

## ***Connecting Classroom to Career - Post Workshop Wrap-Up***

### **Bridging STEM & Career Education and the Workforce Skills Gap - Nov. 11, 2025**

**Summary** - A half-day workshop hosted at Union College of Union County, NJ (UCNJ)

**Challenge:** Nearly 60% of employers report difficulty finding candidates with the necessary soft/essential skills increasingly vital in a rapidly evolving, tech-driven economy.

**Conversation:** How can the education and business sectors collaborate to deliver more graduates with the STEM and core skills needed for the workforce? ([LinkedIn article](#))



*Participants were mostly educators with representation from community organizations, Panasonic Foundation and the NJDOL.*

We framed the day around studies that show there is a consistent need for “durable/human skills,” supported by surveys showing gaps in these skills for new hires. We concluded this portion of the day exploring the following questions: “What does education mean to you?”, “What challenges currently exist?”, and “What do you envision education to be in the future?”

Spark Talks (7-10 minute presentations) provided context to the day’s topic, not only to educate, but inform participants in the group work that followed. We heard from five organizations during the Talks: UCNJ, Morristown High School STEM Academy, South Orange-Maplewood School District, Students 2 Science, and the Panasonic Foundation.

The group then moved into defining a “Big Challenge” each individual wanted to solve, with tablemates sharing opportunities to solve each challenge. ([Pics 1-4](#))

We finished the morning spending an hour in small groups further developing ideas on what’s needed to solve these challenges and close the skills gap. ([Pics 5-8](#))

Workshop action items included continuing towards developing solutions through our ecosystem, each individual making efforts to share GNSE social media and inviting their contacts and bringing a business/industry contact to the January convening.

The group utilized these partner connections and questions to frame their discussions.

### ***Shared Responsibilities: Working Collectively For Change***

Building a workforce-ready STEM pathway requires systematic collaboration across all stakeholders

**Education + Business** - Co-design curricula based on real-time labor market data

**Business + Community** - Create accessible career exploration and mentorship programs

**Education + Community** - Develop wrap-around services supporting student success

**All Stakeholders** - Build industry-driven sector strategies promoting economic mobility

**What Do You Need?**

**What Do You Have?**

**How Do We Create Collective Impact?**

**What Can We Accomplish by NJ STEM Month?**

We worked to build solutions that fit into the 5 Pillars of STEM Learning Ecosystem excellence

<b>PARTNERSHIPS</b> Creating Space for Collaboration	<b>SYSTEMS</b> Architecting STEM Ecosystems	<b>TEACHING &amp; LEARNING</b> Reimagining STEM Learning	<b>MEASUREMENT</b> Measuring Community Impact	<b>WORKFORCE</b> Building Future-Ready Talent
We join education, business, and community together to transform STEM learning.	We support communities in building strong STEM Ecosystems that work for everyone.	We redesign STEM learning that spark creativity and innovation, and build future-ready skills.	We measure how our work strengthens communities and improves learning outcomes.	We support career-connected learning by building bridges between education and workforce partners.

### **What Emerging: Challenges & Themes**

Throughout the UCNJ workshop, attendees surfaced a wide range of ideas, frustrations, opportunities, and possibilities. Rather than fixed answers, what emerged were patterns — signals pointing to where our region is strongest and where it struggles with education.

The ideas generated wrapped around these four themes:

1. STEM & Career Learning Pathways are Fragmented and Not Integrated
2. Educator and Administrator Capacity & Professional Learning Needs
3. Altering Community & Student Perceptions About Two-Year Colleges and Vo-Tech
4. Building Stronger Connections Between Education and Industry

