THE FUTURE OF CTE: PROGRAMS OF STUDY

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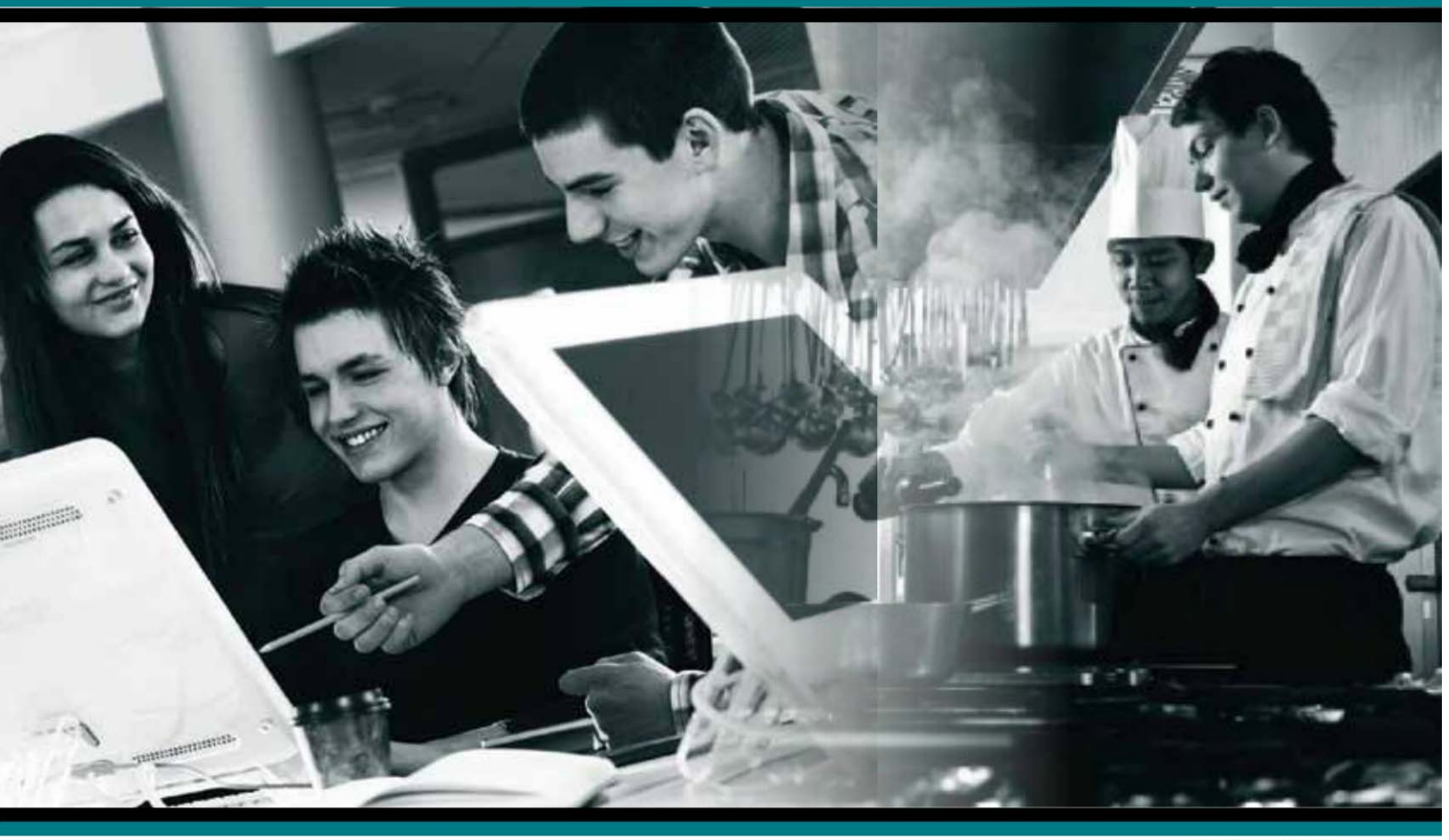
Education in today's world is very challenging. From concerns over the funding of career and technical education (CTE) to discussions about the achievement gap and dropout prevention, to debates about what it means to be college- and career-ready, the role of CTE in educational reform paradoxically is both at the forefront and on the backburner of debate. With the focus of educational reform currently on science, technology, engineering, and mathematics (STEM), college access and retention, and passing high-stakes proficiency tests, the scope and value of CTE is in uncharted waters. Some believe that CTE is an important and essential element of educational reform and success, whereas others feel that it is of limited use—for "those kids" who aren't going to make it in college and who therefore need some vocational training.

