

# Study: Dual Enrollment Can Benefit a Broad Range of Students

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Dual enrollment programs that enable high schoolers to enroll in college courses and earn college credit can positively influence students in career and technical education (CTE) programs, according to a recent study by the Community College Research Center (CCRC). The study finds that CTE students who participated in dual enrollment courses had better educational outcomes than their classmates who did not participate. The report, which was funded by the U.S. Department of Education via the National Research Center for Career and Technical Education, provides evidence that CTE students can benefit from participating in programs to prepare them for college as well as careers.

## WHAT IS DUAL ENROLLMENT?

Dual enrollment programs are collaborative efforts between high schools and colleges, in which high school students (usually juniors and seniors) are permitted to take college courses. These programs provide students with a challenging academic experience and the opportunity to earn college credit prior to high school graduation. However, unlike in other programs, such as Advanced Placement, dual enrollment students take college courses with college syllabi. Dual enrollment programs vary in their structure and content. They may be taught on a college campus, with high school students integrated into regularly offered classes and sitting next to regularly matriculated college students. Sometimes, they are taught at a high school by either a college faculty member or a high school teacher who has the same credentials as a

college faculty member and is certified as a college adjunct. In this case, the college usually oversees the course syllabus to help ensure that students receive the same course content and are held to the same standards as students taking the course on a college campus.

Dual enrollment programs were once limited to students in college-prep tracks. Today, however, they are often seen as appropriate for many students, including those who have not performed well in traditional academic environments. This is because dual enrollment programs are believed to lead to a range of positive outcomes, including increasing the academic rigor of the high school curriculum; helping low-achieving students meet high academic standards; providing more academic opportunities and electives in

cash-strapped, small or rural schools; preventing high school dropout and increasing student aspirations; helping students acclimate to college life; and reducing the cost of college to students. Thus, many dual enrollment programs are opening their doors to a wider group of students than before.

This expansion includes CTE students, who are increasingly being offered the opportunity to take dual enrollment courses—often as explicit parts of their CTE programs. Including college courses helps CTE educators achieve a number of important goals. First, dual enrollment courses can help upgrade the CTE curriculum by providing students with access to rigorous college courses. As educators are increasingly aware, CTE students can no longer be prepared only to enter the workforce imme-



diately after high school; they must also have the academic skills to attend college. Dual enrollment helps develop CTE students' academic skills while demonstrating to them the potential benefits of college, and exposing them to the expectations of postsecondary education.

Second, dual enrollment builds upon the promise and shortcomings of previous CTE reform efforts, particularly Tech Prep. A key shortcoming of Tech Prep is that students often do not benefit from its "credit-in-escrow" or "articulated coursework" model that requires matriculation to the partnering college before the award of credit or advanced standing is made. CCRC researchers and others have found that many Tech Prep students do not know about, or do not take advantage of, articulated credit. To address this, many Tech Prep programs are now turning to dual enrollment courses instead. With dual enrollment, the credit is automatically

transcribed once students successfully complete a course, whether they end up attending the partnering college or not.

Finally, dual enrollment enables high schools to offer students CTE opportunities without having to invest in costly equipment necessary to prepare students for technical fields, equipment that is available at the colleges. By enabling high school students to take courses on the college campus, high school CTE programs can expand options for students without additional drain on their resources. It should be noted that although many embrace the idea of expanding dual enrollment programs to include a wide range of students, some educators and policymakers are wary of such a change. They fear that students who have not performed well in their previous high school courses will be unsuccessful in college courses, thereby starting college with failure already on their transcripts. They also worry that the

quality or content of the college course will be watered down in order to help students be more successful.

### **WHAT DO WE KNOW ABOUT DUAL ENROLLMENT'S EFFECTIVENESS?**

Despite the popularity of dual enrollment, we have not known much about its effectiveness as a strategy for increasing students' college success. This is true generally, and is particularly true for CTE students. Part of the reason for this is that researchers have just started to study dual enrollment, and these early studies have primarily documented what these programs look like or what state policies are necessary to support them.

