



COLLEGE CREDIT IN HIGH SCHOOL: DOING THE MATH ON COSTS

MARGUERITE ROZA AND CAITLIN BROOKS

The last five years have seen a surge in state policy efforts designed to enable students to earn college credits while still in high school.¹ To date, 47 states now have laws or regulations governing dual enrollment² and 48 have state policies surrounding the Advanced Placement (AP) program.³

For most lawmakers, the rationale for having high schoolers accumulate college credits is twofold: To increase the odds of success in higher education and to save money. This paper focuses exclusively on the latter. The thinking is that by studying college-level material and earning college credits while in high school, students need fewer credits to graduate once they enroll in college, presumably translating into less money spent on pricey higher education credits (less money spent by taxpayers and/or by students). Legislators seem especially persuaded by this promise of cost savings. The lure of saving on higher education costs (both public and private) is obvious, with higher education a major expense both for states, when the student attends a public institution, and for families.

Yet until this analysis, we haven't known the actual extent of savings (if any) tied to taking college classes in high school because almost no such cost analysis exists. This brief seeks to fill the gap by investigating the costs of providing college credit in high school for models in three states: Florida, Georgia, and Ohio.⁴ We examine costs paid by public dollars, in addition to costs borne by students and families (private dollars). We then compare those costs to the costs of attaining credit *after* graduating high school in those same states.

In the models we studied across three states, we found that costs varied substantially depending on the program details. In all three states, dual enrollment triggered some double funding; Public funds essentially paid for the student to be in two places (both high school and college) at the same time. Thanks to double funding, the dual enrollment program did not yield public savings for any state studied. In two states, the cost analysis actually revealed **higher** costs to the state when compared with the public dollar cost of equivalent credits taken *after* high school graduation. In all but one scenario, we found that college credit earned in high school by taking high school AP courses was the option that carried the least incremental cost in public dollars. (This finding is unsurprising given that most AP course costs are already covered by existing K-12 funding for high school coursework.)

1. Gross, Natalie. "Two Places at Once: The Growth of Dual Enrollment." Education Writers Association. March 18, 2016. Accessed August 1, 2017. <http://www.ewa.org/blog-higher-ed-beat/two-places-once-growth-dual-enrollment>.

2. Zinth, Jennifer D. "Dual Enrollment: Statewide Policy in Place." Education Commission of the States: 50-State Comparison. March 2016. Accessed August 2016. <http://ecs.force.com/mbdata/MBQuestRTL?Rep=DE1501>.

3. Zinth, Jennifer D. "Advanced Placement Policies - All State Profiles." Education Commission of the States: Individual State Profile. 2006. Accessed August 2016. <http://ecs.force.com/mbdata/MBQuestRTL?Rep=DE1501>.

4. States were selected based on the availability of participation and spending data by program type.

Different models carry different cost implications

A range of program types let students obtain college credits while still in high school. The box at the right describes the most common models. But implementation of these models varies by state and, sometimes, by district or school.⁶

The advanced placement (AP) and International Baccalaureate (IB) models don't require coordinated delivery with an institution of higher education, but rather involve high school teachers delivering college-level content assessed by an exam designed to verify college-level mastery. The exams cost roughly \$100 per course: Details like who foots the bill vary by locale. The two dual enrollment models (one where courses are delivered on college campuses, the other where courses are taught at the high school campus) involve some level of cooperation between institutions of higher education and high schools. Here again, the cost implications for the high school, college, and family tend to vary from program to program depending on local determinations around what costs are incurred and who pays what.

