

# Where Academic Knowledge and Applied Learning Work Together

**A district's career pathways initiative moves to scale to treat career readiness as central to everyone's learning**

BY LAZARO LOPEZ

**O**n a Friday afternoon at the Willis Tower in downtown Chicago, three seniors from Township High School District 214 stood before a panel of local investors at the annual Uncharted Learning student competition.

On the table between them sat a spray can labelled Shimmer Shield, a product that can stop jewelry from rusting by providing a clear, waterproof, protective coating. The students had conceived the product,

developed a prototype and refined it with the support of their high school science teacher. Now they were ready to take their product to the consumer marketplace.

What began as a team project in our school district's INCubatoredu course quickly became something bigger. These students identified a need and a market, researched materials and tested prototypes with mentors in the community. They learned to read a room, adjust a sales pitch and

defend their business model under tough questioning from finance professionals.

That day, their pitch hit the mark. The judges awarded them \$8,000 to take their product to the next level. This came in addition to the \$3,000 they already had won from the school district-level competition. The confidence and belief they could create something real and valuable was life-changing. The entrepreneurship skills they developed as high school stu-



dents are preparing them for a rapidly changing future of work.

### From Story to System

The story of Shimmer Shield is not the exception in High School District 214, located in the northwest suburbs of Chicago with an enrollment of 12,000 students. The promising outcomes are the result of a deliberate redesign of the high school regimen — one that treats career readiness not as an add-on, but as the frame-

work for how we organize learning, from our courses to our instructional materials to the way we interact with students every day.

Over a decade ago, we asked ourselves two questions:

- How do we make high school relevant to every student's future?
- How do we connect learning that encourages self-discovery with life skills and work readiness that the world demands?

Our answer emerged as an integrated career pathways model — a districtwide approach that leverages career-related elective offerings into pathways at every comprehensive high school. The district's career offerings teach career skills, vocabulary and technical information.

Today, more than 1,000 employer partners deliver 3,000 workplace learning experiences each year across pathways in health care, business, education, construction, aviation and more.



Students who developed a consumer jewelry product, Shimmer Shield, which prevents rust, received \$8,000 in incubator funding to take their product to market.

Achieving this scale was not an overnight achievement. In 2015, we founded the Center for Career Discovery, a department focused solely on connecting students with work-based learning experiences, from vocational training to formal apprenticeships.

We deliver internships as a capstone experience after junior year, following several years of career-related coursework and authentic learning experiences. This work-based learning experience serves primarily to affirm a student's career choice. Employers host students already invested in the industry with some level of experience.

Observers of our program often ask how we fund such an extensive initiative. For us, it's braided funding — coordinating multiple sources while keeping each one's identity and compliance intact — to staff building-



based coaches and district-level placement specialists, while supporting student transportation and dual credit costs. (See related story, page 33.)



Lazaro Lopez (left), executive director of career pathways in Township High School District 214 in Arlington Heights, Ill., shadowed a student in the information technology pathway.

## Rich Benefits

These experiences are paired with multiple higher education partners, resulting in 85 percent of graduates having completed at least one college-level course, with the average student earning 15 semester hours of credit in academic core and career-related electives. Combined with robust opportunities for students to discover their career path, graduates make better-informed decisions about their future.

By design, this model:

- Increases the likelihood of postsecondary persistence and completion;
- Reduces the overall cost of postsecondary education;
- Eliminates barriers to the high school-to-college or career transition;
- Increases student agency and the likelihood of economic mobility; and
- Delivers on the school district's value proposition to the community.

At its core, our message to Discover Your Future at District 214 ensures every student graduates with

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# Niche CTE Pathways Address Communities' Needs

BY SHARI L. CAMHI

**W**hen Baldwin Union Free School District introduced the nation's first Jewelry Academy, it was more than a creative addition to career and technical education. The school was a direct response to the workforce needs of one of New York's oldest industries.

Centered in midtown Manhattan's Diamond District, the jewelry sector generates billions annually but faces a shortage of skilled workers. The one-block stretch on West 47th Street is home to thousands of wholesalers and retailers.

The Jewelry Academy is one of several niche Baldwin School District programs that directly address the economics of the Long Island/New York City region and, equally important, student interest. Other Baldwin programs relate to health care and police science.

In the Medical Office Assistant pathway, students learn medical terminology, office procedures, coding and billing, and they gain hands-on experience in a clinical-office environment. The Criminal Justice/Police Science Academy pathway equips students with basic knowledge in law enforcement, corrections and public-safety careers.

