Work-based Learning for the New Economy: From "K to J" in Tennessee

ne of the hallmarks of career and technical education (CTE) has always been its emphasis on connecting curriculum to the work-

place. CTE practitioners pride themselves on their ability to make content come alive by demonstrating how the knowledge and skills students learn in the classroom transfer to the activities they will one day conduct on the job. When it comes to high-quality CTE programs, perhaps no better example can be offered than the ultimate classroom-to-workplace application: work-based learning (WBL).

For those unfamiliar with CTE, workbased learning might sound like an exotic elective or a fancy way to fill a transcript—something reserved for students in search of a "non-academic" credit. But for seasoned educators, work-based learning isn't just for CTE students, nor should it be seen as an afterthought to a student's graduation requirements. On the contrary, WBL is a methodology that can be embedded throughout any student's schooling experience. It is a framework for integrating career preparation into curriculum and an approach to learning that bridges the classroom and the workplace.

Moreover, it is an approach that is known to be effective, especially in countries where linkages between education and so-called "vocational" training are explicit and intentional. While academic research into the topic is as yet underdeveloped in the United States, the outcomes of these systems speak for themselves. According to the Organisation for Economic Co-operation and Development (OECD), countries with strong student vocational training programs allow for easier transitions to the labor market—as in Germany, where the average graduate finds employment in a much quicker time frame, and at a higher entry salary, than his or her American peer.

And yet, in practice, work-based learning in this country has not been implemented to match what we know works in career preparation. In the January 2015 issue of Techniques, author Corinne Alfeld discussed findings from her study of WBL models in U.S. high schools. She and her colleagues gathered data on three common WBL arrangements: internships/ co-operative education, youth apprenticeships and school-based enterprises, focusing her article on out-of-school placements in particular. The takeaways were clear: Too often, out-of-school WBL arrangements do not do enough to connect back to curriculum; coordinators are frequently left in the dark about placement activities; and students are rarely involved in designing their training plans and setting their own learning expectations.

Distill these observations down and it becomes clear that the source of the problem may lie in the lack of common, clear

20 Techniques May 2015

By Thomas Gibney

guidelines around what makes for a quality WBL experience—for the student, the school system and the industry partner. But what if states took the lead in crafting these expectations?

This is precisely what Tennessee has done with its new statewide WBL program. As the "statewide" portion suggests, the program represents a departure from the hands-off approach of years past, in which local school systems were often left to figure out on their own what a quality WBL experience should look like. In the new economy, where today's youth can expect to change employers many times throughout their careers, that hands-off approach no longer makes sense; increasingly, school officials and researchers alike view career preparation across a "kindergarten to job" (K to I) continuum that is premised on early intervention and ongoing exposure. With a strong lead team of five districts piloting the new program this school year, Tennessee has bold plans to revitalize workbased learning to bolster the pipeline from school to career.

Getting Business and Community Engagement Right

Work-based learning, says Chelsea Parker, executive director for the Tennessee Council for Career & Technical Education (TCCTE), used to be defined by *where* the learning took place—in a clini-

TENNESSEE DEPARTMENT OF **EDUCATION**

Employability Skills Checklist

The following skills were identified as the most critical employability skills that can be learned through work-based learning. Over 225 participants from all three grand divisions vetted this list during focus groups that included Tennessee administrators, teachers, WBL coordinators, CTE directors and postsecondary and industry partners. While all skill areas below were deemed important, "Application of Academic Knowledge and Skills" and "Personal and Social Skills" are considered the most critical areas by focus group participants.

EMPLOYABILITY SKILLS

Application of Academic and Technical Knowledge and Skills

- □ Literacv
- Math
- Industry-specific Technical Skills
- Industry-specific Safety Skills

Career Knowledge and Navigation Skills

- Understanding Career Paths
- Planning
- Reflection

21st Century Learning and Innovation Skills

- Creativity and Innovation
- Critical Thinking and Problem Solving
- Communication
- Collaboration
- Information Literacy
- Information, Communications and Technology (ITC) Literacy

Personal and Social Skills

- Initiative
- Professionalism, Ethics and Interpersonal Skills
- Cultural and Global Competence
- Adaptability and Flexibility
- Productivity

*For a the full Employability Skills Check List, please visit http://tn.gov/education/cte/work_ based/wbl_employability_skills_checklist.pdf

cal setting, a credit union or a construction site, for instance. Though ensuring students receive high-quality place-

ments in settings that will nurture their academic and soft skill development remains a primary concern, attention has now shifted to how and what those students are learning.

