

MEMORANDUM

January 22, 2015

TO: Education Committee

FROM: Elaine Bonner-Tompkins, Senior Legislative Analyst *EBT*
Kristen Lathart, Legislative Analyst
Office of Legislative Oversight

SUBJECT: **Worksession on OLO Report 2015-2: *Developmental Education at Montgomery College***

On January 26, the Education Committee will hold a worksession on Office of Legislative Oversight Report 2015-2, which the Council received and released on October 28, 2014. Councilmembers are asked to bring their copies of this report to the worksession. Extra copies of the full report are available in LIS. This report is also accessible on-line at www.montgomerycountymd.gov/olo.

Staff recommends the following worksession agenda:

- Overview of the report by OLO staff;
- Comments and presentation from Montgomery College and MCPS representatives; and
- Committee worksession on issues identified for discussion.

The Executive Summary of OLO's report is attached on © 1. Written comments received from the President of Montgomery College on OLO Report 2012-2 are attached on © 12 and comments from the Superintendent of Schools are attached on © 15.

The following Montgomery College representatives are scheduled to attend the worksession:

- DeRionne Pollard, President
- Sanjay Rai, Senior Vice President for Academic Affairs
- Judy Ackerman, Vice President/Provost, Rockville Campus
- John Hamman, Collegewide Dean of Mathematics

The following MCPS representatives are also scheduled to attend the worksession:

- Maria Navarro, Chief Academic Officer
- Erick Lang, Associate Superintendent for Curriculum and Instruction Programs

And the following College representatives will be in the audience and available to address questions:

- Carolyn Terry, Associate Senior Vice President for Academic Affairs
- Margaret Latimer, Vice President/Provost, Germantown Campus

- Monica Trent, Collegewide Dean of Communications, AELP, and Linguistics
- Rodney Redmond, Collegewide Dean of English and Reading
- Elena Saenz, Director of MCPS Partnerships

A. Background

The intent of developmental education, also known as remediation, is to prepare students for college-level coursework. Most colleges, and community colleges in particular, offer non-credit developmental courses in mathematics, English, and/or reading. In practice, developmental education often provides a second chance for recent high school graduates to develop mastery in course materials introduced in high school. The County Council tasked OLO to undertake this project to improve their understanding and oversight of developmental education at the College.

B. Findings

This OLO report describes the College's developmental programs and costs, developmental education enrollment and outcomes, and the alignment between the College's practices and promising practices in developmental education. The following four major findings emerged from the information reviewed on new English proficient (non-AELP) students at Montgomery College. The report's Findings and Recommendations Chapter is attached, beginning on © 4.

1. **Most students at the College must complete one or more developmental courses before they can enroll in college-level courses.** In 2011, nearly three-quarters of all students new to the College required remediation in math about a third required remediation in English or reading. Surprisingly, across all subjects, remediation rates were higher for recent high school graduates than for older students. Remediation rates were also higher among Black and Latino students than among White and Asian students, although it's important to note that a majority of new Asian and White students at the College nevertheless required remediation in math.
2. **Current remediation rates at the College may overstate the actual need for remediation at Montgomery College.** Montgomery College, like other community colleges in Maryland, relies almost exclusively on standardized test scores to determine developmental course placement. Thus students who have completed Algebra 2 or even Pre-Calculus in high school can place into Pre-Algebra and Algebra 1 developmental math courses at the College if they test poorly on the math course placement exam. Research suggests, however, that course placements based on standardized test scores alone may overstate the need for remediation compared to the use of multiple measures placement such as student transcripts and grades earned in high school.
3. **Although Montgomery College implements promising practices recognized in the research, most students never progress out of developmental education.** The College implements in whole or in part 13 of the 14 following promising practices in developmental education identified in the research literature.
 - Align high school benchmarks with college expectations (partially aligned)
 - Dual enrollment and early college programs (not aligned)
 - Early assessments and transitional courses (partially aligned)

- Summer bridge programs (partially aligned)
- Multiple measure assessments (partially aligned)
- Preparation for placement tests (aligned)
- Accelerated courses (aligned)
- Modularized courses and mastery learning (aligned)
- Mainstreaming into college-level courses (aligned)
- Contextualized instruction (partially aligned)
- Learning communities (aligned)
- Tutoring (aligned)
- Advising (aligned)
- Student success courses (aligned)

Yet, within two years of enrollment, most students requiring remediation either do not complete their developmental sequence of required courses or first gateway course for college credit. For example, among new students that required math remediation in 2011, a third (32%) completed their math developmental sequence by 2013, and only a fifth (19%) completed their gateway math course for college credit. In English and reading, however, nearly three-quarters of students needing remediation in 2011 (70-73%) completed their developmental sequence by 2013 although less than half (43-46%) completed their gateway English course for college credit.

4. **In 2013, remediation costs totaled \$14.9 million at the College with the County funding half of total costs. Yet, the students themselves likely bear the greatest costs for remediation.** With Current Fund support, County taxpayers funded about half of the costs of remediation at Montgomery College at \$6.5 million followed by \$5.6 million in tuition and fees and \$2.1 million in State Aid. However, students likely bear the greatest costs for remediation as they must pay tuition and fees for these non-credit classes and delay their progress in earning a degree. Developmental education also adds an additional burden for students receiving financial assistance as they must ensure that they do not exhaust their assistance before completing their remediation and program requirements. For students with multiple developmental courses to complete, this can be a difficult task.