A deeper dive into each of these themes is outlined below

THEME	Questions to Explore
<b>STEM &amp; Career Pathways Exist, but Often Feel Fragmented</b> Participants consistently described having many programs, but not a clear pathway. <ul style="list-style-type: none"> <li>• “Not a 1 + done experience.”</li> <li>• Students get exposure, but not sequence.</li> <li>• It's hard to connect early awareness to actual opportunities after high school.</li> </ul>	<b>Questions</b> <ul style="list-style-type: none"> <li>• What would it take to make our existing programs feel more connected?</li> <li>• Where are students most likely to fall off between awareness → preparation → transition?</li> <li>• Who owns the “pathway architecture” in a district... and who should?</li> </ul>
<b>Educator Capacity Is a Major Pain Point</b> Participants raised concerns: teacher and counselor support <ul style="list-style-type: none"> <li>• Limited understanding of emerging STEM careers</li> <li>• Lack of externships, industry exposure, and curriculum examples</li> <li>• Challenges integrating energy/sustainability, tech skills, and career readiness</li> <li>• Uncertainty about dual enrollment req's. and credentialing</li> <li>• Developing human connections between administration and teachers, teachers and students, educators and families</li> </ul>	<b>Questions</b> <ul style="list-style-type: none"> <li>• Which educator groups need the most support, and what type of professional learning genuinely moves practice?</li> <li>• Would a regional “career-connected academy” help — or add another layer?</li> <li>• How do we layer in support when time is already at capacity?</li> </ul>
<b>Cultural Narratives Are Barriers</b> Several groups noted the persistence of the “4-year college as the only successful path” mindset. <ul style="list-style-type: none"> <li>• “Break the university myth,” Students rarely hear about high-wage, non-degree careers.</li> <li>• Parents don't always see the value in work-based learning or CTE.</li> </ul>	<b>Questions</b> <ul style="list-style-type: none"> <li>• How do we shift the narrative without devaluing higher education?</li> <li>• What stories or data would resonate most with families?</li> <li>• What role should employers play in shaping that message?</li> </ul>
<b>Industry Wants to Engage, but Connection Points Are Unclear</b> Many employers are present in New Jersey, but engagement is not yet deep, strong or widespread enough to support true career-connected pathways. <ul style="list-style-type: none"> <li>• Schools often don't know who to contact / Employers aren't sure what schools need.</li> <li>• Existing relationships feel inconsistent or one-off.</li> <li>• Educators and industry rarely share planning space.</li> </ul>	<b>Questions</b> <ul style="list-style-type: none"> <li>• What does “high-quality” industry engagement look like?</li> <li>• What structures best support recurring educator/industry interaction?</li> <li>• How do educators make it easier for businesses to participate and signal their essential involvement?</li> </ul>
<b>Strong Activities Exist, but without Integration</b> The region has: Construction career days, NJMEP tours, STEM panels, Dual enrollment, Teacher PD conferences, County workforce initiatives, but participants described them as “islands,” not an ecosystem.	<b>Questions</b> <ul style="list-style-type: none"> <li>• Where are we duplicating effort, and what structures already exist that we can plug into?</li> <li>• What would a more integrated pipeline look like from a student's point of view?</li> </ul>

## Potential Directions Raised by Participants

Rather than fixed solutions, participants offered ideas worth exploring. These are starting points, not commitments.

IDEA	Questions to Answer
Clarify What a Regional Pathway Could Look Like	<ul style="list-style-type: none"> <li>• How formal or informal should a shared framework be?</li> <li>• Should it be sector-specific, grade-banded, or both?</li> <li>• Is the goal alignment, visibility, shared language — or all three?</li> </ul>
Strengthening Educator & Counselor Exposure to Industry	<ul style="list-style-type: none"> <li>• Would educators participate voluntarily?</li> <li>• Which sectors are most ready to host educators?</li> <li>• How do we measure student-level impact?</li> </ul>
Shifting Community Mindset Through Joint Storytelling	<ul style="list-style-type: none"> <li>• What stories should we uplift first?</li> <li>• Which communications channels best reach families?</li> <li>• How do we avoid overwhelming parents with information?</li> </ul>
Testing Sector Pilots (Energy, Construction, Tech)	<ul style="list-style-type: none"> <li>• What makes a pilot doable within one school year?</li> <li>• What data would help us evaluate success?</li> <li>• Should pilots focus on curriculum, WBL, credentials, or all three?</li> </ul> <p>Some of the companies and organizations mentioned: Merck, Panasonic, NJMEP, Sanofi, Nova, Home Depot, NJDOL, and county workforce boards</p>
Forming a Regional Working Group or Council	<ul style="list-style-type: none"> <li>• Who should be at the table?</li> <li>• What is the lightest structure that still adds value?</li> <li>• How often should the group meet?</li> <li>• What decisions (if any) should this group make?</li> </ul>

## Conclusion — A Launchpad

As expected, the workshop surfaced more questions than answers, and this will drive further work of GNSE. A recurring theme across all tables was clear: we cannot build effective STEM and career pathways without far greater and more intentional engagement from industry and business partners — and without creating regular spaces for educators and employers to collaborate directly.

