
Dual Enrollment in Maryland and Baltimore City: An Examination of Program Components and Design¹

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Overview

Dual enrollment programs offer students the opportunity to enroll in college courses while still enrolled in secondary school. Traditionally, dual enrollment programs have appealed to high-performing college-bound students; however, today there is growing interest in encouraging access to dual enrollment programs for a broader range of students. Increasingly, policymakers are endorsing dual enrollment as a strategy to promote college readiness, increase postsecondary enrollment, and even decrease the cost of college (Cowan & Goldhaber, 2015; Karp, 2012; Struhl & Vargas, 2012). By offering students the opportunity to gain college-level experience while in high school, dual enrollment programs are seen as a strategy for giving high school students a “jump start” on postsecondary education and for improving their performance in college.

Proponents of dual enrollment policies note a number of benefits of these programs for students (Hoffman, 2005). Dual enrollment programs can increase the rigor of high school programs, especially for students who are not challenged by the regular high school curriculum (Cowan & Goldhaber, 2015). Such programs can also provide students, especially first-generation college-bound students, with an opportunity to experience a college curriculum, “test” their readiness for college, explore different career options, and develop a more informed strategy for applying to a postsecondary institution (Karp, 2012). By providing students with college experiences while in high school, dual enrollment programs can improve the transition from high school to college for students who traditionally are under-represented in postsecondary education (Allen & Dadgar, 2012; An, 2013). Dual enrollment also has the potential to deliver long-term financial benefits to students and the state (Cowan & Goldhaber, 2015; Hoffman, 2005). Parents save on college costs because credits earned usually can be applied toward a college degree. For the state, it can shorten the time to college graduation and reduce the need for remediation courses in college.

Dual Enrollment in Maryland

As part of Maryland’s effort to enhance college and career readiness, and college completion, the General Assembly passed the *Maryland College and Career Readiness and College Completion Act of 2013* (CCR-CCA), which included provisions to encourage high school students to enroll in college-level courses (State of Maryland, 2013). The legislation established tuition arrangements between local boards of education and

¹ Lisa Davies Berglund provided research assistance for this report.

public institutions of higher education for each dually enrolled public school student. It sets guidelines for how much institutions of higher education can charge for tuition and requires each local board of education to pay for up to a maximum of four dual enrollment courses per eligible public school student. Tuition for low-income students is waived, but local boards can charge non-low-income students up to 90 percent of tuition costs. In Maryland, institutions of higher education offer dual enrollment courses, and local education agencies are responsible for informing eligible students of the opportunity to enroll in college courses while in high school. In the absence of legislation mandating program design, local school boards partner with institutions of higher education to develop policies, procedures, and program details that guide implementation. Colleges and local boards determine eligibility requirements.

So far, participation rates in Maryland's dual enrollment program have been low, and the program has not encouraged access across a diverse range of students. Statewide, about 11 percent of 12th grade students enrolled in a dual credit course in the 2014-15 school year (Henneberger, Cohen, Shipe, & Shaw, 2016).² In Baltimore City, enrollment was 2 percent, among the lowest in the state. Furthermore, Henneberger, et al. (2016) report that low-income and minority students were underrepresented in dual enrollment programs across Maryland in 2014-15. Low-income 12th grade students accounted for 21 percent of dually enrolled students despite a statewide enrollment of 34 percent (Henneberger et al., 2016). Minority students were also underrepresented. In 2014-15, 22 percent of 12th grade dually enrolled students were black compared to a statewide enrollment of 36 percent; dually enrolled 12th grade Latino students represented 7 percent compared to 11 percent statewide. In comparison, white students represented 65 percent of 12th grade dually enrolled students, but represented just 49 percent of the 12th grade students enrolled in Maryland's public schools.

The underrepresentation of low-income and minority students in Maryland's dual enrollment programs is reflective of other postsecondary enrollment and demographic trends in the state. While the number of high school graduates in the state has remained about the same since 2008, the number of full-time entering freshmen at Maryland public and private institutions of higher education decreased 14 percent between 2009 and 2014 (Popovich, 2015). Most of this decline is attributed to fewer black students enrolling in college and an apparent decline in the enrollment of lower-income students. This decline was particularly large in Baltimore City, where the number of high school graduates remained about the same, but the number of entering freshmen from Baltimore declined 45 percent between 2009 and 2014 (Popovich, 2015).

These college-going trends run counter to changes in the demographic composition of the school-age population in the state. The proportion of white students in the state's public schools is declining, while the proportion of black students has stabilized, and the proportion of Latino students has increased (Sunderman & Dayhoff, 2014). At the same time, the proportion of low-income students is also increasing, with a corresponding rise in the income-based achievement gap (Casalaspì, Sunderman, Croninger, & Luchner, 2015; Reardon, 2011). The demographic shifts in the school-age population, the increasing

2 The majority of 2014-15 dually enrolled students (72 percent) were 12th grade students (Henneberger, et al., 2016).

share of lower-income students in the public schools, and a corresponding drop in average SAT scores in the state (Popovich, 2015, 2016) provide a worrisome set of indicators about how the college-age population is changing.

Maryland's CCR-CCA legislation set the laudable goal of increasing college and career readiness, and established dual enrollment as one mechanism to facilitate that goal. However, if Maryland is to provide equitable access to effective dual enrollment programs, legislators and local policymakers will need to design programs that address both the dual challenge of changing demographics among the school-age population and the declining enrollments of low-income and minority students in Maryland's postsecondary institutions.

To better understand how local policymakers may be addressing these challenges, we examine how four districts in Maryland designed and implemented dual enrollment following the passage of the CCR-CCA. The following section reviews the literature on dual enrollment, discusses its limitations, and develops an analytical perspective for examining the dual enrollment program in Maryland. Next, we present the study's design. In this section, we describe the characteristics of districts selected for study and show dual enrollment patterns by type of higher education institution. In the third section, we examine the implementation of dual enrollment in four districts, including the transition challenges encountered by districts and colleges as they complied with the CCR-CCA, how program design features varied by local school system, and the institutional arrangements that impeded or facilitated dual enrollment. The final sections offer our conclusions and recommendations.

Research on Dual Enrollment

To date there is surprisingly little research on dual enrollment programs, even though many states, like Maryland, have state policies that promote these programs.³ Much of the research that is available has been conducted by the programs themselves or advocates, and thus tends to emphasize positive outcomes rather than objectively reporting impacts (Bailey, Hughes, & Karp, 2002). There is some empirical evidence on the effects of dual enrollment participation on students' educational attainment, postsecondary enrollment choices, or success in college. This literature suggests that participation in dual enrollment is positively related to college enrollment, persistence in college, and degree attainment (Allen & Dadgar, 2012; An, 2013; Cowan & Goldhaber, 2015; Karp, Calcagno, Hughes, Jeong, & Bailey, 2007; Speroni, 2011; Struhl & Vargas, 2012). However, studies find mixed effects for low-performing students. There is evidence that lower-performing participants in dual enrollment programs enroll in college at higher rates than expected but such students are also more likely to drop out of high school or fail to complete high school on time (Cowan & Goldhaber, 2015). These counterintuitive results point to the need for more research on which components of dual enrollment programs influence high school completion and college enrollment.

3 See Education Commission of the States, <http://ecs.force.com/mbdata/mbprofallRT?Rep=DE14A> for a description of state policies.

On the other hand, there is little or no research on the components of dual enrollment programs or how those components influence students' decisions to enroll in a college course while in high school. Empirical studies tend to focus on the *effects* of dual enrollment overall rather than on the *mechanisms* that account for student access or attainment. Moreover, there is little evidence on *which* components of dual enrollment programs have the greatest influence on students' decisions to enroll. Because legislation in most states does not specify how school systems should provide dual enrollment programs, there is likely to be substantial variation in program components and design across school systems. Understanding which components and designs promote greater access and success for low-income students is a necessary first step in expanding the benefits of dual enrollment programs for all students.

Study Rationale

Many policies, including Maryland's, assume that if the program is offered and information on the program is provided, students will take advantage of it. However, we know from research on access to college that there are many potential obstacles to enrollment in addition to the financial costs of college, particularly for students from low-income and minority families (Avery & Kane, 2004; Berkner & Chavez, 1997; Cabrera & La Nasa, 2001; Horn, 1997; Klasik, 2012, 2013). This research suggests that there are likely impediments to enrollment in dual enrollment courses as well. By understanding the obstacles to enrollment in dual enrollment programs, as well as the strategies used to address those obstacles, policymakers and educators will be in a better position to craft interventions that can help students take advantage of the program.

