

# INSPIRE

K12 Education Update | Volume II



# Empowered Communities:

## How CTE is igniting student interest and fueling our workforce

By Katie Becker AIA, LEED Green Associate | JLG Architects

K-12 Career and Technical Education is creating lifelong learners and invested community members.

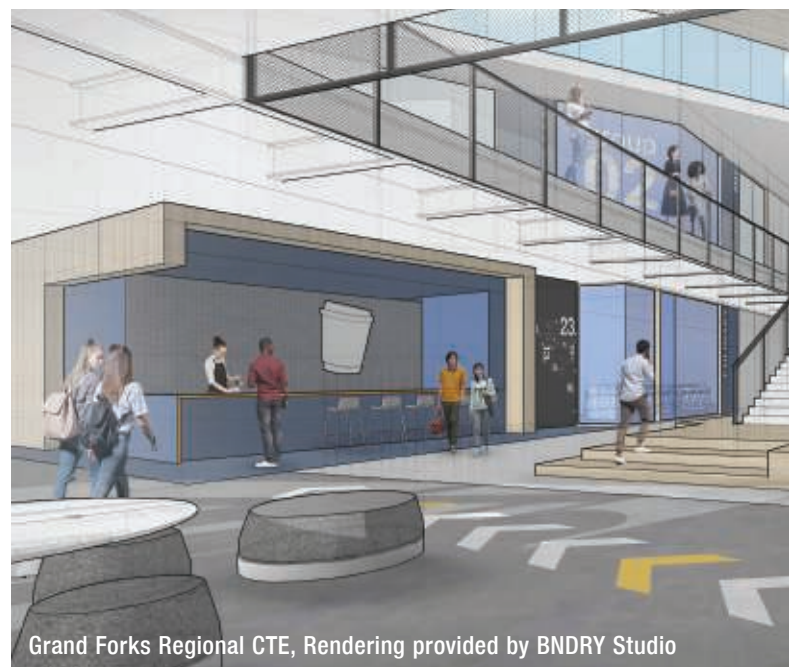
The entrepreneurial spirit of today's students is laying the groundwork for collaborative learning environments that drive their dreams beyond the textbook. In response, schools across the nation are broadening exploration of Career and Technical Education (CTE) to help students make sense of what they are learning. This is hands-on education that has the power to transform the way we live, learn, and do business. Like other aspects of This Century learning, CTE is not only about what you know, but how you apply it to the problem at hand.

### Personalizing Learning Experiences

It's easy to sit back and ask ourselves how we ever managed without technology, flexible learning environments, and access to hands-on lessons when we see students thriving in these environments in ways that make them want to come to school. During the pre-design process for the new Grand Forks Career Impact Academy, students were asked, "how will the new facility be IMPACTFUL for all students?" Overwhelmingly, their charge was to create a building that didn't feel like a traditional school but supported their interests and creates opportunities to explore with others in an environment that celebrates learning over home school identity. Traditional classrooms still have value, but it's the experience students are getting

beyond the classroom in CTE curriculum that is helping elevate their potential and expedite their path toward rewarding careers. CTE, in collaboration with traditional core subjects, begins to help students understand how all subjects are important in their future careers.

Students in CTE programs have been repeatedly studied and are found to be more likely to graduate from high school than those who are not involved in CTE.



Grand Forks Regional CTE, Rendering provided by BNDRY Studio



## MAKER SPACES FOR ALL AGES

CTE can happen at every level, not just in specialized programs at the high school level. Districts can start building a CTE culture in younger grades through spaces that embrace a maker culture of getting your hands dirty, trial and error, and problem solving. At the same time, specialized CTE programs allow districts to grow existing programs and open up learning beyond the traditional classroom.

CTE gives students options to explore new interests in an active, hands-on setting — skills that can be immediately applied in the regional workforce. Whether students are categorized as Visual, Auditory, Kinesthetic, or Verbal learners, CTE offers unbridled opportunity. In fact, students in CTE programs have been repeatedly studied and are found to be more likely to graduate from high school than those who are not involved in CTE. If that's not enough to pique your interest, according to the U.S. Department of Education, "Eight years after their expected graduation date, students

who focused on career and technical education (CTE) courses while in high school had higher median annual earnings than students who did not focus on CTE."