"We have heard for years that some placements are less desirable than others, or that working in fast food is never as good as working in a law office," Parker explains. "We believe a quality placement is defined by the variety of skills practiced and by having a workplace mentor who exposes students to all aspects of the business, beyond sweeping floors or filing. By defining what quality learning looks like, we give businesses the ability to help shape their future workforce and teach the professional skills they know best, which turns a part-time job into a true work-based learning experience. Students should model professional behaviors and soft skills, understand what it takes to be successful, set realistic goals for their future and walk away with a portfolio that demonstrates their skills and work ethic."

This work began in earnest in 2014 with a statewide assessment that sought to engage stakeholders at the school, district and industry levels. An initial survey yielded responses from 437 CTE directors, counselors and WBL coordinators to identify successful practices and opportunities for districts in offering and scaling up WBL experiences.

Next came the task of defining what the profile of a successful employee looked like, and to help give shape to this picture, the Tennessee Department of Education (TDOE) turned to the experts: the businesses and industries that will be employing students down the road. With the help of WestEd, a leading non-profit education research, development and service organization that has done extensive work on college and career readiness, Parker convened focus groups of over 75 industry partners and more than 225 administrators, teachers and counselors at locations all across the state in an effort to identify and discuss the employability skills valued

most by Tennessee employers. See the checklist on page 22.

Not surprisingly, the responses echoed what WestEd researcher Svetlana Darche has found on a national scale. "The literature on college and career readiness has shown time and again that so-called 'non-cognitive' skills, such as the ability to be an active learner-in addition to academic and technical skills-are absolutely critical for students entering both college and career," she says. These include a variety of personal and social skills that facilitate successful navigation of college, career and civic life.

Feedback from the Tennessee focus groups indicated that, while the specific needs of employers vary, they have a shared desire for employees who can demonstrate a range of interconnected traits: the ability to apply academic and technical knowledge and skills, yes, but also initiative, professionalism, productivity and effective communication.

"The reality is it's much deeper than just having a good attitude, especially in a complex, changing economy," Darche concludes. "The advantage of work-based learning is that it provides students with an incredible opportunity to develop noncognitive skills, as well as technical skills and applied academics, and see those skills validated in an authentic environment."

From the student perspective, WBL can be viewed as an outlet for sharpening those skills not readily assessable in the traditional classroom, and from the employer perspective, seeing those skills expressed within a performance-based environment can offer a more accurate barometer of job readiness than a transcript or a test score.

This Is What Learning Looks Like

Defining the end result is one thing, but how are students supposed to get there? Parker recognized that Tennessee's existing policies did not provide districts with a clear idea of what to expect from a quality WBL experience. In particular, policies did not go far enough to promote the idea of WBL as a continuum of progressive career exposures gradually leading to more immersive activities, beginning in elementary school and culminating in a capstone-level experience.

Additionally, it was difficult for districts to differentiate between the requirements of policy and recommended successful practices. Parker addressed this by developing several key resources:

- WBL programs
- tions and child labor laws
- ment resource

This new guide is the first step in what Parker calls a "culture shift" in how individual schools think about WBL programs, moving from an "out-thereon-your-own" mentality to a "peerto-peer" support system for WBL coordinators focused on collaboration and best-practice sharing. Released this spring, the guide describes: recommended strategies for coordinating the work of teachers and

- counselors
- the workplace

Further, the document is packed with ready-made, customizable forms that coordinators and other district personnel can use to support their WBL programs-from sample letters for recruiting industry partners to a rubric for evaluating student portfolios.

Still, the challenge of capturing proficiency in a WBL setting required putting student learning at the center of the conversation: in a word, it required standards. Enter the new Work-Based Learning: Career Practicum course. Ap-

• a WBL framework, adopted by the State Board of Education, which articulates the expectations for

> a revised WBL Policy Guide more closely aligned with state regula-

the WBL Implementation Guide, a brand new professional develop-

examples of how to assess what students have learned and ensure skill transfer from the classroom to

approaches to collaborating with employers, touching on recruitment and program evaluation

proved by the State Board of Education earlier this year, the career practicum standards codify for the first time what students should know and be able to do in a WBL placement, whether that be a research laboratory or a veterinary clinic. As such, the learning expectations and the skills acquired therein are transferrable across industry sectors, reinforcing the employability skills identified by businesses throughout Tennessee.

Given that 3,521 students earned credit in WBL placements in the 2013-14 school year, it was high time for a uniform set of benchmarks to govern what each of those students was actually gaining from his or her experiences. Far from infringing on districts' abilities to customize the nature of those placements, the standards set meaningful targets for student proficiency, ensuring students, schools and partnering businesses are all on the same page.

TDOE, meanwhile, has reimagined its role as a support entity whose mission is to facilitate trainings and to serve as the connection point for sharing best practices. Taken together, the standards complement the new policies by focusing on the rigor and the learning at a WBL site, while allowing greater flexibility for districts in how they determine where that learning can best take place for their students, based on what's available in their



own communities.

