Meeting Notes

STEM Education Innovation Alliance
February 10, 2016
Washington State Capitol - Legislative Building, Senate Rules Room
Olympia, Washington

Welcome

Washington Student Achievement Council (WSAC) Executive Director **Gene Sharratt** welcomed everyone to the meeting and introduced **John Aultman** from the Office of the Governor.

A View from the Washington State Office of the Governor

John Aultman, Governor Inslee's *Senior Policy Advisor for Higher Education and Workforce Development*. His policy focus includes STEM education across all the enterprise, higher education, community and technical colleges, career and technical education, and skills centers.

John provided an overview of Governor Inslee's priorities, mentioned some current initiatives affecting STEM education, and discussed the 2016 legislative session from the perspective of the Governor's Office.

There are several initiatives affecting STEM education and workforce alignment in Washington state that are either currently underway or under legislative review this session:

1 – College tuition reduction.

2 – Expansion of STEM slots for demand degrees.

3 – The Youth Works Initiative, a youth career readiness project, which provides internships and other work-based learning experiences in biomedical and other sciences for thousands of students across the state and helps re-engage those who have dropped out or are at-risk of not graduating from high school. The Governor has directed $2M towards that this year.

[Additional Info: Governor Jay Inslee launched the Youth Works Initiative in September of 2014, tapping the Workforce Board to help lead this career-connected learning initiative for the state's low-income youth. The state's Employment Security Department will administer $1.9 million in Workforce Investment Act discretionary funds to help more youth get connected to learning and find a pathway to a viable career.]

4 – A reinvigorated focus on work-based learning with a new National Governors Association grant on scaling work-based learning. The Workforce Board, the STEM Alliance and other regional networks are all looking at how work-based or worksite learning can be improved and expanded in Washington to connect young people with successful careers. House Representative Sharon Tamiko Santos introduced a bill [2016 HB 2948] to create a pilot program that encouraged building partnerships with industry, students and worksite learning with a focus on STEM-themed educational experiences. The bill didn't make it out of committee, but there is still hope for a budget proviso.

5 – STEM School Construction Assistance Program - OSPI reported that about 45 grants came in from school districts to fund eligible projects seeking state support. The 2015-2017 capital budget included $12.5M for this support.

6 – Resulting from last year's legislation, the Professional Education Standards Board (PESB) was charged with expanding computer science education by developing standards for a K-12 computer science endorsement [2015 SHB 1813]. PESB staff has completed and presented their proposed computer science endorsement competencies to the PESB; the endorsements are currently under review and consideration for adoption.

7 – Work in previous years to make advanced placement computer science courses count toward required credits in either mathematics or science.

8 – $2M for technology and professional development in computer science (ESSB 6052).

9 – Several non-profit organizations are working to enhance STEM education in Washington state:

a) Technology Education and Literacy in Schools (TEALS). [TEALS pairs computer science professionals from across the industry with classroom educators to team-teach computer science in high schools throughout the U.S.] Everett School District had a strong response to a call for volunteers and now have four TEALS volunteers in each high school. TEALS is now challenged to expand the program. Gig Harbor School District had a unique idea this year. It used the Internet to mentor teachers.
b) Code.org is not just here in Washington but is doing a major push across the country.
c) Washington First Robotics. [First Robotics' goal is to inspire students to pursue careers in science and technology. It does this by creating opportunities for students to engage in after school activities that create a very effective mix of technology and sports.]
d) Project Lead the Way. [Through world-class K-12 curriculum, high-quality teacher professional development, and outstanding partnerships, PLTW is helping students develop the skills needed to succeed in the global economy.]
e) Advanced Manufacturing and CorePlus curriculum.
f) Washington STEM's regional networks are looking at internships and externships for students and staff. Snohomish County is doing a quite a bit for teachers returning for summer internships.

g) Increased MESA funding and expansion - one of the key STEM Alliance recommendations - is included in the Governor's budget.

10 – Funding for WSAC support of the STEM Alliance is also included in the Governor's budget request.

11 – Expansion of the Washington State Opportunity Scholarship.

12 – Private money for expanding slots in higher education or training capacities.

13 – JPMorgan Chase & Co. career and technical education grants for planning and early implementation of long-term career readiness programs that align with the needs of area employers. [*New Skills for Youth* will encourage U.S. states to transform career-focused education programs and invest in effective strategies for scaling high-quality, skills-based training and education globally - JPMorgan Chase & Co. $75 million five-year global initiative to address economic opportunity crisis facing young people, January 19, 2016.]