### Creating Career Readiness

Today's CTE programs are far more than the wood and metal shops of the last century. Modern CTE education is a true-to-life, simulated experience that can put students' skills to the test in commercial kitchens, mechanical and auto shops, labs, greenhouses, manufacturing, and emerging technical advancements. To sum it up, these are the ultimate maker spaces where new interests are ignited and hands-on problem solving is encouraged.

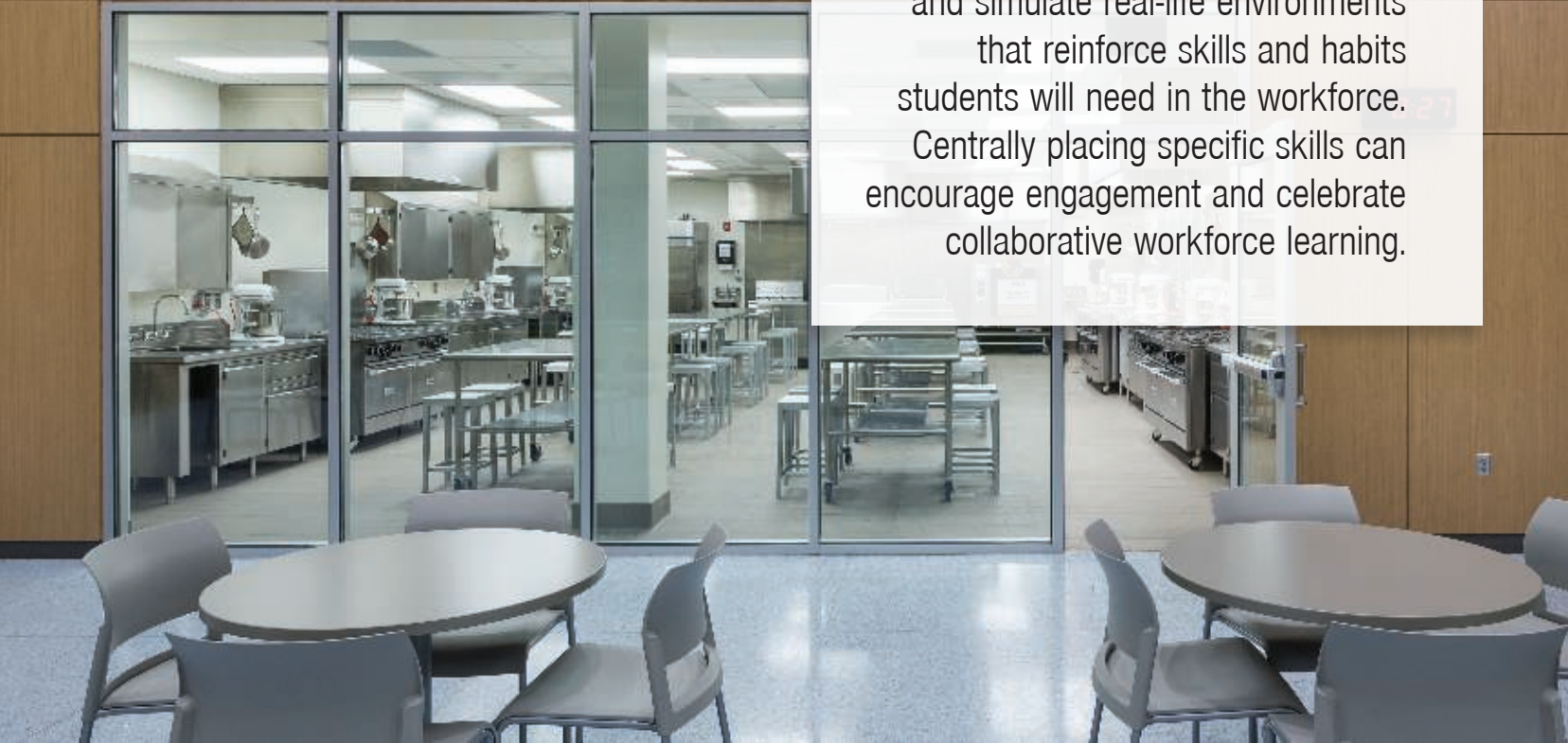
Many schools are taking their CTE further, partnering with local industry and businesses on behalf of regional workforce. A great example of this is the new Grand Forks Career Impact Academy that is being designed as a collaborative partnership among several entities within the Grand Forks region. The new Academy will "provide hands-on, relevant career and technical education experiences for students in the Grand Forks region" through ten career pathways that were determined by consideration for student interest, industry demand, and post-secondary options available to students.



