



Meeting of Governor Jay Inslee's STEM Education Innovation Alliance

December 2, 2014

Breakout session: 2015 Washington STEM Summit

Microsoft Conference Center, Redmond, Washington

MEETING SUMMARY

The Governor's STEM Education Innovation Alliance met during a morning breakout session during the 2015 Washington STEM Summit. Governor Jay Inslee was in attendance and addressed the members, outlining some of his key priorities going forward.

MEETING PARTICIPANTS

Alliance Members: Brian Bonlender (Washington State Department of Commerce); Violet Boyer (Independent Colleges of Washington); Jeff Charbonneau (Zillah High School and Educational Service District 105); Maud Daudon (Seattle Metropolitan Chamber of Commerce); Susan Enfield (Highline School District); Christine Johnson (Spokane Community Colleges); Caroline King (Washington STEM); Ed Lazowska (University of Washington Computer Science & Engineering); Marcie Maxwell (Governor Inslee's Legislative Affairs & Policy Office); Gil Mendoza (Office of Superintendent of Public Instruction); Isabel Munoz-Colon (City of Seattle, Office for Education); Gene Sharratt (Washington Student Achievement Council); Brad Smith (Microsoft Corporation); Stan Sorscher (Society of Professional Engineering Employees in Aerospace); Brian Teppner (Bellevue School District); Nancy Truitt Pierce (Monroe Public Schools); Margaret Tudor (Pacific Education Institute); Joyce Walters (Corporate Education Strategies); Sam Whiting (Thrive By Five Washington); Yale Wong (General Biodiesel).

Alliance Alternates/Substitutes: Jane Broom Davidson (Microsoft Corporation); Jeff Estes (Pacific Northwest National Laboratory); Larry Wright (College Success Foundation).

NGA-STEM Project Operations and Management Team: Melissa Beard (Washington State Office of Financial Management); Mary Kay Dugan (Battelle); Ellen Matheny (Washington Student Achievement Council); Daryl Monear (Washington Student Achievement Council); Randy Spaulding (Washington Student Achievement Council).

WSAC Staff: Cristina Gaeta, Noreen Light, Anne Messerly.

MEETING HIGHLIGHTS

- Governor Inslee addressed the STEM Alliance. He asked the Alliance how they can most effectively engage the STEM community to focus on STEM in early childhood education. Emphasizing the importance of preparing our kids for K-12, he requested that the Alliance members get this message of the importance of STEM and high-quality early childhood education out to the legislators and their constituents.
- The STEM Alliance voted to approve and adopt the Washington STEM Framework for Action and Accountability. The Framework outlines the following progress indicators that will be incorporated into a data dashboard and further refined by Alliance members:
 - 1) STEM awareness in Washington State
 - 2) Student interest in STEM fields
 - 3) Student STEM achievement among pre-K12
 - 4) Student readiness for college-level study in STEM
 - 5) 21 century skills
 - 6) Pre-K12 classes led by effective educators
 - 7) Teachers and school leaders with STEM-related degrees
 - 8) Graduates from postsecondary institutions with degrees in STEM fields
 - 9) Alignment of STEM education programs with workforce needs of key economic sectors
 - 10) State and local systems to support STEM success
- Several Alliance members indicated that they would like to be involved in the development of the metrics. It was decided that those interested will form a small work group to focus on refining the progress indicators for the data dashboard.
- In 2014, Washington was one of 8 states to earn a fully-funded grant from the National Governor's Association, in a highly competitive process, for the purpose of aligning the state's education system with the workforce needs of the economy.
- This NGA-STEM grant project will help focus and accelerate the work of the STEM Alliance, led by Marcie Maxwell from the Governor's Office working with Washington Student Achievement Council staff. Leaders from Washington STEM, the Education Research and Data Center, and Battelle will assist with the data dashboard development and technical advising.