14 – State auditors performance reviews of workforce training board. Now they are doing one on career and technical education - if there are not new dollars, where the current dollars reallocated and what are some of the best practices around the state?

There are a lot of initiatives on the landscape right now, and Governor Inslee is very much committed to the support of STEM education in Washington.

STEM is important in all areas of the state. Just this morning, a busload of students from the Quinault Indian Nation (Taholah School District) met with the Governor. One young man said he is doing an internship - 90 paid hours in the Quinault's fish hatchery doing scientific study with the staff biologists. STEM is everywhere.

STEM Talent Supply and Demand Dashboard Update

Discussion led by: **Mary Kay Dugan***, Managing Director–Education*, IMPAQ International

The legislation that created the STEM Alliance [2013 ESSHB 1872] called for publication of an annual STEM Education Report Card that would track talent supply and demand against the framework the STEM Alliance adopted. It provides a key tool for answering policy questions about where we are with respect to the student pipeline and employment outcomes. Funding provided by the current NGA grant helped us get started on its development.

Several state agencies have supplied data for the dashboard: Office of Financial Management Education Research Data Center, Employment Security Department, and the Washington Student Achievement Council. The first phase has been completed with nine measures and 19 data displays to show student pipeline and employment outcomes. The next step will be to add additional data to the dashboard to track where we are with the measures and add behind the

scenes functionality, so users can export data from the website to a Microsoft Excel-formatted spreadsheet to be able to put data into reports.

Regional STEM network groups recently held a virtual meeting to look at the STEM dashboard. The network members are excited about the dashboard because it allows them to go to one place to see where the jobs currently are and projected to be. It also provides a snapshot measurement of how we are doing at preparing students and workers for employment opportunities. Network members are meeting with legislators to express their support of this. In the future dashboard enhancements, network members would like to have regional level data added.

STEM Talent Supply and Demand Dashboard link: http://stem.wa.gov

Legislative Update

Discussion led by: **Maddy Thompson**, *Director of Policy and Government Relations*, Washington Student Achievement Council

The Alliance's four recommendations to legislators for 2016 were reviewed. Two were included in the Governor's budget; we are waiting to see how they are received in the Senate and the House of Representatives.

STEM Education Innovation Alliance 2016 Recommendations	Legislative Results
• Fund College in the High School courses with a priority on STEM-related courses and low-income students.	• Possible proviso
• Increase MESA funding and expand the program to increase its outreach to underrepresented minorities and women in STEM studies	• Community and technical college request for expansion • Included in the Governor's proposed
• Invest in educators' endorsements in Computer Science teaching by providing professional development opportunities.	• Various proposal related to general professional development opportunities
• Fund the STEM Education Innovation Alliance and continue to build the STEM Talent Supply and Demand Data Dashboard.	• Included in the Governor's proposed budget

Various postsecondary and education bills - related to reducing opportunity gaps, teacher shortages, and other STEM-relevant issues - that were still alive in the legislature were reviewed (see meeting materials for detailed list).

One interesting example is House Bill 2955 (Hansen) "Washington free to finish college program" – Students who left their program of study before completing their degree. It is

modeled after a few local examples of institutions that track down their alumni and recruited them back to finish their degree. Some of those programs have been very successful. It is estimated it will cost the state about $10M to fund 5,000 students to finish their degrees.

Last day of the legislative session is March 10, 2016 (Sine Die).

Legislative Strategy
There are a lot bills, ideas, higher education components that are centered on the issue of affordability, such as textbook resources, community college for all, and preserving the continued tuition reduction provision.

Alliance members are encouraged to share the STEM Talent Supply and Demand Dashboard with members of the legislature and the message to support the STEM Alliance funding.

Question: *What role is the STEM Alliance playing in terms of advocating for the four core recommendations moving forward? Are we going to collectively try to go to members of the Senate and House of Representatives and ask for those? Or is the STEM Education Report Card the extent of our advocacy for them?*

Two are in the Governor's budget request: (1) Increased Mesa funding and expansion of the program, and (2) funding for the STEM Alliance and dashboard work.

We can also take a longer view and look towards next session for some of these initiatives.

