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Strengthening Transitions by Encouraging Career Pathways: A Look at State Policies and Practices

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In order to be economically self-sufficient, youth need some education beyond high school. Nonetheless, persisting in college and earning a credential is difficult for many students. To facilitate students' transitions into college and careers, policymakers and practitioners are attempting to find ways of connecting formerly separate facets of the education system. One such effort is the establishment of P-16 (preschool through postsecondary) commissions in 30 states (National Governors Association, n.d.), whose goal is to reconceptualize education as a pathway spanning high school, college, and the workplace.

Attention is also being paid to the integration of academic and occupational preparation in order to increase the rigor of career and technical education (CTE) and to make stronger connections to high-wage, high-growth occupations. At the federal level, these goals are encouraged by proposed changes to a key funding stream for career and technical education, the Carl D. Perkins Vocational and Applied Technology Act. The federal government seeks vocational education reform in keeping with its emphasis on higher academic standards and accountability. These changes will encourage the refinement of CTE programs in occupations that require postsecondary credentials, to ensure both rigorous academics and a smooth secondary-to-postsecondary transition.

Perkins funding may be an impetus for reform, but states must address the ways that their own systems of education support these goals. States need to rethink the structure and focus of the educational pipeline, including the relationships between high schools and colleges, academic and applied courses, and educational credentials and the labor market.

This Brief summarizes a report prepared to assist the U.S. Department of Education's College and Career Transitions Initiative (CCTI). The report presents a sample of state-level policies and legislation that support the implementation of career pathways and other strategies that facilitate educational and employment transitions. Data gathering for the investigation consisted of interviews with CCTI site contacts and other experts in education and workforce development, and web searches

for information on legislation and regulation pertaining to career pathways.

The College and Career Transitions Initiative

In fall 2002, the Office of Vocational and Adult Education, U.S. Department of Education, sponsored the College and Career Transitions Initiative. It renews efforts toward the seamless transition from secondary to postsecondary school by coordinating academically rigorous study with career and technical courses across education sectors. The goal of the initiative is to help community colleges, working with high schools and business partners, create career pathways that lead from high school to two- and four-year degrees and technical careers. The League for Innovation in the Community College was selected as the project administrator.

As defined by CCTI, a career pathway is an articulated sequence of rigorous academic and career courses, beginning in the ninth grade and leading to an associate degree, and/or an industry-recognized certificate or licensure, and/or a baccalaureate degree and beyond. The pathway is developed, implemented, and maintained by partnerships among secondary and postsecondary education and employers.

CCTI reflects the national priorities of increased rigor and educational attainment by establishing five very specific long-term outcomes goals: (1) decreased need for remediation at the postsecondary level; (2) increased enrollment and persistence in postsecondary education; (3) increased academic and skill achievement at the secondary and postsecondary levels; (4) increased attainment of postsecondary degrees, certificates, or other recognized credentials; and (5) increased entry into employment or further education.

Fifteen site partnerships composed of community and technical colleges, secondary schools, and employers have been funded in occupational areas that include: education and training; health science; information technology; law, public safety, and security; and science, technology, engineering, and mathematics. The site partnerships are working to develop exemplary models of college and career transition strategies and programs, and collect and report project implementation and student outcomes data.

Policies That Support Career Pathways

Below, we highlight state policies that are promoting a seamless transition to college and careers, and provide examples of cases in which curricula, requirements, and assessments are being coordinated on a statewide basis. These are only a sampling of efforts around the country that are helping to develop effective career pathways.

High School Initiatives

Advising. Students need access to information about career pathways – the types of courses involved and the degrees and careers they might lead to – in order to choose which pathway to enter. Moreover, career pathways should be structured in ways that help students make informed decisions with the assistance of knowledgeable and caring adults.

There is widespread support for advising and counseling activities, and evidence that they can have positive influences on young people (Hughes & Karp, 2004). The Carl D. Perkins Vocational and Applied Technology Education Amendments of 1998 included language supporting “career guidance and academic counseling,” defined as “providing access to information regarding career awareness and planning with respect to an individual’s occupational and academic future that shall involve guidance and counseling with respect to career options, financial aid, and postsecondary options.”

It seems clear that pathway plans should explicitly require the provision of such services, and a number of states have implemented policies to support students as they develop their career and educational goals. For example: The State Board of Education in **Oregon** requires all high school students to develop an educational plan and an education profile that includes short- and long-term career goals and documents progress toward those goals. **South Carolina** mandates that high schools provide career-focused advising to all students, and all middle and high schools are required to employ a career specialist certified in career development by 2007.

Graduation Requirements. In speaking with college faculty and staff, we often heard that high school graduation requirements can pose a barrier to creating career pathways. Possible barriers include uneven student preparation for college; an emphasis on academics, to the exclusion of applied coursework; the need for CTE students to take courses above and beyond regular graduation requirements to earn a diploma; and the lack of room in students’ programs for CTE electives.

