standards Board (PESB) to serve as the lead agency to coordinate current and new initiatives to support preparation and recruitment of mathematics and science teachers.
- Requires each public four-year institution of higher education to create a Washington Teach initiative to recruit and prepare mathematics and science teachers, offer an alternative route program for certification in mathematics or science, and reduce enrollment in certification for elementary education in order to increase enrollment capacity in mathematics and science.
- Authorizes selection of up to three community colleges to offer a post-baccalaureate teaching certificate in mathematics or science, and up to three colleges to develop a baccalaureate degree program with a teaching certificate in mathematics or science.
- Recognizes up to five years experience in nonschool mathematics, science, or engineering occupations for purposes of the salary allocation schedule if the teacher has at least 10 years of such experience.

Hearing Date: 2/11/09

Staff: Barbara McLain (786-7383)

Background:

Teacher Preparation Programs and Initiatives

The Professional Educator Standards Board (PESB) is the agency charged with establishing standards for and approving programs that lead to state certification as a teacher or other

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educator. Teacher certification programs are offered by public and private institutions of higher education. Certification can be earned as part of a baccalaureate degree, a masters degree, or a post-baccalaureate certificate program. The PESB also approves and oversees various alternative routes to teacher preparation that offer an abbreviated, classroom-based mentored internship and less traditional college coursework. Some alternative routes are designed for paraeducators to obtain a baccalaureate degree and a teaching certification; others are designed for mid-career professionals seeking a nontraditional pathway to a teaching certificate. Alternative route programs are operated in close collaboration between the institution of higher education and the school districts where candidates are placed for their internship. The majority of alternative route candidates are prepared to teach in subjects where there is a state or regional shortage, and the Legislature has provided alternative route scholarships for this purpose.

There are a number of state initiatives intended to encourage individuals to become teachers, particularly in shortage subjects. The Recruiting Washington Teachers (RWT) aims to recruit and support underrepresented, multicultural, and multilingual high school students interested in a teaching career. The RWT provides a summer academy, academic support and guidance, and classroom practicum experience. The Pipeline for Paraeducators program assists experienced paraeducators in obtaining a transferrable associate degree, then a baccalaureate degree with teaching certification in mathematics, English as a Second Language, or special education through an alternative route program. The Retooling to Teach Mathematics and Science program provides a scholarship for currently certified teachers to earn an endorsement to be able to teach mathematics or science. The Future Teachers' Conditional Scholarship program offers a scholarship for individuals who make a commitment to teach in Washington's public schools. The condition is one year of teaching for every year of scholarship if the teacher is in a shortage subject.

Mathematics and Science Teachers

The 2008 Legislature directed the PESB to conduct a study to quantify the supply and demand of mathematics and science teachers and recommend strategies for how to meet the demand, including improving the productivity of current programs. The PESB found that there are approximately 3,030 full-time equivalent science teachers and 3,700 full-time equivalent mathematics teachers currently teaching in Washington's public schools. School districts have a difficult time quantifying their future demand. The PESB estimates that perhaps 300 science teachers per year and between 600 to 700 mathematics teachers per year will be needed. Washington's teacher preparation programs produce about 350 science teachers and 165 mathematics teacher each year. With very limited exception, preparation programs report that they have unused capacity for preparing teachers in these fields. In contrast, programs provided 1,253 candidates with an endorsement in elementary education in 2007-08.

As part of the study, the PESB also reviewed current programs and initiatives, both in Washington and in other states, focused on recruiting and preparing mathematics and science teachers. The study concluded that Washington's alternative route programs are similar to best practices identified in other states, but do not operate at a desired capacity. None of the public four-year institutions of higher education offers an alternative route program. The study also highlighted a model program from the University of Texas in Austin called UTeach where the College of Education and the College of Arts and Sciences collaborated to recruit promising mathematics and science majors into teaching by providing them with guidance, classroom experience, and a streamlined degree program. Western Washington University has developed

and proposed a similar program and has increased enrollment in mathematics and science teacher preparation. The study found an initiative in California designed to help small rural school districts use data and seek private and federal funds to more effectively recruit highly qualified teachers.

The study also found that approximately half of new teachers start their postsecondary education in community colleges. Community colleges can offer associate degrees and non-degree certificates approved by the State Board for Community and Technical Colleges. Three colleges are authorized to offer applied baccalaureate degrees in technical fields on a pilot basis.

The study cited a national survey of mid-career professionals wishing to change careers, 40 percent of whom indicated that they would consider a career in teaching, but only 35 percent of whom would be willing to consider it at a salary of under \$50,000. In Washington, certain career and technical education teachers who have been certified on the basis of specific industry experience can use up to six years of experience in a managerial position for purposes of placement on the state salary allocation schedule.

