HOUSE BILL REPORT
SSB 6697

As Reported by House Committee On:
Higher Education & Workforce Education

Title: An act relating to establishing a state priority and state objectives for access, enrollment, delivery, and degree achievements in the fields of engineering, technology, biotechnology, science, computer science, and mathematics in higher education.

Brief Description: Establishing technology priorities for institutions of higher education.

Sponsors: Senate Committee on Early Learning, K-12 & Higher Education (originally sponsored by Senators Berkey, Schmidt, Shin, Haugen, McAuliffe, Kohl-Welles and Rasmussen).

Brief History:
Committee Activity:
Higher Education & Workforce Education: 2/17/06, 2/23/06 [DP].

Brief Summary of Substitute Bill

- Places a priority on student enrollments and degrees in the fields of engineering, technology, biotechnology, science, computer science and mathematics.
- Institutions of higher education will determine local student demand for these programs and submit findings and proposed alternatives to meet demand to the Higher Education Coordinating Board (HECB) and Legislature by November 2008.
- The HECB is required to track progress and report biennially.

HOUSE COMMITTEE ON HIGHER EDUCATION & WORKFORCE EDUCATION

Majority Report: Do pass. Signed by 11 members: Representatives Kenney, Chair; Sells, Vice Chair; Cox, Ranking Minority Member; Rodne, Assistant Ranking Minority Member; Buri, Fromhold, Hasegawa, Ormsby, Priest, Roberts and Sommers.

Minority Report: Without recommendation. Signed by 1 member: Representative Dunn.

Staff: Jennifer Thornton (786-7111).

Background:

Undergraduate Enrollment and Degree Production

The Office of Financial Management (OFM) collects data on undergraduate enrollment and degrees produced in specific fields on an annual basis. Data from OFM show that in 2003-04, there were 90,074 full-time equivalents (FTEs) at public four-year institutions. Four percent of these students were enrolled in engineering and related technologies, and 3 percent were enrolled in computer science.

Between 1993-94 and 2003-04 there was a 12 percent decline in the number of engineering and related FTEs and an 8.6 percent decline in the number of students receiving engineering and related degrees, with 867 such degrees awarded in 2003-04. During the same time period, there was a nearly 25 percent increase in the number of baccalaureate degrees awarded at public four-year institutions, with a total of 20,456 bachelor's degrees awarded in 2003-04.

Relationship Between Specific Fields of Study and Employer Demand

A recent joint study conducted by the Higher Education Coordinating Board (HECB), the Workforce Training and Education Coordinating Board, and the State Board for Community and Technical Colleges states that:

"....demand for workers trained at the baccalaureate level and higher in certain occupations is not met by current supply. Matching with the ultimate demand measure, current degree production meets only 67 percent of the need in engineering and 56 percent of the need in computer science.... Demands in engineering, software engineering and architecture would best be met through increased enrollments in engineering. Demand in computer science would best be met through increased enrollments in computer and information systems."

Summary of Bill:

The Legislature recognizes that placing a priority on enrolling students and conferring degrees in the fields of engineering, technology, biotechnology, science, computer science, and mathematics is vital to the state's economic prosperity. Therefore, it is the Legislature's intent to promote increased access, delivery models, enrollment slots, and degree opportunities in these fields.

Institutions of higher education shall determine local student demand in these fields and submit findings and proposed alternatives to meet demand to the HECB and the Legislature by November 1, 2008. The HECB must track and report progress in at least the following ways:

- the number of students enrolled in these fields on a biennial basis;
- the number of associate, bachelor's and master's degrees conferred in these fields on a biennial basis;
- expenditures on enrollment and degree programs in these fields; and
- the number and type of public-private partnerships established relating to these fields.

The institutions of higher education have discretion and flexibility in achieving the objectives of increasing enrollments and degrees in these fields. Types of institutional programs include, but are not limited to, establishment of institutes of technology, new polytechnic-based

institutions, and new divisions of existing institutions. Examples of delivery models include face-to-face learning, interactive courses, internet-based offerings, and instruction on main campuses, branch campuses, and other educational centers.

Appropriation: None.

Fiscal Note: Available.

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

Testimony For: Washington is one of most trade dependent states, and is recognized worldwide as a leader in aerospace, computers, and biotechnology. This legislation is a broad policy statement for the entire state, as there is a serious shortage of engineers and scientists in Washington, and industries must recruit from out of state and out of country to fill these positions.

Currently, Washington colleges are not graduating enough people to meet the needs of the technology based economy, which will create a long-term competitive disadvantage. This bill is intended to establish engineering, science, and math as priorities for college students and reverse the declining trends in these fields. More graduates are needed at the baccalaureate and graduate degree level. Recognition of the role of community colleges in transferring students into these priority programs is appreciated; of baccalaureate graduates in these areas, 38 percent started at community colleges. There is also a role for technicians with associate degrees in these fields, and the SBCTC is willing to provide information on that in the report.

The HECB completed a statewide assessment of regional and state needs in higher education, which found that further expansion of higher education is essential. The process and time line of the Senate bill aligns with research by the HECB. It is valuable to direct institutions to develop findings and provide recommendations for best addressing student needs.

High school students are often not prepared to tackle advanced engineering and science courses in colleges. Similar to the "Science Olympiad" program, this Senate bill embraces getting young people interested in sciences starting at a young age, so that they pursue it in college.

Testimony Against: None.

Persons Testifying: Senator Berkey, prime sponsor; Pat McClain, City of Everett; Loretta Seppanen, State Board for Community and Technical Colleges; Chris Thompson, Higher Education Coordinating Board; and Steve Smith, Snohomish County Executive Office.

Persons Signed In To Testify But Not Testifying: None.