



Photo Credit: West Virginia Department of Education

## Simulated Workplaces in West Virginia

In order to provide students with demand-driven skills that will set them up for career success, the West Virginia Department of Education (WVDE) and state businesses collaborated to create the Simulated Workplace—powerful learning environments that transform the traditional classroom into student-led companies that replicate real-world work experiences.

Participating students master high-level technical skills that “stack” along a career pathway, embrace business processes and expectations, and gain soft skills such as

leadership, communication, teamwork, critical thinking, a positive work ethic, accountability, and valuing quality work.

Students find the program engaging, exciting, and empowering. In a recent statewide survey conducted by the Rural Education Laboratory, 93 percent of students reported seeing connections between what they are learning and what they need to know for a job.<sup>2</sup> When a high school senior from the Mid-Ohio Valley Technical Institute was asked, “Do you understand what the Simulated Workplace is trying to do?” the student

*“Businesses’ number one problem is finding qualified workers. At the current pace of job growth, if sustained, this problem is set to get much worse. These labor shortages will only intensify across all industries and company sizes.”<sup>1</sup>*

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responded, “Oh, yes ma’am, you are not just preparing us for the next four years, you are preparing us for the next 40 years.”

WVDE designed the Simulated Workplace environment in 2012, inspired by conversations with local, state, and national business and industry representatives, who raised issues that have also emerged in national business surveys: critical job openings remaining unfilled due to the inability to find highly skilled workers and teens and young adults often entering the workforce lacking the skills, attitudes, motivation, and education for personal or professional success.<sup>3</sup>

In a debriefing of these business/industry interviews, the department decided to create a more authentic classroom environment for career and technical education (CTE) in which students would have the opportunity to gain employability and technical skills. It is important to note that Simulated Workplace is not a curriculum: It is an environment that transforms the culture of CTE and empowers students to create and define their education experiences.

## Program Protocols

Working with a committee of experts from West Virginia industries, businesses, and the education sector, the group identified 12 framework-setting protocols and processes aligned to real working environments:

- student-led company, with organizational charts and assigned roles within the company;
- application/interview process to join the company;
- formal attendance system that mimics an industry-related company;
- random drug testing;
- 5S quality control;
- safe work areas;
- workplace teams;
- project-based learning/project management;
- student-developed company policy and procedures;
- company meetings;
- onsite business reviews; and
- accountability system using data review, reporting, portfolios, and technical assessments.

These protocols, which are the essential piece of the Simulated Workplace environment, ensure the consistency, quality, and measurable outcomes of simulated companies statewide. In 2013, six schools piloted the program, with 30 more schools added in 2014. Feedback from educators, students, and businesses further enhanced the initiative. By 2015, participating schools were reporting significant increases in student attendance, decreases in discipline referrals, and higher test scores, prompting the department to increase the number of participating schools to 80.

The West Virginia Board of Education voted unanimously to include the protocols of simulated workplace in state policy in 2016, transforming all West Virginia CTE classrooms into student-led simulated companies using the protocols. In addition to passing this board policy, the state board was instrumental in connecting the Simulated Workplace initiative with other state agencies (Commerce, Workforce, Department of Natural Resources, Governor’s Office, etc.) and West Virginia business/industry stakeholders.

Today, CTE programs in 130 secondary schools have Simulated Workplace companies. The CTE programs are part of the secondary high school curriculum. Typically, students are scheduled into elective CTE courses that range from 55 to 90 minutes per day alongside their academic courses. The CTE programs are housed either in comprehensive high schools or at a county CTE center. The programs in CTE centers are typically half-day programs, with students returning to their home high school for the academic courses. Regardless of school structure, West Virginia has more than 1,200 student-led companies with more than 24,000 students participating. Several schools have hosted representatives from other states and Australia who wanted to learn whether this model would work in their education systems.<sup>4</sup>

The program has produced many positive outcomes. Participating schools report increased participation in CTE, increased attendance rates, higher high school graduation rates, fewer discipline referrals, high passing rates at drug screening, increased use of project-based learning models from the Southern Regional Education Board, increased participation of business and



industry, and a significant increase in students' safety awareness.

