



MLDS CENTER

Maryland Longitudinal Data System

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December 18, 2014

The Honorable Martin O'Malley
Office of the Governor
100 State Circle
Annapolis, MD 21401

Dear Governor O'Malley,

The College and Career Readiness Act of 2013 requires the Maryland Longitudinal Data System Center to report to the Governor and the Maryland General Assembly the number of students who are dually enrolled and information about the courses in which they are enrolled.

I am pleased to be given the opportunity to provide you with this report, which is enclosed, and hope that you find it useful and informative.

I am happy to address any questions you may have and look forward to future reporting on this topic, which, as the MLDS continues to develop, will be more comprehensive.

Sincerely,

Ross Goldstein
Executive Director

Enclosure

cc: President Thomas Miller
Speaker Michael Busch
Jared Billings, Office of the Governor
MLDS Governing Board
Caroline Boice, DLS
Nathan Bowen, DBM
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A Report to the Maryland General Assembly and Governor Regarding Dual Enrollment

December 2014

Submitted by:

Maryland Longitudinal Data System Center
Ross Goldstein, Executive Director

Written by:

Dr. Jon Enriquez, Associate Director
Reporting Services Branch

Introduction

The College and Career Readiness and College Completion Act of 2013 (“CCRCCA”) established a statutory requirement that the Maryland Longitudinal Data System Center (“Center”) provide an annual report to the Governor and General Assembly about the number of students who are dually enrolled in high schools and in colleges or universities, as well as information about the courses taken by dually enrolled students (Annotated Code of Maryland, Education Article §24-703.1). This report is submitted in fulfillment of that requirement.

The statute defines a “dually enrolled student” as one who is simultaneously enrolled in a secondary school and also in an institution of higher education in Maryland. College classes taken in this way are used to fulfill requirements for high school graduation and can also qualify for college credit if the student enrolls in college. Dual enrollment allows students to undertake challenging learning experiences, explore subjects of interest through classes generally not available at high schools, demonstrate readiness for college study, and complete coursework that can be accepted as transfer credit towards earning a postsecondary degree.

At present, the Center does not receive data that allow it to present the full range of information stipulated in the statute. It is expected that these data will be available for the 2015 report. This edition of the report will discuss the data issues to be resolved in order to ensure full responsiveness by 2015, and provide the best information on dual enrollment that is currently available.

The CCRCCA instituted a new funding method for students in public high schools pursuing dual enrollment, effective July 1, 2013, and required local county boards of education to make students aware of dual enrollment opportunities. These changes were expected to increase dual enrollment, and particularly to reduce some of the financial barriers to dual enrollment faced by the neediest high school students. The data in this report describe dual enrollment as of Fall 2013, the first college semester after the statute took effect. This report will compare Fall 2013 enrollment to Fall 2012 enrollment in an attempt to evaluate the immediate effect of the new law, although it is expected that the law will have greater impact in future years.

One final note: The data in this report were obtained directly from the Maryland Higher Education Commission. The Center is grateful to the Commission for providing the data used to produce this report.

Discussion of data issues

A detailed report on dual enrollment is possible only when the Center can collect and connect data provided by two of its partner agencies, the Maryland State Department of Education (MSDE) and the Maryland Higher Education Commission (MHEC). Data collection enhancements are still being developed.

For MSDE, the CCRCCA effectively created a requirement to collect two types of data that had not previously been collected. The first is information on the college courses for which dually enrolled students were registered. Dually enrolled students received high school credit through processes that were not reported by schools to local educational authorities (LEAs) and therefore were not reported to MSDE. The second type of information is related to funding. Prior to the CCRCCA, high schools were not necessarily involved in funding these courses, but the CCRCCA mandated that LEAs would be responsible for funding a large share of the tuition for these courses. MSDE, working with LEAs, has begun the process of developing standards and processes for LEAs to transmit both of these types of data to MSDE. MSDE expects to receive these data in the next few months and transfer the data to the Center in time for the 2015 edition of this report.

For its part, MHEC is currently implementing a collection of course-level data for public colleges and universities. Its first collection of course-level data from four-year colleges and universities will take place during the 2014-2015 academic year, and it expects to collect course-level data from community colleges during 2015-2016. Only a small percentage of dually enrolled students are enrolled at four-year institutions, so the community college data will be much more useful for answering questions about dually enrolled students. Unless there are difficulties with the data, the Center should be able to include data from both two-year and four-year institutions in the 2016 dual enrollment report.