In addition, studies of dual enrollment are often difficult to conduct because we lack the appropriate data to truly understand if dual enrollment helps students be more successful in college. Specifically,



we need an understanding of the characteristics of students before they take dual enrollment courses, so that we can compare similar students who participate in dual enrollment and who do not participate. Unfortunately, such data are hard to come by because the data high schools collect on their students are not often connected to the data colleges have. Thus, there are few studies that examine, in a statistically rigorous way, the relationship between dual enrollment participation and subsequent postsecondary outcomes. Moreover, because including CTE students in dual enrollment on a large scale is relatively new, until now no studies have investigated this population in detail.

## METHODS

In this study, we were able to follow students from high school to college. We had information on students' high school grades and college transcripts. We also had information on students in CTE who took dual enrollment courses and those who did not. This meant that we could compare students who were similar on many characteristics, but differed on whether or not they took a college course in high school, and explore whether these two groups were different in terms of their success in college.

## WE ASKED FOUR QUESTIONS:

1. What are the short-term effects of participation in a dual enrollment program for CTE students as measured by high school graduation and college enrollment rates?
2. What are the effects of participation in a dual enrollment program on CTE students' initial entry into postsecondary education, such as first-semester grade point average and persistence to the second semester?
3. What are the long-term effects of participation in dual enrollment for CTE students, as measured by their persistence into the second year of postsecondary education, grade point average, and credit accumulation?
4. Does the program effect vary by high school achievement, gender or socioeconomic status?

To answer these questions, we analyzed two large-scale, existing administrative datasets using statistical methods that accounted for students' backgrounds. The datasets were from the state of Florida and New York City, both of which have large dual enrollment programs.

## FINDINGS

We analyzed the datasets as follows. In Florida, we compared CTE students who took dual enrollment courses in high school with CTE students who did not. We defined CTE students in this case as

those who met the National Center for Education Statistics' definition of a CTE concentrator—those who took three or more courses in the same labor market preparation area. In New York, we had data on students who graduated from one of the city's 19 CTE high schools and subsequently enrolled in the City University of New York (CUNY) in 2001 and 2002; we compared students who participated in the city's dual enrollment program, College Now, with those who did not. In our statistical analyses of both groups of students, we were able to control for students' high school grades and socioeconomic background.

We found consistently positive outcomes for CTE students who participated in dual enrollment, as compared to their CTE classmates who did not do so. For short-term outcomes, we could only examine students in Florida. For these students, dual enrollment participants were one percent more likely than their peers to earn a diploma; though it sounds small, this is statistically significant. Participation also appears to encourage students to pursue college after graduation. CTE students in Florida who took dual enrollment courses were more likely to enroll in college and of those students who enrolled in any college, dual enrollment participants were more likely to enroll full-time. CTE students in Florida who took dual enrollment courses were almost nine percent more likely to enroll in a four-year college than their peers who did not take a college course in high school.

Once they were in college, CTE students who had taken dual enrollment courses continued to have more positive outcomes than their non-participating CTE classmates. In Florida, but not in New York, dual enrollment students were more likely to persist in college. Florida dual enrollment students were four percent more likely to still be enrolled in college one year after high school graduation, and were five percent more likely than their non-participating peers to remain enrolled after two years. Dual enrollment participation was related to higher grades in college in both locations, indicating that taking a college course in high school can prepare CTE students for success in postsecondary education. It's important to remember that we were able to control for students' previous academic experiences, so our positive findings are not due to differences in students' pre-existing academic abilities.