Simulated Workplace enhances the state's apprenticeship model, adding value for students and employers. Like all apprenticeships, it helps students gain technical skill sets. But it also focuses on the employability skills employers require—critical thinking, problem solving, and communication. Turning the classroom into a student-led company exposes students to business processes not normally covered in traditional apprenticeship programs. Additionally, West Virginia is a rural state, which limits apprenticeship opportunities. Simulated Workplace equips interested students across the state with technical and employability skills critical for workplace success.

## Assessment

Assessments of these skills help students demonstrate their value to employers. As part of Simulated Workplace, West Virginia implemented the National Occupational Competency Testing Institute (NOCTI) technical assessments. U.S. industry and educational experts developed and vetted these industry-recognized, skill-based measurements of technical skills for

specific programs. The assessments are administered online. The majority of West Virginia CTE students are scoring above the workforce entry levels (criterion-referenced cut scores) established by business/industry experts, with 55 percent meeting workforce entry levels and 25 to 30 percent exceeding them. Students who successfully complete their program-specific assessments earn a NOCTI Workforce Competency Credential.

In addition to the technical assessment, West Virginia collaborated with NOCTI to create a Simulated Workplace assessment to determine students' attainment of employability skill sets. Thus the inclusion of NOCTI into the Simulated Workplace environment illustrates to business and industry that students are gaining soft skills and technical skills.

Participation of West Virginia's business and industry with Simulated Workplace companies is ongoing, with representatives continuing to play a major role through onsite business reviews. They act as inspectors, reviewing and rating each company with predeveloped criteria, like a health inspector's review of a restaurant. They review skill sets being taught, evaluate the company's equipment, interview



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CTE instructors and students, and review the company's performance data, attendance, industry credentials earned, and safety policies. Afterward, they present the company with an overall company rating, which includes commendations and recommendations. The inspection benefits both Simulated Workplace companies and the business. Educators receive needed feedback for continuous improvement and quality, while businesses gain firsthand knowledge of the experience and training of prospective employees and a venue for ensuring that the technical skill sets they need are being taught in high schools.

### Students Leading

Simulated Workplace changed CTE learning in West Virginia, but the student-led company projects also are benefitting West Virginia's economy. Spinoffs from the Simulated Workplace initiative include four statewide projects: Tiny Homes, a student-led Economic Summit, the State Parks projects, and a project competition.

**Tiny Homes.** In June 2016, West Virginia experienced a horrific flood, which devastated families and businesses throughout central and southern West Virginia and left many homeless.

As with many disasters, recovery was slow and arduous, and when media attention waned, recovery slowed further.

When students returned to school in fall 2016, the plight of the flood victims—which included friends, families, some of their schools, and some of the students themselves—weighed heavily on their minds. At Simulated Workplace company meetings, students discussed ways to assist in flood cleanup efforts. WVDE staff presented its project idea for small-home construction, “Big Hearts, Give Tiny Homes,” to student leadership groups, who promptly began designing the process and the product.

Students committed to having the tiny homes ready for Christmas delivery, which was only seven weeks away. The typical tiny home takes six months to construct. The simulated companies at 12 schools agreed to construct 15 homes, complete with furnishings and everyday essentials. Students at the 12 schools collaborated to complete welding, plumbing, construction, drafting, nursing, electrical, and culinary tasks required to design, build, furnish, and supply each home by the deadline. Their efforts extended beyond the schools, with the West Virginia National Guard joining the

project to transport the homes from across the state to the Yeager Airport in Charleston, West Virginia. On December 20, West Virginia's governor, Jim Justice, presented keys to 15 homeless families.

"I love working hands-on with my colleagues and getting to experiment through the tiny home project," said one student from James Rumsey Technical Institute. "I would love to come back and do it over again!"

**Economic Summit.** The transformation of CTE has given students a voice. In his 2017 State of the State address, Governor Justice decried West Virginia's national economic ranking and expressed the need for change.<sup>5</sup> Simulated Workplace student leaders who listened to the address began to ask questions about the state economy during company meetings, and WVDE staff decided to help give them an outlet.

