Thinking differently about education policy and praxis: STEM collaboration as the cornerstone for public education

Introductory Remarks

What an honor to be here today and to be a part of this process that Aurora and Sherry Eagle have created to further the vision of effective education for students.

To answer the collective question in the room that you are all too kind to say out loud, who the heck am I? And why did Sherry Eagle put me here? Trust me I asked her that question multiple times just to confirm her decision.

Well, to answer that question, I'm not an educator or part of a higher education institute anymore, I'm not a CEO of a STEM industry, or a Director for a non-profit organization, and I don't play one on TV. I am a stakeholder though in issues related to education and especially issues related to STEM partnerships. My 17 years in the evaluation field have provided opportunities for collaboration with state agencies related to STEM and Workforce Development, for-profit industries, not-for-profit organizations, local education agencies, as well as support agencies like office of education and learning technology centers. These experiences in addition to the research and evaluation work in the field related to community partnerships, brain development, and effective education practices provide me with some insight to share with you today.

So, now for that title. Thinking differently about education policy and praxis: STEM collaboration as the cornerstone for public education. It seems like a lot of pressure now that I'm up here. Maybe I should have gone with something like random musings from a cynical optimist about STEM partnerships. Because I'm truly passionate about the potential for these partnerships but as my colleagues will tell you, my cup is always half full. It's the nature of evaluation work I think. Yeah these 14 things are working well and making progress but look at that one. Nope, you're not done yet. Half full. At national conferences I turn into the Lewis Black of evaluators ready to explode with the frustration of un-realized promises from our field.

[slide] History

Anyway, back to that title. Thinking differently...somewhat of a misnomer. There are certainly many historical precedents for thinking about the relationship between workforce development, industry needs, and public education.

My thoughts on the matter are built on the backs of many historical people and events and their work to reconcile theory, practice, and policy related to the purposes of education. [slide] Are we developing a workforce through public education? Sure thing. (Horace mann, booker washington). [slide] Is public education about producing a a literate citizenry? (w.e.b. dubois) [slide] Are issues

of social justice and equal access for all students relevant, central issues to this purpose? (Linda Brown Thompson, Catherine Beecher). **[slide]** Are there assumptions about how children, and people, learn most effectively that we should consider when designing learning environments? (John Dewey, Deborah Meier).

[slide] Enacting Partnerships for Public Education

So if thinking about public education through the lens of industry isn't new, what do I mean? Well lets look at some examples.

What does it look like to work with organizations outside the K-12 setting and what are the benefits?

In this first video, we see students developing relationships and learning through project-based work with a community center:

http://howtovideos.hightechhigh.org/video/281/STEMIE+Proposal

[2:27]

[slide] Project work is a fantastic vehicle for these partnerships. But non-lea partners don't have to serve only as consumers of student learning or participate on the periphery. They can be an integral part of the learning itself.

http://www.edutopia.org/mountlake-terrace-geometry-real-world-video

[stop at 4:33 before "Five weeks later…"]

[slide] And this can be personal. This is personal. And it can be achieved in public education settings.

http://www.edutopia.org/is-school-enough-real-world-internship-video

[5:38]

Doesn't seeing these make you want to just tell me to shut up so you can reach across the table and start working together? They are so inspiring! And they really get me excited about the potential.

Future

These are complex learning environments to be sure. They require thoughtfulness and intentional support across several areas. And this is why I'm so excited about the environment today. There is a lot to be optimistic about (ok, cynically optimistic). **[slide]** We have policies in place and being adopted to support these kinds of partnerships. New standards, like CCSS & NGSS, college & career readiness, reflect, if not a consensus, certainly a common vocabulary for defining a vision for public education.

[slide] We have investment of resources (although these days it is more the potential for investment than the actual investment). But all kidding aside, grants like Race to the Top and I3 grants which support the development of **[slide]** infrastructure and support the scaling up of piloted initiatives on a large scale

provide opportunities that we must put to good use and show good stewardship to realize their potential.

We must not wait for permission to change. Our students need these opportunities today. We must assert control locally through grass roots efforts adopting standards and practices before they are mandated. **[slide]** At the policy level we must explore legislative flexibility (like with NCLB waivers) to provide the legal space for these initiatives. We need cross-district, district-charter, public-private collaborations like those found in portfolio districts to allow for agility and differentiation that students need. And last but most certainly not least, we need pervasive parent and community stakeholder involvement and even legislative support where needed (like with parent trigger laws) to propel our progress. We need these changes now. Students (my own kids included) need these experiences now.

The point is thinking differently about education, collaboration, and how STEM is a vehicle that can be a cornerstone to support the lens of public educators.

Policy makers need to continue to support innovation in the K-12 learning environment by policies that adopt relevant standards and leverage resources accordingly. Currently, in Illinois these take the shape of STEM learning exchanges, CCSS/NGSS adoption, and most importantly, the new legislation that allows for the creation of the STEM Collaboration School. The STEM school we are celebrating today embodies this vision and can serve as the Lewis and Clark into this territory of a new enactment of public education.

[slide] Educational leaders need to evolve to facilitate these dynamic learning environments. They need to continue growing as transcendent leaders, being proactive in personal growth as well as the growth of staff in subject matter expertise, stewardship of resources, brokering, supporting, and sustaining partnerships, and demonstrating analytical acumen.

[slide] Educators need to continue to adapt instruction to erase the boundaries of traditional visions. Flipped classrooms, virtual collaboration, authentic problems (e.g., Project Citizen), NGSS, CCSS, STEAM…the list grows daily. Educators need to embrace agility and their role as lifelong learners.