## IT'S ALL ABOUT FLOW

A CTE learning space should reflect and simulate real-life environments that reinforce skills and habits students will need in the workforce.

Centrally placing specific skills can encourage engagement and celebrate collaborative workforce learning.



### Post-Graduation + Cross-Collaboration

While many CTE students aim for experience or certification to advance quickly into careers after graduation, others look to CTE as a springboard, better preparing them for a four-year or two-year college education. CTE programs also give students the opportunity to cross-collaborate between subjects, creating experiences that simulate real-world business transactions. For example, if a school has an agriculture program growing plants, the business program can step in to advise a plan for the sale of those plants. Next, the art program can collaborate with the marketing program to create a campaign including imagery for graphics, posters, and advertising.

Similarly, building a house involves not only the construction, but the design, drafting, estimating, understanding of the supply chain, and ordering of the materials. Students will also gain experience marketing the house for sale, managing costs during

construction, setting the price, and ultimately selling the house. This type of collaboration gives more students the opportunity to be involved depending on their particular interest.

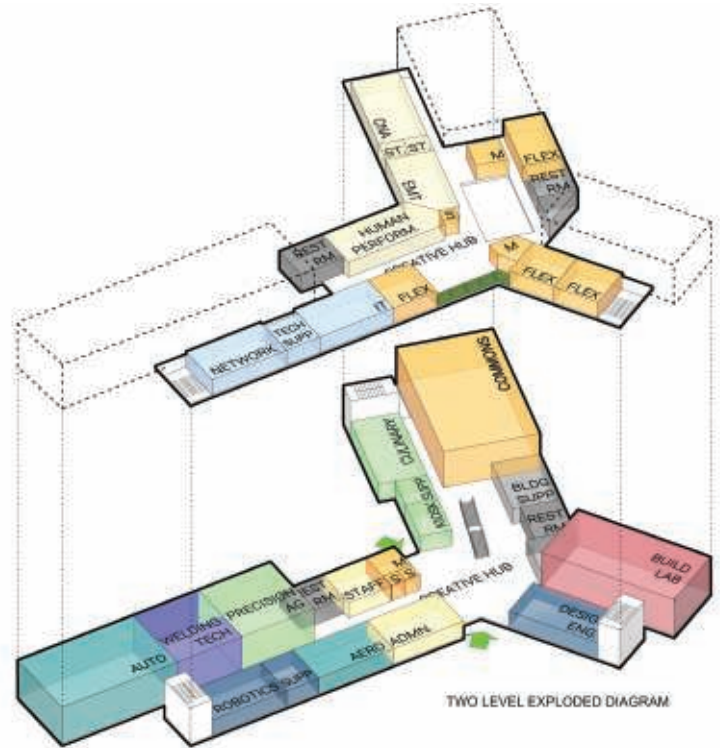
This full-circle collaboration is precisely why program location is critical. When designing for CTE, we keep in mind the proximity to other programs, ensuring complimentary programs are within reach for collaboration. Traditionally, Tech Ed space is relegated to the farthest point in the building. By placing it in a central location, the programs can encourage engagement and celebrate workforce learning at a distinctly higher level. Creating transparency around the programs, more students are exposed to what is happening in CTE. This is all part of the process of reinforcing valuable skills and habits students will need once they enter the workforce.



## The Business of Building Relationships & Industry Partnerships

CTE programs are a fantastic way to build strong relationships with regional industries and create lucrative partnerships that benefit students and community. The most successful CTE programs provide workforce solutions that directly reflect your community and industry needs. Talk with local business leaders and ask what skills they are looking for in their future workforce. Find out what type of equipment and machinery they are using and what skills are needed to operate them. You may even discover that some businesses are willing to form a partnership, one in which your school caters programming to their needs, and they provide real-world equipment to your programs.

Partnerships can create a direct talent pipeline for local industries looking for skilled, local talent. CTE has the capacity to create a cyclical relationship where the school is able to support local businesses, and in turn, local businesses are able to support the school district. Many CTE programs also help create summer internship opportunities so students can start applying their skills. This is where students begin building their own relationships with local business leaders and community members; sharing knowledge of their programs with those who may not have students in school. The Grand Forks School District envisions the new Career Impact Academy as just that, “a community hub with space for activities, community events, and continuing education” that supports the needs of the region now and in the future by “providing a space for employers to retrain, recertify, or upskill current employees.”