One key feature of the new WBL standards is how they encourage the development of concrete artifacts (such as resumes) that students compile into portfolios. In this way, students walk away from their practicum placements with real work products that they can point to in future job interviews or that they can carry with them into postsecondary.

In addition, a foundational course, Career Exploration, intended for eighth- and ninth-graders, was also approved by the State Board for fall 2015 implementation. Upon completion of the course, entering high schoolers will have mastered standards like the following:

"Conduct a research project, citing multiple sources, to analyze and describe how skills learned in school (including academic, technical, and "soft skills") benefit an individual in postsecondary training, career, and society. Articulate the importance of specific skills that will be the focus

of high school, including literacy, numeracy, critical thinking, and problem solving. (TN Reading 2, TN Writing 7)"

These and all the documents mentioned previously can be found on the Tennessee Department of Education's WBL homepage (http://tn.gov/education/cte/work_based_learning.shtml), ground zero for everything teachers and coordinators need to kick-start a new WBL program or revitalize old ties with local partners.

From Policy to Practice

Some districts are already jumping in with two feet. Last fall, five school systems began piloting the statewide WBL program, representing a diverse slice of the state: Anderson County in east Tennessee, Clarksville-Montgomery School System to the northwest of Nashville, Gibson Special School District (SSD) on the western side of the state, Moore County in south central and Rutherford County smack

dab in the middle. These district leaders are providing critical feedback on the new WBL tools, trainings, policies and standards prior to the 2015–16 statewide scale-up. Already, reactions are positive to the improved sense of structure, accountability and business recognition generated by the new focus on WBL.

David Brewer of Gibson SSD has seen firsthand how much local industries are craving the kinds of skilled workers promoted by successful WBL programs. Increasingly, local manufacturers are turning to the schools, he says, as a legitimate pool for tapping future talent. He anticipates that the revitalized connections between schools and industries will bring WBL to the forefront as a place where employers can recruit and students can test-drive companies and occupations before jumping into the job market. As coordinators and teachers strengthen the match between rigorous placements and committed student candidates, employers will begin to take WBL more seriously, which in turn reflects positively on the

Real CNC for the Classroom

Tormach's affordable CNC machines not only bring real CNC capabilities into the classroom, but they are also easily integrated with any design software. Shown below is an articulated humanoid robot leg, built by researchers at the Drexel Autonomous System Lab (DASL) with a Tormach PCNC 1100 milling machine. To read more about this project or to learn about Tormach's affordable CNC mills and accessories, visit www.tormach.com/education.



image of the school.

Tyra Pilgrim of Rutherford County agrees. She sees an added benefit, too: students taking ownership over their own learning and their own future career trajectories. "Kids like structure," she says. "Before, when there was no oversight, that accountability wasn't there to ensure they were learning. Now, employers are being asked to talk more with students, and students see that adults in and out of school care about what they think, what they want to do and that their experience matters."

So far, student placements in the pilot phase of the program range from part-time paid internships to advanced training toward an industry certification. In Clarksville-Montgomery, for instance, students in the Emergency Medical Services (EMS) course get to go on calls with the Montgomery County EMS, shadowing the first responders on their ambulance rounds and taking the lead on select duties as part of their training toward First Responder certification.

Students wear their uniforms with pride and take the opportunity seriously. CTE Director Karen Pitts recognizes that this is important, not only for the students, but also for the school system to grow strong industry partnerships over time. "This experience is invaluable," she says. "We are working to ensure all students graduate college- and careerready, and the Career Practicum course provides us with an additional tool to meet this goal."

In Anderson County, junior Culinary Arts student Keisha Heatherly is participating in an internship with the Museum of Appalachia-a Smithsonian associate museum—and will be transitioning into a part-time paid position by the summer in time for her WBL Career Practicum experience as a senior. Under the museum placement, she will gain a holistic view of the museum's operations (farm-to-table dining, retail gift shop, event venue, restaurant operations, catering and day-today operations).

Further, the experience provides an avenue for information to be shared

between her and her Culinary Arts classmates on the days that she is in the classroom. This sharing of firsthand experiences is priceless in the impact on the other second-year students in the program as they prepare for their third and final years, reports Anderson County WBL Coordinator Vikki Burns.

"I love the environment, and I have learned a lot about the restaurant experience," says Heatherly. "To be honest, I have started thinking about learning more and taking on a career in the hospitality industry after I finish my postsecondary studies."

Progress can also be seen in Moore County, where the WBL pilot is being used to jumpstart a brand-new WBL program in Health Science, placing nursing students in a long-term care facility close to the school. As a rural district, industry relationships were a question mark for CTE Director Danny Mooney early on. While there are not many large employers in Moore County, small and large businesses alike need qualified workers.