It would be good to be able to thoroughly prepare between sessions and advance these initiatives as a group. We need to find effective legislative champions and possibly bring them in to talk to the STEM Alliance.

Question: *Is our operational standard to publish a report and hope they read it? Or are we going to be lead advocates for these recommendations?*

The STEM Report Card has been distributed to legislators during meetings, and WSAC is advocating on behalf of these recommendations. Four is a good number to advocate. If we are consistent and have a focused story, we can make a strong case. We just need to stick to it. We need to have a long term plan, but if there is any opportunity to move these bills along in the short term we need to take advantage of it.

There tends to be a strong emphasis in bills on undergraduate education. But we need to get the message out to legislators that graduate education needs support as well. Paul Francis has been talking with some of the graduate students about putting together a graduate education summit. Recommendations arising from this conversation could be carried over to future sessions, incorporating requests from the institutions (two- and four-year) around STEM to produce more STEM degrees.

There will be requests from different organizations – agency requests, universities, regional, research, etc. It would be good to collect all those requests into one bundle and have this group support and champion some of those. It would provide a bigger voice than one university "showing up at the door."

Industry Education Partnerships

Discussion led by: **Daryl Monear**, *Associate Director for Academic Affairs and Policy*, Washington Student Achievement Council; **Eleni Papadakis**, *Executive Director*, Workforce Training and Education Coordinating Board; **Caroline King**, *Chief Policy Officer*, Washington STEM

Daryl, Eleni and Caroline provided an overview of existing industry education partnerships initiative and grant activity currently underway in Washington, and outlined how some other states have approached the issue of building industry-education partnerships. To facilitate this conversation, meeting participants broke out into small groups to discuss the essential characteristics of effective partnerships and the best role the STEM Alliance could play in fostering partnerships.

Overview of different approaches to building industry-education partnerships developed in other states - Eleni Papadakis

The Workforce Training and Education Coordinating Board is very excited to be participating in the NGA Scaling Work-Based Learning Policy Academy. The underlying question is: how do we get more young people to start thinking about their place in the world, especially as it relates to economics? How do you help them attain a position so they can "do what they love so it doesn't feel like work?"

In 1999, Washington first invested in industry partnerships at the regional level. The majority of states in the nation have investments in partnership learning, in some form. These four states are the furthest along.

Illinois Learning Exchange – This is an interesting one for the STEM Alliance to think about. Illinois has given the responsibility for figuring out how schools can partner with industry sectors to industry associations. They work directly with the school systems, help them with curriculum, help get their teachers up to speed, help them think about what resources they need (equipment, etc.), and help raise the funding to get schools the resources they need. An incredible amount of effort has been put into this. Labor and professional organizations lead the creation of K-12 learning objectives, curricular and classroom resources, and work-integrated learning opportunities.

Kentucky's Plan for Economic and Education Transformation – Kentucky pooled vision and goals for economic and workforce development and K-20 education system in one secretariat with a

single vision of doing better for all Kentuckians and businesses. It transformed the system. [Also state and local alignment.]

Colorado – Colorado started at the regional level. They gave money to their workforce boards and others in regional sectors to figure out how they are going to make a difference. [Regional sector partnerships; K-14 career pathway development; Business Experiential Learning Commission.]

New Jersey – New Jersey started at the state level. It started business-led talent networks, created for alignment of post-secondary education and businesses. From that, which was successful at bringing industry to the table, they've now expanded it to the K12 system. [Statewide policy reform to support talent pipeline development and accountability.]

The Five Stages of Sector Partnership Industry Skill Panels (reference to handout included in packet)

Stage one: Convene
Sounds easy. What we found is that discussions are most effective when businesses talk about their very specific business needs and how they identify whether or not partnerships are making a difference in those business needs. Success indicators that resonate with business is what we look for. Groups that talk about their future needs and not just their current needs made a huge difference in the success of a partnership.

Stage Two: Governance
Business wants to be part of the decision making process. They don't want to be "drive by" partners. What we generally talk about in partnerships is "sign this letter" and "show up at a meeting." They want to be more a part of it. They are really interested in mid-course corrections.

These two stages stand out for us. If we see a partnership starting there, we know it has made the difference. If stage one and two happen well, the businesses will put up the resources to make a program work. The evaluating and improving stage is critically important for businesses to stay involved. It is not just that the program is more successful but that businesses stay on board. These are the longest running partnerships. After our grant funding goes away, these kinds of organizations will provide the foundation for the partnerships to continue.