Graphic Axon provided by BNDRY Studio

“We all want Grand Forks to grow, so introducing learners to regional industry and colleges helps strengthen our workforce pipelines.”

– Grand Forks Public School District

## A Brighter Future

The future of CTE programs is looking brighter every day. Through specialized skills training, CTE students have become our workforce’s most valuable asset, strengthening the resilience of industry and our communities. For students and schools, CTE equates to enhanced confidence for those transitioning to college, and immediate career opportunities for those who are not. With either pathway, both gain the ability to explore a wide variety of interests, gain employable skills, create job stability, and land well-paying careers close to home.

# Education has changed, and with it the school spaces that support learning pedagogies.

Just like educators and administrators, JLG's K12 design studio studies how students process information. Shown here are different ways in which people learn and how that might translate into interests within CTE pathways. Which one are you?



## VISUAL LEARNERS

Visual Learners prefer to take in their information visually – maps, graphs, diagrams, flow charts! They understand information through relationships between ideas visually. Students who identify with this kind of learning style may find interest in CTE programs that involve visuals like design or engineering. They might also find themselves interested in careers like architecture, engineering, graphic design, software development, or aviation.



## AUDITORY LEARNERS

Auditory Learners like to hear solutions and examples explained to them. They learn best when they take in information by hearing it spoken out loud or repeating it to themselves out loud. They thrive in lecture settings and group activities that require thoughtful listening. They might find themselves interested in CTE tracks devoted to medical careers like nursing, or business classes to help them on the path toward a career in sales.



## KINESTHETIC LEARNERS

Kinesthetic Learners prefer hands-on work that lets them be physically engaged with what they are learning about. They learn by doing and don't mind getting their hands dirty. Students who are Kinesthetic Learners probably excel in classes that assign projects, allow them to move around, and connect material with real-life examples. They might find themselves interested in CTE courses that connect them with pathways toward careers in the culinary arts, construction, electrical and mechanical careers.



## VERBAL LEARNERS

Verbal Learners typically have a preference towards reading and writing – word learners. They learn best by writing things down or reading them in a book. Students who are Verbal Learners may prefer research-heavy tasks and communicating their ideas through reports or presentations. They might find themselves interested in CTE tracks that lead to jobs in marketing, technical writing, scientific research, TV announcing, or journalism.

# Dan Miller is one of only eight A4LE Accredited Learning Environment Planners (ALEP) in the Upper Midwest.



**Dan Miller, AIA, ALEP, LEED AP**

Meet Dan Miller, JLG's K12 Practice Studio Leader and Principal Architect. Dan puts his passion for education to work with over 27 years of experience shaping learning environments and communities throughout the Upper Midwest. In 2021, he earned certification as an Accredited Learning Environment Planner through the Association for Learning Environments, making him one of only 245 architects in the nation with this credential. This certification is the highest qualification in the profession, identifying those who actively demonstrate the knowledge and skills of a competent educational facility planner.

For Dan, ALEP is another mark of excellence, reflecting his desire to build healthy, safe, high-performance, and sustainable learning environments. For JLG, it's one more way we're elevating the everyday – creating personalized environments that uplift communities, inspire teachers, and inclusively support all students' dreams. JLG's K12 Practice Studio creates design solutions that infuse your educational vision and pedagogy into progressive, future-driven learning environments. With ALEP certification, Dan has earned his seat at the head of the class – helping students thrive in This Century learning environments while helping districts set the standard for the future of educational design.

# Katie Becker named Governor of A4LE Midwest Great Lakes.

Please help us congratulate JLG's Katie Becker – who recently started a three-year term on the A4LE Midwest Great Lakes Board as the Governor for Area 5 (serving Minnesota, North Dakota, and South Dakota)!

The Association for Learning Environments (A4LE) is a professional organization whose sole mission is improving the places where children learn. Katie is an integral member of JLG's K12 Education design team and will use her role as Governor to further A4LE's mission to lead innovation in inspired learning.



**Katie Becker**  
**AIA, LEED Green Associate**

*Engineering News-Record*  
Top Design Firms in the U.S.

*Building Design+Construction*  
Top K12 Education Architecture Firms in the U.S.

Great Place to Work Institute  
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Construction Specifications Institute  
Environmental Stewardship Award