As Mooney explained in a recent WBL strategy meeting, getting businesses on board by building open lines of communication is critical to establishing a strong program. This is a sentiment echoed by all the pilot district leaders. The businesses-not just the students-must have a stake in the learning process, too, if the desired outcomes of WBL are truly to be realized.

From K to J: Starting Young, and **Dreaming Big**

The new WBL program in Tennessee begins with a simple but powerful premise: career awareness starts young and should build progressively through all levels

The new WBL program in Tennessee begins with a simple but powerful premise: career awareness starts young and should build progressively through all levels of schooling.

> of schooling. If you think about it, this insight reveals what is arguably missing from career preparation models in the United States-we push students through a schooling pipeline that does a poor job of connecting their learning to career activities, ask them to declare a major at postsecondary without really knowing how that major translates into an occupation, and then hand them a diploma one day and expect them to sink or swim in the job market the day after.

It's this lack of scaffolding throughout the schooling experience that disadvantages students who do not have the privilege of seeing role models of themselves in popular culture. The current system, in essence, asks students to figure it out on their own; that is, unless states can take the initiative-much as they have done with other subject-area standards-to define what meaningful career preparation should look like.

As this article has shown, though, defining success is only the starting point. As final revisions to the WBL program are made based on the feedback from the pilot team, TCCTE's Chelsea Parker and her partners in Tennessee are rolling out spring and summer training sessions to help guide districts in their transition to the new statewide program.

Regional professional learning communities (PLCs) are being established in each of the eight Centers of Regional Excellence (CORE) across the state to share successful practices and dive into professional development discussions using the WBL Implementation Guide. These PLCs will be led by the department of education's CORE consultants, who act as the conduits for state professional development offerings disseminated at the regional level.

In addition, a new WBL Leadership Council with representation from all CORE regions will be convened for WBL coordinators, who will facilitate the sharing of best practices throughout their designated areas, reinforcing the peerto-peer culture shift that characterizes TDOE's professional development model.

Last but not least, the department is establishing a WBL Task Force in conjunction with the Tennessee Departments of Labor and Workforce Development, Economic and Community Development, the Tennessee Board of Regents, TCCTE and other key industry stakeholders to identify and address barriers to student participation in WBL in high-wage, high-demand advanced manufacturing industry sectors in Tennessee.

What's most compelling about workbased learning's comeback in Tennessee is that it firmly places students at the center and positions itself as one in a list of many elements of a high-quality CTE program. Under the new policy, coordinators can oversee more types of placements and serve more students with provisions for increased flexibility. A confident graduate can dare to dream big, knowing that options exist and his or her skill sets are valued.

By promoting WBL as a braided and cumulative component of a student's program of study, connections can be made all across the curriculum, not just in the senior year. This way, students at least get a feel for the water before jumping off the high dive. After all, transitioning to the real world is hard enough. Let's give students the tools to make a good splash. Tech

Thomas Gibney is the program manager for student success at the Tennessee Department of Education (TDOE), Division of College & Career Readiness. Does one of your students have an interesting or impressive WBL placement? Contact Thomas at 615-253-3223 or by e-mail at Thomas. Gibney@tn.gov to share your promising practices for postsecondary and career readiness.

EXPLORE MORE

The WBL Toolbox is a set of supplemental resources to the WBL Implementation Guide, designed to help districts build strong and effective WBL programs. Access the full toolbox at http://tn.gov/education/cte/wbl_toolbox.shtml.

Other links you might like to explore:

WBL Framework http://tn.gov/education/cte/work_based/ wbl_framework_intro.pdf

WBL Policy Guide http://tn.gov/education/cte/work_based/ wbl_policy_guide.pdf

Implementation Guide www.tn.gov/education/cte/work_based/ wbl_implementation_guide.pdf

Work-based Learning Career Practicum http://tn.gov/education/cte/pos/cte_std_ career_practicum.pdf

Career Exploration http://tn.gov/education/cte/pos/cte_std_ career_exploration.pdf

<section-header><section-header><section-header><section-header><section-header><section-header><section-header><text>

www.acteonline.org/shop

ACTE) 1410 King Street, Alexandria, VA 22314 // Phone: 800-826-9972 // Fax: 703-683-7424 // www.acteonline.org // Connecting Education and Careers

\$45,970 WIND TURBINE MAINTENANCE TECHNICIAN

\$57,051 PIPEFITTER





By the year 2018, the construction industry will need over 2 million new craft professionals.

The construction industry is looking for bright, young skilled professionals to help fill the skills gap. Your students can be those people. Construction offers fantastic pay, great benefits and exciting career opportunities with plenty of room for advancement.

Help your students get the career of their dreams. Visit **byf.org** to view our online resources, including digital craft trading cards, an interactive career path and educational videos.

Exciting careers are waiting for your students in construction.

\$61,100 MOBILE CRANE OPERATOR

51,441 RPENTER

\$**57,174** ELECTRICIAN





