

OFFICE OF PROFESSIONAL LEARNING



— November 2025 Education Bulletin —

Welcome to the November 2025 edition of the **Luzerne Intermediate Unit (LIU) Office of Professional Learning's (OPL)** monthly education bulletin. This special edition of the OPL Education Bulletin summarizes attendance at the 2025 Innovation, Learning, and Career Education (ILC) Conference, hosted by the PA Department of Education's Bureau of Career and Technical Education. A special thanks to Mr. Judd Pittman, the Bureau Director, and his team for organizing this most worthwhile conference.

WHAT IS THE ILC CONFERENCE?

CONFERENCE DESCRIPTION

The PDE Innovation, Learning, and Career Education (ILC) Conference is an annual event hosted by the Pennsylvania Department of Education's Bureau of Career and Technical Education. Typically taking place in November each year at The Penn Stater Hotel and Conference Center in State College, the conference's primary goal is to promote and showcase the successful integration of career-related and academic content across all levels of education, from K-12 through postsecondary.




It emphasizes the importance of unique partnerships between Career and Technical Centers (CTCs), K-12 schools, higher education institutions, and employers to create a thriving Career and Technical Education (CTE) ecosystem. Attendees, including teachers, counselors, administrators, and business representatives, gather to share instructional strategies, build cross-sector connections, and provide opportunities for professional networking to enhance lifelong learning for students. The author of this bulletin was invited to present and attend this conference. This Bulletin summarizes a few of the notable presentations attended.



PASmart GRANT AWARDEE PANEL




The Luzerne Intermediate Unit's Assistant Director of STEM and Innovative Practices, Dr. Rich Mackrell, was invited to present on a PAsmart Grantee Session. Lead by Dr. Nancy Peter, Penn State Greater Allegheny's Director of STEM Initiatives, the panel presenters fielded questions from attendees meant to help them learn more about successful project design and the shared experiences that lead up to a confirmed award.

Alongside the Allegheny and Central Susquehanna Intermediate Units, Dr. Mackrell showcased how the LIU awarded submission was accomplished via a coordinated partnership with the leads from the [Luzerne Learns to Work](#) program. The infographic below contains more information about our project. If you have students enrolled in your school that you know would benefit from this opportunity, please reach out to Dr. Mackrell at rmackrell@liu18.org.



Luzerne Intermediate Unit

ENHANCING MATHEMATICS PROFICIENCY TO PROMOTE STUDENT ACCESS TO CS/STEM CAREERS
PASMART CAREER AND TECHNOLOGY EDUCATIONAL PLANNING GRANT

INTRODUCTION	<p>Forge Career Pathways: Establish student connections to local colleges and STEM/CS employment opportunities through mentorship and resources.</p> 	OUR PARTNERS
<p>Math proficiency is a critical threshold for accessing higher wages and STEM/CS occupations. However, a severe lack of this proficiency is creating a barrier to opportunity. We propose a direct solution.</p> <p style="background-color: #008000; color: white; padding: 2px;">Implement a comprehensive, out-of-school-time, high-dosage tutoring math program that targets underserved students, prioritizing those in CTE programs.</p>	<p style="background-color: #008000; color: white; padding: 2px;">METHODOLOGY</p> <ul style="list-style-type: none"> • Out-of-school cohorts—one focused on Algebra I proficiency and a second on Calculus readiness—to maximize learning without disrupting regular class time. • Remove Common Barriers for Underrepresented Learners by prioritizing low-income students in CTE programs and supplying necessary computing devices and resources. • Ensure Lasting Impact: We actively encourage family engagement, inviting caregivers to attend all activities and build a sustainable support system at home. 	<p>A program that gives Luzerne County high school students the power to explore potential career pathways through free access to online courses, local career development tools, programs with local higher education institutions, work-based learning experiences with local companies, and scholarships.</p> 
OBJECTIVES	<p style="background-color: #008000; color: white; padding: 2px;">When are We Ever Gonna Use This Stuff?</p> <p style="background-color: #008000; color: white; padding: 2px;">We answer this question through tangible integration of career development partners who will directly link math mastery to high-demand STEM/CS postsecondary opportunities and local jobs.</p>	<p>https://luzernelearnstowork.org/</p> 

SPECIAL THANKS TO THE PENNSYLVANIA DEPARTMENT OF EDUCATION - PASMART GRANT 2025 AWARD

LEADERS NOT CHEATERS: BUILDING AI INTEGRATION...

The next presentation attended was entitled **Leaders Not Cheaters: Building Authentic AI Integration in CTE Assignments**. Presented by Lebanon County CTC's Instructional Coach, Lisa Pison, and Penn State Program Specialist, Chris Warren, the team began by discovering that approximately 50% of attendees permit their students to use AI in their classroom in some form. They then followed up with a very important disclaimer: AI classroom and/or schoolwide policy must be in place first, and educators need to take deliberate time to teach students its responsible and ethical use.

