Addressing Online Education for CTE/RTI Programs

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I. Background

On Wednesday, March 25, 2020, the American Association of Community Colleges (AACC) queried its members through two leadership circles to investigate online-only related technical instruction (RTI) in registered apprenticeship programs. The two groups queried included:

- AACC's Apprenticeship Advisory Board, a group of more than 50 community college executives and key industry figures in the community college apprenticeship arena; and
- AACC's Commission on Economic and Workforce Development, a leadership circle of more than 30 community college CEOs or administrators focused on workforce issues.

While the executives involved in AACC's registered apprenticeship work led by AACC President & CEO Walter G. Bumphus were specifically targeted, AACC made the active choice to solicit non-apprenticeship workforce and economic development experts to see if there was any alignment around the topic in the general career and technical education (CTE) space. By Friday, March 27, 2020, AACC received numerous responses from across the country. These findings represent current information (as of April 2020), and a broad spectrum of state and local-industry perspectives. On Friday, April 3, AACC was granted audience with U.S. Department of Labor executives to present these initial findings.

II. Findings

The use of online RTI has been established in multiple community college registered apprenticeship programs, but not all. Face-to-face education is seen as preferred and essential in multiple registered apprenticeship programs, as well as in CTE programs across multiple industry sectors. During the last two weeks of March, AACC members have shifted most of their teaching to online formatting. Courses with lecture portions are being considered less problematic.

Overall, immediate challenges community colleges faced included student access to technology, and the lack of comfort with using technology for online learning, which hindered universal engagement. In some cases, student preference to not use technology for learning has caused them to want to exit programming altogether.

In the applied learning space, there was a spectrum of online adaptations to allow students to progress with their learning. Multiple members believed teaching online for certain programs would be impossible due to legal requirements, while other programs, even if they did not have legal barriers, would still be inappropriate to take to an all-online method. For example, in an electrical line technician program, a student would work directly with an instructor to train to complete a task at an elevated height after physically climbing a pole. During a teaching and assessment in-person experience, the student would be coached through how to troubleshoot an issue in a setting with live voltage. This experience is one of many that is simply not replicable on a computer. This example is widely counterpoint to that of a cybersecurity student working with a college who can easily conduct all their

practical experiences and assessments online, because many of those systems were engineered for online teaching, learning, and assessment.

The following are examples from member colleges about students taking courses and CTE programs entirely online:

- Programs with direct patient care (e.g., nursing, firefighting, police training) were often noted as impossible due to legal and licensing requirements.
- Programs that require demonstrations with highly refined skills (e.g., tool and die, culinary arts, barbering) were highly problematic. Even in cases where state and/or industry legal and licensing issues are not a factor, students working online are potentially not equipped to complete the task at hand, while also filming themselves in such a manner appropriate for the instructor to observe and assess the student's skill acquisition.
- Programs where the student would be working with heavy machinery and/or under extreme experiences and physical performance, and/or those with specialized personal protective equipment (e.g., electrical lineman, welding, HVAC installation) were often listed as highly problematic and/or impossible.

Of equal importance, AACC members should anticipate more rigorous safety and cleaning standards when their campuses reopen. It is expected by many members that the manual cleaning of both the equipment and physical environment to ensure safety for students and faculty, as well as the ratios of interaction in the spaces for teaching and learning, will inevitably slow down student and teacher programming evaluations, observations, and assessments. For all reasons noted, it also is expected that this will increase the cost of running a program for colleges.

III.   Position on Online-Only CTE Programming

In the last few weeks, members have presented compelling evidence to inform a position regarding online-only CTE programming. To maintain the high quality of America's community college system, it is not possible and, in some cases, irresponsible to encourage member colleges to adopt 100% online coursework for all CTE programs.

We will continue to support online learning where it is practical and pedagogically sound. We believe that the necessary applied learning scenarios that happen in-person at clinics, labs, and businesses are essential. To supplant in-person training with an entirely online solution will not do justice to the capacity and skill of the campuses or the American workforce. As the colleges are currently looking to accreditors and third-party certifiers for guidance to ensure compliance, we will continue to coordinate and provide information as it is available. The sector needs, flagged by the member colleges as problematic, will be our priority.

We predict that some groups may propose the use of virtual solutions as a means for providing contextualized learning in lieu of face-to-face. We generally support simulated experiences as they offer

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an array of settings, situations, and variations that are invaluable to many learners. The ability to safely conduct applied learning by way of portable home-based goggles to large-scale simulators is an effective tool for many programs. These simulators allow students to learn and troubleshoot in a safe space. These tools are useful and enhance learning but are simply not enough for all CTE/RTI coursework. We have seen and worked with multiple versions of simulators in use at a myriad of campuses, from life-size mannequins with varying programmable health-related features, to trailer-size situational experiences such as police cadet training programs or oil drilling. While impressive and useful, simulator training cannot be provided at a scale that can meet the demand for the current student cohorts at America's community colleges.

AACC supports the nation's career and technical education system and will continue to provide information so that members can do the work of building a world-class talent pool in this country. Once campuses reopen their doors to students and faculty, colleges will need to prioritize certain activities on behalf of the American workforce. Community colleges should address the following when campuses reopen:

- First responder programs
- Programs with refined skills, heavy machinery extreme physical performance, and/or those with specialized personal protective equipment in critical infrastructure programs (energy, water/wastewater, food and agriculture, manufacturing, transportation/distribution/logistics)

Future recommendations will be gathered, refined, and communicated to the field so that the country's community college system can best position their institutions and communities to re-engage students, faculty, and administrators, and keep them safe as they work to rebuild the nation's workforce pipeline.

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