Increasingly, states have been setting statewide graduation requirements. Still, while almost all states now specify the number of courses that must be taken in the subject-matter areas, fewer specify the content of the courses (Somerville & Yi, 2002). This variation can make it difficult to develop pathways from high school to college, as students will enter college with very different academic backgrounds. Thus, imposing some consistency of requirements, at least across a particular state, likely has a positive effect on the high-school-to-college transition. However, imposing statewide requirements often goes hand-in-hand with raising the level of graduation standards, which may discourage CTE course taking. Increased academic requirements and emphasis on standardized tests may squeeze electives such as CTE courses out of the curriculum.

A number of states are finding ways to include CTE courses in their new high school graduation requirements, however. They do so by creating diploma endorsements that reward CTE students for their extra work. States may also create multiple pathways to a high school diploma. For example: The **Delaware** Department of Education has integrated career pathways into the state’s high school graduation requirements, establishing pathways as a central part of a high school education and requiring three

credits in a career pathway. **Oklahoma’s** high school graduation requirements allow students to meet math and science requirements with State Board of Education and school district approved contextual courses that are technology oriented and may be taught at technology-center schools.

Connecting High School and College

Curricular Alignment, Articulation, and Dual Enrollment. Aligning high school and college curricula across educational sectors and career requirements is a hallmark of a career pathway. Pathways should allow students to take high school courses that connect to their future postsecondary coursework and also prepare them for entry into the job market, preferably by offering students the opportunity to earn an industry credential soon after high school graduation.

One common way to align high school and college coursework in technical areas is to create articulation agreements through which high school electives serve as the first step toward a college major. Students who successfully complete articulated courses are awarded college credits that can be applied toward a degree if the student completes additional coursework at the college. Unfortunately, these arrangements have not been as uniformly successful as intended (Bragg, 2001). Hence, dual enrollment is emerging as a popular alternative to articulated courses. Dual enrollment students take actual college courses, with credit recorded on a college transcript.

Forty states have policies addressing dual enrollment (Karp, Bailey, Hughes, & Fermin, 2005). Sometimes, these policies encourage dual enrollment, such as when they ensure that both high schools and colleges receive funding for dually-enrolled students. In other cases, policies can inadvertently inhibit the growth of technically oriented dual enrollment. States may set target populations or admissions requirements for dual enrollment that exclude students who learn more effectively in applied situations. A number of individuals we spoke with expressed a preference for only limited state policies in this area, to allow for more institutional flexibility.

In some cases, dual enrollment students earn high school as well as college credit, and remain on track for graduation. For CTE students, who often take additional coursework already, earning dual credit can make it easier for them to take a college course while still meeting all of their requirements for high school graduation. However, many state policies do not specify whether students may earn dual credit.

Some states have made efforts to link high school and postsecondary curricula in both technical and academic areas, trying to strengthen articulation agreements, increase students’ and parents’ knowledge about these agreements, and open access to dual enrollment programs. For example: **Iowa’s** Grow Iowa Values legislation supports career academy programs, in which students participate in a sequential course of study in an applied field beginning in high school and culminating in a postsecondary credential. The state does not set admissions standards; institutions may create their own eligibility requirements. **Missouri** is developing statewide articulation agreements for career and technical courses of study.

College Readiness. A chief goal of career pathways is to help all students become ready for college. Including

rigorous high school academics in pathways is an important way to encourage this goal. Students also need to understand what will be expected of them in college, yet they often receive unclear messages about what it means to be college ready.

In most states, the secondary and postsecondary education systems function separately from each other, so that high school graduation requirements, including exit exams, are not aligned with the assessments colleges use to determine students' readiness for college-level work. High school teachers may not be familiar with the college placement exams and may not realize that their students lack appropriate preparation. Hence, students may be awarded a high school diploma but not be prepared for college. Moreover, in many states, postsecondary institutions themselves decide which placement test to administer and what score signifies college readiness, so a student may qualify for college-credit coursework at one institution but may need remedial courses at another. This inconsistency may cause confusion and frustration for students and teachers.

A number of states have adopted common testing procedures and cutoff scores. For example: **Illinois's** eleventh grade achievement test, the **Prairie State Achievement Examination (PSAE)**, includes the ACT Assessment, a widely used college entrance examination, and two ACT WorkKeys tests. Therefore, the PSAE simultaneously assesses students' progress toward state standards and readiness for college admissions. The **City University of New York** has aligned its entry standards with **New York State's** high school exit examinations.

Connecting Two- and Four-Year Colleges

The transfer of credits between community colleges and four-year institutions has historically been problematic. Universities may be reluctant to issue credit for courses not taken on their campus. If community college faculty do not know the expectations of university faculty, they may not be able to prepare their students accordingly. Consequently, students who earn credits at a community college cannot always apply all of them toward a bachelor's degree and thus must retake some classes whose content they already mastered. Technical students may have an even more difficult time when trying to apply previous college coursework to a bachelor's degree; many technical associate degrees focus on discipline-specific coursework, while traditional liberal arts education usually includes general education in the first two years. Thus, aligning applied associate degrees with bachelor's degrees has been challenging.