To better understand how dual enrollment programs are designed and implemented in Maryland, particularly in Baltimore City, this research examined program components that may promote the goals of dual enrollment legislation, institutional arrangements that may incentivize enrollment in particular kinds of colleges, and the challenges that may hinder student enrollment. There are several reasons to focus on the design and implementation of dual enrollment programs. Maryland's legislation is vague on the design components of dual enrollment programs, which suggests that there will be considerable variability in how school systems design and implement the program and the kinds of supports provided to encourage enrollment. Given the differential enrollment in dual enrollment programs across the state, it is very likely that unobserved processes influence who enrolls and who does not. Unpacking these processes will both facilitate the design of the dual enrollment programs and identify points where policies and interventions may be most effective.

In addition, understanding the differential kinds of supports that students receive is necessary for understanding the program's potential impact and for identifying impediments to participation. There is some evidence that student support services are important for increasing both high school graduation and college enrollment (Webber & Ehrenberg, 2010), which has led policy researchers to suggest that these services may be an especially important component of dual enrollment programs for low-income students (Cowan & Goldhaber, 2015). Without understanding the design features of the program, it is difficult to interpret any outcomes we may observe through a quantitative analysis of the effects of dual enrollment.

Finally, programs such as dual enrollment are best understood when viewed as part of their broader institutional environment where institutions at all levels of the school system play a role in shaping policy and practice (Burch, 2007; Meyer & Rowan, 2006). These institutional arrangements matter in impacting policy outcomes because they may constrain agency decision-making by rendering some choices unavailable or precluding particular courses of action. For example, funding decisions may influence the ability of districts and colleges to grow the program whereas decisions on where to locate courses may create structural obstacles, such as transportation difficulties or scheduling conflicts that impede enrollment. On the other hand, institutional features, such as negotiated agreements between colleges and districts, or policies that facilitate the transfer of credit, may incentivize enrollment in particular kinds of colleges (Cowan & Goldhaber, 2015).

Study Design

Research Questions

The questions guiding this research were:

- *How do school systems in Maryland design and implement dual enrollment programs?* We identified dual enrollment program components such as how student eligibility was determined, what courses were offered and where, what supports were available for students, and how costs were determined and distributed.
- *Are there policies from other states that could inform Maryland's legislation on dual enrollment?* We reviewed policies and legislation from other states to identify how they have addressed challenges similar to those that we uncovered in Maryland.

Methodology

This research used a comparative case study method to examine the design and implementation of dual enrollment in four Maryland school districts—Anne Arundel County, Baltimore City, Baltimore County, and Prince George's County. We were particularly interested in understanding the Baltimore City program, but a comparative study that included Baltimore City and three other local school systems provided us with information on other policies and program practices that may facilitate or impede participation in dual enrollment. This approach allowed us to explore the nuances of dual enrollment programs and provided contextual information that furthered our understanding of program design and implementation.

This research was exploratory. The goal was not to show that one way of designing and implementing dual enrollment was preferred, but to discover what factors may facilitate or constrain enrollment, and to identify additional information that might be helpful in developing robust programs.

Selected District Characteristics and Dual Enrollment Patterns

The comparison counties were selected based on three criteria: (1) the demographic characteristics of the students (i.e., counties with significant minority and low-income enrollment); (2) dual enrollment program enrollment (i.e., counties with higher enrollment that may help identify “promising practices”); and (3) geographic proximity to Baltimore City. We selected Prince George’s County because it enrolls a high proportion of African-American and low-income students. Two counties, Baltimore County and Anne Arundel County, are in the Baltimore region. Baltimore County has a diverse student population, and Anne Arundel County, while not as diverse as the other counties in the study, has higher dual enrollment participation rates and is more diverse than many other counties in the Baltimore region.

Table 1 shows the demographic characteristics and enrollment of the four districts and the state. Three districts are minority-majority districts—Baltimore County, Baltimore City, and Prince George’s County—where non-white students comprise more than half of total enrollment. In contrast, white students represent 57.8 percent of enrollment in Anne Arundel County. The enrollment of low-income students ranges from 33.5 percent in Anne Arundel County to 84 percent in Baltimore City, followed by 62.8 percent in Prince George’s County and 47.5 percent in Baltimore County.

Table 1: Demographic Composition and Enrollment by District and State, 2014-15

District	Black %	White %	Latino %	Asian %	Multi-Racial %	FRPM %	Total Enrollment
Anne Arundel County	20.4	57.8	11.9	3.6	5.8	33.5	79,518
Baltimore City	82.7	8.0	7.4	1.00	0.5	84.0	84,976
Baltimore County	38.8	42.1	7.7	6.7	4.2	47.5	109,830
Prince George’s County	62.6	4.5	27.9	2.80	1.6	64.8	127,576
<i>State of Maryland</i>	<i>34.6</i>	<i>39.93</i>	<i>14.7</i>	<i>6.17</i>	<i>4.2</i>	<i>45.0</i>	<i>874,514</i>

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data.

Note: Eligibility for free and reduced-price meals (FRPM) is used to measure the number of students from low-income households.

As shown in Table 2, a total of 6,548 12th grade students were dually enrolled in Maryland in the 2014-15 school year, representing 11 percent of high school seniors in the state. The proportion of dually enrolled students in the four districts varies, ranging from 2 percent of 12th grade students in Baltimore City to 13 percent in Anne Arundel County. Between 2011-12 and 2014-15, the proportion of dually enrolled students increased in three districts—Anne Arundel County (3 percentage points), Baltimore County (4 percentage points), and Prince George’s County (3 percentage points)—and remained unchanged in Baltimore City. The statewide increase in dually enrolled students was 4 percentage points.

Table 2: Number and Percentage of Dually Enrolled 12th Grade Students by District and State, 2011-12 to 2014-15

District	2011-12		2012-13		2013-14		2014-15		Percentage Point Increase, 2011 to 2015
	N	%	N	%	N	%	N	%	
Anne Arundel County	512	10	534	10	724	14	709	13	3
Baltimore City	124	2	125	2	146	3	119	2	0
Baltimore County	625	8	551	7	672	9	905	12	4
Prince George's County	261	3	231	3	238	3	501	6	3
<i>State of Maryland</i>	<i>4,585</i>	<i>7</i>	<i>4,732</i>	<i>7</i>	<i>5,453</i>	<i>9</i>	<i>6,548</i>	<i>11</i>	<i>4</i>

Source: Maryland Longitudinal Data System. For 2011-12 to 2013-14 data: (Henneberger, Shar, Uretsky, & Woolley, 2015). For 2014-15 data: (Henneberger et al., 2016).

Enrollment patterns by type of higher education institution suggest that community colleges are the primary beneficiaries of dual enrollment. Table 3 shows the number and percentage of dually enrolled 12th grade students by type of institution. The majority of students (86 percent) attended a Maryland community college. One of the reasons for this enrollment advantage is that community colleges are regional—there is a community college available to students in every local school system.

Table 3: Number and Percentage of Dually Enrolled 12th Grade Students Attending Community Colleges, Four-Year Public Colleges/Universities State-Aided Independent Schools, and Out-of-State Institutions in Academic Year 2013-14

Total	Community Colleges		Four-Year Public Colleges/Universities		State-Aided Independent Schools (Private)		Out-of-State Institutions	
	N	%	N	%	N	%	N	%
5,742	4,935	86	424	7	94	2	289	5

Source: Maryland Longitudinal Data System. Henneberger, A. K., Shaw, T. V., Uretsky, M. C., & Woolley, M. E. (2015). *Dual enrollment in Maryland: A report to the General Assembly and Governor Lawrence J. Hogan*. Maryland Longitudinal Data System Center: Baltimore, Maryland.

Table 4 shows the growth in dual enrollment across 17 community colleges in Maryland. Between fall 2013 and fall 2016, the number of dually enrolled students increased 55.4 percent, from 4,532 to 7,042. Enrollment in fall 2016 was highest at Community College of Baltimore County (1,061) and Frederick

Community College (1,026), followed by Prince George’s Community College (800) and Anne Arundel Community College (788).

Table 4: Number of Students Dually Enrolled under the *College and Career Readiness Act of 2013*, Fall 2013 – Fall 2016

Community Colleges	Fall 2013	Spring 2014	Fall 2014	Spring 2015	Fall 2015	Spring 2016	Fall 2016
Allegany College of Maryland	47	52	125	134	113	121	98
Anne Arundel Community College	595	377	586	425	643	523	788
Baltimore City Community College		26	1	33	28	54	38
Carroll Community College	114	140	108	143	202	229	244
Cecil College	123	102	133	160	207	176	206
Chesapeake College	227	188	268	217	202	212	215
College of Southern Maryland	168	473	202	607	305	850	293
Community College of Baltimore County	685	607	742	654	912	745	1061
Frederick Community College	564	601	854	535	844	790	1026
Garrett College	32	34	33	28	63	106	130
Hagerstown Community College	658	516	618	588	601	573	615
Harford Community College	381	361	319	289	446	450	609
Howard Community College	82	75	99	90	177	354	221
Montgomery College	391	405	475	442	394	401	426
Prince George’s Community College	323	334	674	699	741	802	800
Wor-Wic Community College	142	126	183	190	200	220	272
<i>Total</i>	<i>4,532</i>	<i>4,417</i>	<i>5,420</i>	<i>5,234</i>	<i>6,078</i>	<i>6,606</i>	<i>7,042</i>

Source: MCCSAO Dual Enrollment Survey; data provided by Maryland Association of Community Colleges.