Yes, there are some obvious uses of AI by educators such as a teaching assistant, creation of lesson plans, differentiating instruction and classroom materials, rubric generation, curriculum development and evaluation, classroom newsletters, etc. This list can go on. This workshop focused more on student use. Examples discussed included:

- **Collaborative Brainstorming:** Individual students use AI as a thought partner and synthesize the results in small group learning experiences.
- **Career Advisor/Interview Support:** AI can generate replies to “when am I ever gonna use this stuff?, or it can give students ideas on how they should respond to interview prompts. AI can then facilitate these experiences via classroom simulations grounded in authentic context.
- **Customer Scenario Creation:** Students can upgrade classroom content by interacting with connected simulated customer or other career-based interaction scenarios (positive or negative). They can then role play the simulation or engage the “Artificial Customer/Client” in discussions focused on problem-solving.

Google’s Gemini Gems and Co Pilot’s Agent were lightly touched upon. Here, students take control of their use of their chosen AI platform. Rather than generic and piecemeal interaction, students design their own chat bot using preset parameters, created by the students.

LIVED EXPERIENCES OF INDUSTRY PROFESSIONALS...

Presented by Dr. Ernie Powell, the session entitled **Researcher on the Qualitative Exploration of Industry Professionals Transitioning to CTE** focused on his research using the Transition Theory framework applied to CTE professionals.

Dr. Nancy Schlossberg's Transition Theory is a widely respected framework in career development that focuses on how individuals navigate and cope with life transitions, including career changes, retirement, or entering the workforce. Schlossberg defines a transition as any event or non-event that results in a change in one's relationships, routines, assumptions, and roles. The theory posits that a person's ability to cope with and ultimately succeed in a transition is determined by their resources in four key areas, often called the 4 S's:

The four key factors, or 4 S's, that influence a person's ability to cope with a career transition are:

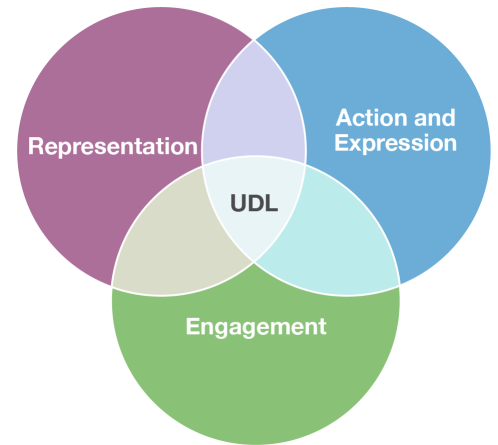
1. **Situation:** This refers to the external circumstances of the transition. Key questions involve the trigger (What precipitated the change?), timing (Is the transition considered "on time" or "off time" in the social context?), control (How much control does the person feel they have?), and role change (Is it viewed as a gain or a loss?).
2. **Self:** This covers the individual's internal resources and characteristics. It includes personal and demographic characteristics (age, gender, health, socioeconomic status) and psychological resources (ego development, optimism, commitment, and past experience with similar transitions).
3. **Support:** This relates to the social support systems available to the individual. This includes intimate relationships, family units, networks of friends, and institutional/community support. Strong support networks can significantly mitigate the stress of a transition.
4. **Strategies:** These are the coping responses or behaviors the individual uses to manage the transition. Strategies are generally divided into three categories: those that modify the situation, those that control the meaning of the problem, and those that help manage stress in the aftermath.

By taking stock of a person's resources across these four dimensions, individuals entering CTE employment and their employers can identify strengths to leverage and weaknesses to address, allowing them to formulate a successful plan for navigating the change. Wise users of Transition Theory doctrine can even leverage its framework to sustain the employment of their staff by reducing the factors that cause a transition from one career to the next.

CREATING INCLUSIVE CLASSROOMS W/ UDL

Another enlightening workshop was entitled **Designing for All: Creating Inclusive, Student-Centered Classrooms through Universal Design for Learning (UDL)**. Presented by Katie McGinn, the Special Education Coordinator of Middle Bucks Institute of Technology, and Lisa Rich, Special Education Coordinator, Middle Bucks Institute of Technology, their central point explained how to design instruction and instructional spaces to address the needs of ALL students.

UDL is broken down into three Principles: Engagement, Representation, and Action & Expression. Rather than define each, below are two examples presented by the UDL team that did a much better at explaining the Principles than simply defining them.