One student who was in the Jewelry Academy's first class in 2024-25 says she never considered a career in the field, "but now I can see myself designing pieces and even running my own business one day."

School districts elsewhere are launching CTE programs in fields that will supply trained labor in local industries. In suburban Chicago, Township High School District 214 developed programs in aviation and agriculture to address unmet career training.

"Some pathways may be smaller in size, but they serve distinct passions and are intentionally connected to real economic opportunities in our community, whether that's pilot ground school or agriculture," Lazaro Lopez, executive director of the education foundation and career pathways for the district based in Arlington Heights, Ill., says.

## Jump-Starting Options

The idea for the Jewelry Academy surfaced when a Baldwin board of education member, Annie Doresca, a jewelry industry professional, expressed a need to address the shortage of skilled workers in her field. She asked whether an academy pathway could be viable. Industry professionals offered to shape the curriculum and connect the school with key resources and hands-on learning options.

Baldwin partnered with the National Diamond Council, the Black in Jewelry Coalition and local jewelers and designers. These partners work side by side with educators, mentoring students, co-developing curriculum and providing workplace experiences. Students gain authentic exposure through internships, studio visits and guest lectures, which places real-world learning at the center.

The Baldwin curriculum blends artistry, technical training and business skills. Students begin with design and computer-aided modeling and are introduced to gemology basics, including the



Alan Guajardo Orellana filed a piece of copper, to be used to create a piece of jewelry, as a student in the Jewelry Academy run by the Baldwin Union Free School District in New York.

properties of stones and metals. In the workshop, they practice the skills of soldering, casting and polishing. Courses in branding, marketing and entrepreneurship help students understand how to take a product from design to market.

## Rapid Appeal

Launching a first-of-its-kind academy brought both opportunity and challenge. The opportunity: aligning a high-demand, high-skill industry with Baldwin's diverse student body and opening doors to careers they never might have imagined. The challenge: building a full-time curriculum and network of partners without an existing K-12 model.

The program quickly proved its appeal upon its launch in fall 2024. Baldwin, a 4,200-student district, serves a middle-class community about 25 miles from the Diamond District. The Jewelry Academy attracted strong student interest, reflecting both the community's support for unique occupational pathways, academic rigor and the need for economic preparedness in students' futures.

In addition to specialized training, the academy fosters broader life and professional skills — creativity, problem solving and entrepreneurial thinking — that serves students well in any career. By linking CTE directly to New York's jewelry field, Baldwin has shown how schools can prepare students for the future while contributing to the region's economic vitality.

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the skills, experiences and confidence to navigate a complex decision process that begins long before high school graduation and profoundly impacts their life after high school.

### A Few Surprises

One common misconception is that schools must choose between a strong academic core and the elective experiences tied to a career pathway. In reality, the two are not in competition. They work in tandem. When students see the connection between a math lesson in one classroom and building a high-mileage vehicle in another or between learning persuasive strategies in English and applying them to pitch investors for a viable product, each gives purpose and depth to the other.

From the outset, our approach was about making high school a purposeful journey of discovery to help students answer the universal question, *Who am I?*

What surprised us was how profoundly this design shifted the role of the school district itself to an intermediary. Employers became partners rather than occasional volunteers, helping shape curriculum and offering authentic challenges. Parents began to view high school less as a holding space before college and more as the launchpad to a meaningful future.

At the system level, we also discovered that sustainability requires more than enthusiasm — and embracing this approach was neither quick nor easy. Pathways flourish only when they are embedded for all students, supported by braided funding, aligned with post-

secondary institutions, tied to the local economy and clearly communicated.

The surprise was how quickly employers, higher education partners and families embraced this shared ownership. Career pathways did not dilute rigor but elevated it. They redefined high school as a place where academic knowledge and applied learning work together to prepare students for the complexity of life after graduation.

### Building Pathways

If I could offer four starting points to any superintendent looking to integrate life skills and work skills at scale, they would be:

► **Start with local demand.** Build pathways in industries that matter to your community's economy.

## Health Care Pathway

**M**ore than 3,000 workplace learning experiences happen for students each year in our high school district across pathways such as health care, business, STEM, transportation, arts and communications.

Because they are embedded with dual credit and industry credentials, the students' experiences inform their personal choices. They develop a deeper understanding of who they are and cultivate a systemic context that leads to discovering a purpose and finding where they belong.