Data Collection and Analysis

Data collection included interviews and document analysis. We interviewed school district officials,⁴ college administrators, and Maryland State Department of Education (MSDE) administrators responsible for administering the dual enrollment program. Interviews included both individual and small group interviews, and lasted approximately 60 to 90 minutes. We used a semi-structured interview protocol that included questions such as: a) “Tell us about your dual enrollment programs;” b) “What changes did you make to your dual enrollment programs in response to the CCR-CCA?” c) “How would you describe the strengths and weaknesses of your current programs?” d) “What are the major challenges or issues that you have faced in implementing these programs?” and e) “What strategies have you used to address these issues and challenges?” We conducted 11 interviews (group or individual) with 19 people. This included interviews with two MSDE officials; nine with college or community college officials; seven with district officials; and one with a community college association representative.

We supplemented our interview data with document analysis. We scanned district and college websites to identify and collect documents on dual enrollment. This not only provided information on the district’s program but also allowed us to examine how the district or college communicated information about the program.⁵ In addition, we collected documents on dual enrollment from MSDE, district, and college officials. Finally, to identify dual enrollment policies in other states, we reviewed a national survey on state dual enrollment policies conducted by the Education Commission of the State (ECS) to identify major policy categories and states with robust state policies (Education Commission of the States, 2016; Zinth, 2014). We collected and conducted in-depth reviews of state policies in eight states (California, Colorado, Florida, Iowa, Kentucky, Minnesota, North Carolina, and Tennessee) that were identified as having robust policies.

Implementing Dual Enrollment: Description of Current Dual Enrollment Programs

Dual enrollment, in the most general sense and the one articulated in the CCR-CCA, allows students to enroll in college courses while in high school and to earn college credit for passing these courses.⁶ Because the legislation is silent on most design features, dual enrollment programs can vary on a range of factors. The literature on dual enrollment programs suggests three basic designs (Allen, 2010; Bailey & Karp, 2003):

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- 4 Anne Arundel County Public Schools (AACPS) declined our request to interview AACPS officials. Instead, we relied on information collected from its website. Since the community colleges are important partners, we interviewed officials at Anne Arundel Community College (AACC) about the dual enrollment program and its partnership with AACPS.
 - 5 We collected documents from the following colleges: Anne Arundel Community College, Baltimore City Community College, Community College of Baltimore County, Prince George’s Community College, Bowie State University, Morgan State University, University of Baltimore, Coppin State, and University of Maryland at College Park.
 - 6 The law defines a dually enrolled student as a student enrolled in both a secondary school in the state and an institution of higher education in the state (State of Maryland, 2013; 18-14A-01(a)(2)).

- Singleton programs: Students enroll in college courses while in high school and receive college credit for passing these courses. These programs most often offer “cafeteria-style” course options. Students may initiate interest and enroll on their own, or may receive assistance with the enrollment process from either the college or district.
- Dual credit or concurrent enrollment: Districts and colleges identify a list of approved courses that students can take and receive both high school and college credit.
- Comprehensive programs that integrate dual enrollment with other programs: Students take college courses during the 11th and 12th grade years to satisfy requirements for a high school diploma and an associate degree or other certificate concurrently. These programs typically involve a coherent sequence of courses, and provide internships and other opportunities to gain job experience.

The four districts in Maryland that we studied implemented dual enrollment programs that included elements of all three types of programs. While singleton programs—where high school students enroll in a college course—dominated implementation, districts also developed lists of courses that students could take and earn both high school and college credit. Districts often integrated dual enrollment into other comprehensive programs such as middle or early college high schools⁷, theme-focused academies, and Career and Technical Education (CTE) programming. Programs in each of the four districts are described below.

Baltimore County Public Schools

Baltimore County Public Schools (BCPS), through a partnership with the Community College of Baltimore County (CCBC), offers the College 4 Free program, which allows eligible high school juniors and seniors to enroll in up to four college courses tuition-free. This partnership also includes a Dual Credit Program, where students can take designated college courses at CCBC and earn both high school and college credit. CCBC covers 50 percent of tuition and BCPS pays the remaining 50 percent for both programs. Students are responsible for fees, books, and supplies, although low-income students are exempt from CCBC fees. In addition, CCBC offers other comprehensive, early college-access programs to BCPS students, including the Diploma to Credential (D2C) program, where students graduate with a high school diploma and a program certificate from CCBC; Career and Technology Education (CTE) pathways; Upward Bound, a college-preparation program for first-generation and/or low-income BCPS high school students; Gifted and Talented programs, where select 8th and 9th grade students can take college credit classes; and Advanced Placement programs, where students can receive CCBC credit for AP courses. Students who wish to take more than four college classes may do so as part of CCBC’s Parallel Enrollment Program (PEP); they only have to pay for the fees, books, and supplies, plus 50 percent of the tuition.

⁷ Middle or early college high schools are collaborations between a district and college that offer students an alternative high school program.

Baltimore City Public School System

Baltimore City Public School System (City Schools) and Baltimore City Community College (BCCC) have a signed MOU that allows students to enroll in college courses while in high school. The MOU identifies courses for which students can receive both high school and college credit. Tuition and fees are paid by BCCC. Because so few students met the enrollment criteria, City Schools extended the program to cover tuition for students to take developmental (i.e, remedial) courses at BCCC.⁸ Students can dually enroll at other colleges in the city, but no formal MOUs have been signed. In the 2015-16 school year, eight individual high schools had dual enrollment programs with the University of Baltimore, BCCC, or Coppin State University. The University of Baltimore offers College Readiness Academies (programs with partner high schools to teach math and reading/writing skills to prepare students for college and possible entry into UB’s dual enrollment program). Students who successfully complete a College Readiness Academy program or meet other criteria (i.e., passing a placement test) can enroll in dual enrollment courses. The goal of this program is to create more equity in access by providing students more options for meeting the enrollment criteria. Coppin State operates the Coppin Academy High School, a charter school located on the Coppin campus. It offers an early college program where students can earn college credit at Coppin.

Prince George’s County Public Schools

Prince George’s County Public Schools (PGCPS) has signed MOUs with Prince George’s Community College (PGCC) and Bowie State University (BSU). These MOUs spell out tuition arrangements and include a list of courses that students can take and receive both high school and college credit. For students attending PGCC, the college offers a 50 percent tuition discount (the law mandates at least a 25 percent tuition reduction). To encourage participation among low-income students—those eligible for free and reduced-priced meals (FRPM)—PGCPS pays for tuition, fees, and books for all qualifying students attending any Maryland postsecondary institution. PGCPS also offers concurrent enrollment for private and home school students to take college courses at PGCC. In addition, dual enrollment programming is integrated into the district’s middle college program, the Academy of Health Sciences at Prince George’s Community College. This is a four-year, comprehensive program with students earning both high school diplomas and associate degrees in health sciences. In addition to PGCC and BSU, students have also taken dual enrollment courses at the University of Maryland, Anne Arundel Community College, and the College of Southern Maryland.

Anne Arundel County Public Schools

Anne Arundel County Public Schools (AACPS) partners with Anne Arundel Community College (AACC) to offer students dual enrollment opportunities. At the time of this study, officials at Anne Arundel County Public Schools (AACPS) articulated that the district was in the process of blending the new CCR-CCA regu-

⁸ The CCR-CCA is silent on developmental courses as a dual enrollment option.

lations into its pre-existing Jump Start College Program and declined to participate in the study. Outlines of the current program were gleaned from the district’s website. The Jump Start program, a longstanding partnership between AACPS and AACC that allowed high school students to enroll in college courses, was renamed the Early College Access Programs (ECAP).⁹ Under ECAP, eligible high school students can receive both high school and college credit for certain, designated courses. AACC offers a 50 percent tuition discount. In addition, AACPS offers a series of advanced studies or comprehensive programs that incorporate college courses into the high school curriculum.¹⁰ Among these are its signature programs, offered at all high schools. Signature programs are organized around workforce themes—such as business, engineering, information technologies, and health and human services—and are designed to prepare students for college and careers.¹¹ The aim is “to connect classroom instruction with real-world situations and workforce relevant skills.”¹² The incorporation of dual enrollment into the district’s signature programs may in part account for higher dual enrollment among Anne Arundel public school students noted earlier.

Results

Transitioning to Districtwide Dual Enrollment Programming

Dual enrollment existed in all four districts prior to the passage of the CCR-CCA in 2013. These were local agreements entered into between colleges and districts, and in many cases, between colleges and individual schools. While these programs took different forms, they were largely dependent on the support and buy-in of principals and counselors at individual schools. Implementation often depended on the relationships colleges established with school-level administrators and their counseling units. For example, in Baltimore County, CCBC administrators worked with individual schools to cultivate student interest, enroll them, and collect tuition (CCBC, 9/23/16). In-school support for dual enrollment varied; for example, in some schools, there was support from counselors, but not the principals. CCBC also established “credit contracts” with a few schools to facilitate dual enrollment participation.