## Next Steps and Action items

1. Review and present this work as the foundation for group work at the January 2026 convening
2. Map out an sub-ecosystem (sub-system) of collaborators for the ‘themes’ and ‘ideas’
3. Ensure each sub-system has representation from the 5 Pillars
4. Ecosystem coordination of each sub-system, ensuring they all roll up and fit together in GNSE



## ARTIFACTS - Challenges & Opportunities Roundtable (Pics 1-4)

Coryn Shaw  
Convince Public School Districts w/ stakeholders the value in providing pathways + real world opportunities to students

Brian Young  
Opportunity: Begin by developing academic pathway courses in the building and then creating these pathways w/ possible stake holders

Opportunity - partner w/ NJDOE and utilize their data/partner w/ county W/B (workforce investment board)

Shurida Hinchon (Opportunity) - Partner with other entities, such as NJDOE or even Green Quotient Solutions to create a case study documenting your points. Also, attending NJEA & other educator conferences will put you in proximity to the clients that you can directly ask questions to. [www.gqsol.org](http://www.gqsol.org)

Stephanie Young-Dyer

Challenge/Problem Attracting  
Attracting Schools  
recruiting program teachers

Coryn Shaw  
Going to NJ School Board/Association Convention to share what you do and/or Superintendent Roundtables

Brian Young  
Opportunity: Continue to attend & present programs at conferences & talk up into partner schools already to champion your program

Opportunity - pilots, conferences, reach out to parents & students, county/school meetings

Minal Thakur  
challenge/Problem @  
Bring industry into classrooms

Kevin Christman  
Find 1 industry partner in Newark (Pennsylvania?)

Michael De Armas Jr.  
• Attend workshops, such as those do network to partners  
• Send teachers to partnerships to connect their content to the "real world"

John Elbert  
- Work with NJDOE to find applicable partners/businesses  
- NJDOE 2nd. Partnership Reps who work with the business community.  
- CR grade in each content (Career readiness)

Shurida

Challenge/Problem  
Integrating Energy Education into curriculum/CTE  
finding new schools to serve

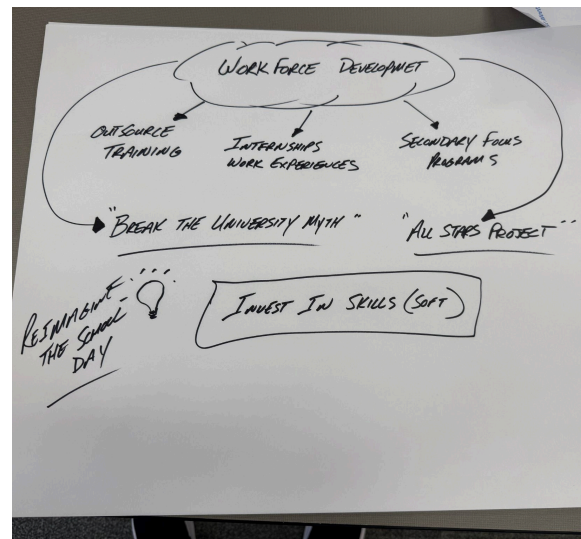
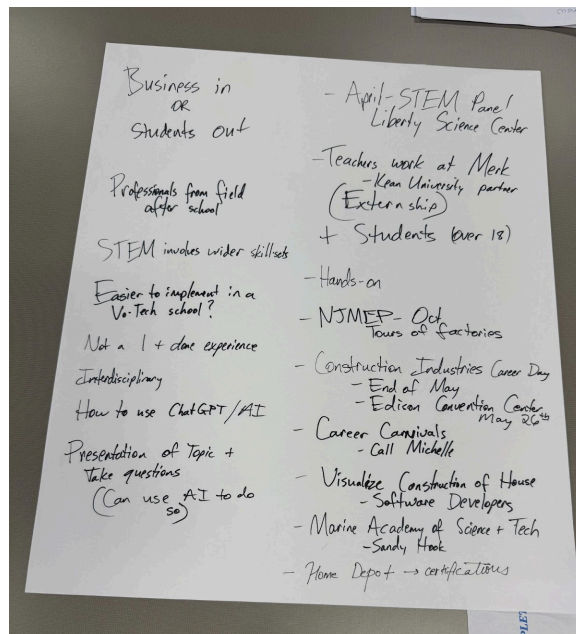
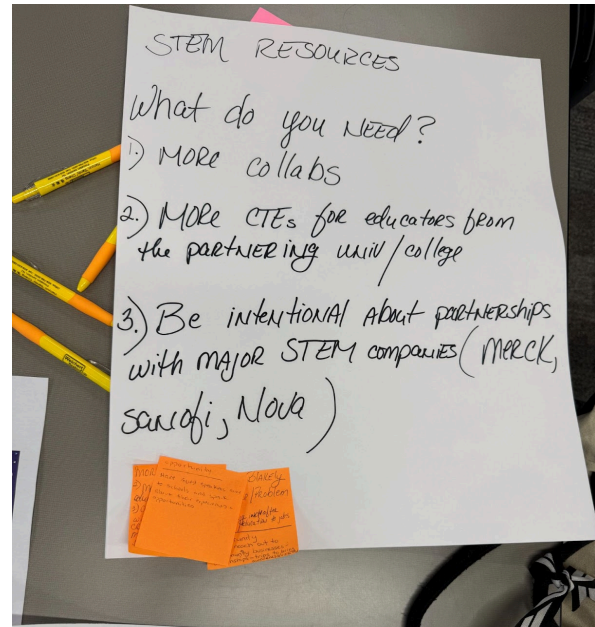
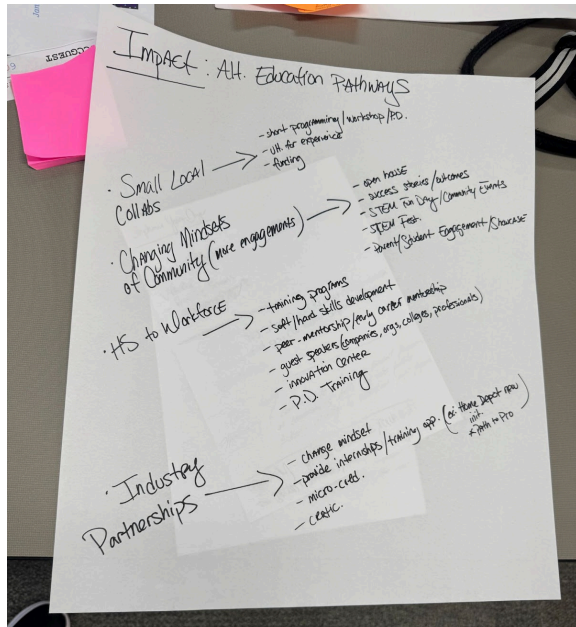
Stephanie Young-Dyer  
Opportunity  
• Collaboration w/ Partners.  
• Host Events together to meet new faces + School Leaders.  
• NJEA → Curriculum Directors