One of the more prominent programs in the 2006 reauthorization of the Perkins legislation was Programs of Study (POS). This initiative includes elements that connect it with past CTE efforts, yet POS have a focus and direction that make the initiative more potent than almost anything that has been supported by federal dollars in the past. POS have been described as the old Tech Prep, only with more teeth to make secondary-postsecondary articulations stronger and more real.

The National Research Center for Career and Technical Education (NRCCTE) has been conducting several research studies on POS, as described elsewhere in this issue of *Techniques*. Three are quantitative and longitudinal in nature, and two have been qualitative studies of POS efforts in several states. This article is about the first of the two qualitative investigations, *Six Stories About Six States: Programs of Study*. This study focused on how POS were developed, and especially on how technical assistance was provided to strengthen and improve them.

The Six States project report generated some major findings, including the power of project-based learning (PBL) and



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hands-on, active participation in both classrooms and in the community/workplace to sustain student interest, engagement and understanding. In study sites, skills and knowledge were also developed and enhanced through instruction that met both academic and workplace competency expectations. Such strategies led to improvements in student achievement outcomes. Districts and states in our study were able to cite data that showed that CTE students were doing well and even outperforming average, non-CTE students in their states. District and state data showed that students in POS had higher high school graduation rates.

The study supported what we've known for a while: Relationships matter. Several people interviewed noted that: "You have it backwards. It's not rigor, relevance and relationships; it's relationships, relevance and rigor." Good collaborations between educators and business and industry stakeholders were especially important to ensuring rigorous academic and career-related POS curricula that would be relevant for the workplace. The successful development of these important instructional materials was considered a by-product of the cooperative, friendly relationships between education and business.

Findings

Some findings from the Six States study regarding the development of effective CTE and general educational reform program are listed here, not necessarily in the order of their importance.

Technical assistance is provided at both the state and local levels: Technical assistance for POS development came from both the state and local levels. Every state had a technical assistance team that was competent and passionate about ensuring the success of POS efforts.

Champions deliver much of technical assistance: At the state level, and often even more so at the local level, technical assistance was delivered by "champions," people deeply committed to CTE and program collaborations. Many came originally from Tech Prep and were able to leverage their knowledge of program components to forge better and stronger secondary and postsecondary collaborations, as well as articulated, aligned curricula.

POS are more than just about CTE—they are about basic educational reform connecting academic learning with real-world contexts: Most participants in the six states suggested that their ongoing POS system efforts were a positive force because these efforts promoted dialogue among and between the state, secondary and postsecondary institutions, and business and industry personnel. The POS system in

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each state gave POS stakeholders a venue to critically think about what was being taught, what needed to be taught, and why it was important to have articulation and collaboration between educational systems and business to produce high-quality preparation for education, work and life.

Challenges to the Implementation of Programs of Study

Although most states appeared to be moving in positive directions, there were some challenges. Not all states involved had the same infrastructure or level of organization and collaboration between secondary and postsecondary education; nor did they have the same priorities for program development. Interviewees articulated the following challenges.

Cultural/mission misalignments between secondary and postsecondary, and between academic and CTE programs: A serious barrier for some POS programs was an inability to create necessary POS alignment and articulation agreements to meet POS mandates. This challenge was typically characterized as perceived mission misalignments between secondary, postsecondary, and business and industry stakeholders. The missions and focus of secondary and postsecondary institutions were highlighted as being different, partly due to the ages of the students they serve and their inability to operate independently in the world of adults and the world of work.