The Center expects to be able to provide data from matched records beginning with the 2015 edition of this report. The present edition, however, will follow the methodology of the 2013 report. It will review the data collected by MHEC on students who identified themselves to colleges and universities as high school students.

Analysis

In Fall 2013, 5,730 students were identified by the colleges and universities they attended as dually enrolled, which is an increase of 3.5% over the 5,534 students enrolled in Fall 2012. 5,562 of these students (97.1%) attended community colleges, 79 (1.4%) attended public four-year colleges and universities, and 89 (1.6%) attended independent colleges and universities.

These group totals are broadly similar to those of Fall 2012, when 5,428 (98.1%) enrolled at community colleges, 69 (1.2%) at public four-year colleges and universities, and 37 (0.7%) at independent colleges and universities. The number of students dually enrolled at independent institutions saw the largest percentage increase, rising from 37 to 79, an increase of some 114%, but the absolute number remains small. These statewide numbers suggest that the CCRCCA may have had little immediate impact on increasing the number of dually enrolled students.

Because almost all dual enrollment occurs at community colleges, this report will use the universe of community college students as a basis for comparison when needed. The number and percentage of students dually enrolled at public and independent four-year institutions is so small that meaningful comparisons cannot be made with these broader populations.

The report will also use the population of Maryland public high schools for certain comparisons with the dually enrolled population, despite the fact that this comparison is much more problematic. The present data do not differentiate between students enrolled in Maryland public high schools and students enrolled in other kinds of high schools (such as homeschools, private schools, or out-of-state schools). It is likely that a significant minority of dually enrolled students are enrolled in high schools of this type. Nevertheless, comparisons of the dually enrolled population with the public high school population can be helpful in identifying relationships of interest and areas for further study.

Headcount enrollment

The dually enrolled population is a very small fraction of college enrollment as well as high school enrollment. The 5,730 dually enrolled students is equivalent to 4.2% of all students enrolled in community colleges. The dually enrolled population is also equivalent to 2.3% of the total population of students in grades 9-12 in public high schools in September 2013, and 9.7% of the total population of students in grade 12 alone. By comparison, data from the National Student Clearinghouse released by MSDE indicate that approximately 70% of 2012 high school completers enrolled in some college within 16 months of graduation.

Credit hour enrollment

The 5,730 dually enrolled students registered for 26,990 credit hours, for an average of 4.7 credit hours per student. By comparison, in Fall 2012, 5,534 students enrolled for 24,289 credit hours, or an average of 4.4 credit hours per student. Since most college courses earn 3 credit hours, the total volume of dual

Dual Enrollment Report

enrollment can be considered equivalent to 8,997 college courses. By comparison, in 2013-2014 58,421 Maryland public high school students completed 110,397 Advanced Placement (AP) exams. A successful score on an AP exam can usually earn a student 3 transfer credit hours at many colleges and universities, so these exams are considered an important element of early-college strategies. We can therefore estimate that high school students were at least 12 times more likely to take an AP exam than take a dual enrollment course. Thus, again, dual enrollment has made up a relatively small component of the early-college strategies of public high school students.

Table 1 shows the pattern of credit hours taken by dually enrolled students, both statewide and by institution. More than five out of six students enrolled in one or two classes (1-6 credit hours), but a small group were effectively enrolled full-time at the college level (12 credit hours or more).

TABLE 1. CREDIT HOURS ATTEMPTED, PERCENTAGE OF DUALY ENROLLED STUDENTS, BY INSTITUTION OF HIGHER EDUCATION, FALL 2013.

Institution	Number of Credit Hours Attempted			
	1-3	4-6	7-11	12 and up
Allegany College of Maryland	68.8%	22.7%	6.3%	2.2%
Anne Arundel Community College	62.4%	25.2%	10.8%	1.5%
Baltimore City Community College	22.0%	25.6%	32.9%	19.5%
Carroll Community College	43.0%	30.9%	23.0%	3.0%
Cecil College	66.7%	21.4%	9.4%	2.6%
Chesapeake College	56.4%	33.2%	9.1%	1.2%
College of Southern Maryland	37.5%	39.8%	11.6%	11.2%
Community College of Baltimore County	43.8%	37.4%	14.4%	4.4%
Frederick Community College	52.0%	33.5%	11.3%	3.2%
Garrett College	23.5%	58.8%	14.7%	2.9%
Hagerstown Community College	52.9%	38.7%	5.9%	2.5%
Harford Community College	67.5%	16.8%	11.1%	4.5%
Howard Community College	39.9%	34.8%	19.6%	5.7%
Montgomery College	68.1%	25.3%	5.1%	1.5%
Prince George's Community College	49.3%	19.4%	2.0%	29.3%
Wor-Wic Community College	58.5%	26.6%	12.8%	2.1%
<i>All Other Colleges and Universities</i>	<i>56.5%</i>	<i>31.0%</i>	<i>11.3%</i>	<i>1.2%</i>
TOTAL (PERCENTAGE)	55.4%	29.3%	10.3%	4.9%
TOTAL (NUMBER)	3,175	1,681	593	281