Figure 1: Dual Enrollment Model Overview
<p>Traditional Dual Enrollment - Course taken on College Campus</p> <p>Students take college course at a local post-secondary institution; course is taught by a post-secondary faculty member. Student performance in the course determines college credit eligibility at the partnering institution.</p>
<p>Traditional Dual Enrollment - Course taken on High School Campus</p> <p>Students enroll in a college class taught by a post-secondary faculty member at their high school campus. Student performance in the course determines college credit eligibility at the partnering institution.</p>
<p>Advanced Placement (AP) and International Baccalaureate (IB)</p> <p>Students take AP or IB courses at the high school taught by a high school faculty member. A test is taken at the end of the course. Colleges then choose—depending on the score—whether students are eligible for credit at their institution.</p>
<p>Early College High School⁵</p> <p>Students take high school and college classes such that they earn a degree from the partnering post-secondary institution at the same time they earn a high school degree.</p>

To find incremental cost for college credits, follow the funding

This analysis seeks to uncover the incremental spending per pupil for a three-credit college course taken while in high school. By “incremental” spending, we aimed to identify any *extra* spending (both public funding and student-paid tuition or fees) *beyond* what is typically funded per pupil for public high school. Some states may give additional funding for high school students taking college coursework; others may not. The funding mechanisms vary. Below, we quantify these incremental extra dollars per pupil.⁷

In traditional dual enrollment, when a student takes a course at college while in high school, the college receives some funding on behalf of that student. Depending on the arrangement, those funds might come out of the school district's state aid allotment (in which case the money isn't “extra” or incremental). Or the state might fund the college separately for some portion of the high school student's costs on top of what the state is paying the district for that student (in which case the funds are “extra” or incremental). And/or the college might require the student to pay tuition. Depending on the state and the program, the total incremental costs may involve one or a mix of these scenarios.

5. Early College High School models were not studied in this analysis.
 6. It is worth underscoring that it is entirely up to a college's or university's discretion as to whether to accept college credits earned in high school through these models.
 7. This approach to quantifying incremental spending focuses more on the costs to government funding mechanisms supporting college credit in high school than on computing the actual price tag of delivering a course. Because this paper examines cost from the perspective of various state policy options, it makes sense to examine what states are spending (versus how funds eventually are divided up among participating institutions).

Other reasonable ways to run the numbers on incremental costs associated with taking a college course in high school include an expenditure approach, isolating that portion of a school's funding that was actually used to deliver the course. But for this paper, we've chosen a funding approach that *best tracks to state policy*, such that expanding or eliminating a program would result in a proportionate change in taxpayer funding or private individual spending as computed here.

Public costs hinge on each state's funding model

Only when following the money do the cost implications become clear. Take Florida's dual enrollment program. The state's basic funding for school districts is the same per high school student (regardless of whether the student is taking college credit). When the student participates in dual enrollment, the state then requires the school district to pay the post-secondary institution the standard in-state tuition (\$315.21 per three-credit course) for each course taken by a high school student on the college campus.⁸ These funds aren't incremental since the \$315.21 comes out of the public funding already paid to educate the high schooler. However, that \$315.21 in tuition covers only a *portion* of the full cost of a student taking a class on a public college campus: Public colleges also receive separate direct support from the state, designed to keep in-state tuition low for all students taking their classes.

To compute the three-credit per student share of the state subsidy the higher education institution, we divided the total state contribution to each type of public college⁹ by the total number of credits taken by all students at that type of college. Using this method, we found that the average state subsidy for a three-credit course at a Florida community college was \$647 per student and at a public four-year university was \$2,522 per student. Figure 2 illustrates and compares the incremental costs of a high schooler taking a three-credit college course across various models and types of public institution.

In some Florida school districts, students can earn college credit by taking a class taught by a college professor (or college-certified professor) *on the high school campus*. This arrangement has a different cost structure as the district directly pays the professor's salary and benefits and does so out of the K-12 public funding the school district gets to educate the high school student.¹⁰ In this arrangement, the state pays no more on a per-student basis than if the student were taking a normal high school class.

In states like Georgia and Ohio, a dual enrolled student's funding for tuition and fees is delivered as a stand-alone state program, in addition to state funding for high school, and does not involve the transfer of public funding from the school district to the postsecondary institution.¹¹ In effect, both states double pay for the student: They pay for the student to attend high school *and* they separately pay for the

8. Average per FTE spending data is approximately \$9,450 Snyder, Thomas D., and Sally A. Dillow. "Digest of Education Statistics 2013." Table 236.65. Current expenditure per pupil in fall enrollment in public elementary and secondary schools, by state or jurisdiction: Selected years, 1969–70 through 2010–11. May 2015. Accessed August 2017. <https://nces.ed.gov/pubs2015/2015011.pdf>.