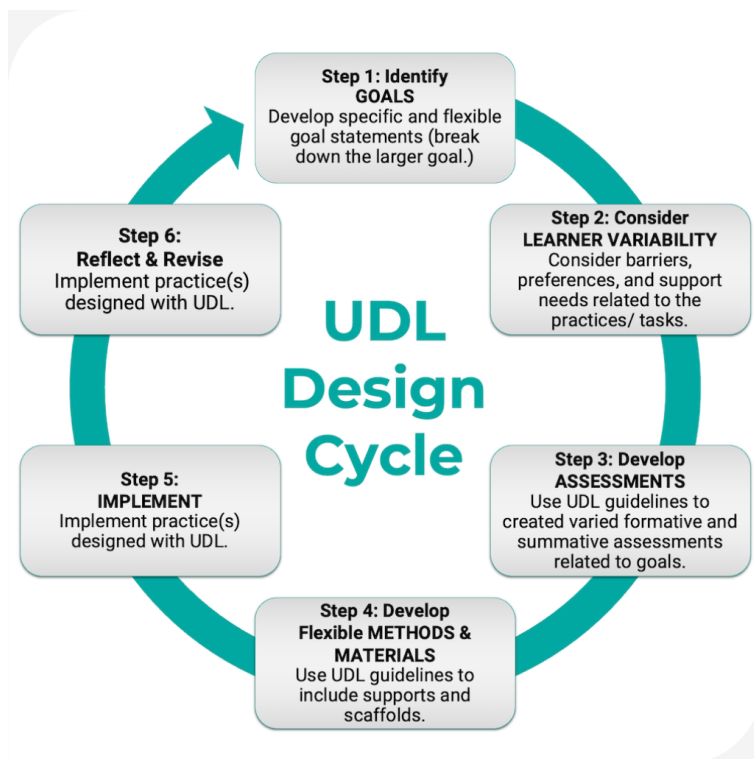


Culinary Arts:

- **Action & Expression** based on Recipe Management: Provide recipes in three formats on the lab day: a standard paragraph block recipe, a photo-based visual step-by-step recipe, and a large-print/checklist format with boxes to check off once a step is complete.
- **Representation** based on Knife Skills/Technique: The teacher demonstrates a new cut while simultaneously projecting a close-up video feed of their hands, verbally narrating the safety tips, and displaying a bulleted list of safety rules on the board.
- **Engagement** based on Menu Planning: In a unit on costing and menus, students are allowed to design a menu for a restaurant of their choosing (e.g., a food truck, a five-star diner, a school lunch program) as long as it meets the required costing and nutritional criteria.

Health Sciences:

- **Representation** based on Anatomy/Terminology: When introducing a new body system, provide content via a written textbook chapter, a narrated 3D model/simulation (like Visible Body), and graphic organizers/concept maps to visually show the relationship between organs and functions.
- **Action & Expression** based on Patient Intake/Role-Play: Students demonstrate a patient intake interview either by performing the full role-play with a classmate/mannequin, or by typing a fully scripted dialogue into a document, or by recording an audio file of the conversation.
- **Engagement** based on Connecting to Careers: Students research and present on a "Day in the Life" of a health professional related to the current unit (e.g., a physical therapist for the Skeletal System unit), allowing them to personalize the career connection and motivational "why."



If you wish to learn more about UDL and its application to the instructional setting, we have some very knowledgeable staff that can support your team. Feel free to reach out to us.

CONFERENCE WRAP UP

OTHER PRESENTATIONS AND FINAL THOUGHTS

The Bulletin author agrees that this is indeed an excellent conference. The Innovation, Learning, and Career Education (ILC) Conference is a critical event that promotes the essential integration of academic content with career-related learning. The conference provides practical instructional strategies, facilitates the building of crucial partnerships, and showcases successful practices that help the CTE ecosystem thrive. I highly recommend you consider permitting key Classroom Teachers, Academic and Career Counselors, School Administrators, and/or Instructional Coaches to attend this event next November. We hope to see you there.

Additional sessions attended can be found below. If you wish to learn more about them, please reach out to our OPL department leads.

- Innovative Partnerships: Creating Affordable Pathways from CTE to College Degrees
- Understanding Pennsylvania's CTE Certification Requirements
- Next-Gen Teaching AI-Driven Strategies For Design & Assessment
- Where Academics Meet Industry: Aligning Academic Instruction with CTE Mindsets

Did You Know: If presentation sessions do not interest you, the conference also conducts field trips to local career partners and showcases mobile labs from a slew of different organizations. Definitely worth a look for next year.

All prior OPL Education Bulletins can be found on our LIU website. Our website address is www.liu18.org. From here, select "District Services" under the "Departments" dropdown. This space will provide you with information

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about our professional group. Select the "Office of Professional Learning" and then head down the page to "OPL Education Bulletin". Prior to doing so, feel free to look around any of the other informational items on this page like Assistive Technology, Career Development, the Guest Teacher Program and many more. See you next month.



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