National Governors Association Comments - Martin Simon
One thing that is common across these four states [Illinois, Kentucky, Colorado and New Jersey] is they defined their leading industries. States that are really making a good connection between their education and workforce systems are aligning it with their economic development strategies, looking at the makeup of their industry and where the skills gaps are. They all turned to industry to take a bigger leadership role.

Minnesota is another state that has tried a variety of strategies: sector strategies, career pathways. Each of these states started with one of these approaches or the other. It is either career pathways, looking at the supply side, or sector strategies, looking more on the inside. The key result is that they have eventually come together. They aren't looking at these two strategies separately anymore.

One of the things that NGA liked about Washington's workforce-based learning proposal is that it is part of a comprehensive strategy, not a stand-alone strategy.

Washington STEM – Caroline King
Washington STEM is a non-profit composed of business, education and community leaders across the continuum, all focused around equity and excellence in STEM. Washington STEM believes that STEM is what our young people need to be future ready – to have a life of opportunity on the job and in the world.

The issue of industry-education partnerships is a top priority for Washington STEM because young people can't aspire to careers they don't know exist. Their business and education partners really want to dig into this challenge. You can't be a regional STEM network without having alignment of your education, business and community leaders around common goals. We support them to develop business plans and top of the line industry-education partnerships.

Over the past year, Washington STEM has learned that - despite great enthusiasm - a lack of coordination, good assessment of what works, and systemic solutions undermine progress. There are bright spots and promising practices but not the infrastructure and capacity to support it at scale and reach our most underserved youth. Washington STEM wants to be a good partner in how it stewards and leverages private resources to help spread best practices and spur systemic solutions.

Washington STEM found they needed to create a common language – work-based learning, worksite learning or internship – creating common definitions and outcomes and defining the purpose of the partnership. What is the purpose of the partnership: drive career awareness for students; equip students with hard skills to walk into a job in a short term fashion; or build the capacity of teachers?

Washington STEM accomplishments:

1) With its partners created a career-connected continuum with the best thinking about how we can gain clarity around common definitions. [shared definitions and outcomes drive effectiveness and sharing]
2) Gathered stakeholder feedback from the 2015 Washington STEM Summit – pathways to jobs - what is working, what are the root causes, what we might do differently.
3) Started a landscape review of who is doing what and what is working well to identify partners, gaps and opportunities.

Washington STEM's next steps include:

1) 2017 - New funding from JPMorgan Chase & Co. and The Boeing Company to conduct research, planning and testing to determine the issues and develop partners.
2) Engineering Fellows Program – connecting 5th grade teachers with practicing engineers to help bring design challenges right to the classroom.

Small Group Breakout Discussions

Meeting participants broke out into small groups to discuss the essential characteristics of effective partnerships and the best role the STEM Alliance could play in fostering partnerships. The discussion centered on two key deliverables in the National Governors Association grant:

1) Identify high-quality industry-education partnerships:
    a) Adopt a set of criteria for effective and sustainable partnerships
    b) Create an asset map of existing partnerships.

2) Establish a state structure to support and coordinate state and regional industry-education partnerships:
    a) Develop a system of support and technical assistance to foster regional and state-level partnerships.
    b) Create a plan for scaling effective partnerships and assisting the development of new partnerships.

Questions that were discussed in small group breakouts:

- In addition to what you heard presented today about existing partnerships, what other key partnerships are you engaged in and/or aware of?
- Provide feedback on National Governors Association partnership criteria in light of: 1) our landscape and needs in Washington State; 2) other state examples; and 3) your own expertise. What should be retained, changed, added or dropped? Reference: *NGA's Building Partnerships to Get Results Workgroup Overview*
- How can the STEM Alliance help provide leadership, partnership/connectivity across efforts and spur greater impacts? Reference: *Strategies for Expanding and Leveraging Partnerships – Questions 3(a), 3(b), and 3(c)*

Discussion Highlights

We need to have another indicator around diversity and equity efforts within some of the business partners, showing how they are working on diversity and equity, and supporting employees of color and women in the workplace. I know when we talk to students of color some of their biggest reasons for not choosing STEM fields is because they know they are not going to be welcomed in those workplaces or feel that they are not going to have the support once they are there. Women or people of color will leave a workplace because of a potentially hostile environment or not enough mentorship opportunities. When we do target outreach to college students, especially as they get to the internship and externship, we need to address

how we are going to support them once they are in the workplace and in those internship spaces.