One of those students is Zander, now a high school senior apprenticing as a biomedical equipment technician at Endeavor Health Northwest Community Hospital in Arlington Heights, Ill. Rather than working in retail or food service, he spends his afternoons alongside professionals training to install and maintain the equipment that literally sustains lives — patient monitors, ventilators, ultrasound machines, even X-ray machines.

"I had quit my old job and was planning to get some kind of internship," Zander says. "Then Mrs. Thompson (career discovery student success coach) came into my auto class and gave a presentation on apprenticeships. They offered all the experience internships did, but they were paid and career-tailored."

That shift opened doors Zander never expected. "This apprenticeship has impacted my future decisions greatly," he says. "I've gotten insight from people I'm shadowing about different colleges, learned how broad biomedical engineering is and discovered jobs I didn't even know existed. Now I know what I'm getting into when I pick this career."

On the job, he's learning problem solving and precision. "Just this week, I was helping fix a tourniquet machine. I thought the problem was the motherboard, but it turned out to be the con-



Zander, a high school senior in Arlington Heights, Ill., is an apprentice as a biomedical equipment technician at a nearby hospital.

ductors on the button wearing out," he explains.

Beyond the technical side, Zander says he benefits from the teamwork emphasis. "If someone needs help, there's always someone there," he says. "I've learned how effective communication keeps the team moving."

The apprenticeship isn't just about skills. It's about clarity. "This experience gave me so much more to consider," he says, "and confidence that I'm choosing the right path."

—LAZARO LOPEZ

# Braiding Funding for Sustainable Pathways

BY MARCELLA RECA ZIPP

**B**raided funding is the strategic coordination of multiple funding sources to support a single initiative while keeping each source's identity and compliance requirements intact. Unlike blended funding, where dollars are pooled and used interchangeably, braided funding maintains separate tracking and reporting for each source while aligning them toward shared program goals.

Why braid?

- Single funding streams are rarely reliable from year to year.
- It maximizes resources and expands student access.
- It enables targeted use of restricted funds without losing sight of the big picture.
- It strengthens program sustainability by diversifying revenue.

Our braided model for youth apprenticeships and work-based learning draws on funding support from all levels:

► **Federal:** Department of Education Perkins, Title I, Part A/Title II, Part A/Title III, Part A; Workforce Innovation and Opportunity Act; Individuals with Disabilities Education Act



Marcella Reca Zipp

- **State:** Career and Technical Education Improvement; Illinois Department of Commerce and Economic Opportunity; and Illinois Department of Health and Human Services, Division of Rehabilitation Services grants
- **Local:** Property tax-based school district operating funds
- **Philanthropy:** The school district's education foundation, corporate contributions and private grants

Perkins and state funds support career advisers, equipment and CTE programs. Titles I and III cover career advisers for underrepresented groups and dual credit fees. WIOA and DRS provide funding for job coaches and apprenticeships. Philanthropic dollars fill gaps, from reimagining classroom spaces to specialized equipment.

## BEST PRACTICES FOR BRAIDING

- Develop a funding map and matrix.
- Keep separate tracking and compliance documentation for each source.
- Use shared service-delivery models where possible.
- Review funding alignment regularly and maintain transparency with stakeholders.

When done right, braided funding isn't just a survival strategy. It's a way to scale programs sustainably, expand access for all students and deliver measurable results without compromising accountability.

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► **Design with employers, not just for them.** Invite them into course development, mentoring and commitments to providing work-based learning.

► **Engage higher education partners from the start.** Design course sequences that lead beyond high school, that ensure transitions are designed to be seamless.

► **Make it systemic.** Ensure pathways are not electives for a few but embedded options for all students.

► **Braid funding early.** Secure multiple streams from the start to avoid program fragility.

Our pathway development process moves from ideation to scaling, guided

by principles that keep learning relevant and connected to opportunity.

## Closing the Loop

From jewelry that keeps its shine to a hospital apprentice repairing life-saving equipment, our graduates remind us that relevance fuels readiness. When learning is connected to living — through work, mentorship and authentic challenges — students don't just prepare for jobs, they discover who they are and where they belong on their terms.

This vision is echoed in the work of the Commission on Purposeful Pathways, a national initiative I serve on, which calls on schools to braid together advising, dual enrollment and career-connected learning around belonging and purpose. Our

answer was not a program or an add-on but a full redesign of an integrated career pathways model embedded in every high school, with academics and career coursework reinforcing one another.

The lesson is clear: When school districts design with purpose, align with community and commit to scaling for all students, high school becomes more than preparation for what comes next. It becomes the place where young people discover their future and step into it with confidence. ■

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