CTE Transfer Research Project

Themes from a Literature Review of Career & Technical Education Transfer

What is the state of student transfer between California community colleges and four-year institutions in career and technical education (CTE) disciplines? How can practitioners, policymakers and funders increase the transition of these students to baccalaureate-level preparation, particularly in programs related to high-growth, high-demand occupations?

The CTE Transfer Research Project aims to answer these questions through its three-year study of occupational transfer in California. While limited research exists on this topic, RP Group reviewed available literature on policies and practices impacting CTE transfer. These findings have directed development of its own research design and focus.

The RP Group summarized this analysis in CTE Transfer: A Literature Review Summary, available at www.rpgroup.org/css/CTETransfer.html. The following brief highlights key themes from the literature review and is intended for those who seek a high-level summary of the context for studying CTE transfer, models for facilitating students' pursuit of baccalaureate degrees and factors impacting this transition.

Why is CTE Transfer Important?

Practitioners, policymakers and researchers alike have historically tied CTE programs to the terminal function of the community college system. However, in recent decades, researchers have begun to examine if, how and why CTE students make this transition to baccalaureate programming and what states and institutions do to encourage or impede it. Three primary trends drive this interest.

Changing workforce demands: Multiple reports emphasize the urgent need to close the gap between the growing number of positions in the state that demand baccalaureate-level preparation and the number of individuals available to fill them. Researchers conclude that this gap will present a significant economic challenge to the state and what states and institutions do to encourage or impede it. Three primary trends drive this interest.

Changing student demographics: Data on postsecondary enrollments show that an expanding majority of students increasingly enter higher education through the community college system, with California leading the nation in this trend. A significant number of these
learners enroll in career-oriented programs and often express interest in transfer. However, minimal research exists to track CTE student movement from sub-baccalaureate to bachelor's level programming.

**Changing approach to career preparation**: The literature reveals that many community colleges are rethinking the traditional silos between their vocational and transfer functions, considering ways to extend CTE beyond certificates and associate degrees and promoting transfer as an opportunity for students enrolled occupational programs. These efforts include forming pathways that encourage educational and career advancement from entry to the professional level and integrating CTE and academic instruction.

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**What approaches and strategies facilitate CTE Transfer?**

A survey of available research reveals several emerging approaches and strategies that aid students in pursuing baccalaureate-level preparation related to a range of occupations. These examples go beyond the traditional approach of articulation as the primary conduit for transfer between educational segments.

**Innovative Degrees**: These models include both specialized associate and bachelor’s degrees and take varying but often overlapping forms. They emphasize different kinds of content, are conferred by both two- and four-year institutions and can be initiated at the institutional level or legislated by the state. Some examples include:

- **Applied Baccalaureate**: These programs allow students with applied associate degrees to complete advanced preparation for a particular occupation. In some cases, students take general education classes in the junior and senior years after mastering technical coursework at the community college. Other options allow students to cap two-year technical degrees with broad-based courses in the field. Over 75% of states offer one of these degrees.

- **Community College Baccalaureate (CCB)**: Approximately one-third of states have passed legislation allowing community colleges to award these bachelor’s degrees in addition to their traditional associate- and certificate-level offerings. The CCB often focuses on preparing students for high-demand or high-growth occupations critical to a state's economy.

**University Centers**: Several community colleges have formed collaborative relationships with four-year institutions to provide students greater local access to the baccalaureate degree and meet pressing local or regional workforce needs. In these models, partnering four-year institutions confer the baccalaureate degree. Collaborations range from minimal commitments to more complex and deep arrangements.

**Special Block Articulation Agreements**: In one study, states reported development of articulation agreements or policies between community college and four-year partners to facilitate the transfer of a grouping of units or courses within an occupational program. About half of the study's 40 responding states indicated arrangements that allowed for the transfer of blocks of courses within a CTE major.
**What factors impact CTE transfer?**

While state-level policies, institutional practices and particular student attributes can generally influence transfer, research indicates that several issues uniquely impact CTE student transitions.

**Systems Alignment:** Literature indicates that fundamental issues of communication and coordination between two- and four-year systems contribute to the disjointed nature of career pathways for CTE students, including transfer. With separate leadership and governance structures, limited understanding of one another’s expectations for learners and minimal cross-system collaboration, higher education systems may produce challenges for vocational students pursuing transfer.

**Transferability of Credits:** According to the literature, a range of issues specifically related to course transferability impact CTE transfer, including the following.

- **CTE Courses.** The research reveals that the transferability of occupational versus traditional liberal arts and sciences courses may vary by institution and system, indicating that the willingness of four-year institutions to accept CTE credit earned at community colleges may impact student success in this transition. On a related note, CTE course requirements for

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**University Centers:** A handful of community colleges across the state have generated partnerships with public and private universities based on local needs and resources, offering students opportunities to complete bachelor’s degrees in a range of CTE disciplines. In 2006, the California legislature also allocated $100,000 for the Baccalaureate Partnership Program (BPP), an effort to increase access to bachelor’s degrees in areas with low four-year degree attainment and meet a documented local labor market demand.

**Bachelors of Vocational Education:**
CSU-San Diego, CSU-San Bernardino and CSU-Sacramento offer this option, intended for vocational professionals with more than seven years experience who wish to teach in their area of expertise. Students are awarded credit for their work in a particular occupation and take teacher education classes at the university.

**Bachelors of Applied Studies:** CSU-Dominguez Hills and CSU-Stanislaus both offer this degree which is designed for community college students who have earned a CTE associate degree for which there is no complementary baccalaureate-level training. The interdisciplinary curriculum focuses on preparing students with management and supervisory skills.

**Special Articulation & Transfer Agreements:** Initiatives like the Intersegmental Major Preparation Articulate Curriculum and Lower-Division Transfer Pattern have promoted agreements to facilitate community college students’ transfer into particular occupational disciplines.

**What models does California use to support CTE transfer?**

While California does not generally appear in the literature, ground-level investigation reveals that the state is in fact home to strategies focused on facilitating occupational transfer.
sub-baccalaureate certificates and degrees may differ from the lower-division prerequisites for transfer majors, causing students to take a larger number of units when pursuing both goals.

- **General Education (GE) Courses.** While states may establish minimum GE requirements for community college CTE degrees, these guidelines may not mandate that this coursework be transferable. Additionally, the GE requirements established by accrediting agencies and certifying bodies for certain CTE community college programs may not align with those of receiving four-year institutions.

- **Applied Academics Courses.** Some practitioners and researchers argue for integrating academic and vocational skill building through applied academic courses as a means for enhancing transfer. However, research shows that receiving institutions may not award credit for these courses or may only do so for a limited few.

- **Articulation Agreements.** While some research indicates that state-level articulation policy can support transfer, few states have developed system-wide agreements that support transfer in CTE programs and often these agreements focus on one or two disciplines. The literature indicates that many states show articulation activity at the individual college and university level; however, these localized agreements can leave students navigating a confusing array of arrangements that vary from institution to institution, making course selection challenging.

**CTE Program Goals and Expectations:** The literature also discusses how the historical view of CTE programs as terminal—expecting CTE students to end their education with a community college degree or certificate—may impact students’ transfer experience. Despite their educational and career interests or needs, some researchers assert that CTE students receive little encouragement to pursue transfer. Another study indicates that when community colleges focus on awarding certificates in CTE disciplines rather than degrees, student attainment, including transfer, is negatively impacted.

(Endnotes)