In general, most community colleges follow the statewide pattern, but there are important institutional differences. As in Fall 2012, Carroll Community College enrolled a relatively large group of students in 7 to 11 credit hours, and College of Southern Maryland enrolled a relatively large number on a full-time basis. However, three community colleges significantly increased their share of dually enrolled students enrolled in 7 or more credits: Baltimore City Community College (52.4%, up from 4.6%), Prince George's Community College (31.3%, up from 7.4%), and Howard Community College (25.3%, up from 13.0%). These colleges led a statewide increase in the percentage of students taking 7 credits or more, from 11.5% in Fall 2012 to 15.2% in Fall 2013. This may indicate one of the immediate effects of the CCRCCA – for some colleges and some counties, the number of credits taken by dually enrolled students saw increases.

As course-level information becomes available, further analysis will be employed to understand course-taking patterns and other local practices that contribute to these unusual patterns, as well as the high school circumstances of these students.

Age

Dual enrollment is primarily intended as an opportunity for high school students who are ready to undertake college-level coursework. Although the available data do not indicate the grade level of the dually enrolled student, the data do identify the students' birth year, which can provide a rough approximation of grade level. 68.9% of dually enrolled students were born in 1996, 17 years prior to the date of enrollment; an additional 11.2% were born in 1995, 18 years prior, and 13.7% were born in 1997, 16 years prior. This distribution, with 93.8% of students in the 16-18 age range, is consistent with what can be expected for high school students in upper grades, and is consistent with Fall 2012 data. This birth year pattern appears consistently for most community colleges. An interesting exception, however, occurs at Prince George's Community College, where only 41.4% of dually enrolled students are in the 16-18 age range. An additional 54.5% of PGCC's dually enrolled students were born in 1998 and 1999, or age 14 and 15 at the time of enrollment.

Gender

Among dually enrolled students in Fall 2013, 39.6% were male, while 60.3% were female. This ratio more closely resembles the gender mix of community college students (40.9% male, 59.1% female) than that of public high school students (50.9% male, 49.1% female). Dually enrolled students are thus more likely to resemble the college-going population than the high school population. This pattern is unchanged from Fall 2012. Among community colleges, 14 institutions enroll between 34% and 42% males. The two exceptions are Garrett College, 50% of whose 34 dually enrolled students are male, and Anne Arundel Community College, which includes 434 males (47.5%) among its dually enrolled students.

Race and ethnicity

One of the most distinctive findings of the 2013 dual enrollment report was that white students were significantly overrepresented among the dual enrollment population. That is, many more dually enrolled students were white than could be expected if the population reflected either the community-college-going population or the public high school population. This overrepresentation is still present in Fall 2013, as shown in Table 2 below.

TABLE 2. RACE AND ETHNICITY OF THREE STUDENT POPULATIONS: PUBLIC HIGH SCHOOLS, COMMUNITY COLLEGES, AND DUALY ENROLLED STUDENTS, FALL 2013.

Race or Ethnicity	Public High School Population	Community College Population	Dual Enrollment Population
White	43.0%	46.5%	69.2%
African American	35.9%	31.2%	13.1%
Hispanic, any race	11.4%	8.4%	5.3%
Asian	6.0%	5.4%	3.7%
Two or more races	3.2%	2.8%	3.9%
American Indian/Alaska Native, Native Hawaiian/Pacific Islander	0.4%	0.5%	0.6%
Unknown	0	2.2%	3.1%
Non-resident alien	0	3.0%	1.1%

The overrepresentation of white students among the dually enrolled population is so strong that it is extremely unlikely to be accidental. Currently available data give no readily apparent explanations for this disparity, although as more data become available, it should be possible to advance further explanations. In the meantime, high schools, local educational authorities, and community colleges should work to ensure that information about dual enrollment opportunities is distributed to students of all races and ethnicities, and that any potential barriers to enrollment are reduced or removed.