In April 2017, the Simulated Workplace Student Economic Development task force was created. At its first summit in Charleston, 50 students from across the state convened to develop ideas for building upon the state's economic assets and addressing its problems. The following summer, company leaders met and talked with local business leaders and economic development authorities to get an understanding of the needs of their respective communities that they could take to a second summit that September.

Students vetted and honed more than 30 ideas at the September summit and split into project teams to develop frameworks for potential economic projects. The cross-state teams continued their work after the summit via Skype, email, and other media. Then they returned to Charleston in October for a meeting with members of the business community. Business experts selected as mentors for the teams asked guiding questions to ensure that students addressed key components in their proposed projects. Five projects were selected to be developed further and presented to the governor: restoration of properties; tiny homes for tourism; smart/medical homes technology; theme park development; and agricultural impact.

**The State Parks Project.** In an interagency collaboration between WVDE and the West Virginia Division of Natural Resources, Simulated Workplace companies work with State

Park officials to revitalize parks in their areas.

The project covers 35 state parks, seven state forests, the Greenbrier River Trail, and the North Bend Rail Trail. Simulated Workplace companies are updating these properties through construction and restoration projects such as the installation of HVAC systems and design and construction of cabins, bath houses, and walking trails. There are about 320 ongoing projects.

**The EPIC Project.** In the fall of 2018, the WVDE challenged Simulated Workplace companies to participate in a statewide competition on innovations to boost local economies. The competition, Economic Projects Impacting Communities, required Simulated Workplace company leaders to meet with community leaders such as mayors, local councils, economic development officers, and county commissioners to collaboratively develop and submit an idea for a project that would benefit their local economy. Of sixteen student teams presenting projects, five were awarded grants. Simulated Workplace companies will work with their community leaders over the next two years to bring their projects to life. The projects include a star-gazing cabin to attract tourists to one of West Virginia's "dark sky" counties (known as the darkest area in the United States); a town revitalization project that includes an amphitheater, a microbusiness complex, and innovative cabins for tourists; and local park upgrades and renovations.

Simulated Workplace has changed the learning landscape for West Virginia CTE students, and West Virginia in turn is reaping the benefits of phenomenal changes in student behaviors, achievement, and accountability. This process has reinforced the notion that schools must give students a voice in their education if they want to see increased performance and better outcomes. Education that provides an exciting, engaging, empowering environment changes lives. Through the Simulated Workplace initiative, West Virginia is experiencing this firsthand.<sup>6</sup> ■

<sup>1</sup>Mark Zandi, quoted in Fred Imbert, "Private Payrolls Miss Expectations as Companies Can't Find Enough People to Hire," CNBC (July 5, 2018).

<sup>2</sup>Laura Holian and Brittany Cunningham, "The Student Experience: West Virginia's Simulated Workplace" (Arlington, VA: Regional Educational Laboratory Appalachia, 2017), 1–2.

<sup>3</sup>NS4ed, "Survey of Employer Skill Needs," presentation (Charleston, WV: West Virginia Department of Education,

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March 2019).

<sup>4</sup>I know of simulated workplace sites located in Ohio, Alabama, Missouri, Pennsylvania, North Carolina, and Australia.

<sup>5</sup>Governor Jim Justice, “West Virginia State of the State Address” speech (February 8, 2017), <https://www.c-span.org/video/?423620-1/governor-jim-justice-delivers-west-virginia-state-state-address>.

<sup>6</sup>To learn more about Simulated Workplace, visit [www.simulatedworkplace.com](http://www.simulatedworkplace.com).

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Education Across Three Decades” (Washington, DC: National Assessment of Career and Technical Education, U.S. Department of Education, 2013), [https://www.rti.org/sites/default/files/resources/cte-trends\\_finaldraft.pdf](https://www.rti.org/sites/default/files/resources/cte-trends_finaldraft.pdf); Jay Rojewski and Xue Xing, “Treatment of Race/Ethnicity in Career-Technical Education Research,” *Career and Technical Education Research* 38, no. 3 (2013): 245–56.

<sup>2</sup>Advance CTE, “Making Good on the Promise: Understanding the Equity Challenge in CTE” (Silver Spring, MD: author, September 2018).