It is important to identify the classroom teacher as a partner right from the beginning, for a shared vision and shared leadership with employers in the partnership. In the USA, there are $3.5 million K12 teachers – 1% of population. If educators are not behind this, it will not work. You need to engage educators from the beginning and intentionally make them part of that partnership.

The best way to engage teachers needs exploration. A number of organizations are crucial to encourage the building of those partnerships. OSPI has a voice in that. The Washington Education Association is important. Let's not forget our principals' and superintendents' associations and the Washington Science Teachers Association. We also need to find some partners in the media that are not necessarily tied to STEM – social media, internet.

We need to define which industries we are really talking about. The Chamber identified 13 different industries. Are we looking at all 13 industries? Or are we going after aerospace, culinary, etc.? Or are we narrowing our vision?

Should we be focusing on building employer led partnerships? Is there reliable data that says "when employers lead it there is a high level of sustainability?"

What is the long term vision for the partnership? For K12, the vision is to graduate all students from high school and send them on to postsecondary education. For a business, the vision is to be a viable, sustainable business for at least 20 years. The vision of the teacher is they want the student to be successful when they graduate from high school. We need to make sense out of those two visions.

We have 295 school districts that are all very different, even those that are geographically right next door to each other. Each district has some concept of STEM focused in their community. We respect equity and equality in public education and don't want to limit the types of industries that are considered. Let's define it and come up with a definition that everyone is attracted to in some way.

Sometimes people of color are in communities that don't have a lot of STEM around them. How do we identify the STEM that <u>is</u> around them?

Should we be limiting STEM to the region where the student is? It seems that we should be expanding the horizons for the student to include the whole state.

Question: What was the source of the data from the NGA partnership handout? This was a product of a workgroup that participated in the talent pipeline policy academy. The experience of the states involved showed that without strong employer engagement (employers taking a lead role) at the front end, partnerships tend to fall apart. Building partnerships with teachers is

really the second step in the process. Employers want to sit down with their peers first and discuss their needs – they don't always start discussing workforce needs but rather other issues, like regulatory issues. Then they get to the workforce as a common issue and realize that they have to reach out to the wider community, if they are going to solve this problem.

For example, the State of Pennsylvania Governor gathered all the CEO's of Pennsylvania's major manufacturers. First, they groused about regulations during the first hour. Then they criticized K-12. They ran out of steam before they got to postsecondary. Then they realized they needed to sit down with K-12 because they couldn't solve the problems amongst themselves. That was revealing. They had to get past some of the issues that they grappled with on an operational basis every day. But when it came to their longer term views, they recognized pretty quickly that they needed to work closely with the K-12 system because that is where they were seeing their pipeline issues most prominently.

On the other hand, in all of the partnerships the Workforce Board has supported, their experience shows that it is uneven if business is in the lead or somebody else is in the lead. That didn't really make the difference. It was the underlying model they used that made the difference. In some cases, where they wanted the business to take the lead, they couldn't find a business person available to take it on. Eleni suggested not to get caught up in who is in the lead, but we do need know the needs of businesses and make that a part of the crux of developing a strategy.

Jeff Charbonneau pointed out that he is the only active K-12 classroom teacher in the room. Many of these meetings don't have representation from active classroom teachers who are relied on to implement the strategies. We know what employers want. McCleary is there for a reason. We just need resources. Too many partnership are ineffectively developed without active classroom teachers involved.

Washington State Opportunity Scholarship Recipient

Brittany Allison
South Puget Sound Community College

Brittany expressed gratitude for her WSOS-funded scholarship. She is in the nursing program at SPSCC that will prepare her to transfer into a four-year university offering a Bachelor of Science degree in nursing. She feels having this scholarship makes or breaks her opportunities in education and drives her to achieve educationally, to have a positive impact on her patients and to be a role model for her child. This scholarship program will have a positive impact on the next generation.

SPSCC's nursing program had six out of 30 students drop out because of financial problems. They are all single parents trying to better themselves but having trouble finding the resources. This is the first year that Brittany had heard about the WSOS.

Questions for Brittany Allison about her Experience as a WSOS Scholarship Recipient

What advice do you have about how to drive awareness about WSOS for more students?

