Measure 1.3.f & h: Supplemental - STEM

INCREASING STEM / HIGH DEMAND DEGREES & ENROLLMENTS

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Background:

- A skilled and educated workforce is the foundation of a prosperous economy

- By 2018 70% of STEM jobs in Washington will require a bachelor’s degree or greater

- 73% of all job growth in STEM between 2014 and 2024 will be in computer occupations

- Many of the fastest growing occupations over the next decade are projected to be in the healthcare fields

Sources: Georgetown Center on Education & the Workforce, U.S. Bureau of Labor Statistics

Current State:

- Our schools met our Results Washington goal for this indicator three years early!

- The public baccalaureates together enroll nearly 2,500 more STEM/High Demand students than when Results Washington began

- These increases are not limited to one or two campuses but rather all statewide (including branch campuses and centers)
Problem/Opportunity:

STEM/High Demand degrees produced by the public baccalaureates

- Our schools met our Results Washington goal for this indicator three years early!

- The public baccalaureates together produce 1,700 more STEM/High Demand degrees than when Results Washington began

- These increases are not limited to one or two campuses but rather all statewide (including branch campuses and centers)

College and University STEM/High Demand Successes:

- In Fall 2014, 37% of UW students were pursuing at least one STEM major

- WSU recently established several new engineering degree programs, including software engineering at WSU North Puget Sound at Everett, electrical engineering at Olympic College in Bremerton, an online master’s degree in software engineering through WSU’s Global Campus, and construction engineering at its Pullman campus

- EWU recently established a STEM college with 11 programs of study
College and University STEM/High Demand Successes:

- CWU’s SOLVER program provides $20,000 in scholarships to underrepresented students pursuing a degree in the STEM fields

- Evergreen produces nearly the same ratio of STEM PhD graduates as the UW

- Western currently ranked 9th among 590 masters-granting U.S. institutions for the number of its bachelor’s degree graduates who go on to earn a research doctorate between 2005-2014

College and University Computer Science Successes:

- We educate our students not only to work at the Googles of the world but to create the next Google

- Our graduates are employed by Amazon, Apple, Attachmate, Boeing, Canonical, Conversica, EBay, Etsy, Expedia, F5 Networks, Facebook, Faithlife Software, Flipboard, GE Healthcare Global Asset Management, Google, IBM, Isilon EMC, Itron, Leviathan, LogicBlox, Microsoft, Microsoft Research, Pixar, Point 5 Solutions, Schweitzer Engineering Laboratories, The Climate Corporation, Twitter, and Yahoo

- Our graduates work and earn a living as software engineers, software developers, programmers, web developers, systems security specialists and computer administrators at some of our state’s most innovative and successful companies
Strategies:

- Washington’s six public baccalaureate colleges and universities have the ability to grow STEM and High Demand graduates to meet employer demand

- Past successes are the result of specific funding in areas such as computer science, engineering, medical and other health-related programs, and more

- The largest demand/supply gaps in the baccalaureate level are in the fields of computer science, engineering, human and protective services, and for media, design, and communications specialists

How can the Results Washington team help?:

- Advocate for increased state funding (operating + capital dollars) during the 2017 legislative session for STEM/High demand enrollments & student support services

- Advocate for fully funding the State Need Grant and adequate funding for the Opportunity Scholarship and State Work Study programs

- Support pipeline programs that encourage students – particularly underrepresented students – to pursue STEM/High Demand careers

- Support current and emerging efforts to increase the high school graduation and community college transfer rates