Summary of Bill:

Coordination of Initiatives for Preparation of Mathematics and Science Teachers

The PESB is directed to serve as the lead agency in a coordinated approach to create an adequate supply of well-qualified mathematics and science teachers. In fulfilling this role, the PESB:

- works with institutions of higher education to building stronger connections with school districts and craft innovative teacher preparation programs;
- works with in-state and national organizations to identify barriers and craft solutions to improved recruitment, hiring, preparation, and retention;
- expands information to students and counselors about teacher preparation options;
- seeks private and federal support for innovations and initiatives; and
- sets goals and analyzes data to monitor progress.

The coordinated approach overseen by the PESB includes the following strategies and initiatives, some of which are created in the bill:

1. building pipelines to mathematics and science teaching beginning in middle school and through college through such programs as the Recruiting Washington Teachers, the Pipeline for Paraeducators, and the Washington Teach Initiative;
2. streamlining teacher preparation and improving the geographic distribution of mathematics and science teachers through the Retooling to Teach Math and Science program, alternative routes to teacher preparation, community college teacher preparation options, and rural recruitment collaboratives;
3. shifting and building capacity in public four-year institutions of higher education for mathematics and science teacher preparation through participation in alternative routes and the Institutional Priority Initiative and Incentive; and
4. attracting individuals to mathematics and science teaching through the Future Teachers' Conditional Scholarship Program and the Mathematics and Science Mid-Career Incentive.

Washington Teach Initiative

Each public four-year institution of higher education, including branch campuses, must develop and implement an initiative for recruitment and development of mathematics and science teachers from within the institution and among high school students in partnering school districts. The plan must include evidence of a commitment to make development mathematics and science teachers an institutional priority; collaboration among institutional leadership and colleges within the institution; targeted outreach, student advising, and recruitment; streamlined course requirements; opportunities for classroom experiences; and increased collaboration with school districts. Plans must be submitted to the PESB by October 30, 2009, with progress reports submitted annually until 2014.

Alternative Routes to Teacher Preparation

By January 15, 2010, each public four-year institution of higher education, including branch campuses, must submit a proposal to the PESB to offer an alternative route program that provides a post-baccalaureate teaching certificate for mathematics and science teachers in collaboration with a school district or districts. If approved, the institution must begin operation of the program by September 1, 2010, unless the PESB authorizes an extension. A significant factor in the PESB's review of an institution's proposal is the quality of the partnership with local school districts.

Institutional Priority Initiative and Incentive

Beginning in the 2010-11 academic year, all public four-year institutions of higher education, including branch campuses, must decrease admittance and enrollment of students seeking teacher certification in elementary education and increase enrollment capacity for students seeking certification in mathematics and science. An institution that can demonstrate that it has accomplished this objective in the last five years is exempt from the requirement, but is encouraged to continue increasing capacity in mathematics and science. Beginning in 2010-11, if funds are appropriated, the Higher Education Coordinating Board (HECB) allocates an enrollment incentive to institutions for each enrolled student seeking certification in mathematics and science to provide support for the Washington Teach Initiative and alternative route programs.

Community College Teacher Preparation Options

Community colleges can seek approval from the PESB to offer courses that teachers can use to demonstrate competencies needed for an endorsement in mathematics and science.

The State Board for Community and Technical Colleges (SBCTC) selects up to three community colleges who are willing to partner with school districts to offer a post-baccalaureate teaching certificate in mathematics or science through an alternative route program. To the extent possible, selected colleges must be geographically dispersed. The SBCTC and the PESB provide technical assistance to the colleges and school districts in developing the program and submitting it to the PESB for approval.

The SBCTC also selects up to three community colleges to develop and offer a program of study that leads to a baccalaureate degree with a teaching certificate in mathematics or science. To the extent possible, selected colleges must be geographically dispersed. The SBCTC and the PESB provide technical assistance to the colleges in developing the program and submitting it for approval by the SBCTC, the HECB, and the PESB.

Rural Recruitment Collaborative

Subject to funding, at least two Educational Service Districts serving large numbers of small rural school districts must develop and operate rural recruitment collaboratives to assist the districts in recruiting, hiring, and retaining mathematics and science teachers. The collaboratives provide data, help districts develop partnerships with teacher preparation programs, examine recruitment and hiring practices, seek grants, and assist districts with accessing and using federal funds.

Mathematics and Science Mid-Career Incentive

Teachers who are endorsed and in a teaching assignment in middle level or secondary mathematics or science are provided credit on the state salary allocation schedule for up to five years of documented nonschool experience in occupations requiring a mathematics, science, or engineering degree. To qualify, the teacher must have ten or more years of this type of nonschool experience.

Appropriation: None.

Fiscal Note: Requested on 2/9/2009.

Effective Date: The bill takes effect 90 days after adjournment of the session in which the bill is passed.