



INNOVATEBIO

National Biotechnology Education Center

Envisioning the Next Bioscience Workforce:
A Summit on Industry Trends and Needs
Washington, DC
June 26-27, 2023

Ecosystem Collaboration: Best Practices for Addressing Critical Workforce Challenges

Tuesday, June 27, 2023

9:15 – 10:15 AM



Ecosystem Collaboration: Panelists



Highlighting how best practice states are pulling multiple stakeholders & funding together to address the industry's critical talent needs

NEBRASKA: Misty Wehling, Co-Chair, Biotechnology Program & Biotechnology Instructor, Southeast Community College

NORTH CAROLINA: Brenda Summers, Ed.D., Director of Workforce Programs, NC BIO

TEXAS: Linnea Fletcher, Ph.D, Biotechnology Department Chair & Director, InnovATEBIO National Biotechnology Education Center

UTAH: Tami Goetz, Ph.D, Executive Director, STEM Action Center



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Ecosystem Case Study: Using authentic research to elevate biotechnology careers in Nebraska

Misty Wehling
Co-Chair, Biotechnology Program
Southeast Community College



Challenge: Lack of awareness

- InnovATEBIO
 - Undergraduate Research Strategic Planning Workshop
- Neogen and Lincoln STEM Ecosystem
 - Biotechnology Summer Institute
 - High school teachers



Solution: Authentic Research



- How attached is your dog?
- Citizen science to increase sample
- Incorporate biotechnology skills
- Increase awareness of careers



www.southeast.edu/k9project



IDEA

EPSCOR

N E B R A S K A



MatMaCorp

Diagnostics Simplified



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NCBioImpact Industry-Academic Partnership

Brenda J. Summers, EdD

NCBIO Director of Workforce Programs



Formation of NCBioImpact

- ⌘ Workforce development collaboration began in 2001 when NC Biotechnology Center (state econ dev org) launched BioWork w/ Novozymes
- ⌘ Strong workforce demand led life science companies to approach NCBIO in 2002-03
 - NCBIO and NCBiotech Center partnered on \$70M Golden LEAF grant for facilities; operating costs picked up by the NC General Assembly
 - Formed NCBioImpact to fuel growth of NC biopharma manufacturing cluster



NORTH CAROLINA AGRICULTURAL AND TECHNICAL STATE UNIVERSITY



- ⌘ Supports programs to provide students with hands-on training, education, access to equipment and industry relevant experience
- ⌘ Biotech Manufacturers Forum formed and continues – working on talent awareness and best practices
- ⌘ Window on Workplace Survey in 1997 by Center and done every 2-5 years – latest one later this year
- ⌘ Implementation Group meets 4-5 times year



NCBIO BMF Meeting

- ⌘ Legislative Life Science Caucus Meetings – share industry/academic partnership
- ⌘ Build Back Better grant \$25M – industry helping with apprenticeships at community colleges
- ⌘ BRITe part to provide training and equipment to 5 other HBCUs & HAIU
- ⌘ Continue to expand at community colleges
- ⌘ Metrics - 2700 announced jobs and \$2.1B announced life science and related investment in 2022



Legislative Life Science Caucus Meeting



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Ecosystem Case Study: Texas Skill Standards

Linnea Fletcher Ph.D.

Department Chair, Biotech Austin
Community College



Goal: Adopt and Implement Washington Skill Standards

- Objectives
 - Texas Adopt Skill Standards
 - Two Year Programs Work Together to Implement Them in Core Courses
 - Renew and If Necessary, Update

Outcome

Two-year programs still use the skill standards and work as a team to update them. **By working together, the programs produce the same high quality biotechnician graduate across the state.**

How did we do this?

Ecosystem/Action Plan



- State-Bio Organization: Texas Healthcare and Bioscience Institute (THBI)
 - Enabled the adoption of the skill standards and communication with the Workforce Board (THBI recruited ACC, and I recruited the schools)
- Workforce Board
 - Adopted skill standards and funded grant for institutions to work together
- 2-year Biotechnology Programs and Their Institutions
 - Supported the adoption of the standards and continued conversations
- The skill standards can be found at
 - www.tssb.org



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Utah Biotechnology Ecosystem: Then and Now

Tami Goetz, Ph.D.

Director, Utah STEM Action Center



The Common Challenge THEN (2001)



Talent needs for growing life science industry

- Community college not a problem
- Focus on secondary education was unique
- **THE CHALLENGE** – missing ecosystem partners
 - Industry partners
 - University-centric
 - Buy-in was tricky
 - State leaders
- A new challenge – the program is working
 - Grow the ecosystem
 - Evaluate role of existing ecosystem partners

The Common Challenge NOW (2023)



Ecosystem partners remain critical

- Secondary and Post-Secondary partnerships
- Talent demand is greater and DIFFERENT
- Student motivation has CHANGED

Disclaimer

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DISCUSSION / Q&A

UT: Lessons Learned

- Ecosystems evolve and are
 - Leverage the InnovATEBIO community
 - Speak in known language
 - Relationships are EVERYTHING
 - Relationships require TIME
- Be creative with internal opportunities
 - InnovaBio
 - Scalable, sustainable
 - “Quality” control
- Stay relevant
 - Look to “next wave” of needs
 - Bioindustrial manufacturing

In order to stay relevant,
you have to stay open to
new trends and keep
educating yourself. You
have to keep evolving.

Natalie Massenet

PICTUREQUOTES.com