The financial aid offices at colleges are aware of the scholarship, but students don't know about it. She did not hear about it at the end of high school but rather heard about it from her SPSCC instructor via email. She thinks more outreach to students would be helpful.

What were some of the hurdles and obstacles your classmates faced that prevented them from connecting to financial aid resources?

The biggest problem is, when you are in the here and now, you are not really focused on the future. They may be a single parent that needs to feed their children and may not have looked into the financial aid resources because they are so focused on their studies and feeding their children. When they applied for the program, these resources may not have been mentioned to them.

You are in year two of the registered nurse degree program. Do you plan to continue on?

Yes. She applied to WSU Vancouver and other universities for the BSN program – the academic background most needed by the hospitals. In her clinical rotations, she determined this is going to be the most important degree to obtain. Also, having prior clinical experience is important. She knows there are internships available. She learned in her clinical rotations that "you really don't learn it until your first year on the job." These internships are where people are getting their foot in the door and getting that experience.

Your scholarship ramps up next year to a higher amount?

For next year's BSN program, she can apply to get additional help, in part, because the tuition is higher at the university.

Jane Broom Davidson at Microsoft was acknowledged for her role in establishing the WSOS. Microsoft was one of the founders and funders of the WSOS.

The Realities of the K-12 System

Discussion led by: **Nancy Truitt Pierce**, Monroe Public Schools Board of Directors; **Jeff Charbonneau,** Zillah High School

K-12 education is approaching critical system failure. Where are we going with the K-12 system?

We need a clear picture of reality in public education today to achieve greater alignment of the members of the STEM Alliance and ensure better recommendations [Common Picture, Common Language for change].

We need to decide how we are going to spend our limited resources and time as leaders.

What do we really want as an outcome? We need collaborative, creative problem solvers with strong foundational skills.

During the White House briefing announcing $4B for the 'Computer Science for All Initiative' on January 30, 2016, Megan Smith (US CTO and former Google executive) said: "We have to make sure that all of our children are equipped to be innovators and entrepreneurs."

Nancy referenced public education analyzer Jamie Vollmer's list of classroom requirements. With 1080 instructional hours in the school year, the changes in instructional requirements listed below have occurred over the years. These lists reflect a partial list of additional requirements above basic education (reading, writing and arithmetic).

<u>1900 – 1970</u>

- Physical Education; organized athletics
- Domestic science / Home Economic
- Vocational Education / Industrial & Agriculture
- Business Education / typing, shorthand and bookkeeping
- Art and Music, speech and drama
- Career education
- Foreign Language requirements
- Sex education

<u>1970-1980</u>

- Drug & Alcohol abuse education
- Behavior adjustment for classrooms and communication
- Character Education
- Special education
- Environmental education
- Women's studies
- African-American heritage

<u>1980-1990</u>

- Keyboarding & computer education
- Global education
- Multicultural / Ethnic education
- ESL and Bilingual education
- Teen pregnancy awareness
- Early Childhood Education

- Alternative education

Plus standardized education assessments.

1990-2000

- Expanded Special Education
- Conflict resolution
- HIV / AIDS education
- Expanded computer and internet education
- Tech Prep and School to Work programs
- Talented and gifted programs

Plus new standardized assessments, increased documentation and 27 hours of professional development.

2000-2010

- Dramatically changing demographics – dozens of languages in schools
- Expanded Special Education – 504 plans explode
- No Child Left Behind reforms
- Bully prevention
- Wrap around programs
- Personal financial literacy
- Obesity prevention
- Media literacy

Plus new standardized assessments, increased documentation and a reduction to 18 hours of professional development.

2010-2015

- Common Core and Smarter Balance
- New content in all areas and new curriculum
- All day kindergarten
- Next Generation Science standards
- 21st Century Skills

Plus new standardized assessments, increased documentation and a reduction to six hours of professional development.

Question: If it were up to educators, what items would they take off the list?

We need to do some research on this. We need a list of the unfunded mandates the schools have been given. What would we want them to take away? Jamie Vollmer has been saying that you don't have to have the public education system do it all. You can have partners do part of it.

Question: If you could offload to partners any of these items, what would that look like? What is the appropriate role for the non-profit community, the employer community? The employer community really needs wisdom about that.

The four-year institutions bring in an efficiency bill every year and try to eliminate things they've been doing that they no longer think is important. I believe in K-12 this is also necessary. The public schools could say, "We think this better done by a non-profit or employer community." And this is the core academics that we believe are needed in education.