Coryn Shaw  
Connect w/ curriculum directors at monthly meetings & also superintendent roundtables

Brian Young  
Opportunity: Continue to present & share @ conferences & use districts & people that you already partner with to champion and share your work.

<u>Need</u>	<u>How</u>
\$ for dual enroll	UCNJ tracking students that R in dual enroll in UCNJ
\$ train teachers	environ. sustain. maybe deal @ sample.
info on careers to HS.	the will
Feels to create home skills w/in the structure of our education system	How Morris builds its ecosystem
Morris Top 10 list	
Challenges	
Industry to step up	
[NJMEP]	
Marketing STEM program	
CS&S, one Vision mentioned	
Nov/9	
Goal	
business/school course bus	
	Share our mission bring business partners @ per BOE/super Admin

## ARTIFACTS Small Group Work (Pics 5-8)






## Workshop Flyer



**GREATER NEWARK  
STEM ECOSYSTEM**  
SUPPORTING NJ Educators, Business & Industry  
Essex, Morris, Passaic, Sussex, Union, Warren counties  
[www.newarkstem.org](http://www.newarkstem.org)



**UCNJ**  
Union College of  
Union County, NJ

**Connecting Classroom to Career: Discussion & Workshop**  
**Create Private/Public Collaborative Opportunities for STEM and Career Learning**

**The Challenge**  
Nearly 60% of employers report difficulty finding candidates with the necessary soft/essential skills increasingly vital in a rapidly evolving, tech-driven economy.

**Our Question**  
How can the education and business sectors collaborate to deliver more graduates with the STEM and core skills needed for the workforce?

**Our Purpose & Goal:**  
This conference will be a mix of short presentations and round table discussions, including viewpoints from a cross-sector of our STEM Ecosystem. We will share successful implementations of STEM and career-connected learning programs, and the challenges and opportunities of public/private partnerships. Our goal is for attendees to gain insights and walk away with opportunities to grow STEM and Career Programs between education & business.

**A Limited Number of seats are available. This event is open to:**  
School & Business Leadership, STEM/CTE/ Supervisors (6th-12th grade), HS Guidance Counselors, CSR leaders, STEM professionals, funders and supporters of STEM and career education programs

\*\*\*Event is also open to STEM/CTE program providers that are GNSE financial supporters\*\*\*

Date: Tuesday Nov 11, 2025  
Time: 9:00-12:00p  
Location: UCNJ - Cranford  
Nomahegan Hall, Conference Room N4  
1033 Springfield Ave, Cranford, NJ 07016

**SIGN UP**



**Educators can received 2.5 hours of CEU through the NJIT CLEAR Program**

Thank you to **UCNJ Union College of Union County, NJ** - Greater Newark STEM Ecosystem is part of the: Cranford Campus, for providing event support and conference space. [www.ucc.edu/](http://www.ucc.edu/)





*The written artifacts, group conversations, and individual participant observations produced during the workshop were used for this summary, supported by an AI LLM as a thought partner. This final document was written by Brad Schenker, Co-lead and Coordinator of the STEM Learning Ecosystem, and a Partnership & Innovation Consultant.*