As districts transitioned from a school-level to district-level program, managing and navigating these pre-existing relationships and developing the policies and structures necessary to support a districtwide program presented major challenges. Dual enrollment is a structural reform that changes how educational systems are organized, how systems and institutions relate to one another, and how institutions arrange their work processes and practices (Karp, 2015). It requires colleges and school districts to work together to enroll students, identify course offerings, develop scheduling routines, and determine where

9 On Early College Access programs, see <http://www.aacps.org/html/studt/ecap.asp>

10 On Advanced Studies and Programs, see <http://www.aacps.org/admin/templates/sigprog.asp?articleid=959&zoneid=51>

11 On Signature Programs, see <http://www.aacps.org/admin/templates/sigprog.asp?articleid=1569&zoneid=75>

12 Advanced Studies and Programs, Signature Programs:
<http://www.aacps.org/admin/templates/sigprog.asp?articleid=959&zoneid=51>

classes will be offered and who will teach them. As one community college administrator said, “partnerships take a lot of time—at the front-end and ongoing maintenance” (AACC, 11/11/16).

Top-level administrative support, from both districts and colleges, facilitated the development of dual enrollment partnerships. This support, too, took different forms. In Baltimore County, the president of CCBC and the district superintendent made a commitment to support dual enrollment. CCBC signaled its importance by designating two deans and a vice president in charge of implementing the policy. Because these administrators had access to decision-makers at the very highest level of the administration, they could develop the policies and procedures needed to successfully implement dual enrollment and manage implementation issues as they arose. For example, early on, the academic credit that students received for dual enrollment courses was not the same as the credit students received for AP courses. When used to calculate a student’s GPA, dual enrollment courses were weighted lower than AP courses. This was a disincentive for high-performing students to enroll in dual enrollment because it affected their GPA. This was resolved by weighting dual enrollment courses the same as AP courses.

In Baltimore City, introducing a districtwide initiative interacted with, or in some cases replaced, existing partnerships between schools and colleges. Prior to the passage of the CCR-CCA, school leaders were encouraged and expected to be “entrepreneurial in seeking opportunities in their schools” (City Schools, 10/14/16). As a result, a number of schools had established “early enrollment” programs with BCCC or developed partnerships with other colleges. When the CCR-CCA passed, the district developed a plan to implement dual enrollment and signed an MOU with BCCC that established a dual enrollment program in compliance with the CCR-CCA. Because the eligibility criteria for the early enrollment and dual enrollment programs differed, BCCC ran both programs for two semesters (spring 2014 and fall 2014) and reported enrollment data on the two programs separately. The admissions criteria were eventually aligned and the two programs were rolled into one beginning with the spring 2015 cohort. Many of the earlier arrangements, including school-level programs and programs offered at other colleges, remained in place. Dual enrollment gained significant support from the new City Schools’ CEO who took office in July 2016. This signaled the importance of dual enrollment as part of the district’s strategic plan for improving student achievement, and facilitated coordination between district officials and school leaders in implementing dual enrollment (City Schools, 10/14/16; 11/14/16).

Prior to the CCR-CCA, there was no districtwide program or structure to facilitate student enrollment in Prince George’s County. It was up to students to initiate interest in participating, and school-level processes in place to facilitate dual enrollment, if they existed, differed by school. Students often went directly to the college to enroll. In addition, there were a few disparate programs operating at different schools across the district that contained elements of dual enrollment (PGCPS, 10/14/16). For example, an NSF Minority Student Pipeline Math Science Partnership (MSP2) grant provided opportunities for around 375 high school students over five years to take science courses through early college/dual enrollment programs. Oxon Hill High School offered a career academy engineering program in conjunction with the University of Maryland, and the district established a few programs based on a middle college model, most notably the Academy of Health Sciences at Prince George’s Community College. Following the pas-

sage of the CCR-CCA, the district reorganized and the superintendent assigned implementation of dual enrollment to the Department of College and Career Readiness; staff size doubled. The district signed MOUs with PGCC and Bowie State University, developed a list of courses that students could take at these colleges, and established tuition arrangements. To coordinate dual enrollment across institutions, PGCCPS created the Dual Enrollment Advisory Committee, co-chaired by the PGCCPS's Deputy Superintendent for Teaching and Learning and PGCC's Chief Academic Officer.

Anne Arundel County Public Schools (AACPS) has partnered with AACC to offer dual enrollment and dual credit courses for more than 20 years (AACC, 11/11/16). The Jump Start College Program, a partnership between AACPS and AACC, offered high school students the opportunity to take college courses at AACC and earn college credit. Dual credit was an option for some courses. Now called the Early College Access Program (ECAP), tuition arrangements—a 50 percent discount on tuition for students—and other admissions criteria established under Jump Start remained the same after the passage of the CCR-CCA. The district has also developed signature programs at each of the high schools that integrate college courses into the curriculum. These programs offer students a series of courses linked to a particular theme. For example, North County High School offers International Trade, Transportation, and Tourism; Glen Burnie High School offers Public Service; and Mead High School has a Homeland Security program. Depending on the program, the curriculum may include seminars with leaders in the field, internships, mentoring, technical and community college courses, online learning, and other real world experiences.¹³ These signature programs have continued, and at the time of this study, AACPS officials were in the process of reviewing current dual enrollment programming and deciding on future directions.

Dual Enrollment Program Design

Dual enrollment programs vary depending on state policies and local program requirements. Because the CCR-CCA is silent on most design elements, with the exception of funding, program decisions are made locally by partnering institutions. To identify how programs typically vary, we reviewed state policies and the literature (Allen, 2010; Karp, Bailey, Hughes, & Fermin, 2005). We then narrowed our focus to relevant program dimensions that emerged from our interviews and document analysis. In this research, we examined the following program variables:

- Funding arrangements: How do funding arrangements vary across districts and colleges?
- Eligibility criteria: What criteria must students meet to dually enroll?
- Support: What support and/or counseling are provided to assist students?
- Communication: How is information on dual enrollment communicated to parents and students?

13 AACPS, Signature Programs FAQ, <http://www.aacps.org/admin/templates/sigprog.asp?articleid=1570&zoneid=75>

Funding Arrangements

At the most basic level, dual enrollment under the CCR-CCA is a payment plan. The legislation codified statewide tuition guidelines for assessing and paying tuition costs, and now ensures that dually enrolled public school students receive a reduction in tuition when they enroll in a college course during high school.¹⁴ Tuition costs were shifted from students onto the districts, colleges, and universities, with districts responsible for a significant portion of tuition. Because the program is implemented locally, tuition and fee arrangements may differ by district and college.

By spelling out how much colleges and universities can charge for tuition and which institution is responsible for paying tuition, the law addresses one main obstacle associated with enrolling in college while still in high school: cost. Under the law, colleges must provide a tuition discount, and each local board of education is required to pay tuition for up to a maximum of four courses for each dually enrolled public school student. Although all students receive discounted tuition, low-income students particularly benefit from this law. Local boards are responsible for paying the full tuition charged for students who are eligible for free and reduced-priced meals (FRPM), and 10 percent of tuition is paid for non-FRPM students. Because colleges cannot charge students directly, they invoice the local board, which then reimburses each college. The law is silent on who is responsible for paying additional costs such as fees, books, and transportation. It does, however, contain a provision for an Early College Access grant, which is to be awarded to institutions of higher education to provide financial assistance to low-income students. However, funds have not been allocated for this grant.

Even though the law was very specific about funding, arrangements differ by district—and within districts—by college or university. Funding policies differed on the size of the tuition discount offered by colleges, the amount of the tuition subsidy provided by the district, which students received a tuition subsidy from the district, and whether the college or district covered the cost of books and fees. Most colleges followed the law and provided a 25 percent tuition discount. But some colleges offered larger tuition discounts. Funding arrangements most often went beyond the law’s requirements when there was a signed MOU with a college, but not always. For example, PGCPSS has a signed MOU with both PGCC and BSU, but PGCC offers the district a 50 percent reduction on tuition while BSU follows the law’s guidelines and charges the district 75 percent of the per-credit tuition costs.¹⁵ In addition, the district pays the

14 For up to four courses, public senior institutions of higher education can charge 75 percent of the per credit tuition costs, while community colleges can charge either 75 percent of tuition or 5 percent of the target per pupil foundation amount, whichever is lower. For each additional course, public senior institutions of higher education can charge 90 percent of tuition, and community colleges can charge either 90 percent of tuition or 5 percent of the target per pupil foundation amount, whichever amount is lower. The law requires each local board of education to pay tuition for up to a maximum of four courses for each public school student dually enrolled. Tuition is waived for students who are eligible for free and reduced-priced meals (FRPM), but the law does allow local boards to charge non-FRPM students 90 percent of the amount paid in tuition and 100 percent of tuition for more than four courses (State of Maryland, 2013).

