

Career and Technology Education: Many Paths, Equal Rigor and One Destination for Texas High Schools

**Executive Summary
September, 2008**

By Chris Patterson



Texas Institute for Education Reform

"Every child a high school graduate ready for college, the workplace and citizenship."

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Texans are striving to meet the twin challenges of increasing the high school graduation rate and equipping high school graduates with the knowledge and skills necessary for postsecondary success. Like other states, Texas is using Career and Technology Education (CTE) reform as a lever for improving the performance of all high school students. CTE reform has proven a powerful lever for systemic improvement of secondary education in other states and nations because CTE generally serves a large population of high school students, customarily enrolling a high proportion of students who struggle to succeed in traditional high schools.

Two distinct models of CTE reform have emerged in Texas and other states. The primary difference between the two models consists in the role that CTE plays in the organization of teaching and learning in high school. The first model integrates high school college-preparatory academics into CTE, and expands the choice of occupational and technical programs within CTE. Most states presently use this model – redesigning CTE to serve as an academically rigorous, technically sophisticated, and occupationally-relevant alternative to the general college-preparatory academic program. This model represents an enhancement of the traditional high school program; it offers students the opportunity of choosing to enroll in CTE or a wholly academic program, or a blend of the two, both of which are designed to ready students for postsecondary success. The second model uses CTE as a framework for comprehensive school reform, redesigning high schools by organizing instruction into a selection of career clusters (occupational areas) and career pathways (a selection of course sequences and work-based learning activities that relate to the students' career choice). Students must select a career pathway by no later than 8th grade, but are permitted to review and revise this selection annually, provided the chosen pathway is locally available and revision will not prevent on-time graduation. Although described as high school redesign, the more appropriate description is K12 reform because, in addition to high school reform, the model integrates occupational awareness into the elementary school curriculum and introduces occupational activities in middle schools for students for career exploration. In reorganizing K-12 around vocational or occupational preparation, the second model significantly changes and limits what and how students learn. At present, five states are implementing this model.

Both models are present in Texas public schools today in a variety of forms, including: Tech Prep, High Schools That Work, magnet schools, and career academies. Generally, Texas school districts offer CTE as an option or alternative to the college preparatory academic program; however, there are some districts that have replaced traditional high school options with a fully integrated academic and vocational program that must be completed by all students (a reform that reflects the second CTE model). The diverse forms of CTE, evident throughout Texas public schools, have been encouraged by a long history of strong local control for CTE instruction, historically considered a local option. Over the past decade, however, state policymakers have introduced sweeping reforms to the traditional high school program in Texas public schools, strengthening the academic program and CTE, as well as strengthening state authority over both forms of instruction. A new state initiative, AchieveTexas, was introduced in 2006 to provide a framework for districts to reorganize K-12 education around career pathways and blending academic and career preparation for all students. This initiative reflects the second national model of CTE, although in Texas this reorganization is presently voluntary for districts (unlike the statewide mandate established by the five other states presently engaged in this reform).

Today, Texans stand poised at a critical juncture in CTE and high school reform. Will CTE become a viable *part* of the high school curriculum – an academically rigorous, technically sophisticated, occupationally relevant alternative to the college preparatory academic curriculum? Or will CTE become the *entire* framework for high school instruction – serving all students and eliminating the choices associated with traditional high school instruction? Answers to these questions are enormously important for every student in Texas public schools. Of equal importance are the questions: What should students learn in Texas public schools, and who should make this decision?

The preponderance of evidence from CTE reforms introduced by other states indicate the first CTE reform model – strengthening CTE – as a viable alternative to the fully academic program is an effective lever for improving high school outcomes and postsecondary transitions. There is also strong international evidence that this approach significantly increases secondary and postsecondary success, as

well as reduces the achievement gaps between student groups. Additionally, international evidence suggests the fully academic, optional college preparatory program is an essential component of public education, particularly for high diverse student populations.

Findings of research also support the first model of CTE reform. Numerous studies confirm the need for a school, district or state system to offer a diverse array of educational choices, and conclude that different student groups require different educational experiences in order to succeed. Additionally, numerous studies reveal the significant educational limitations of using CTE as a framework for comprehensive K-12 reform (the second reform model). This approach defies the fundamental lesson that can be learned from research and the practice: no one single educational system, program, course, or instructional method has ever succeeded in meeting the needs of all students. Texas can increase high school completion and successful transitions to college and workplace by enhancing both the fully academic program and technical education. Texas public schools must provide many paths of equal rigor, both academic and technical, that lead all students to the one destination of postsecondary readiness.