9. "Delta Cost Project: Florida." Delta Cost Project at American Institutes for Research. Accessed August 1, 2017. http://www.deltacostproject.org/sites/default/files/products/deltacost_2010_stateprofile_FL.pdf.

10. The professor's cost are covered out of the district money, regardless of whether the professor's earnings are above or below the norm for a high school teacher.

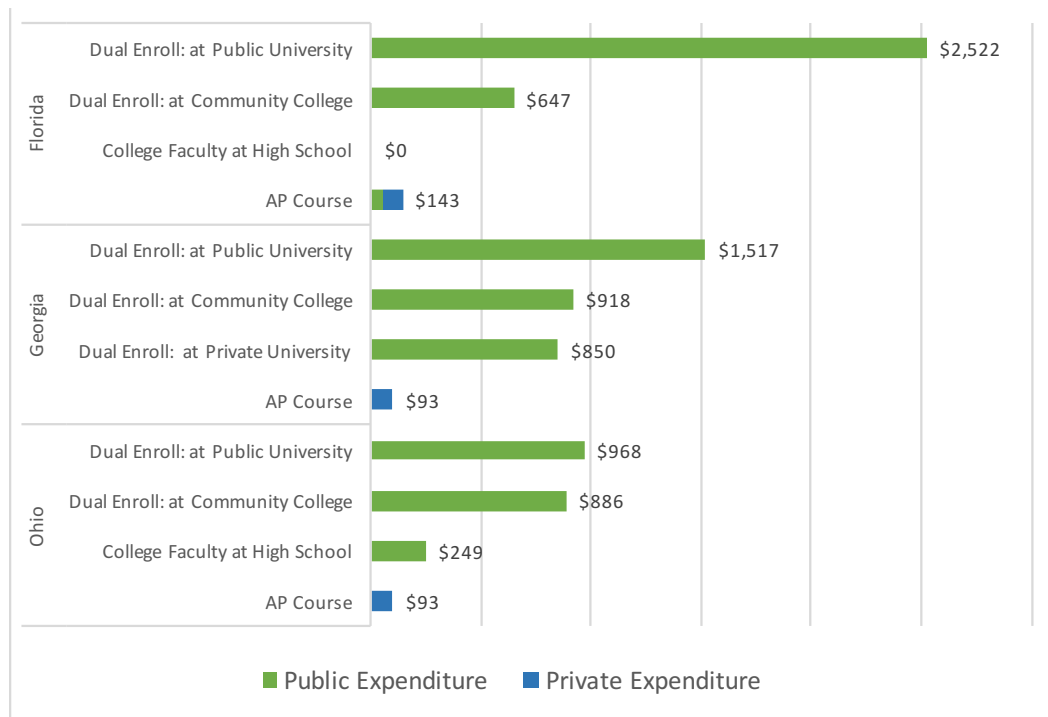
11. "Move On When Ready Frequently Asked Questions For High Schools, Home Study Programs and Eligible Postsecondary Institutions." Georgia Student Finance Commission. October 2016. Accessed August 2017. <https://www.gafutures.org/media/113472/mowr-high-schools-home-study-programs-and-postsecondary-institutions-faqs.pdf>. "College Credit Plus: Resources for Administrators." Ohio Department of Higher Education. Accessed August 1, 2017. <https://www.ohiohighered.org/ccp/resources>.

tuition and fees for the student to attend college. For these states, the dual enrollment student’s share of the state subsidy to the higher education institution (to support all course-taking students) must be added to the college tuition cost per course to determine the incremental funding per three-credit course.

For Georgia’s dual enrollment program –Move on When Ready (MOWR)¹² – the incremental costs for each high schooler taking a three-credit class are \$1,517 at a public university and \$918 at a public community college. Georgia high schoolers can also dually enroll at a *private* university, where the only incremental cost is the state-reimbursed tuition, set at \$850 per three-credit course.

