

## **EXECUTIVE SUMMARY**

### **An Evaluation of the Outcomes of Career and Technical Education in San Diego Unified School District (SDUSD): A Descriptive Case Study**

**April 25, 2014**

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The authors are indebted to Shawn Loescher, Director, and Lynn McConnville, Program Manager, of the College, Career, and Technical Education (CCTE) Department, SDUSD, as well as Ron Rode, Executive Director of the Office of Accountability (SDUSD), and Peter Bell, Director of the Research and Reporting Department (SDUSD), for their assistance during the course of this research project. Thanks are also due to the many principals, teachers, counselors, students, Employer Outreach Specialists, and district office staff who contributed to the success of the project by volunteering to participate in interviews and focus groups.

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The Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV) requires the U.S. Department of Education (ED) to conduct a National Assessment of Career and Technical Education (NACTE) in order to examine the status and effectiveness of career and technical education (CTE) in the United States. To broaden this national evaluation, the ED has commissioned a number of district-level studies aimed at determining factors that lead high school students to enroll in, and successfully complete, CTE coursework.

An ongoing ED-commissioned research project at the University of California, San Diego (UCSD) addresses (1) the CTE course offerings in San Diego Unified School District (SDUSD), (2) the students enrolled in this CTE coursework, and (3) the relationship between CTE course taking and a variety of outcomes, including gains in test scores, grade promotion, on-time graduation, completion of college preparatory coursework, and postsecondary outcomes.

This study extends the analysis of student outcomes described above to include a descriptive case study of the CTE programs at seven SDUSD high schools. Specifically, the study uses qualitative and quantitative data to examine the programmatic, organizational, and institutional elements associated with particularly effective vs. less-than-effective CTE programs at study schools, examine the extent to which each factor contributes to the success of the CTE programs at study schools and in the district, describe changes made, and changes anticipated, by study schools and the district, identify barriers to success or improvement, describe the ways in which staff characterize their CTE programs, and determine how students (i.e., concentrators, participants, non-participants) at one high school characterize the CTE program at their school.

The selection of case study high schools was based primarily upon schools' classification as "effective" vs. "less-than-effective" using two CTE and two academic outcome measures. Schools were identified as effective if they demonstrated higher performance than other San Diego high schools in both CTE outcomes (i.e., higher than average percentages of CTE two-course concentrators in 2007-08 and higher than average CTE course enrollment in Fall 2009) *and* both academic achievement outcomes (i.e., higher than average statewide or similar schools ranks based on the 2008 Academic Performance Index and higher than average 2008 graduation rates relative to the state average). Conversely, schools in the below average range for all CTE and academic outcomes were considered less than effective. Ultimately, seven schools (four effective, one "on the move," and two less-than-effective) were selected for participation in the study.

The primary data collection methods employed in the case study were interviews with district office College Career and Technical Education (CCTE) Department staff, principals, counselors, CTE teachers, and Employer Outreach Specialists, and focus groups with Grade 12 students who were – or who were on-track to becoming –

two-course CTE concentrators, students who were CTE participants, and students who were non-participants. In-depth interviews with 39 site-based and district office CTE staff were conducted in May and June 2010 at study high schools and the SDUSD CCTE Department offices. The three student focus groups discussions were conducted in May 2010.

Questions related to the programmatic, organizational, and institutional elements of CTE programs at study sites were informed by the California Department of Education's (CDE) *2008-12 California State Plan for Career Technical Education: A Guide for High-Quality Programs* and ConnectEd: California Center for College and Career's *Capacity and Needs Assessment Tool*. Programmatic elements were High Quality Curriculum and Instruction, Skilled Faculty and Professional Development, Student Support and Student Leadership, Career Exploration and Guidance, Middle School Orientation and Preparation, and Industry Partnerships. Organizational elements were System Alignment and Coherence, Confluence of Efforts, Effective Organizational Design, Postsecondary Articulation, Facilities and Equipment, and CCTE Promotion, Outreach, and Communication. Institutional elements were Leadership at All Levels, System Responsiveness to Changing Economic Demands, Evaluation, Accountability, and Continuous Improvement, and Funding.

The two primary goals of this descriptive case study are (1) to examine the programmatic, organizational, and institutional elements associated with particularly effective vs. less-than-effective CTE programs in selected SDUSD high schools and (2) to describe the ways in which career technical education is structured and managed in a large, urban school district. Differences in response patterns were explored by gender, role (i.e., principal, CTE teacher, counselor, Employer Outreach Specialist, CCTE Department staff), school/office experience (i.e., 0-2 years, 3 or more years), district experience (i.e., 0-5 years, 6-15 years, 16 or more years), school performance (i.e., effective, less-than-effective, "on the move"), school/office type (i.e., small high school, comprehensive high school, district office), and location type (i.e., school site, district office).