The demands of POS development and certification require resources: Besides the time needed to build successful collaborations to develop curriculum and dual credit systems, a challenge mentioned in all states was the enormous amount of paperwork associated with documenting important POS components including: courses, aligned and articulated curricula, business and industry involvement, and other related elements. Most participants thought they would need more resources to address all the logistical and programmatic demands of the Perkins IV POS goals for 2013. Many states also regularly altered some of the POS forms and requirements, often requiring paperwork and POS efforts in progress to be changed or redone.

Issues with meeting required targets for POS "success": Meeting the expected POS targets of aligned and articulated instruction across secondary and postsecondary institutions, as well as ensuring that POS efforts lead to an industry-recognized credential or certificate at the postsecondary level, was problematic in at least a couple of ways. First, many suggested that measuring the success of POS is compromised because education and occupational pathways are not always linear. For example, when students leave a POS before completing the program to take a job, but later return to postsecondary education to complete a program, POS success targets are not met. Another example is if a secondary institution has alignment and articulation agreements with postsecondary institutions that are out of the district, even if these agreements meet other POS requirements, POS success targets are not met.

Recommendations

Several recommendations arose from the data and analyses that could potentially improve the development and implementation of POS. These include:

Continue POS collaboration efforts: To keep improving POS initiatives, participants believed that it was necessary to continue to (a) develop collaborations between secondary and postsecondary and between academic and CTE instructors, and (b) pursue stronger articulations between courses, programs, and business and industry outcomes.

Streamline paperwork and the approval process to keep the process simple and consistent, and to remove some of the burden from educators and business and industry representatives: As noted by many interviewees, POS development efforts strained staff time and resources. However, many also commented positively on these efforts as hopefully leading to a more consistent and stable POS system in the future.

Special emphasis should be placed on teacher development and training models to connect academic instruction with real-world contexts: Individuals with a long history with CTE and an understanding of POS development efforts suggested that future POS could be strengthened by helping educators develop programs that used real-world contexts, such as work-based learning, as a platform for their academic instruction. CTE educators mentioned that academic educators were not taught how to use work-based learning contexts to teach academic concepts, and CTE educators were often not taught how to teach academic concepts through work-based activities.

Develop a publicity campaign to

further promote the value of POS: Many felt POS were still not well known in their states and that POS could benefit from a promotional campaign to inform the public, high school counselors, parents and students about their goals and benefits. Each state had POS exemplars that could be publicized so that students thinking about career plans and pathways would know about the many programs available to help them achieve their goals.

Recognize the legal and logistical restrictions for developing POS efforts and resolve them in realistic ways: Legal restrictions, especially for secondary students, prevented some from performing the workplace activities necessary for some POS. For example, there are laws in place that do not allow students under 18 to participate in certain forms of workplace training (e.g., x-ray technician), especially with regard to health and safety issues. POS need options to address these restrictions, while still allowing POS to meet mandated success targets.

Ensure sufficient information flow so that those "at the top" hear and react to the people "on the ground" delivering the instruction: Every state expressed concern about the tensions between the ideal of POS at the state level and the reality of trying to implement POS for people "on the ground." People at the state level were aware of these tensions. They suggested that more time, resources and opportunities for interaction were needed to support those actually implementing and teaching POS in school districts and community colleges. Also needed is a system structured to provide continuous feedback between the state and those implementing POS.

Conclusions

Our study of POS implementation in six states revealed that this CTE initiative is alive and well. Every state had already developed good models of POS and had already approved and authorized their adoption and implementation. Despite several challenges, POS are expanding in scope and numbers and becoming a more stable component of CTE for delivering articulated, documented, collaborative programs that successfully connect secondary, postsecondary, and business and industry.

Technical assistance in ongoing POS development efforts is frequently provided by people with Tech Prep experience. These personnel assist with all levels of course development and champion cross-institutional collaboration and instructional integrity. Time will tell how effective this technical assistance will be in creating a sustainable, effective system for delivering CTE that is integrally connected to academic instruction and produces educated and skilled employees for tomorrow's workforce. T

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