DISCUSSION DETAILS

CONVERSATION WITH GOVERNOR JAY INSLEE

Governor Jay Inslee thanked the Alliance members for their work. He asked the Alliance how they can engage the STEM community to focus on STEM in early childhood education. He noted that it is a challenge to get funding for early learning because of the McCleary decision and emphasized the importance of preparing our kids for K-12. He requested that the Alliance members get this message of the importance of STEM and high-quality early childhood education out to the legislators and their constituents.

Some of the responses from Alliance members included:

- There will be a little resistance when we get the message out. The challenge is getting more advocates.
- We should start educating our kids through the early learning pipeline.
- A challenge is that early learning providers can be resistant to their role in math and science education. We have to figure out how to provide content and training to early learning professionals
- This is complicated because of the different types of people interacting and teaching children. There are formal and informal caregivers, parents, and teachers, to name a few.
- We should connect legislators to this issue by showing them what kids are really doing in the classrooms.
- There are challenges funding STEM education due to a lack of resources and revenue.
- We need to focus on the full spectrum of the education system, from early learning to higher education.

GOVERNOR'S STEM EDUCATION INNOVATION ALLIANCE – ITS ROLE AND PROGRESS TO DATE

Marcie Maxwell (Office of Governor) and Gene Sharratt (WSAC)

Results Washington

Results Washington is Governor Inslee's vision where the opportunity for a world-class education for all students is the #1 goal. Reaching this goal will help our State reach other goals (e.g., prosperous economy, healthy & safe communities). For this to be successful, we will all need to be engaged in this work.

Governor's STEM Education Alliance and House Bill 1872

The charge of HB 1872 is to provide vision and guidance to the Governor in support of STEM education, from early learning to postsecondary education. These are areas the STEM Alliance can greatly assist with.

STEM Framework

Marcie Maxwell reviewed the STEM framework. Sam Whiting made a motion to approve the framework, and Jeff Charbonneau seconded the motion. The Alliance voted to approve the framework. All Alliance members were in favor.

Some points made during the discussion:

- There is a concern about math as the main indicator of STEM skills. We haven't really defined or articulated what STEM skills are and which ones are important.
- The framework is broad, so we can still provide detail about STEM skills.

Background and Timeline

Washington is one of only two states that received two separate grants from the National Governor's Association.

- 1) The goal of the first grant, Improving Student Learning at Scale, is to help implement Common Core State Standards and Next Generation Science Standards in Washington. A big step has been the Smarter Balanced Agreements which allow students who score a three or four on the Smarter Balanced Assessment (assessment aligned to the Common Core State Standards) to exempt remedial coursework at any public college in Washington State.
- 2) The second grant [insert name] allowed us to launch the STEM Alliance. Washington was one of 14 states to be awarded a grant from the National Governor's Association for STEM work, and one of eight states to receive full funding for the grant.

Some key milestones for the STEM Alliance and its work with the NGA-STEM grant-funded project:

<u>Timeframe</u>	<u>Milestone</u>
September 22, 2014	First meeting of the STEM Alliance
December 2, 2014	Adopted STEM framework
2015	Review and finalize STEM benchmark report card
	Ongoing development of the Dashboard
	Start to identify 2016 priorities
	Finalize 2016 priorities

Organization of Washington's NGA-STEM Project

The goal of the NGA-STEM Project is the alignment of education, the economy, and the workforce. The arrows to the left on the organizational chart depict all the action steps we need to take to get there:

- establish sustainable partnerships
- increase STEM education attainment
- close STEM workforce gaps
- improve K-12 and postsecondary transitions
- establish STEM framework for Action & Accountability
- increase attainment for underrepresented students
- track progress through Dashboard

To accomplish this, the Washington Student Achievement Council will work with Marcie Maxwell in the Office of the Governor and use WSAC staff to lead and manage this project. Leaders from Washington STEM, Office of Financial Management Education Research and Data Center, and Battelle will assist with the data dashboard development and technical advising.