15 Memorandum of Understanding Dual Enrollment between Prince George’s Community College and Prince George’s County Public Schools, 2014; Memorandum of Understanding Dual Enrollment between Bowie State University and Prince George’s County Public Schools, 2015.

full tuition for all students, both FRPM eligible and non-eligible, dually enrolled in any public institution of higher education in the state. The district also pays fees, books, and materials for FRPM students and administers the Accuplacer¹⁶ college placement test free of charge to all students.

Dual enrollment is more complex in Baltimore City than in many counties as there are several local colleges for students to choose from, including Baltimore City Community College (BCCC), University of Baltimore (UB), Coppin State University (CSU), and Morgan State University (MSU). While this provides students options, each college has its own admissions criteria, tuition arrangements, and application process. With the exception of BCCC, tuition arrangements follow the law's guidelines and expectations on what the colleges can charge the district and how much the district can charge students. To encourage enrollment, BCCC uses a combination of internal funding and grant funding to cover tuition and pay student fees (BCCC, 10/13/16). BCCC also covers the cost of Accuplacer testing. Because BCCC offset City Schools' tuition liability, City Schools extended the tuition arrangements to cover the cost of developmental courses taken at BCCC.

Prior to the passage of the CCR-CCA, there was an MOU in place between BCPS and Community College of Baltimore County (CCBC) that provided any BCPS student with a 50 percent tuition reduction. Called parallel enrollment, this program allowed high school students to take college courses at CCBC while in high school. Following the CCR-CCA, the district and CCBC redesigned the program and signed a new MOU, now calling it College 4 Free. The 50 percent tuition reduction remained, but the district decided to cover all tuition costs for students, making dual enrollment tuition-free for those attending CCBC. The district also pays college fees for FRPM-eligible students. To facilitate placement testing, students have two options. CCBC goes to the school site to administer the Accuplacer test, or students are bused to CCBC for testing. BCPS absorbs the transportation costs, and CCBC absorbs the costs of testing and staff time to administer the test and provide academic advisement.

Dually enrolled AACPS students attending Anne Arundel Community College received a 50 percent tuition reduction prior to the passage of the CCR-CCA. Students were responsible for books and other fees. These policies remained in place following the passage of the CCR-CCA. Some schools have foundation grants to offset tuition costs, and AACCC had a grant from the state that paid fees and books for eligible students based on need; however, funding for this grant is no longer available (AACCC, 11/11/16).

Eligibility Requirements

One goal of the CCR-CCA was to increase opportunities for high school students, particularly low-income students, to gain college experience and earn college credit while in high school. But to enroll, students must demonstrate the ability to access college-level courses. Because the law is silent on eligibility

¹⁶ The Accuplacer test is a computer-adaptive assessment designed to evaluate students' skills in reading, writing, and mathematics developed by the College Board. See <https://accuplacer.collegeboard.org>

requirements,¹⁷ colleges determine these criteria, although districts may have input or additional requirements. In addition, students must apply and complete the application process required by the college where they wish to enroll. Each of these steps presents potential obstacles to student enrollment and can create disparities in who takes advantage of the program (Klasik, 2013).

In all four districts, student eligibility requirements were based on objective indicators of a student's ability to succeed in a college course and did not include difficult-to-measure student attributes such as motivation or ability to benefit from dual enrollment (Zinth, 2014). Criteria typically required that students maintain a minimum GPA, receive a passing score on a college entrance exam (ACT, SAT, Accuplacer, etc.), and be enrolled as a junior or senior in a public high school.¹⁸ However, the minimum required GPA, acceptable entrance exam, and college placement scores differed depending on the college or university because each determines its own admissions criteria. The application process required students to complete an application form, and submit transcripts, test scores, and other paperwork required by the college. Some districts had additional eligibility requirements. For example, Baltimore City required students to have an attendance record of 94 percent, and Baltimore County requires students to meet with a counselor as part of the dual enrollment process. In addition, students must meet any additional requirements set by the college or university of interest. These vary depending on the college or university offering dual enrollment courses.

In Baltimore City, student readiness for college-level coursework was a challenge. Very few students qualified for dual enrollment, and among those who did, few met the placement exam cut scores. In the 2013-14 school year, the first year of the program following the passage of the CCR-CCA, the district identified 500 rising seniors who met the eligibility criteria with the exception of passing the college placement exam (City Schools, 10/14/16). These students were contacted and provided the opportunity to take the Accuplacer. Of the 500, 10 percent, or 50 students, passed the placement test. Recognizing that entrance exams may not be the best predictor of student performance, especially for the nontraditional or first-generation college-going students, City Schools and BCCC developed a pilot program that allowed students to take a developmental course if they did not meet the cut-off scores. If they passed the developmental course, they could go on and dually enroll in a credit-bearing course at BCCC. In the first year of the pilot (fall 2015), 13 out of 17 students passed the developmental course, and seven went on to enroll in a credit-bearing course. In the fall of 2016, the pilot was extended to 10 schools. BCCC tested 167 students on the Accuplacer, most of whom did not test college ready (BCCC, 11/3/16). To incentivize students, City Schools covers the cost of tuition for developmental courses taken at BCCC.

Other districts identified placement scores as an obstacle to enrollment as well, especially for nontraditional college-going students. Some questioned the appropriateness of the Accuplacer for high school

17 On eligibility requirements, the law states: "Each county board shall make all high school students who meet mutually agreed on enrollment requirements aware of the opportunity to dually enroll..." (18-14A-05).

18 Respondents most often referenced the Accuplacer when talking about college placement exams. It is accepted by all community colleges while other colleges and universities may require students to take other placement exams.

students. The test does not align with Maryland's College and Career Readiness Standards and the PARCC assessments, so students were tested using unfamiliar testing formats and on content that may or may not be included in the curriculum. Others suggested that scores on PARCC should be included as an alternative to traditional measures of college readiness. Because students in Prince George's County were not meeting the college placement scores, the district experimented with providing a boot camp at three schools for students preparing for the Accuplacer test. This experiment was ongoing at the time of the study and results were not available.

Dual enrollment also competed with other college enrollment programs, cutting into the potential pool of students eligible for dual enrollment. According to a City Schools administrator,

"When you think about the flagship schools with more eligible students, this is not something that fits with their vision and planning. If a school is doing a full IB program, it is not easy to fit dual enrollment into the school. Poly had success with AP. They offer 23 AP courses, and students do well on exams" (City Schools, 10/14/16).

In PGCPs, some counselors viewed dual enrollment as competing with the school's signature program, believing that students could not enroll in dual enrollment courses if they were participating in the signature program. To address the issue, the district developed a list of dual enrollment courses that students could take and receive signature program credit.

Student Support Services

The law is silent on providing students with support, counseling, or guidance when considering or enrolling in college courses. Nonetheless, students with less social and cultural capital, particularly low-income and first-generation college students, often require additional support and guidance to navigate access and ensure success in a college system. Students may also lack a clear understanding of expectations for college-level work and possible consequences for failure (Kanny, 2015; Karp, 2015).

Both districts and colleges recognized the need for and importance of student support services to help students navigate the enrollment process, and to advise them on course selection and career planning. The job of providing these services fell on high school counselors and the college admissions office.

"There is a lot of work with doing dual enrollment. A counselor has to sign off on every application—they are tasked with doing so much, but they have been doing it. Counselors have a lot to do" (PGCPs, 10/14/16).

In the districts, responsibility for enrolling and advising students on dual enrollment was added on top of school counselors' other responsibilities. As one district administrator said, "So counselors serve as college counselors as well. They help them select courses, and if courses are closed, pick another; they help them arrange their schedule so they will be able to get to the course. At some schools it is done well; at others, it is not done so well, which is related to all of the logistics of doing dual enrollment" (PGCPs, 10/14/16).

One challenge districts faced was providing incentives for school principals and counseling staff to take

on the added responsibilities of advising students and facilitating the enrollment process. For example, according to a Baltimore City district administrator, “Coordinating to get students dually enrolled, takes a lot of work and they [i.e., principals] didn’t feel that they got any credit for doing that” (City Schools, 10/14/16). In meetings to promote dual enrollment, principals pointed out that they received data on a number of accountability measures of college and career readiness, such as graduation rates, SAT scores, and AP enrollment, but did not receive data on dual enrollment as a measure of accountability. To provide an incentive, the district began to show dual enrollment participation on internal reports sent to the schools.