Ohio’s dual enrollment program –College Credit Plus – is much like Georgia’s, although Ohio does not include private universities. For Ohio, the incremental cost involves tuition reimbursement plus each student’s share of the direct state subsidy for the public postsecondary institution. The incremental public funding to support each high schooler taking a three-credit college class total \$968 at a public university and \$886 at a public community college. Similar to Florida, Ohio also has a dual enrollment program where college (or college-certified) professors teach college classes on the high school campus. These programs do not tap the direct state subsidy to colleges, thus the incremental costs are a more modest \$249 to cover tuition costs per pupil for a three-credit class.

Figure 2: Incremental cost for a three-credit course taken in high school varies by state and program



12. MOWR is funded by the Georgia State Finance Commission (GSFC).

AP classes generally do not involve a separate state funding stream

In addition to the dual enrollment programs on offer in various states, many high school students can also earn college credit through Advanced Placement (AP) courses (or similarly through the International Baccalaureate, or IB, program¹³). In most cases, the \$93 AP test fee is paid for by the student or their family (and is sometimes subsidized by the district or state for low-income students). In most states, the state makes no additional expenditure to deliver the AP courses; districts draw on their standard state and local funding stream to offer AP classes.¹⁴

Of our three focus states, only Florida included a separate state funding stream for AP classes. The state pays each teacher a \$50 bonus for each student who receives a 3 or higher on the AP test with a \$2,000 cap per teacher.¹⁵ Adding the \$50 a student state bonus yields a total per-student, per-course cost of \$143, with \$93 of that in student-paid fees.

In Georgia and Ohio, the only incremental costs associated with a student taking an AP class were the student-paid exam fees, making total incremental spending for an AP course \$93 in private dollars.

Most of dual enrollment incremental costs stem from ‘double funding’

Depending on the model the state selects, the public cost of having high schoolers take college courses varies substantially. For typical dual enrollment programs where students take a college course at a public community college, the public cost per student per course amounts to \$647 in Florida, \$918 in Georgia, and \$886 in Ohio. While less costly than college classes taken at public universities (where the state supplement to the university tends to be higher on a per pupil basis than to public colleges or community colleges), the costs are still substantially higher than credits students earn by remaining physically on the high school campus. Total incremental cost per pupil for course credits earned via the AP program totaled only \$143 in Florida and \$93 per course in Georgia and Ohio. Incremental costs were lowest (zero) in the Florida model where students take a college course taught on their high school campus by a college teacher.

Much of the cost disparity can be traced to state policies that “double fund” students who are simultaneously counted as being in high school (and funded accordingly) while also being on the enrollment rolls at the college (where they are also subsidized with state support). In Georgia and Ohio, public funds cover the tuition portion of the dually enrolled students’ higher education costs.

13. The AP and IB programs function similarly. For the purposes of this paper, we quantified only the incremental spending on the AP program.

14. Some schools may find that they are spending more per student on an AP class, although this extra expenditure comes from shifting costs around within the school, and not from drawing on more state resources.

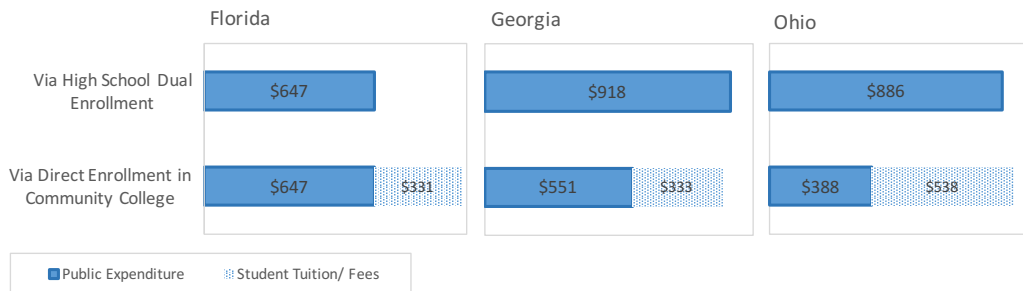
15. The 2017 Florida Statutes.” Official Internet Site of the Florida Legislature. Accessed August 1, 2017. http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&URL=1000-1099/1011/Sections/1011.62.html.