Geographic origin

Although colleges and universities do not identify the high school or local educational authority (LEA) where the students were enrolled, they do provide information on the students' "geographic origin." Typically, this variable identifies the student's permanent residence. As such, it does not indicate the high school or LEA in which the student is enrolled at the secondary level, or even whether the student is enrolled in a public high school at all. Nevertheless, the geographic data reveal some interesting patterns in dual enrollment.

As expected, most dually enrolled students have their geographic origins in the counties that comprise the service areas of the community college at which they are enrolled. For example, about 98% of dually enrolled students at Harford Community College are from Harford County, and over 99% of dually enrolled students at Chesapeake College are from Caroline, Dorchester, Kent, Queen Anne's, or Talbot Counties. Table 3 shows the percentage of dually enrolled students by college with respect to service area.

TABLE 3. DUALY ENROLLED STUDENTS, PERCENTAGE ENROLLMENT BY GEOGRAPHIC ORIGIN.

Institution	Percentage of Students From			
	Service Area	All Other Maryland Localities	Pennsylvania	All Other States and Nations
Allegany College of Maryland	12.6%	0.0%	86.3%	1.1%
Anne Arundel Community College	82.7%	16.9%	0.0%	0.4%
Baltimore City Community College	81.7%	18.3%	0.0%	0.0%
Carroll Community College	93.9%	6.1%	0.0%	0.0%
Cecil College	100.0%	0.0%	0.0%	0.0%
Chesapeake College	99.6%	0.4%	0.0%	0.0%
College of Southern Maryland	95.6%	4.0%	0.0%	0.4%
Community College of Baltimore County	92.2%	7.6%	0.0%	0.3%
Frederick Community College	99.2%	0.8%	0.0%	0.0%
Garrett College	97.1%	0.0%	2.9%	0.0%
Hagerstown Community College	83.6%	1.2%	14.6%	0.6%
Harford Community College	98.1%	1.2%	0.7%	0.0%
Howard Community College	89.2%	9.5%	0.0%	1.3%
Montgomery College	95.5%	0.6%	0.0%	3.9%
Prince George's Community College	98.6%	1.4%	0.0%	0.0%
Wor-Wic Community College	97.9%	1.1%	0.0%	1.1%
<i>All Other Colleges and Universities</i>	n/a	64.3%	3.6%	32.1%
TOTAL	82.8%	6.8%	8.7%	1.6%

These patterns are largely unchanged from Fall 2012. However, the largest percentage change appears among the “other colleges and universities” group, which saw a significant increase in the percentage of dually enrolled students from other states and nations (32.1%, up from 0%). This suggests that these colleges and universities may be offering early-college experiences for students from other locations.

In Fall 2013, as in Fall 2012, Baltimore County (122 students) and Baltimore City (77 students) were the two Maryland localities most likely to send dual-enrolled students to colleges located outside their own service area. This is probably due to the fact that these areas are physically close to a number of other community colleges. Similarly, Baltimore City Community College and the Community College of Baltimore County are among the largest importers of dually enrolled students. Anne Arundel Community College, which has several widely dispersed instructional locations that are convenient for students in other counties, imports the most students (154, or 16.9% of its dually enrolled total). CCBC enrolls the second largest number (53, or 7.6% of its total), while BCCC has the largest percentage of imported students (15, or 18.3% of its total).

It is interesting to note that there appear to be a few dual enrollment programs connecting a four-year institution to its home county. The University of Maryland-Eastern Shore enrolled 18 students from Dorchester County (81.8% of the university's total and 56.2% of the county's total); Frostburg State University enrolled 22 students from Allegany County (100.0% of the university's total and 26.5% of the county's total); and Hood College enrolled 14 students from Frederick County (93.3% of the college's total and 3.6% of the county's total).

Two community colleges have substantially different enrollment patterns because they enroll a significant number of dually enrolled students from Pennsylvania, as indicated in Table 3. Allegany College of Maryland enrolls 396 Pennsylvanians, or 86.3% of its dually enrolled students, and Hagerstown Community College enrolls 94 Pennsylvanians, 14.6% of its dually enrolled population. As shown in Table 4, if Pennsylvania were a Maryland county, it would be the fourth largest producer of dually enrolled students.

TABLE 4. DUALLY ENROLLED STUDENTS, BY GEOGRAPHIC ORIGIN AND INSTITUTION TYPE, FALL 2013.