[slide] And we **all** need to think differently about assessment processes P-20.

Final Thoughts:

[slide] Does collaboration mean to lose the individual identities of our organizations and purposes? **[slide]** No. Industry stakeholders have business interests. Non-profit foundations and organizations for the arts are created and sustained around specific initiatives. LEAs and support agencies are committed to public education for all students regardless of the readiness of students and the conditions of the community. **[slide]** It's not about losing individual identities, it's about creating a

collective space where the intersection of our common purposes can be nurtured and leveraged for our communities.

**[slide]** This is why I'm excited and this is my hope for you all today. So let's get moving.

Elizabeth Oyer
EvalSolutions Inc.

vision

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Considering the purposes of education

purposes of education...

developing a workforce?
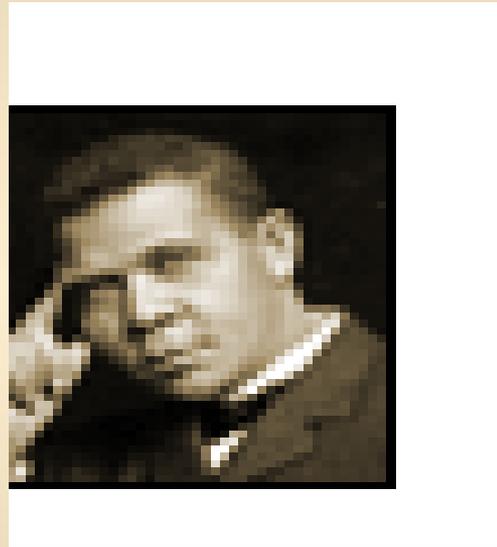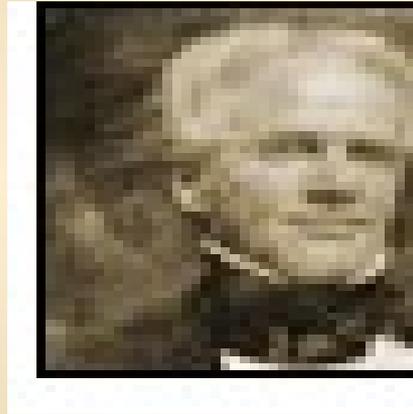
purposes of education…

a literate citizenry?
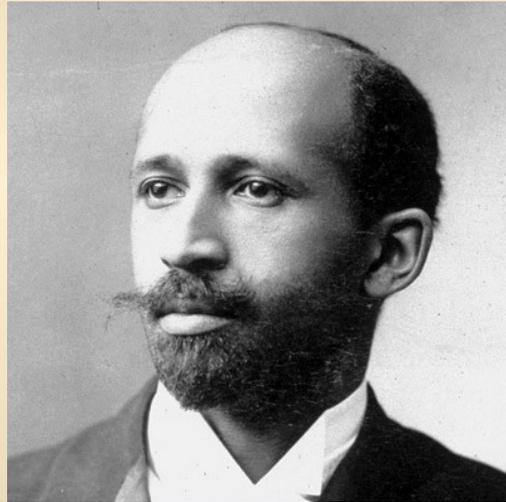
purposes of education…

social justice issues to consider?

purposes of education…

assumptions about learning?

# **Enacting Partnerships for Public Education**

What does it look like?

Enacting Partnerships for Public Education

What are the roles of partners?

Enacting Partnerships for Public Education

It's personal

Reasons for Optimism

✓Policies, legislation, & standards

Reasons for Optimism

- Policies & Standards
- ✓ Investment of Resources

Reasons for Optimism

- Policies & Standards
- Investment of Resources
✓ Infrastructure for change

Reasons for Optimism

- Policies & Standards
- Investment of Resources
- Infrastructure for change

Taking action

- Policy makers need to continue to support innovation

Taking action

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- Educational leaders need to evolve to facilitate these dynamic learning environments

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- And we all need to think differently about assessment processes P-20.

Taking action

- And we **<u>all</u>** need to think differently about assessment processes P-20.

Final thoughts

- Collective purposes, not shared identities
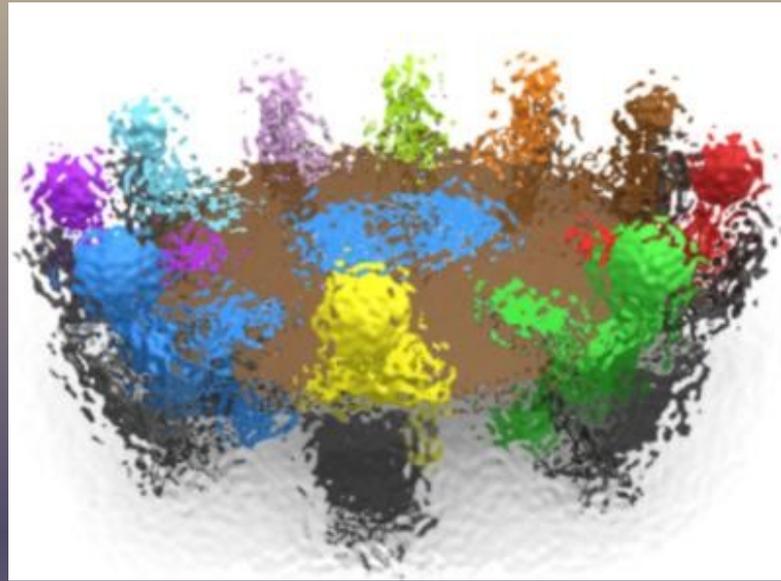
"Nothing happens until something moves."
— Albert Einstein