*Characteristics of the CTE Program at "Effective" vs. "Less-than-Effective" Schools*  
Surprisingly few differences were observed, by school performance (i.e., less-than-effective, "on the move," effective), in interviewees' responses to questions about the implementation level of each CTE program element at their schools, the impact/importance of each element to the success of their CTE program, or in their descriptions of the CTE program elements at their schools.

Significant differences in implementation ratings and impact/importance ratings for the 16 CTE program elements studied were found most often by role and school/office type. No significant differences were found, by gender, for any implementation or impact/importance rating.

Overall, statistically significant differences were found in interviewees' implementation ratings in 9 of 112 cases (i.e., 16 elements X 7 groups) – five related

to programmatic elements, three to organizational elements, and one to institutional elements. Statistically significant differences in impact/importance ratings were found in 13 of 112 cases – four related to programmatic elements, five to organizational elements, and four to institutional elements. Given that we might expect differences in interviewees’ ratings to be due to chance in five percent of cases, this finding allows us to reject our null hypothesis that no significant differences existed across groups for implementation and impact/importance ratings.

*Implementation and Impact/Importance Ratings of CTE Program Elements.* When asked to rate the implementation of each of the 16 CTE program elements at their school/in the district, interviewees gave highest ratings to High Quality Curriculum and Instruction, Skilled Faculty and Professional Development, Effective Organizational Design, and System Responsiveness to Changing Economic Demands. Interviewees gave lowest implementation ratings to Middle School Preparation and Orientation and CTE Promotion, Outreach, and Communication.

When asked to rate (via a Spend-a-Dot activity<sup>1</sup>) the impact/importance of each CTE program element to the overall success of the CTE program at their site/in the district, interviewees gave highest ratings to High Quality Curriculum and Instruction, Skilled Faculty and Professional Development, Industry Partnerships, and Funding. Interviewees gave lowest impact/importance ratings to Middle School Preparation and Orientation, System Responsiveness to Changing Economic Demands, CTE Promotion, Outreach, and Communication, and Effective Organizational Design.

Interestingly, “High Quality Curriculum and Instruction” and “Skilled Faculty and Professional Development” received highest implementation *and* the highest impact/importance ratings from interviewees.

*Modifications to CTE Programs.* A majority of interviewees reported that changes had been made to the CTE program at their school or in the district over the last five years. Most often, modifications were described as changes to the CTE program or coursework, changes in site CTE staff, increasing numbers of CTE courses or students, or new facilities. Reasons mentioned most often for making changes to the CTE program included principal or site staff initiative, a desire to build or improve the CTE program, and the availability of new funding. Interviewees reported a number of outcomes associated with changes made to the CTE program, including a higher

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<sup>1</sup> The Spend-a-Dot activity was used to capture interviewees’ opinions about the relative importance of each program element. Each interviewee was given 32 adhesive dots and asked to distribute (“spend”) them among the 16 elements of an effective program, based upon the perceived importance/impact of each element on the CTE program at the school/in the district. Interviewees were told that a maximum of eight dots could be spent on any one element, and that assigning zero dots to one or more elements was permitted.

quality program, increased numbers of highly qualified teachers, increased teacher enthusiasm and motivation, and better support for students.

Nearly half of interviewees reported that changes to the CTE program at their school or in the district would be made in 2010-2011. Most often, interviewees said that it was likely that there would be fewer teachers, fewer Employer Outreach Specialists, and fewer CTE classes in 2010-11 – largely due to anticipated budget cuts affecting the CTE program. On a more positive note, interviewees said that the reasons for making changes to the CTE program in 2010-2011 included a desire to increase student engagement, motivation, and outcomes. In equal numbers, interviewees believe that the outcomes associated with making these changes are a stronger CTE program, a weaker CTE program, and improved outcomes for students.

*Barriers to Program and Student Success.* A majority of interviewees believe that there are barriers to the success of the CTE program at their school/in the district. Barriers to CTE program success mentioned most often include insufficient funding, master scheduling challenges, and lack of University of California ‘a-g’ designation for CTE coursework. A majority of interviewees also believe that there are barriers to student success at their school/in the district. Barriers to student success listed by interviewees include insufficient workplace skills/motivation for students, community issues, and lack of adequate facilities, equipment, and supplies.

*Staff Encouragement for CTE Participation.* More than half of interviewees said that staff encourages students to participate in the CTE program. Most often, interviewees reported that high achievers are the students likely not to be encouraged to participate in CTE.

*Benefits of CTE Program Participation.* Benefits of CTE program participation mentioned most often by interviewees include career awareness and exploration, acquisition of job skills, acquisition of life skills, real-world relevance/application in coursework, and engaging/motivating coursework.

*Who benefits from CTE Program participation?* More than three-quarters of interviewees said that some groups of students benefit more from CTE program participation. Interviewees said that students who benefit most tend to be those who struggle in core academic coursework, are “active”/prefer hands-on learning, or have poor study skills/motivation.