Geographic Location	Number of Dually Enrolled Students	Enrolled at a Community College	Enrolled at a Public or Independent Four-Year Institution	Dually Enrolled Students as % of Public High School Students
Baltimore County	768	755	13	2.5%
Anne Arundel County	759	758	1	3.4%
Washington County	541	541	0	8.1%
<i>Commonwealth of Pennsylvania</i>	500	494	6	---
Montgomery County	458	458	0	1.0%
Harford County	433	433	0	3.7%
Frederick County	394	379	15	3.2%
Prince George's County	380	371	9	1.1%
Carroll County	165	161	4	1.9%
Howard County	149	146	3	0.9%
Baltimore City	144	143	1	0.6%
Wicomico County	134	129	5	3.4%
Cecil County	118	118	0	2.5%
Saint Mary's County	118	115	3	2.3%
Talbot County	101	101	0	7.6%
Allegany County	83	61	22	3.2%
Calvert County	64	64	0	1.2%
Charles County	63	63	0	0.7%
Queen Anne's County	56	56	0	2.4%
Caroline County	55	54	1	3.7%
Worcester County	50	50	0	2.5%
Garrett County	33	33	0	2.7%
Dorchester County	32	14	18	2.5%
Kent County	26	18	8	4.3%
Somerset County	9	5	4	1.2%
Maryland – County Unknown	5	4	1	---
All Other Locations (including Unknown)	92	38	54	---

Table 4 also shows that the proportion of dually enrolled students as a percentage of public high school students varies significantly by county. While the enrollment figures include students enrolled in both public and nonpublic high schools and therefore cannot be interpreted as evidence of particular initiatives or relationships between LEAs and community colleges, they are nevertheless suggestive that some counties, such as Washington and Talbot, may be more effective at facilitating dual enrollment, while some other counties represent opportunities for growth in dual enrollment. There may also be other explanations, such as those related to course-taking patterns, which will be addressed in future editions of this report as data become available.

One effect of this Pennsylvanian presence is that Allegany and Hagerstown are the two community colleges at which dually enrolled students make up the largest share. Table 5 shows dually enrolled students at each community college, both as a headcount number and as a percentage of the student population of each community college, sorted by the percentage column. Without Pennsylvanians,

Hagerstown would still have 552 dually enrolled students, but Allegany would have only 63. Hagerstown would have the highest percentage of dually enrolled students at 11.4%, while Allegany’s percentage would be 2.0%.

TABLE 5. HEADCOUNT ENROLLMENT, ALL STUDENTS AND DUALLY ENROLLED STUDENTS, COMMUNITY COLLEGES, FALL 2013.

Community College	Number of Students	Number of Dually Enrolled Students	Percentage of Students who are Dually Enrolled
Allegany College of Maryland	3,180	459	14.4%
Hagerstown Community College	4,859	646	13.3%
Chesapeake College	2,551	241	9.4%
Frederick Community College	5,984	373	6.2%
Harford Community College	6,930	422	6.1%
Anne Arundel Community College	16,336	913	5.6%
Wor-Wic Community College	3,389	188	5.5%
Cecil College	2,566	117	4.6%
Garrett College	764	34	4.5%
Carroll Community College	3,756	165	4.4%
Community College of Baltimore County	23,680	701	3.0%
College of Southern Maryland	8,729	251	2.9%
Prince George’s Community College	13,737	345	2.5%
Montgomery College	25,960	467	1.8%
Howard Community College	9,879	158	1.6%
Baltimore City Community College	5,320	82	1.5%

Summary of Findings and Discussion of Future Study

The findings of this report can be summarized as follows:

- In the Fall 2013 semester, 5,730 students took college coursework through dual enrollment programs.
- 97.1% of those students enrolled at community colleges.
- Most dually enrolled students registered for one to two classes, although a few community colleges enrolled an unusual number of students taking three or more classes.
- 93.8% of dually enrolled students were aged 16 to 18, consistent with the age of high school students in upper grades.
- Female students outnumbered male students 3 to 2, a ratio closer to that of the community college population than that of the high school population.
- White students are substantially overrepresented among dually enrolled students.
- Community colleges tend to enroll dually enrolled students from their own counties. Pennsylvania contributes a large number of dually enrolled students to Allegany College of Maryland and Hagerstown Community College.

As more data become available, future editions of this report will begin to examine additional topics related to dual enrollment, including:

- The number of public high school students who are dually enrolled, compared to the number of students from other kinds of high schools;
- The types of courses taken by dually enrolled students;
- More detailed demographic information on dually enrolled students;
- The impact of any special initiatives designed to increase the number of dually enrolled students; and
- The role dual enrollment plays in improving students' readiness for college, college completion, and time to degree.