Recommendations for Reforming Texas CTE

- Enact legislation that clarifies the meaning of HB 3485 and validates the educational obligations of school districts to offer high school students the opportunity to choose to concentrate either in CTE or a fully academic, traditional Liberal Arts program;
- Reserve state policy decisions that introduce fundamental reforms to the public school curriculum for elected representatives of the Texas Legislature or State Board of Education;
- Make CTE a viable (academically and technically rigorous), and attractive option for high school students;
- Expand, enrich, and diversify the menu of CTE options available to all students in every school district;
- Expand, enrich, and diversify the ways that CTE is delivered to students, including a choice of applied and theoretical instruction, and virtual classrooms;
- Revise the CTE course curriculum requirements to ensure they are relevant to current and emerging occupations, and include college and workforce readiness standards;¹
- Ensure that all school districts provide all high school students the opportunity to choose to concentrate in either CTE or the traditional, fully

academic Liberal Arts program, or a combination of both;

- Equalize access to high quality educational programs between schools and districts by developing a state sponsored electronic high school;
- Require all students to take the college preparatory, core academic curriculum through 10th grade and establish occupationally focused versions in core subjects (math, science, English and Social Studies) for grades 11 and 12 that cover the state curriculum standards – TEKS;
- Ensure that all CTE and academic courses/programs culminate in postsecondary readiness, credits, industry-recognized credentials, or state licenses;
- Define the educational outcomes of CTE and all graduates of Texas public schools that are associated with postsecondary readiness, including completion of specific core high school courses and minimum scores on tests of college readiness;
- Define a list of required CTE courses that constitute coherent sequences for a broad, diverse selection of occupational opportunities;
- Require districts to use external, industry-related or national association tests whenever possible for CTE course assessments;
- Predicate state approval and funding for CTE courses that lead to industry certification wherever available and postsecondary credits;
- Phase out weighted CTE funding for courses that are not part of a state-approved coherent sequence, and base state CTE funds initially on completion (but not passing) of approved courses and externally-developed end-of-course tests;
- Designate state funding to underwrite the costs related to test-taking for certification, accreditation, licensure, and credentials;
- Develop a recommended ratio of academic and CTE courses for high school students;
- Encourage school districts to expand Tech Prep as the primary model for CTE and withhold state funding for reform models that have not proven the equal to or superior to Tech Prep;
- Treat CTE courses the same as academic courses with regard to dual credit and GPA weighting;
- Establish state guidelines for state, federal, and privately funded grants for CTE and all high school redesign initiatives to
 - align grants with state goals for postsecondary readiness,
 - prioritize grants that are based on evidence that programs increase high school graduation and postsecondary readiness,
 - evaluate student outcomes of each grant annually and compare high school graduation

rate and postsecondary outcomes of students participating in grant programs with students who are not, and

- terminate grants that do not produce targeted student outcomes for high school graduation and postsecondary readiness within 3 years.
- Strengthen statewide articulation of college credit between high schools and colleges in a way that is economical for students;
- Create a seamless system for transferring credit from public community colleges to state four-year colleges; and

- Create a new K-20 public education information system that provides specific, real-time detail about CTE students, programs, teachers, and schools that is necessary to evaluate and improve outcomes (and begin with clearly identifying the number of students participating in different kinds of CTE, the number and kind of different CTE programs, and the number of schools offering only some form of CTE).

¹ The author has taken the liberty of including a recommendation for CTE reform issued by the Governor's Competitiveness Council in the *Council's Report to the Governor* (June 2008), available online at <http://www.governor.state.tx.us/gcc>.

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Who is TIER?

TIER is a 501(c)(3) non-profit, non-partisan organization of community and business leaders throughout the state who have organized themselves to raise public awareness and educate Texas opinion leadership on the current status of public education in Texas, the progress of our standards and accountability-based reforms to date, the prognosis for achieving the essential universal educational proficiency of the children of Texas, and the daunting challenges that we face in doing so.

Through its leaders and advisors, TIER has access to the nation's leading education policy experts and will use these resources to provide the best available research-based strategies, benchmarked practices, and policy innovations.

For more information, to order a copy of the complete report, or to learn how you can become involved in TIER's mission, contact Andrew Erben at (512)477-1006 or visit our website at www.texaseducationreform.org.

Acknowledgements

TIER is indebted to Pat Bubb (Executive Director of Tech Prep of the Rio Grande Valley), Lee Holcomb (Director for Evaluation and Special Projects, Texas Schools Project), and Drew Scheberle (Senior Vice President of Education and Talent, Greater Austin Chamber of Commerce) for generously sharing their expert knowledge of public education research and practice, reviewing this paper and providing suggestions. TIER is, however, solely responsible for all interpretations of fact, recommendations, and any possible error.

About the Author

Chris Patterson serves as a consultant for state and national policy centers, and provides analysis of K-12 research and state education policy. She is a policy advisor for TIER, visiting scholar for the Texas Public Policy Foundation, member of the board of directors of the Texas Center for Education Research (appointed by the State Board of Education), research associate with the National Center for Performance Incentives at Vanderbilt University, and member of the Texas High School Completion and Success Initiatives Council (appointed by the House Speaker of the Texas Legislature).