<sup>3</sup>George Ansalone, “Tracking: A Return to Jim Crow,” *Race, Gender & Class* 13, issue no. 1/2 (2006).

<sup>4</sup>Office of Career, Technical, and Adult Education, “Carl D. Perkins Career and Technical Education Act of 2006: Report to Congress on State Performance Program Year 2014–15” (Washington, DC: U.S. Department of Education, March 2018); National Center for Education Statistics, “Educational Longitudinal Study of 2002, Third Follow-Up,” table H134 and table 5A (2012), <https://nces.ed.gov/surveys/ctes/tables/h134.asp> and [https://nces.ed.gov/surveys/els2002/tables/CTE\\_ELS\\_table5a.asp](https://nces.ed.gov/surveys/els2002/tables/CTE_ELS_table5a.asp).

<sup>5</sup>Gary Orfield and Erica Frankenburg, “Brown at 60: Great Progress, a Long Retreat and an Uncertain Future” (Los Angeles, CA: Civil Rights Project, May 2014).

<sup>6</sup>Tim Waid, “Race Issues in Career and Technical Education: A Snapshot in Black and White,” *Techniques* 79, no. 3 (March 2004), <https://www.questia.com/magazine/1G1-114168003/race-issues-in-career-and-technical-education-a-snapshot>.

<sup>7</sup>National Center for Education Statistics, “The Condition of Education” (Washington, DC: US Department of Education, May 2019), <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2019144>.

<sup>8</sup>Anthony P. Carnevale et al., “Good Jobs That Pay without a BA” (Washington, DC: Georgetown University Center on Education and the Workforce, 2017).

<sup>9</sup>Draws on Advance CTE, “Making Good on the Promise.”

<sup>10</sup>Advance CTE, “The Values and Promise of Career Technical Education: Results from a National Survey of Parents and Students” (Silver Spring, MD: author, 2017).

<sup>11</sup>Illinois State Board of Education, “School Wellness: 5Essentials Survey” (Springfield, IL: Regulatory Support and Wellness Division, 2019), <https://www.isbe.net/Pages/5Essentials-Survey.aspx>.

<sup>12</sup>Massachusetts Department of Elementary and Secondary Education, “College and Career Readiness: College and Career Advising Professional Development Series,” webpage (Malden, MA: author, 2019), <http://www.doe.mass.edu/ccte/ccr/hqccp/>.

<sup>13</sup>Institute of Education Sciences, “What Works Clearinghouse Intervention Report: Dual Enrollment Programs” (Washington, DC: IES, 2017).

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*cont'd from page 17...Making the Most of Perkins V*

There is also significant overlap between definitions and data requirements in Perkins, WIOA, and ESSA. Perkins V’s “special populations” overlap in several areas with ESSA’s “subgroups” and WIOA’s “individual with a barrier to employment.” As a result, Perkins V encourages states to be thoughtful in how they are collecting and using data for these populations in a way that is nonduplicative and can be applied toward each of the laws. In many cases, given that the agencies responsible for implementing ESSA, WIOA, and Perkins in a state may not be the same, leadership must ensure that agencies are being encouraged or required to coordinate.<sup>8</sup>

There are also opportunities for alignment in the construction of accountability systems. States that have selected the college and career readiness indicator as part of their ESSA accountability system may already have included one of the Perkins V measures of program quality. Those states may want to pick another indicator of program quality for Perkins V in order to maximize the ways in which they are assessing CTE program quality.<sup>9</sup>

## **Role for State Boards**

While most states are already developing their four-year Perkins V plans, states will continue to operate under the one-year transition plans they submitted to the U.S. Department of Education in the spring. In addition, the first local needs assessment process is under way.

Members of state boards of education must ask the right questions of state agencies and encourage leadership to capitalize on the new opportunities in Perkins V. During the planning period, state boards should be asking these questions:

- How will Perkins V funds support increased access to special populations to close equity gaps and increase attainment of industry credentials?<sup>10</sup>
- What is the right division of resources between secondary and postsecondary programs?
- How will the expanded reserve fund be used to incentivize high-quality CTE programs and encourage innovation?