We need a prioritization list to take to the legislature every year.

We need to decide which items to take off the plate and focus it. We don't have a way in Washington to funnel that up to a decision.

The State Board for Community and Technical Colleges has a good decision process for capital projects – the college presidents come together and review a list of capital projects, deciding which to move forward to the legislature. K-12 doesn't have this kind of organized process in place.

We need to "right size" assessments. Educators like assessments; classroom teachers do quick assessments in their classrooms all the time. We need to balance the right amount of assessments and resulting data from the assessments.

Question: We added the Smarter Balanced assessment but what do we take away? Is that a school district decision? Or State Board of Education? OSPI? Who makes that determination?

Gil Mendoza shared information from OSPI about student assessment requirements. The Every Student Succeeds Act maintains the previous Elementary and Secondary Education Act assessment requirements:

1. Each state must implement a set of high-quality, annual academic assessments that include, at a minimum, assessments in math, reading or ELA (English language arts), and science. Math and reading/ELA are assessed annually in grades 3-8 and once in grades 10-12. Science is assessed once in each of three grades spans: 3-5, 6-9, and 10-12. Assessments must:
    - Be aligned with the challenging academic standards.
    - Include multiple measures of student academic achievement, including those that assess higher order thinking skills and understanding. May include measures of academic growth.
    - Be accessible to all students including students with disabilities and English language learners.
    - Enable achievement results to be disaggregated within each state, LEA and school by subgroup, except where a subgroup is insufficient to yield statistically

reliable information or the results would reveal personally identifiable information for individual students.

OSPI NOTE: Washington State Superintendent of Public Instruction Randy Dorn is committed to the state's comprehensive assessment system which includes Smarter Balanced assessments for English language arts and math in grades 3-8 and high school, Measurements of Student Progress in science in grades 5 and 8, and the Biology End-of-Course test in high school. His reasons include:

The Smarter Balanced assessment system integrates high quality summative and interim assessments, and formative assessment resources, to not only monitor student achievement but also provide instructional support to teachers.

Smarter Balanced tests are fully aligned to the state's new K-12 Learning Standards.

Smarter Balanced tests offer an articulated assessment system from grade 3 through high school, providing a measure of college and career readiness throughout a student's K-12 experience.

Smarter Balanced offers unprecedented accessibility for students with disabilities and English language learners.

Smarter Balanced assessment results allow comparisons not only across groups of students, schools and districts within Washington but also across other states that are also implementing these assessments.

2. A local educational agency [i.e., school district] may administer a nationally recognized high school academic assessment in lieu of the state-designed academic assessment if the state educational agency [in Washington state, OSPI] approves such assessment through certain procedures and criteria.

   OSPI NOTE: Washington State Superintendent of Public Instruction Randy Dorn is committed to using the same high school assessment in all schools in the state to provide comparability. He does not plan to approve school district requests to use an alternate assessment.

Nancy suggested that one problem is that scheduled testing ties up classroom time and limits field trips, etc.

Some needed action items:

- Demand full funding for McCleary
- Focus on the goal – innovators and entrepreneurs
- Right size assessments – fewer, more targeted, and measurement of soft skills

- Limit additions to requirements – nothing new
- Look for things to stop doing
- Find metrics that track innovation, creativity & collaboration

Jeff posited the question: what do you want to cut? To illustrate the difficulty of this, he posed three possible choices: 1) anti-bullying; 2) sex education; or 3) discrimination prevention? The reality is the schools will not cut a resource from a child.

McCleary is widening the pot. For instance it will free up counselors across districts so they can share counselors, share resources between districts.

Next Steps

The STEM Alliance members expressed support for the continuation of these meetings and WSAC's request for supplemental funding to support Alliance efforts in the 2016 legislative budget. Several members said they would be willing to speak to legislators to let them know the importance of the STEM Alliance and its work in advancing STEM education and highlighting and measuring workforce needs.

Feedback from the STEM Alliance, after the breakout session~~s~~, was not conclusive about whether a separate industry/education partnership task force should be formed. The alternative is to approach this issue with the full membership, beginning with an asset map of existing partnerships in the state and considering the most effective ways to leverage and expand on them going forward. Further discussion on this topic will be on the agenda at the next meeting.

