



GOVERNOR'S STEM ADVISORY COUNCIL

dedicated to building a strong STEM education foundation for all Iowans

Iowa Governor's STEM Advisory Council Meeting XIII – September 15, 2015

PANEL – How to sustain and grow our Iowa STEM Foundation?

Panelists:

Barry Butler, Executive Vice President and Provost, University of Iowa
John Carver, Superintendent, Howard-Winneshiek Community School District
Rob Denson, President, Des Moines Area Community College
Debi Durham, Director, Iowa Economic Development Authority
Bill Ruud, President, University of Northern Iowa
Gary Scholten, Executive Vice President and Chief Information Officer, Principal Financial Group
Ed Wallace, Deputy Director, Iowa Workforce Development
Ryan Wise, Director, Iowa Department of Education
Isa Zimmerman, Consultant, IKZ Advisors, LLC

Question 1: What factors determine whether an innovation of the scope of Iowa's statewide STEM initiative is sustained over time, or not?

Generalized Panel response:

- Clear and consistent communication among all stakeholders
- Intentional planning
- Coordination across agencies and partners; embed
- Political support; engage legislators
- Proper leadership and staff structure
- Built partnerships between businesses, schools, higher education and communities
- Need to brag and sell/tell our story; recognition
- When innovating, have to be our own worst critics which helps identify gaps
- Innovators fixate on a problem and don't stop until they have a solution to that problem
- There is not enough workforce; Skilled folks are leaving the state
- Alignment with current and future needs of the business sector
- Excite the base — excite kids who excite parents who excite the community who excite legislators
- Identify data to increase impact – connect with the demand
- Rural Iowa is looking to be innovative and keep kids in rural Iowa
- Teachers and colleges are not adapting quickly enough
- Vendors are going to start marketing directly to kids
- Need a think tank to vision what education needs to be—use resources here in Iowa at Iowa State University, The University of Iowa and the University of Northern Iowa
- Design what education needs to be and step away from old traditions and protocols

Question 2: How would you rate the current long-term sustainability prospect of Iowa's statewide STEM initiative?

Generalized panel response:

- Future is extremely bright; bipartisan support, strong leadership
- Has provided the activation energy
- We are at the point where things are ready to explode; tipping point
- Headed in the right direction; not automatic
- We are at a crossroads; declining enrollments
- Need to vision a new model in the state for education
- Potential fatigue from funders
- With the Scale-Up Program have to demonstrate sustainability
- Massachusetts story—change in gubernatorial office, now on hiatus

Audience input:

- Get past Iowa “niceness”
- Talk about why STEM is part of our culture, for example existence of companies such as Rockwell Collins and John Deere in our state
- Bi-lingual curriculum important to engage students and parents.

Audience question: What will you commit to doing in the near future to support and strengthen?

- Iowa's Dept. of Ed. is committed to identifying opportunities for connections, forging partnerships, collaboration to move forward together, and to implementing the new NGSS
- Starting a Global STEM Subcommittee; 95% of Iowa's customers are outside the U.S.; Must engage around the globe with workforce, cultivation and alignment
- The University of Northern Iowa is investing \$30 million in state funding and an additional \$5 million in private funds to repurpose the Schindler Education building. It will contain unique classrooms for STEM education, STEAM/STREAM education and a sandbox.
- Do a crosswalk to identify what other initiatives are doing; Break down silos
- Principal Financial is an advocate for education; STEM is always on the list of talking points with legislators
- Support future talent needs as the fastest growing jobs are in STEM fields. The single most limiting factor to growth is talent. Let employees know the business priorities and needs, then get out of their way.
- Howard-Winn – voice for rural education; replicable model; embrace YouTube and other social media to share out a new DNA for learning, a new model
- Have to connect broadly around the state—rural and urban

Audience input:

- Frustration for teachers is that they are not allowed by the system to try new things. It is a pervasive thought that everyone has to do the same thing. Individuals cannot innovate. Their creativity is taken away.
- The problem is in the implementation, not the standards. A systems problem
- Through NGSS with a deep understanding of these standards, there is a chance to change things
- Need to talk to the administration. Those are the ones who make the rules.

Panelist response:

- Need to strike a balance—how do we have high rigorous standards AND allow for talent, creativity and skill of the teachers
- Hope as a Department to promote teachers, support competency-based education and personalized education for each student

Audience input:

- Need to talk to teachers at the teacher preparation level. We can influence this as a Council.

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- Need to help teachers teach in an integrative way and be able to innovate beyond the kits
- Need to help teachers argue that each classroom can look different and have the same outcomes

Panelist response:

- K-12 is a local control issue. School boards are the gatekeepers. They are the patrons.

Audience input:

- The challenge is that the focus at the elementary level is literacy and mathematics. Elementary teachers and administration think it is one or the other. They don't see how to integrate. They need to use literacy and use mathematics within a STEM context in a real way and then they can meet the standards.

Question 3: Systemically, what step(s) do you recommend the Council's administrative leadership take to strengthen the prospect for long term sustainability of the solutions that make up Iowa STEM ?

Generalized panel response:

- Communication with administrators and the general public is critical; Build upon what we have done and grow
- Share the best success stories we have publicly to the people at large so Iowans know how well we are doing
- Preach to schools boards, administration, parents and take time to make visits to these others
- Break down silos; Keep focused on the core problem; Expand the audience and recruit more ambassadors across these audiences
- Grow the business side—even include smaller businesses

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