C. Recommendations

Based on OLO's findings, the report offered two recommendations for the College –

1. Pilot and expand the use of multiple measures like high school transcripts and grade point averages to determine the need for remediation among new students; and
2. Partner with MCPS to align the College's and MCPS' expectations for college readiness in math by developing common end-of-course exams that are recognized as markers of math proficiency and college-readiness by both institutions.

Montgomery College President DeRionne Pollard’s October 31 letter to OLO indicates the College’s support for both of these recommendations and describes current efforts underway to utilize multiple measures for students testing into the upper levels of developmental coursework and conversations to better align public schools and higher education’s expectations for college readiness. The President’s letter is attached, beginning at © 12.

MCPS Superintendent Joshua Starr’s January 22 response to the report is also attached, beginning on © 16. The letter also endorses OLO’s recommendations and describes current partnerships between MCPS, Montgomery College, and the Universities of Shady Grove aimed at enhancing the college and career readiness of MCPS graduates.

ATTACHMENTS	BEGINS AT:
Executive Summary of OLO Report 2015-2	© 1
Chapter VI: Summary of Findings and Recommendations	© 4
Letter from President DeRionne Pollard, October 31, 2014	© 12
Letter from Superintendent Joshua Starr, January 22, 2015	© 15

Developmental Education at Montgomery College

Most students at Montgomery College are required to complete one or more developmental/remedial courses before they can enroll in college-level courses required for a degree. The County Council tasked the Office of Legislative Oversight to undertake this project to improve their understanding and oversight of developmental education at Montgomery College.

What is Developmental Education at Montgomery College?

Students entering college are either assessed as college-ready in English, reading, and math and can enroll in college-level classes or are considered non-college ready and must enroll in developmental courses to pursue a degree. Depending on their placement, non-college ready students may need to complete up to 21 non-credit hours of remedial coursework before they can enroll in credit-bearing, college-level courses. Most students never advance beyond developmental coursework at the College.

In recent years, the College has undertaken a number of efforts aimed at revamping its developmental education programs and improving student outcomes. These include:

- Redesigning its developmental Pre-Algebra and Elementary Algebra I courses into a single course – Math Preparation I and II (MATH 094) – that utilizes a mastery-based, module approach to instruction that provides numerous opportunities for acceleration.
- Providing accelerated paths in developmental reading and English and combining both departments into one to better integrate developmental courses in both subjects.
- Offering a number of additional services for developmental students including test preparation tools, post-assessment advising, student development seminars, and academic supports.

Demand and Enrollment in Developmental Education at Montgomery College

Student Groups	Reading	English	Math
All Students	29%	35%	73%
Recent Grads	32%	38%	79%
All Others	22%	28%	60%
Asian	25%	29%	56%
Black	37%	42%	82%
Latino	43%	50%	87%
White	15%	21%	59%

Demand. In 2011, 4,021 new non-American English Language Program (AELP/non-ESOL) students enrolled in Montgomery College. As noted above, nearly three-quarters of new students (73%) were non-college ready in math compared to about a third of students (29-35%) in reading or English. Rates of remediation were also higher among recent high school graduates and Black and Latino students compared to other student groups. And 2009 data suggests that half of new students placed into developmental math were placed into the lowest level math course - Pre-Algebra. Thus, these students were typically required to complete three non-credit math courses (Pre-, Elementary and Intermediate Algebra) before they could enroll in the gateway math course required for their degree.



Enrollment. Students requiring developmental education are placed into either lower or intermediate level remedial courses. Course enrollment data below shows that a majority of developmental students were enrolled in the lowest level English and math courses in 2013.

Developmental Courses and Enrollment, 2013	Course Enrollment	Share of Enrollment
College Reading Skills I (RD 095)	810	35%
College Reading Skills II (RD 099)	1,479	65%
Basic English I (EN 001)	1,429	55%
Basic English II (EN 002)	1,165	45%
Math Prep I/II (Pre-Algebra & Algebra I) (MATH 094)	6,042	57%
Intermediate Algebra (Algebra II) (MATH 097/099)	4,459	43%

Developmental Education Assessment Practices at Montgomery College

Montgomery College uses scores on the Accuplacer or other standardized exams (SAT or ACT) to determine the college-readiness of most incoming students. Like other community colleges in Maryland, scores on these assessments are used to place students into pre-developmental, developmental, and college-level courses. As a result of these state mandated course placement processes, the vast majority of new students at the College are placed into developmental English, reading, or math courses.

A review of promising practices, however, suggests that the College's remediation rates may overstate the actual need for remediation. Researchers have found that test scores alone overstate the need for remediation and that the developmental placement process should rely on multiple measures of student performance, such as grade point averages and transcripts, to assess students' college readiness.