State funding mechanisms determine if dual enrollment saves on costs down the road

In the next step of this analysis, we compare the cost of credit attainment while in high school to the cost of equivalent credit attainment after completing high school. Specifically, we compare: a) how much it costs the state for a student to take a three-credit college course while still in high school versus b) the cost for that same course if taken after the student has graduated high school and is enrolled in college. In Figure 3 we compute the state (and student) cost per course for community colleges in Florida, Georgia and Ohio.

Figure 3 shows that in Florida, the *public* cost of taking a course at the community college is the same (\$647) whether that course is taken while still in high school or after the student graduates and directly enrolls in college. But if the student waits until after high school graduation to take the course when she is directly enrolled, the *private* incremental cost to the student is \$331 in tuition and fees.

Figure 3: Incremental costs vary for a community college course if taken via dual enrollment or direct enrollment



In Georgia and Ohio, the state will spend substantially more for the student to take a college class while in high school than for that same class taken later in college (in the case of Ohio, more than twice as much). For college classes taken while still in high school in these states, public sources bear all costs for dual enrollment. When students directly enroll in the community college, in Georgia the state still pays more per-course than the student, but in Ohio, the student pays more per-course than the state. In both states, the total cost of a course is roughly the same whether a student is dual enrolled or directly enrolled: What changes in dual enrollment is the cost burden to the state.

In all three states, as Figure 3 shows, students and families have a cost incentive for dual enrollment.

Cost assumption versus cost reality: states should do the math

These wide cost disparities ought to prompt policymakers to ask what they are getting in return for their public dollar in each program. Part of the push for getting high schoolers to take college classes is the notion that doing so will improve their chances for persevering in college and securing a postsecondary degree. If, in fact, the costlier programs are more successful at achieving those outcomes than the less expensive programs, the costlier programs may indeed be worth the extra public funding allocated to them.

Effectiveness in meeting the above goal aside, many policymakers see these credit attainment programs as potential cost saving measures. If high school students can graduate high school with some college credits under their belt, the rationale is that such early credit accumulation will reduce the cost (and time) of completing a postsecondary degree—both for the student and for the publicly funded higher education institution. On this point, the cost of the credit attainment program for high schoolers is central to determining whether the program is successful or not.

Yet the data show that the cost implications vary substantially by state, program, and funding details inherent in a state's dual enrollment design and state education funding formulas. **None of the three states yielded a public savings for credits accumulated via dual enrollment.** If designed like the program in Florida's dual enrollment policy, costs stay steady regardless of whether the student takes the class while in high school or college. In Georgia and Ohio, the dual enrollment program results in a higher public cost per course than taking the same course after graduating from high school. In all three states studied, students have an incentive to take the college class while still enrolled in high school because they (the students) can save money. The state, however, does not save money on a per-course basis.

Amid the hype, policymakers need to run the numbers to see if their assumptions about savings are legitimate. Better yet, they should take stock of all postsecondary credit attainment programs to gauge their cost and value accordingly.



THIS SERIES OF RAPID RESPONSE BRIEFS IS DESIGNED TO BRING RELEVANT FISCAL ANALYSES TO POLICYMAKERS AND EDUCATION LEADERS AMIDST THE CURRENT ECONOMIC ENVIRONMENT.

CONTRIBUTING AUTHORS

DR. MARGUERITE ROZA is the Founder and Director of Edunomics Lab and Research Professor at Georgetown University.

CAITLIN BROOKS is a research affiliate of Edunomics Lab.

Edunomics Lab is a university-based research center dedicated to exploring and modeling complex education fiscal decisions and growing the capacity of education leaders on the topic of education finance. The Edunomics Lab is affiliated with the McCourt School of Public Policy at Georgetown University.