Colleges designated an admissions officer to assist with enrollment, and some community colleges provided on-site staff at the high school to facilitate enrollment and advise students. For example, CCBC requires potential students to meet with an admissions counselor to discuss assessment and placement testing, and BCCC sends admissions advisors to the schools to conduct placement testing, coordinate the admissions process with the school counselor, advise the students, and communicate expectations to both parents and students. Because of the multiple criteria required for admission, BCCC consolidated the admissions process. “We have taken control. Years ago we saw all of these pitfalls so we centralized the admissions process” (BCCC, 10/13/16).

Communication

The law requires that “each county board shall make all high school students who meet mutually agreed on enrollment requirements aware of the opportunity to dually enroll...” (State of Maryland, 2013; 18-14A-05). This minimum requirement can be met by simply notifying students that they are eligible to apply for dual enrollment. However, districts and colleges recognized that effectively communicating with parents and students was multi-faceted, and required the communication of both information and expectations. To communicate information, colleges and districts developed promotional materials that were distributed through websites and brochures, hosted informational sessions, and mailed information to families with students who met the enrollment requirements. More challenging was communicating the benefits of participating in dual enrollment and the expectations of students once they were enrolled. One college administrator said that communicating expectations “... has more to do with developing a better vehicle for communicating with students, parents, and making sure they understand the benefit of participating... I am not sure we have been as effective in how we communicate this to parents” (BCCC, 10/13/16).

Both colleges and districts recognized that to implement dual enrollment districtwide also required developing and communicating a consistent message across schools. Some colleges developed relationships with principals at schools, facilitated by the support of the district superintendent, to ensure that all communicated the same information. Because there were many school-level programs prior to the CCR-CCA, districts expanded their outreach to schools to promote the programs and provide uniform information across schools. But they were also cognizant of the many competing demands placed on principals: “Principals don’t always know about dual enrollment or the details. We need to get to principals as well because they influence counselors and staff. But they have so much on their plate. They also have to prioritize their time” (PGCPS, 10/14/16).

Institutional Arrangements Facilitating or Constraining Dual Enrollment

Theoretically, students can dually enroll in any college or university in Maryland. However, institutional factors—such as the location of colleges, the agreements or MOUs (or lack thereof) put in place between colleges and districts, and agreements or laws that facilitate the transfer of credit—are likely to influence decisions student make about dual enrollment (Cowan & Goldhaber, 2015). For example, it is no surprise that dual enrollment at community colleges is highest. Community colleges are regional; there is one available to students in every local school system; they have actively sought out partnerships and MOUs with districts; and course credits taken at community colleges are readily accepted if students enroll as a college student. Also, dual enrollment fits closely with the community college mission to serve economically disadvantaged and diverse students.

For colleges and universities, particularly community colleges, dual enrollment programs provide pathways to recruit and retain students in their programs. For example, CCBC saw dual enrollment as an opportunity to expand access to the college as well as help it achieve its equity goals of attracting and retaining economically and diverse students. “The goal is to get a cross-section of the student population into an early college setting and for everyone to walk out of high school with at least some college credit” (CCBC, 9/23/2016). Students who received college credit from an institution are also more likely to enroll in that institution, simply because the student has already made progress toward a degree. Some colleges offered incentives to students to enroll after high school graduation, such as bypassing the enrollment process or continuing the discounted tuition arrangements.

Agreements and MOUs

MOUs between a district and college facilitated dual enrollment because they encouraged cooperation across districts, stipulated avenues for addressing challenges to implementation and participation as they arose, and often provided additional resources and supports that were coordinated across institutions. MOUs also established a list of course offerings and identified which of these courses students could take and receive dual credit. Without an MOU between a college and district, students could still attend any college of their choice, but they had fewer resources and supports to help them navigate the process.

Transportation

Transportation can be a significant obstacle for students. In many counties where college campuses are located far from a student’s home or high school, public transportation options are limited. In Baltimore City, students have access to public transportation, but transportation can still be an issue. This was a complicated issue that colleges and districts were grappling with how to address. In Anne Arundel County, some high schools pay for a bus to take students to AACC. In other districts, colleges were considering offering courses on-site at the high school, although none had implemented on-site courses at the time of this study. College administrators seemed to recognize that while on-site courses address the trans-

portation issue, it might not provide the same type of college experience as courses taught on campus. “It is sort of like college lite. There is an advantage for a student to be in a class with college students” (CCBC, 9/23/16).

Community colleges were also considering using high school teachers to broaden access to college courses taught on high school campuses, but this requires that they meet the college credentialing standards in order for the college to maintain college accreditation. However, this was not an option for some courses, such as culinary arts or cyber security, which require specific equipment needs not available on high school campuses, or unique faculty expertise to teach the course.

Transfer of Dual Enrollment Credit

The law is silent on transferring dual enrollment credit from one institution to another. However, transfer guidelines are articulated under Title 13B of the state’s higher education law. This law guarantees that any general education course taken at a Maryland community college will count for general education credit at any other Maryland institution of higher education. This applies even if the receiving institution does not offer that specific course. For nongeneral education courses, the course must be a “parallel” course to the one offered by the college or university to which the student is transferring. To receive credit, a student must have maintained a 2.0 GPA or higher in the block of courses they are transferring. However, the law gives higher education institutions considerable discretion when deciding which courses qualify as “parallel” and eligible to transfer, stating that, the acceptance of the credit is consistent with the policies of the receiving institution...” (State of Maryland, 2016; Title 13b.06.01.05 A (1)(c)).

This study did not have access to data on the extent to which dual enrollment credits transferred to another college or university, but study respondents suggested that the transfer of nongeneral education courses was problematic, particularly between community colleges and four-year institutions. Because each institution decides which nongeneral education courses to accept, it is very difficult for students to determine which institution will accept their community college credits.¹⁹ In addition, institutions often have different numbering systems for similar courses, making transferring credit a complex task.

Conclusion

Our analysis of dual enrollment in four districts shows the complexity of designing and implementing a robust program. As expected, there was considerable variation across districts on all elements of program design and implementation, including variability on requirements specified in the law such as how much colleges and universities can charge for tuition. The law’s relative silence on many components of dual enrollment gives districts and colleges flexibility to design programs that meet local needs and address availability of resources. However, the CCR-CCA greatly oversimplifies the effort and resources

¹⁹ Maryland provides an online resource, The Articulation System for Maryland Colleges and Universities (ARTSYS), to help students navigate the credit transfer process; however, this resource can be difficult to navigate. See, <http://www.artsys.usmd.edu>

needed to develop a robust program. While it mandates tuition discounts that benefit students, particularly low-income students, it neglects to recognize the resources districts and colleges need to administer the program and provide the support students need to navigate the enrollment process and engage in career exploration and planning. By shifting tuition costs onto districts, and to a lesser extent onto colleges, it places additional burdens on district and college budgets without providing additional funding. By failing to provide resources for administration and counseling, it ignores the capacity needs associated with implementing dual enrollment.

This study's findings suggest that support from district and college leadership, particularly that from the community colleges, played a vital role in prioritizing dual enrollment and providing adequate resources to support the program. These relationships and access to decision-makers at the very highest level of the administration facilitated the development of the policies and procedures needed to successfully implement dual enrollment and manage implementation issues as they arose. Programs, such as those in Baltimore City, tended to grow more slowly when top-level administrative support was tepid. Based on the new City Schools' CEO's signaled support for dual enrollment, coupled with the district's approach to analyzing and addressing reasons for low enrollment, we expect the program to develop.

MOUs were an important mechanism for providing a structure that facilitated the interactions among institutions necessary to provide a robust dual enrollment program. MOUs served two functions. First, MOUs addressed program logistics. They created lists of courses that students could take, identified courses that received dual credit, specified the responsibilities of each institution, ensured coherent messaging, and coordinated enrollment processes across institutions. The most cited outcome was the development of stronger relationships between participating institutions. Second, MOUs benefited students. MOUs centralized and coordinated information on dual enrollment across institutions, making it easier for students to enroll and receive support with the enrollment process. Without an MOU, students were more likely to navigate the college site on their own for information on dual enrollment.

Nonetheless, dual enrollment under the CCR-CCA is in the early stages of implementation in Maryland. Data on dual enrollment is just beginning to become available; no program evaluations have been conducted; and we know little about the characteristics of students who are eligible to participate, as opposed to those who enroll. While this study did not extend to school-level implementation, district respondents suggested that schools were central to recruiting, enrolling, and advising students on dual enrollment. However, dual enrollment was added on top of other duties and responsibilities of principals and counselors, and continues to compete with other advanced programming offered at many high schools.

While it is hard to know what an optimal design for a dual enrollment program might be, respondents suggested that access to and enrollment in dual enrollment was impeded by students' academic preparation and college readiness, failing to pass the Accuplacer placement test, and the location of the college and related transportation issues. Improving student readiness will require multiple approaches, but we suspect that one issue may be which students see dual enrollment as a valued opportunity for gaining college credits and experience. Collecting data on which students met the eligibility requirements, and

among those, which students enrolled was beyond the scope of this project. Respondents suggested that other programs, such as AP or IB, competed with dual enrollment and that traditional college-bound students may find these more traditional programs more attractive than dual enrollment. In addition, MSDE acknowledged that it is difficult to get information on the total number of dually enrolled students because its data system only captures students who enroll through the CCR-CCA (MSDE, 8/4/16).