*Is there a “typical” CTE student at the school/in the district?* Not one interviewee said that there is a “typical” CTE student at the school/in the district.

*Student Perceptions of CTE.* When asked to describe the CTE program at their high school, students in all three groups (non-participants, participants, and concentrators) had difficulty describing the CTE pathways or the range of CTE coursework offered. They characterized the CTE program as “very good” – giving high marks for CTE course quality. However, they differed in their opinions of the

workload and level of rigor of CTE coursework – with non-participants characterizing CTE coursework as less demanding than did participants and concentrators. CTE teachers were characterized as less formal – but more knowledgeable and personable – than teachers of core academic subjects.

Most often, students in the non-participant group reported that they did not enroll in CTE coursework because there was no room in their schedules. Students who did enroll did so to fulfill district graduation requirements, because they heard about the coursework from fellow students, or because counselors suggested enrollment to them. Students in all three groups suggested that students who do not enroll in CTE coursework do so because they might not have room in their schedules or that they might not find value in CTE because “they don’t know what it has to offer.”

Those who do complete CTE coursework/pathways were characterized as “a step ahead,” “more prepared,” and more experienced than their peers. Like staff, students in all three focus groups remarked that there is “no such thing” as a typical CTE student. The benefits of taking CTE coursework listed by students included acquiring useful skills, making contacts, discovering career options, hands-on experience, getting a jump start, clarifying college plans, and acquiring job experience.

### *Conclusions*

Although few statistically significant differences were found in interviewees’ responses to questions about the implementation levels and the impact/importance of the elements of their CTE program, important insight into the challenges associated with implementing a comprehensive, high quality CTE program in a large, urban school district was gained during the course of staff interviews. The conclusions and observations below are drawn from staff interviews, student focus groups, and document review.

1. There was clear evidence of a structured, comprehensive, and robust CTE program in San Diego Unified School District, at both the district and site levels. Interviewees’ descriptions of the program, its successes, and its challenges were remarkably similar.
2. School site staff characterized the district’s CCTE Department as respected (both within the district and beyond), well-organized, and “present” – and viewed district office CCTE staff (at all levels) as accessible, knowledgeable, and supportive.
3. The quality of the professional development provided by the CCTE Department – especially for CTE teachers new to the teaching profession – was widely acknowledged by principals and teachers.
4. Although interviewees gave high marks to the CCTE Department’s vision, leadership, and support, they were frustrated by the relatively low levels of

awareness of, and support for, the district's CTE program by the Board of Education and senior leadership.

5. Surprisingly few site-based staff (regardless of role) and students (whether non-participants, participants, or concentrators) were able to describe their school's CTE program (e.g., list the career pathways offered at the school, describe the progression of coursework in a given pathway).
6. A majority of interviewees gave low implementation and impact/importance ratings to CTE Promotion, Outreach, and Communication – and, at the same time, voiced dissatisfaction with the lack of awareness and support of the CTE program at their school/in the district.
7. Even though interviewees reported – almost universally – that all 16 CTE program elements were a part of the CTE programs at their schools, it was apparent that effective implementation and coordination of those elements was a challenge for site-based staff.
8. There was clear agreement that principals' understanding of, and advocacy for, the CTE program is critical to its success.
9. The establishment of complete career pathways at case study high schools – as well as maintaining those pathways, once established – is a significant challenge.
10. While interviewees provided rich descriptions of the student leadership development component of Student Support and Student Leadership Development program element, their descriptions of student support were weak.
11. Responses by staff based at small schools (or at a smaller learning community within a comprehensive high school) – where all students are expected to complete one of a limited number of career pathways – indicate that the small school environment allows more effective integration of CTE and core academic coursework (and common planning time for CTE and non-CTE teachers), features more active, project-based learning, builds and protects career pathways, and produces higher percentages of CTE concentrators.
12. Staff members at the “on the move” school (regardless of role or tenure) were universally committed to building and maintaining a high-quality CTE program at their school and optimistic about succeeding in that endeavor.
13. Although differences in implementation ratings, by district experience, for the 16 CTE program elements were *statistically* significant for only one element (High Quality Curriculum and Instruction), it is important to note that interviewees with more district experience gave lower implementation ratings

to 15 of 16 the elements, and gave the same implementation rating to the remaining element.

14. At all seven case study schools, there was evidence of substantial involvement by business and industry partners – more than 350 districtwide.
15. There was widespread concern about the budget for the 2010-2011 academic year, and the negative impact expected budget cutbacks would have on the CTE program at the district and site levels.
16. Districtwide budget directives – especially those related to procurement – adversely affected the CTE program at case study high schools.
17. Staff and students had remarkably similar opinions about the benefits of CTE program participation for students.
18. When asked if there was such a thing as a “typical CTE student” at their school/in the district, not one staff member or student said yes.