In Florida, CTE students who took a dual enrollment course had grade point averages one year after high school graduation that were 0.26 points higher than their similar classmates who did not take dual enrollment courses. After three years of college, this difference remained; dual enrollment students had grade point averages 0.24 points higher than non-dual enrollment students. In New York City, CTE students who participated in dual enrollment also had higher grade point averages, though the relationship was not as strong. Finally, dual enrollment-participating CTE students made faster progress toward a college credential than non-participating dual enrollment students. Three years after high school graduation, dual enrollment participants in Florida had earned

15 more college credits than non-participants. In New York, CTE dual enrollment students earned 10 more credits than their non-dual enrollment peers three and a half years after first entering college.

Part of the argument for expanding access to dual enrollment programs lies in an assumption that some types of students, such as those from low-income families, may benefit from early exposure to the demands of a college course. We examined whether the positive findings were particularly strong for students from these groups. We used statistical methods to examine whether males, students with lower high school grade point averages, or students from economically disadvantaged families benefited more from dual enrollment participation than females, those with higher high school grades, or those from economically advantaged families.

Given the small size of our New York City sample, we could only examine outcome differences by gender and we found no significant differences. In Florida, we were able to run analyses for all of the sub-groups. We found that, in many cases, male and low-income CTE students benefited more from dual enrollment participation than their peers. On some measures, CTE students with lower high school grades also benefited to a greater extent than students with higher grade point averages.

## CONCLUSIONS AND IMPLICATIONS

The findings provide a generally promising picture of dual enrollment as a strategy for encouraging student access to, and persistence in, postsecondary education. Although more research, using different datasets and additional methods of accounting for pre-existing student characteristics, is necessary, we believe these results provide strong evidence that dual enrollment can be an effective transition strategy for many students. Thus, the spread of dual enrollment may be warranted and states and programs should consider ways

THE FINDINGS PROVIDE A PROMISING PICTURE OF DUAL ENROLLMENT AS A STRATEGY FOR ENCOURAGING STUDENT ACCESS TO, AND PERSISTENCE IN, POSTSECONDARY EDUCATION. WE BELIEVE THESE RESULTS PROVIDE STRONG EVIDENCE THAT **DUAL ENROLLMENT CAN BE AN EFFECTIVE TRANSITION STRATEGY** FOR MANY STUDENTS. **THUS, THE SPREAD OF DUAL ENROLLMENT MAY BE WARRANTED AND STATES AND PROGRAMS SHOULD CONSIDER WAYS TO ENCOURAGE PARTICIPATION FOR A BROADER RANGE OF STUDENTS.**

to encourage participation for a broader range of students. This expansion should include CTE students, as preparation for continued studies in postsecondary education is increasingly important in all fields.

Connections between colleges and high school CTE programs should be strengthened so that CTE students have additional opportunities to engage in college coursework while in high school. At the state level, this means that modifications in policy may have to occur. Some states target dual enrollment to academically advanced students and direct funds away from CTE students seeking such opportunities as a result. Such policies should be rethought in order to encourage more CTE student participation in dual enrollment. At the program level, long held beliefs about which students should participate in dual enrollment and which courses should be offered must also be reconsidered. New relationships between dual enrollment coordinators and high school CTE teachers should be developed, and those in charge of recruiting students into dual enrollment programs should seek ways to target CTE students for program participation. The current trend in CTE reform is to include dual enrollment as part of a sequence of CTE courses. This builds upon and improves Tech Prep and other reforms. There has been some skepticism as to the efficacy of this approach. Our findings, however, indicate that initiatives such as the federally sponsored College and Careers Transitions Initiative are on the right track when they seek ways to combine CTE pathways and dual enrollment opportunities.

As states redefine their CTE programs in response to reforms in Perkins funding, they should seek policy levers to encourage the creation of pathways that include dual enrollment for CTE students. This may include funding streams that reward programs with a dual enrollment component or other levers to encourage dual enrollment over the traditional articulated credit or credit-in-escrow models. At the institutional level, collaborations among high schools and colleges should focus on ways that dual enrollment can be integrated into existing and new curricular pathways. **T**

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