CTE Distance Learning in Rural Communities

One of the effects of COVID-19 (Coronavirus) is that state and local leaders are having to rethink how they provide Career Technical Education (CTE) with limited social contact at the secondary and postsecondary level. Although this is a large-scale change to many state education systems, distance learning has been implemented across the country prior to the pandemic. This is especially true in rural and frontier regions, where access limitations have already prompted leaders to develop distance learning plans. The strategies highlighted below are from Advance CTE's "CTE on the Frontier" series, which was published in partnership with the Council of Chief State School Officers and Education Strategy Group, through the New Skills for Youth (NSFY) initiative.[1]

Using Video Conferencing Technology to Provide Synchronous Hands-On Learning Remotely

While it can be challenging to replicate at home the hands-on learning CTE learners get in the classroom or lab, states can use technology to provide synchronous learning at scale. On example is North Dakota's Interactive Television program (ITV), which connects learners to remote sites in real time via video. In the 30 years since ITV was first established, it has been used to support distance learning in North Dakota in the following ways:

- Approximately 75 percent of CTE courses delivered through ITV are transmitted through one of North Dakota's 10 area career and technology centers, allowing these centers to leverage their resources and instructional staff to reach more learners.[2]
- The video conferencing technology that supports ITV is also used at the postsecondary level, enabling students to hurdle geographic barriers to access the necessary coursework they need to earn a certification or degree.
- The technology connects secondary students with dual credit opportunities. High school students can access the platform from their assigned school and interact directly with postsecondary instructors without leaving the classroom. The technology has been primarily used to help learners earn CTE dual credit in Health Science.

> **Considerations and Lessons Learned**
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> 1. Use video conferencing technology to provide synchronous learning at scale to learners across the state.
> 2. Encourage school districts, community colleges, area technical centers and other institutions to collaborate on developing and delivering lessons or offering their catalog of courses to out-of-district students.
> 3. Ensure learners are aware of course offerings that are already offered virtually.

Leveraging Existing Virtual Learning Platforms to Provide Online CTE Curriculum

Many states have existing virtual learning platforms in use at the secondary and postsecondary level, helping learners make up credit, get ahead on their studies or access specialized courses remotely. **Idaho** Digital Learning, for example, integrates CTE instruction into its online course catalog.[3] Each course is aligned with Idaho Core Content Standards and facilitated by a certified teacher and a certified Idaho administrator. The courses are designed to adapt to students' needs and schedules and are offered in three formats:

- The cohort course format follows a typical schedule aligned with the academic year.

> **Considerations and Lessons Learned**
>
> 1. Focus on providing scalable, foundational content online and supplement this learning with opportunities to develop real-world skills in an applied setting.
> 2. Leverage the same technology used to deliver online CTE content to students for teacher professional development.

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- The flex course format allows learners to proceed at their own pace and skip certain course material if they can demonstrate mastery.
- The hybrid format provides synchronous virtual lectures and online lessons.

Additionally, the **Florida** Virtual School (FLVS) is recognized as an accredited statewide public school district with fully online courses for elementary and secondary school students.[4] Each student is provided with an individualized educational plan and is able to enroll part-time in tandem with their typical school or as a full-time student.

Scaling Employer Interactions Through Technology

Technology can bridge the physical gap between learners and industry partners, which is why many rural communities have invested, often with support from state and federal funding, in technology including broadband, devices and live-streaming equipment. **Louisiana** – as part of its Jump Start CTE initiative – has launched a multifaceted effort combining technology and hands-on teacher supports to connect rural students with employers, a process the state calls micro-industry engagement.[5]

> **Considerations and Lessons Learned**
> 1. Teachers need support to effectively use new technologies.
> 2. School administrators need to be advised and engaged to ensure that all key leaders are on board.
> 3. Industry engagement can take on many forms, and the state has a key role in ensuring quality and consistency.

A major component of Louisiana's micro-industry engagement is a strategic partnership with Nepris, a company that virtually connects schools, teachers and students with workplace experts and professional mentors. Through this partnership, teachers have engaged industry experts to conduct interviews with students, provide virtual feedback on a capstone or other project or judge student competitions.

Another example is **Nebraska**, which offers a virtual career tour for all 16 Career Clusters® in the Nebraska Model.[6] Videos include interviews with existing employees, conversations about the academic and skill requirements, salary information, as well as a tour of a workplace in that industry.

> **In Louisiana, micro-industry engagement is more than just virtual speaker presentations. Rather, it is intended to be a series of cumulatively structured engagements and is designed around four key tenets:**
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> | Virtual access to workplace experts in every industry sector | Teachers are empowered with the technologies and curated instructional resources | Schools offer virtual and in-school exercises akin to onsite workplace-based learning | Students prepare with workplace experts, mastering sophisticated communication skills |

[1] https://careertech.org/resource/series/CTE-frontier
[2] https://www.cte.nd.gov/sites/www/files/documents/Students/ITVOnlineCourseCatalog.pdf
[3] https://www.idahodigitallearning.org/
[4] http://www.fldoe.org/schools/school-choice/virtual-edu/florida-virtual-school/
[5] https://cte.careertech.org/sites/default/files/files/resources/CTE_Frontier_World_Work_2017FINAL.pdf
[6] https://www.nebraskacareerclusters.com/

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