There are other routes for students to dually enroll, but MSDE data may not capture those students, resulting in inaccurate reporting of student participation. Having a clearer picture of students most likely to take advantage of dual enrollment will facilitate program planning and recruitment efforts.

Community colleges were the clear beneficiaries of dual enrollment, attracting the majority (86 percent in 2013-14) of dually enrolled students. The proximate availability of community colleges to students, active outreach by community colleges to local school systems, and a close fit between the goals of dual enrollment and the colleges' goals of attracting and retaining economically and diverse students facilitated student access and enrollment. Community colleges were more likely than other institutions of higher education to subsidize tuition and fees, and to provide support to students. Even so, transportation was identified as an obstacle to participation.

To address transportation, some community colleges were considering whether to offer courses on-site at high schools, and exploring the feasibility of credentialing high school teachers to teach courses on-site. While these initiatives may increase accessibility to college courses, safeguards are needed to ensure that courses have the same content and rigor regardless of where they are taught and who teaches them (Western Interstate Commission for Higher Education, 2006). Keeping in mind the goals of dual enrollment—providing students with an authentic college experience while in high school, and improving the transition from high school to college—students taking classes on-site may miss the benefits of an on-campus experience (Karp, 2012). To address course quality, many states have embedded instructor and course-quality components into state policy (Zinth, 2014).

Recommendations

One question to consider when thinking about Maryland's dual enrollment legislation is how much flexibility should be retained and how much and what kind of additional regulation may be needed. Our recommendations are based on the premise of maximizing the benefits for students while retaining local flexibility over program design. That said, there are a number of policies that Maryland could adopt that would nudge colleges and school districts in the direction of strengthening their programs while ensuring program quality and student access. See the Appendix for examples of state policies that address each recommendation.

1. Fully fund or reimburse districts and institutions of higher education for participating students.

- Maryland should consider fully reimbursing districts the costs of tuition for students that are dually enrolled. At a minimum, fees for low-income students should also be funded by the state.
- Districts and colleges should receive some reimbursement for any administrative costs associated with implementing dual enrollment.
- Districts and colleges should receive funding to provide students and their parents with counseling and advising, both before they enroll and during program participation.
- The state should fund the Early College Access grant, awarded to institutions of higher education to provide financial assistance to low-income students.

Currently, the legislation provides tuition reduction for students, but no additional resources to offset administrative costs of program implementation or to support much-needed counseling and guidance services for students. Across the board, respondents recommended additional funding to support dual enrollment, including the provision of funding to both institutions—colleges and districts. “It takes a significant amount of resources and money to make these things work. That’s the major obstacle” (CCBC, 9/23/16).

Research suggests that funding mechanisms be based on two principles: (1) no cost to students or, at a minimum, no cost for low-income students; and (2) no harm to partnering institutions (Hoffman, Vargas, & Santos, 2008; Krueger, 2006; Western Interstate Commission for Higher Education, 2006). Maryland meets the first principle in that low-income students do not pay tuition; however, all students are responsible for books and fees. The second principle suggests that the state fully fund or reimburse districts and postsecondary institutions for tuition and administrative costs (Zinth, 2014), and provide additional funding for support services (Karp & Hughes, 2008). Maryland passes tuition costs on to the colleges and districts and does not provide funds to cover administration costs or support services. A significant disadvantage of requiring districts to cover tuition is that districts dip into operating expenses to cover tuition costs. Under-resourced districts and districts with significant enrollments of low-income and struggling students may struggle to absorb this additional cost (Zinth, 2015).

2. Require and fund the provision of student support services.

- Require and fund support services to help students and their parents navigate the enrollment process, develop college and career plans, and understand the risks and obligations of dual enrollment.
- Prior to enrollment and during dual enrollment course participation, counseling services should be available at both the high school and college levels.

There was general agreement among interviewees that students and their families needed counseling and support to be successful in college courses and to adequately plan for future college or career

trajectories. They also need to understand the risks, such as what happens when a student fails a course or misses a class, and obligations, such as how to interact with professors and how grading, attendance, and other expectations may differ from high school expectations (Kanny, 2015). Both colleges and districts provided some level of support to students by assigning these responsibilities to high school counselors and college admissions officers, but the level and quality of these services are bound to be uneven without dedicated revenues. Additional funding for career planning and support could come from the state, or from the private sector because it receives benefits when it hires students who are career ready.

3. Facilitate the transfer of credits.

- Require postsecondary institutions to accept and apply credit earned for nongeneral education courses through dual enrollment. Current law requires the transfer of general education course credit, but not for nongeneral education courses.
- Standardize the numbering system for similar courses across the Maryland educational system.

Transferring credits is a complex task, requiring students to navigate two separate education systems: the college where they earned dual enrollment credit, most often a community college, and meeting the transfer requirements of the four-year institution. Student background characteristics, such as prior academic preparation, thin informational networks, and competing demands on time, can interact with these transfer requirements to complicate the process (Baker, 2016). There are a number of potential interventions that could address course transfer, including offering one-on-one advising, providing career exploration workshops or advising seminars to provide information, or leveraging technology to help students navigate complex systems (Baker, 2016).

As previously noted, we recommend expanding student services to help students understand the transfer process. Transfer agreements are an additional intervention that provides an affordable and scalable alternative. They also ensure that the state does not pay twice for the same course when a student eventually matriculates. In Maryland, this may require amending the state's higher education law.

4. Incentivize other program models that incorporate dual enrollment.

- Provide incentives for districts to develop other models that incorporate dual enrollment.
- Extend the tuition discounts to include developmental courses, with provisions that allow students to enroll in a college course if they successfully complete the developmental course.

While the current dual enrollment legislation provides tuition incentives for students to dually enroll, we recommend providing incentives for districts to develop other models that incorporate dual enrollment. This could include developing public-private partnerships such as the Middle College High School in

Prince George's County²⁰ or the Pathways in Technology Early College High (P-Tech) Schools adopted by the Maryland General Assembly in 2016, as well as the Bard High School Early College in Baltimore City, a public-private partnership. These have the advantage of including a more comprehensive approach to college and career planning, and tend to come with more support services. These types of models may also provide additional benefits for lower-performing and first-generation college-going students who need additional support to navigate the college-going and planning process.

Because many students who would benefit from the opportunity to dually enroll did not meet the admissions requirements, extending the tuition discounts to cover developmental courses would help students successfully transition into credit-bearing courses and to college. High numbers of students entering community college are underprepared for college work and are enrolled in at least one developmental course. Traditional developmental courses are lengthy; attrition in such courses is high; and relatively few students taking these courses earn a degree or transfer to a four-year college (Center for Community College Student Engagement, 2016; Jaggars & Stacey, 2014; Mejia, Rodriguez, & Johnson, 2016). While some colleges in Maryland are redesigning developmental courses and achieving more optimal outcomes for students (Knepler, Klasik, & Sunderman, 2014), allowing students the opportunity to take developmental courses while in high school is a strategy that is consistent with the goals of the CCR-CCA.

5. Evaluate dual enrollment program implementation.

- Appropriate state funding to support a robust evaluation of dual enrollment that includes examining short-term and long-term outcomes as well as program design and implementation.
- Appropriate state funding to support research that examines the characteristics of students who are eligible for dual enrollment to better understand why some of these students participate and others do not.

Given the many nuances associated with the implementation of the CCR-CCA, the legislature should appropriate funding to conduct a study of local school systems and community colleges dual enrollment program implementation to determine the efficacy of the law's requirements. In addition to provisions for dually enrolled students, the law contains a number of requirements that impact both human and fiscal resources, with no additional funding. Also, as reported by those interviewed, there are a number of unintended consequences associated with the law that should be studied and perhaps considered for future amendments.

Current legislation requires the Maryland Longitudinal Data System Center (MLDSC) to report annually on the number of dually enrolled students, disaggregated by district, and the number and name of the courses students are dually enrolled in by school district and by the institution of higher education (State

²⁰ See https://www.pgcc.edu/About_PGCC/Academy_of_Health_Sciences.aspx for more information. Opening in 2011, the Academy of Health Sciences @PGCC was the first middle college high school in Maryland.

of Maryland, 2013). This is a reporting requirement and not a program evaluation. The state should support a robust evaluation that includes an examination of short-term and long-term outcomes but also includes a more extensive examination of program design and implementation. This will contribute to understanding the components of dual enrollment programs that have the greatest influence on students' decisions to enroll and identify factors that may facilitate or constrain the implementation of robust dual enrollment programs. For example, the pilot program initiated at City Schools that allows students to take developmental courses is an intriguing idea, but more information is needed to determine the efficacy of this intervention. It should also examine school-level implementation where much of the responsibility for enrolling and advising students lies.