Washington NGA-STEM Project Goals

- 1) Implementing a strong vision
- 2) Integrating workforce and education data
- 3) Cultivating productive partnerships
- 4) Mobilizing resources and incentives

STEM DASHBOARD

Mary Kay Dugan (Battelle)

The NGA-STEM Project grant provided funds to bring the partnerships together to develop the STEM data dashboard. The dashboard allows us to track data in a systematic way which measures STEM outcomes and identifies where we need to make progress. The dashboard will feed into the annual report card. The dashboard will be refined and developed over the next year.

There are ten framework indicators for the data dashboard:

- STEM awareness in Washington State
- Student interest in STEM fields
- Student STEM achievement among pre-K12
- Student readiness for college-level study in STEM

- 21 century skills
- Pre-K12 classes led by effective educators
- Teachers and school leaders with STEM-related degrees
- Graduates from postsecondary institutions with degrees in STEM fields
- Alignment of STEM education programs with workforce needs of key economic sectors
- State and local systems to support STEM success

Dashboard metrics are measures that will track progress over time and drive decisions. The metrics will also show how we are serving underrepresented students.

Phase I represents good quality data that we already have, and Phase II expands measures that we will report out through the dashboard system.

The NGA-STEM grant funding has allowed us to form the dashboard and begin development. We expect a full roll out in 2015 by the time of the next Washington STEM Summit in December.

Alliance members would like to be involved in the development of the metrics. They are interested in how we would measure educator effectiveness. The Operations and Management Team will create a mechanism to get input from the group. There is a concern that the indicators measure the right things. The Alliance would like to be directly involved if they are going to support the data dashboard and results.

The Alliance members want to also assure the dashboard measures imagination and creativity in addition to the typical STEM skills.

The Alliance wants to make sure we use the data we already have collected and not create a new set if we don't have to. Also, they noted that Common Core State Standards measurements are an important metric.

CRITICAL CONVERSATIONS

Discussion Questions:

- 1) As a member of the Governor's STEM Education Innovation Alliance, how will you contribute to and engage with the work?
- 2) Imagine yourself at a session with legislators this spring. What would you want to communicate to them regarding STEM education and Washington's workforce needs? What are the top 3 priorities you would want them to take action on this legislative session?
- 3) What data would be most helpful to you and to policy makers as you and they make decisions about how to prioritize activities and resources?
- 4) What is being left out of the conversation so far?

The Alliance members asked what most needs to be communicated to legislators regarding STEM education and Washington's workforce needs. The suggestion was that interested Alliance members could write a short e-mail and let legislators know you spent the day at the STEM Alliance and you hope we can support the STEM education continuum. Emphasize the importance of STEM and be very active from now until the end of session. Also let legislators know you are in support of the Governor's budget, which will contain funding for STEM. We will send an education summary once the budget comes out.

It is important that the Alliance have one or two big specific messages that come out of the group, as opposed to supporting STEM in general.

The business community is encouraged to support these messages to legislators. It was noted that this Alliance is composed of business, educators and providers. We could be the voice of STEM to bridge the community.

The Alliance needs to ask the legislature for: 1) funding for STEM in early learning; 2) professional development around CCSS and NGSS; 3) incentives for Computer Science training for teachers; and 4) expansion of dual credit options.

The Alliance could also focus on the Washington workforce gap which is in IT. We need these jobs across the entire economy.

A final comment was that students learn best when they see how education relates to real life experiences. The Alliance needs to encourage this.

CLOSING COMMENTS

Gene Sharratt (WSAC)

- We want to continue this conversation.
- We hope to roll this work out into a larger state grant. We will stay focused on the grant's intent, which is to close gaps and remove barriers for students.
- We will develop a website for regular contact among Alliance members.
- All this work will align with our State's [Roadmap](#) Goals, which is that 100% of adults in Washington will have a high school diploma and at least 70% of Washington adults will have a postsecondary credential.
- We will be in communication with you about the date in which we will present our report card to the Legislature.