Fortunately, many states are now creating systems that allow students to transfer credit between institutions seamlessly. The systems include the requirement that certain courses transfer among all state institutions; common course numbering, whereby institutions statewide use the same numbering for courses teaching the same content; and a transferable core, in which general education courses transfer to the baccalaureate degree as a block. For example: **Florida** has a statewide course-numbering system among all its public, and some of its private, two- and four-year colleges. Credit for a course within this system is guaranteed to transfer to any other institution that offers a course with the same number. **Washington State** requires that the Higher Education Coordinating Board develop transfer associate degrees that

will satisfy lower-division requirements at public four-year institutions for specific majors. Further, a pilot program in **Washington State** allows four community colleges to offer students who hold an associate of applied science degree an applied baccalaureate degree in fields where there is demonstrated employer demand.

Employers' Involvement

Because career pathways are meant to prepare students for both postsecondary education and employment, it is important that employers are involved. Employers can (and should) help institutions select the occupational areas included in career pathways, in order to ensure that students are being prepared for economically viable jobs. They can advise faculty and program administrators on issues of curriculum and provide students with work-based learning and job-shadowing experiences to enhance their classroom learning. Employers can also help students gain employment in the pathway's field, either part time for those still in school or full time after graduation.

The individuals we spoke with agreed on the importance of employer involvement in career pathways, and federal policy often gives employers a place at the table, for example, by requiring employer participation on Workforce Investment Boards (WIBs) as part of the Workforce Investment Act. Yet, many of the interviewees reported that their programs did not have prescribed roles for their employer partners. Moreover, we found few policies that served as incentives to formalized employer participation.

A few states, however, have implemented policies that support systematic and sustained involvement of employers. For example: **Iowa's** Accelerated Career Education program provides funds for associate degree programs leading to high-wage employment. In order to receive the funds, colleges must work with employer partners who promise to employ 25 percent of the program's graduates and to pay them a reasonable wage. **Kentucky's** Workforce Investment Network System provides funds that can be used for career pathways initiatives that demonstrate the commitment of employers.

Collection and Use of Student Data

In evaluating whether career pathways help students prepare for rewarding careers, it is important to collect data on student outcomes that demonstrate whether students are following a coherent sequence of courses spanning secondary and postsecondary schools, and whether they are more successful than their peers who did not participate in career pathways. Such knowledge can also be used to continually improve and upgrade career pathways so that they remain relevant and connected to the current occupational structure.

Because pathways encompass multiple educational sectors, data collection is complicated. Ideally, we would like to be able to follow individual students from high school to college and into the labor market, accounting for all of the steps in between in order to understand what happens to participants at each stage in their educational and career path.

Unfortunately, few states collect and use such data. High schools and colleges collect student data, but the two types of institutions may define variables differently, and fail

to share their data with each other, making it impossible to connect data across sectors. In addition, educational data are rarely linked to employment data, making it difficult to understand what happens to graduates in the labor market.

A few states have begun to combine data systems so that student progress through their entire educational careers can be followed. For example: A grant from California's Community College Chancellor's Office supports the Cal-PASS system, which encourages consortia of four-year institutions, community colleges, and K-12 school districts to work together to track students' educational paths by collecting and analyzing data. Florida has created a K-20 Education Data Warehouse, a system allowing for longitudinal analyses of educational data spanning from elementary to graduate school. The data can also be linked to the state's unemployment insurance database, allowing for analyses of labor-market outcomes.

Conclusion

Restructuring career and technical education around career pathways is an ambitious reform that many states are beginning to undertake. Though no state has implemented policies addressing all pieces of career pathways, quite a few have made strides in a number of areas.

A review of the state policies discussed here raises a number of concerns, however. The continued division between academic and career-technical education does not allow students to flexibly move and transfer coursework between the two. The creation of new pathways between applied and academic coursework, such as applied baccalaureate degrees, is a positive start. But overall, policymakers should pay attention to finding ways to integrate programs and curricula.

There is a false assumption that students will pursue education and training in a linear fashion. Some argue that career pathways should contain multiple entry points, as many students, such as workers returning to education and recent immigrants, do not progress from education to work in one direct route. Thus, policymakers should support the creation of multiple pathways to accommodate both traditional and nontraditional students.

Employers seem to be for the most part absent in the policies we examined. Although some employers may play a meaningful role in career pathways in practice, it was difficult to find state policies that encourage or reward them for doing so. This is ironic, since one goal of career pathways is to connect students to the labor market and help them smoothly enter rewarding careers. Alssid et al. (2002) make a strong case that career pathways must be framed as a system for workforce development, with structured roles for a broad group of regional partners to be successful. State policies could encourage stronger employer involvement by providing incentives to those firms offering internships or committed to hiring career pathways graduates.

While we have primarily focused on policies that effectively support career pathways, implementing new policy is not always desirable. We encountered a number of

individuals who felt that in some areas, such as dual enrollment, less regulation would be more conducive to the development of career pathways. In the absence of state directives, institutions can develop their own creative ways, tailored to local needs, for linking secondary and postsecondary education with the labor market.

Finally, it is important for every state to have its own vision for a long-term educational and career pathways system since federal policy tends to shift with different administrations. Each state must determine its own governance of education and workforce development, ideally including career pathways as a system for delivering career and technical education.

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