Most importantly, we recommend additional research that identifies the characteristics of students who meet the enrollment eligibility requirements. For example, Prince George's district officials estimated that about 15 percent of eligible students dually enrolled, but they did not know why more did not take advantage of dual enrollment (PGCPS, 10/14/16). We suspect that dual enrollment may appeal to some students and not others, and that many students are not enrolling because they have other options (e.g., IB, AP) or do not perceive themselves as community college students. Having information on the characteristics of students who are eligible to enroll, but who may or may not enroll, will be useful for targeting dual enrollment programming to students' needs.

6. Consider alternative eligibility assessments.

- Develop a metric so that PARCC can be used in place of college placement scores.

Many respondents cited the failure of students to pass the Accuplacer test as an obstacle to enrollment. They suggested that because students already take the PARCC test, developing a metric using PARCC scores that could be used in place of college placement scores might be more appropriate for assessing high school students' college readiness. It would also cut down on testing. PARCC assessments are better aligned with Maryland's College and Career Readiness Standards and assess content that is included in the curriculum.

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Appendix: State Policy Examples

This section provides examples of policies other states have adopted that address the report's recommendations.

1. Fully fund or reimburse districts and institutions of higher education for participating students.

State policies differ on who is responsible for tuition costs. Some states require students or their parents to pay tuition; others place the costs on the college, district, or other entity, depending on the program. In some states, tuition decisions are made locally, which can lead to considerable variability in access across districts (Zinth, 2015). A few states have policies that require the state to fund dual enrollment. Under *The Postsecondary Enrollment Options Act* in Minnesota, dual enrollment courses are funded by the state through per pupil allocations to the state department of education for courses taken at a state college or university. Tuition amounts are established through a formula and the state department of education reimburses colleges for dual enrollment courses.²¹ In addition, if a course is offered at a high school, Minnesota prohibits a college or university from charging more than the costs that are directly attributable to providing that course.²² Minnesota legislation also reimburses local districts for transportation costs for students from low-income families.²³ In North Carolina, the state legislature requires community colleges to develop a budget and report the costs of delivering instruction provided through dual enrollment programs. Tennessee provides dual enrollment grants that students, if eligible, can apply for to cover the costs of tuition and fees.²⁴

2. Facilitate the transfer of credits.

California provides one example of a transfer model. In 2010, the California State Legislature and Governor enacted the *Student Transfer Achievement Reform Act* (California SB 1440), which simplified the process of transferring within the California State University (CSU) system of higher education. Among other provisions, this bill provides community college transfer students priority admission to other CSU campuses, guarantees admission with junior standing in the CSU system for students completing an associate degree, and prohibits the CSU system from requiring students to repeat courses that are similar to courses

21 2016 Minnesota Statutes, 124D.09 Postsecondary Enrollment Options Act, subd.13, <https://www.revisor.leg.state.mn.us/statutes/?id=124D.09>.

See also, Education Commission of the States, <http://ecs.force.com/mbdata/mbprofallRT?Rep=DE14A>.

22 2016 Minnesota Statutes, 124D.09 Postsecondary Enrollment Options Act, subd.16(b), <https://www.revisor.leg.state.mn.us/statutes/?id=124D.09>

23 2016 Minnesota Statutes, 124D.09 Postsecondary Enrollment Options Act, subd.22, <https://www.revisor.leg.state.mn.us/statutes/?id=124D.09>

24 Tennessee Department of Education: Dual Enrollment, <https://www.tn.gov/education/topic/dual-enrollment>

completed as part of the associate degree. The bill also made it easier for transferring students to earn an associate degree when going on to pursue a bachelor's degree. This law provides a prototype that could improve the transfer of credit within the University of Maryland system and guarantee the transfer of dual enrollment credits, especially from two-year to four-colleges.

An increasing number of states include provisions in their dual enrollment legislation to guarantee the transfer of credits between institutions. For example, Florida has a statewide course-numbering system and requires school districts to provide parents with information on the potential for the dual enrollment course to articulate as an elective or a general education course into a postsecondary education certificate or degree program.²⁵ To ensure course quality and facilitate the transfer of credit, Minnesota requires all state public institutions (and requests private, nonprofit, and proprietary postsecondary institutions in the state) to award credit for courses completed in a program certified by the National Alliance of Concurrent Enrollment Partnerships.²⁶ Colorado requires that coursework completed by a qualified student dually enrolled at an institution of higher education qualify as basic skills credit or academic credit applicable toward earning a degree at the institution.²⁷

3. Require and fund the provision of student support services.

In addition to requiring that districts and schools inform students and parents about dual enrollment options, the Minnesota legislation requires the school or district to provide counseling services to students and their parents/guardian to ensure they "... are fully aware of the risks and possible consequences of enrolling in postsecondary courses." This includes counseling

*...on the program including who may enroll, what institutions and courses are eligible for participation, the decision-making process for granting academic credits, financial arrangements for tuition, books and materials, eligibility criteria for transportation aid, available support services, the need to arrange an appropriate schedule, consequences of failing or not completing a course in which the pupil enrolls, the effect of enrolling in this program on the pupil's ability to complete the required high school graduation requirements, and the academic and social responsibilities that must be assumed by the pupils and their parents or guardian.*²⁸

25 The 2016 Florida Statutes, 1007.271 Dual Enrollment Programs, see http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=1000-1099/1007/Sections/1007.271.html

26 2016 Minnesota Statutes, 124D.09 Postsecondary Enrollment Options Act, see <https://www.revisor.leg.state.mn.us/statutes/?id=124D.09>

27 Colorado Revised Statutes, Article 35 Concurrent Enrollment (2009) <https://www.cde.state.co.us/postsecondary/concurrentenrollmentact>

28 2016 Minnesota Statutes, 124D.09 Postsecondary Enrollment Options Act, subd.6, <https://www.revisor.leg.state.mn.us/statutes/?id=124D.09>

Colorado law requires that each local school system and institution of higher education develop an academic program of study for each qualified student who dually enrolls. The academic program of study must include the courses the student intends to complete to satisfy high school graduation requirements as well as a plan for how the local school system will make ongoing counseling and career planning available to the student.²⁹ Kentucky has similar requirements, requiring that the Kentucky Department of Education (KDE) ensure that information and advising related to dual credit is integrated into the Individual Learning Plan (ILP) process. In addition, it includes provisions to ensure that students receive guidance on degree and career pathway planning, and understand the risks and benefits of dual enrollment participation. Postsecondary institutions are required to provide each student with an advisor and assistance with the application process.³⁰

4. Incentivize other program models that incorporate dual enrollment.

North Carolina's *Career and College Promise* legislation offers three pathways that incorporate dual enrollment: (1) a Career Technical Education Pathway, leading to a certificate or diploma aligned with one or more high school Tech Prep Career Clusters; (2) a College Transfer Pathway, leading to a college transfer certificate; and (3) a cooperative innovative high school program that allows students to earn a diploma and begin or complete an associate degree program, or earn a certificate or up to two years of college credit.³¹ In Tennessee, a community college may develop a program targeting high school students who need to take developmental courses. A student who successfully completes the course and is admitted to a postsecondary institution is deemed to need no further remediation.³²

5. Evaluate the implementation of dual enrollment programs.

Many state policies include requirements to evaluate dual enrollment. However, we did not find policies that required the evaluation of dual enrollment program implementation or that examined the characteristics of eligible students and why they may or may not dually enroll. State evaluation requirements typically focused on outcomes and included measures, if specified, such as high school retention rates, high school completion rates, high school dropout rates, certification and associate and baccalaureate degree completion, admission to four-year institutions, post-graduation employment in career or

29 Colorado Revised Statutes, Article 35 Concurrent Enrollment (2009)

<https://www.cde.state.co.us/postsecondary/concurrentenrollmentact>

30 Kentucky Council on Postsecondary Education (2016). Dual Credit Policy.

<http://cpe.ky.gov/policies/academicaffairs/dualcreditpolicy.pdf>

31 General Assembly of North Carolina (2011). An Act to Spur the Creation of private sector jobs; reorganize and reform state government; make base budget appropriations for current operations of state departments and institutions; and to enact budget related amendments. <http://www.ncleg.net/EnactedLegislation/SessionLaws/PDF/2011-2012/SL2011-145.pdf>

32 State of Tennessee, Public Charter No. 967 (2012). An act to amend Tennessee code annotated, Title 49, relative to dual credit articulation. https://www.tn.gov/assets/entities/education/attachments/pc967_dual_credit.pdf. See also, [Tennessee Transfer Pathway](http://www.tntransferpathway.org/), <http://www.tntransferpathway.org/>

study-related fields, and employer satisfaction of employees who participated in and graduated from the programs. While these are appropriate outcome measures, as previously noted, an evaluation must go beyond selected outcome indicators and include research on the mechanisms that account for student access or attainment.