Question: What if WSAC is not funded to provide leadership for the STEM Education Innovation Alliance?
John Aultman assured the members that the Governor has a great interest in and sense of urgency about these issues in education. He sees great value in the work of the STEM Alliance and in moving STEM education forward across state. He views this group as playing a key part in this process.

Eleni Papadakis thanked the STEM Alliance for "greasing the skids" to help pave the way for the Workforce Board in their successful application for the NGA-funded Work-Based Learning Policy Academy. The Workforce Board very much would like to be helpful in making sure the STEM Alliance continues to meet.

Next Meeting: Thursday, April 28 – 12:00 to 3:00 PM – Seattle Metropolitan Chamber of Commerce

Meeting notes compiled by Washington Student Achievement Council staff Ellen Matheny and Daryl Monear.

APPOINTED ALLIANCE MEMBERS			
First Name	**Last Name**	**Position Title**	**Organization**
John	Aultman	Executive Policy Advisor for Higher Education and Workforce Development	Washington State Office of the Governor
Jeff	Charbonneau	2013 National Teacher of the Year	Zillah High School
Maud	Daudon	Director & CEO	Seattle Metropolitan Chamber of Commerce
Jeff	Estes	Director, Office of STEM Education	Pacific Northwest National Laboratory
Paul	Francis	Executive Director	Council of Presidents
Christine	Johnson	Chancellor	Community Colleges of Spokane
Caroline	King	Chief Policy Officer	Washington STEM
Rai Nauman	Mumtaz	Graduate & Professional Student	Student Representative
Isabel	Munoz-Colon	State Board of Education Member	City of Seattle, Office for Education
Eleni	Papadakis	Executive Director	Workforce Training and Education Coordinating Board
Dana	Riley Black	Executive Director STEM, Legislation & Partnerships	Everett School District
Gene	Sharratt	Executive Director	Washington Student Achievement Council
Nancy	Truitt Pierce	Director, School Board	Monroe Public Schools
Margaret	Tudor	Executive Director	Pacific Education Institute
ALTERNATE ALLIANCE MEMBERS			
First Name	**Last Name**	**Position Title**	**Organization**
Jane	Broom Davidson	Community Affairs Director	Microsoft Corporation
Dan	Grossman	J. Ray Bowen Professor for Innovation in Engineering Education	University of Washington Computer Science & Engineering
Gil	Mendoza	Deputy Superintendent	Office of Superintendent of Public Instruction
OTHERS			
First Name	**Last Name**	**Position Title**	**Organization**
Britney	Allison	Associate of Nursing (Direct Transfer) Student	South Puget Sound Community College
Melissa	Beard	Forecast Analyst	Washington State Office of Financial Management
Nancy	Dick	Workforce Education Director	State Board of Community and Technical Colleges
Mary Kay	Dugan	Managing Director - Education	IMPAQ International
Josie	Ellison	Vice President of Federal Affairs	Western Washington University
Victor	Fernandez	Fiscal Analyst	Washington Student Achievement Council
Nova	Gattman	Legislative Director	Workforce Training and Education Coordinating Board
Elissa	Goss	Executive Director	Washington Student Association
Kimberly	Hauge	Policy Analyst, Economic, Human Services & Workforce Program Division	National Governors Association, Center for Best Practices
Leah	Hausman	Director of Fund Development	Thrive Washington
Ellen	Matheny	Assistant Director of Operations	Washington Student Achievement Council
Daryl	Monear	Associate Director for Academic Affairs and Policy	Washington Student Achievement Council
Juliette	Schindler Kelly	Director of Government Relations and Advocacy	College Success Foundation
Jim	Schmidt	Senior Forecast Coordinator	Washington State Office of Financial Management
Tivoli	Sharp	Administrative Assistant	Washington Student Achievement Council
Andy	Shouse	Chief Program Officer	Washington STEM
Martin	Simon	Director, Economic, Human Services & Workforce Division	National Governors Association, Center for Best Practices
Randy	Spaulding	Director of Academic Affairs and Policy	Washington Student Achievement Council
Maddy	Thompson	Director of Policy & Government Relations	Washington Student Achievement Council
Natalie	Truong	Policy Analyst, Education Division	National Governors Association, Center for Best Practices
Jan	Yoshiwara	Deputy Executive Director of Education	State Board of Community and Technical Colleges
ATTENDED MEETING REMOTELY VIA WEBINAR			