IMPROVING STEM EDUCATION THROUGH COMMUNITY PARTNERSHIPS
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Improving STEM Education Through Community Partnerships

**Expert Presenters:**

*Lita Colligan*, associate vice president, strategic partnerships and government relations, Oregon Institute of Technology and co-chair, South Metro-Salem STEM Partnership

*Mark Lewis*, director of STEM, Oregon Education Investment Board
An on-demand archive of this webinar will be available at www.edweek.org/go/webinar in less than 24 hrs.
Community Partnerships to improve STEM Education

Mark Lewis, Oregon STEM Director
Lita Colligan, South Metro-Salem STEM Partnership
Companies are competing with each other for a limited number of students graduating in STEM fields.

The Leaky STEM Pipeline

We must secure our nation’s future by supporting high-quality STEM education to prepare a skilled workforce and strengthen U.S. competitiveness.
Complementary rationale for STEM

1) Jobs Pipeline
2) Equity & Social Justice
3) Economic Competitiveness
4) Innovation & Creativity
5) Transforming Education
6) Individual Prosperity
7) Informed Citizenry & Societal Participation
8) National Security
9) Improving the Human Condition
Unique but not alone… STEMx
Oregon’s STEM Hub Network
What is a STEM Hub?

For Oregon:

A Regional STEM Hub is a “collective impact” partnership that engages multiple stakeholders and organizations within a defined geographic area, working toward the common goal of increasing student interest, preparation, and success in STEM.
Pillars of a Collective Impact partnership

- Common Agenda
- Shared Measurement System
- Mutually Reinforcing Activities
- Continuous Communication
- Backbone Support Organization
Additional principles of Oregon STEM Hubs

- Equity
- Student voice
- Inclusiveness
- Sustainability
- Openness, transparency, knowledge-sharing
- Continuous improvement
FORMING REGIONAL STEM HUBS
An Investment Strategy to Transform STEM Learning for *ALL* Oregon students
Enabling Conditions

- Compelling regional issue or need
- Commitment from local leadership
- Broad community buy-in
- Willingness to commit time and talent
- History of some cross-sector partnerships
- Recognition that change is needed
- (State leadership, education policy)
Critical Partners

- School Districts
- Higher Education
- Community-based Orgs
- Research agencies
- Business and Industry
- Workforce
- Economic Dev.
- Civic Leaders

STUDENT
South Metro-Salem’s Experience

- Leadership - Get the right people at the table
- Common principles/agreement to collaborate
  (What binds us? What is the change we seek? Why?)
- Common Vision, Goals, and definition of quality STEM education
- Community Engagement: identify & align assets
- Program Strategies
- Constant communication
- Early wins. Jump in and get started.
Structures

- Governance committee
- Partnership agreements
- Measurement/Evaluation system (productivity and impact)
- Communication networks
- Network of advisors
- Development capacity

Stemoregon.org – to share resources

www.oit.edu/stem – agreements, minutes
Focusing our Efforts: High Leverage Points

- Educator Professional Development
- In School – Out of School Alliances
- Bridge Programs (Accelerated College Credit Courses and Industry-School Connections)
- Partnering with STEM practitioners
- Mentorships and Internships
Lessons Learned

- Get the right people in the room
- Build trust: crossing cultures
- Build momentum: celebrate success
- Engage the community!
- Embrace uncertainty
- Question assumptions
- Don’t chase dollars
- Start from where people are
Resources

- STEMx: [www.stemx.us/compass](http://www.stemx.us/compass)
- [STEMoregon.org](http://www.stemoregon.org) –
- [www.oit.edu/stem](http://www.oit.edu/stem) - sample documents
- North Carolina DIY Guide
  - [www.ncpublicschools.org/docs/stem/resources/diy-guide.pdf](http://www.ncpublicschools.org/docs/stem/resources/diy-guide.pdf)
- Dayton STEM Ed Quality Framework
Questions to Ponder

- Put the students first! How will you build engagement and relationships?
- What does STEM look like in your community? Visit local industries!
- How will you sustain momentum and resources?
- What’s in it for EACH partner?
- How will you measure success? What are you assessing and what does it tell you?
Statewide STEM Network
40/40/20 Goal for 2025

Bachelor's degree or higher

Associate's degree or credential

High School

2025 Goal

- STEM Council
- STEM Investments

“ROI” from jobs

- Critical employment needs
- Increase State Revenue

STEM Hubs

- Leadership and Collaboration
- Execution of STEM Strategy
Oregon Context

- Diverse communities with frontier spirit
- Unequal distribution of population and tech industries
- Inequities for students of color and rural poor
- Diverse STEM industries
- Governor and legislative support
Oregon’s STEM Hub Network
Why a STEM Hub Network?

- Local solutions to local issues
- Implementation network (CCSS/NGSS)
- Practice-based research
- Feedback & communications
- Disseminate effective practices
- Systemic transformations
- Outcomes: student engagement
Centralized Support Needed

- Communications & Advocacy
- Policy
- Data & evaluation
- $ for regional backbone functions
- Public and private Investments
- Connective tissue between hubs
Connections

- Mark Lewis, Oregon STEM Director
  Mark.Lewis@state.or.us

- South Metro-Salem STEM Partnership
  Lita Colligan, Lita.Colligan@oit.edu
  www.oit.edu/STEM
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Required Reading from *Education Week*:

**Spotlight on STEM**
Schools and policymakers emphasize STEM as a way to prepare students for 21st century challenges, leaving teachers with their own challenge: How do you successfully engage students in these subjects? This Spotlight offers tips on how to create effective science and math learning opportunities for students.