A review of graduation requirements and course taking trends within Montgomery County Public Schools (MCPS) suggests that most new students enrolling at the College completed a college-prep curriculum and while in high school, many passed Algebra II. Thus, the use of multiple measures beyond test scores to discern students' readiness for college-level courses would likely lower the demand for developmental courses at the College, particularly lower-level remedial courses.

Cost of Developmental Education at Montgomery College

Montgomery College staff estimated the 2013 cost of developmental education at \$14.9 million for instruction, academic support and student services for developmental students. The County funded about half of this cost (\$6.5 million) followed by \$5.6 million in tuition and related charges and \$2.1 million in State aid. One cost which is difficult to calculate is the student's cost: in addition to tuition and fees, students forego wages and delay their progress through college because of remediation.

Developmental Education Performance at Montgomery College

Performance outcomes in developmental education at Montgomery College are low, especially in math:

- Although the percent of students requiring English and reading remediation that completed their developmental coursework within two years increased between 2006 and 2011, less than half of such students completed their first gateway college-credit course within two years of enrollment;
- Less than half of students requiring math remediation completed their developmental coursework within two years between 2006 and 2011, and less than a quarter completed their first gateway college-credit course (e.g. college level algebra) within two years of enrollment.

Montgomery College Alignment with Promising Practices

OLO's review found that the College implements in whole or in part 13 of 14 promising practices in developmental education identified in the research literature and listed below. OLO also found that as the College implements the Maryland College and Career Readiness Completion Act (Senate Bill 740), its alignment with developmental education promising practices will increase.

- Align high school benchmarks with college expectations of readiness (partially aligned)
- Dual enrollment and early college programs (not aligned)
- Early assessments and transitional courses (partially aligned)
- Summer bridge programs (partially aligned)
- Multiple measure assessments (partially aligned)
- Preparation for placement tests (aligned)
- Accelerated courses (aligned)
- Modularized courses and mastery learning (aligned)
- Mainstreaming into college-level courses (aligned)
- Contextualized instruction (partially aligned)
- Learning communities (aligned)
- Tutoring (aligned)
- Advising (aligned)
- Student success courses (aligned)

The research suggests, however, that the collective implementation of these promising practices will not dramatically increase outcomes in developmental education.

OLO Recommendations

OLO found that while developmental education at the College aligns with promising practices, outcomes in remedial courses remain low. OLO also found that the primary reliance on testing data to determine remediation need may overstate the demand. Therefore, OLO offers the following recommendations.

#1: Pilot the Use of Multiple Measures to Assess Remediation Need.

The College has recently piloted the use of multiple measures to assess the need for math remediation; the College has also asked its newly combined Reading and English department to consider piloting a multiple measures approach to determine the need for remediation in these subject areas. OLO endorses these pilot measures and recommends that the College expand and evaluate its efforts to determine the appropriate use of high school grade point averages and transcripts in course placements.

#2: Align MCPS Coursework and the College's Expectations for Proficiency in Math.

OLO recommends that the College partner with MCPS to pilot the development of end-of-course exams that are recognized by both institutions as markers of math proficiency and college-readiness. OLO recommends that this partnership initially focus on the courses covered in developmental math: Pre-Algebra, Algebra I, and Algebra II. If these assessments are effective at improving student outcomes, then OLO recommends the development of joint assessments beyond Algebra II.

For a complete copy of OLO-Report 2015-2, go to:
<http://www.montgomerycountymd.gov/olo/reports/2008.html>

Chapter 6: Summary of Findings and Recommendations

The County Council tasked the Office of Legislative Oversight to undertake this project to improve their understanding and oversight of developmental education at Montgomery College that prepare students for college-level coursework. This report describes: the demand for remedial courses at Montgomery College; the policy drivers that shape demand; the College's developmental education programs, costs and outcomes; and the alignment between local practices and promising practices for improving outcomes in developmental education.

Overall, OLO finds that while the College has revamped its developmental education programs and services and the vast majority of the College's practices align with promising practices, outcomes among students enrolled in remedial courses at the College remain low, particularly in math. OLO also finds that the College's primary reliance on testing data to determine remediation need may overstate the need for developmental education, particularly among students who have completed a college-prep curriculum in high school. To improve local outcomes in developmental education, OLO offers two recommendations for College action: utilize multiple measures of performance to more accurately determine the actual need for remediation and coordinate with MCPS to create common, end of course assessments that demonstrate college-readiness in math.

A detailed description of OLO's eight key findings and two recommendations follows.

A. Report Findings

FINDING #1: Most students new to Montgomery College place into developmental math and about a third place into developmental English or reading. Remediation rates are higher among recent graduates and Black and Latino students.

In 2011, 4,021 new non-American English Language Program (AELP/non-ESOL) students enrolled in Montgomery College. Of this total:

- 73% were assessed as requiring math remediation;
- 35% were assessed as requiring English remediation; and
- 29% were assessed as requiring reading remediation.

As a consequence, these students were required to complete one or more developmental courses before they could enroll in: (a) credit-bearing courses that meet their general education requirements for higher education credentials; and/or (b) other college-level, credit-bearing courses that required placement in English 101 – the gateway English course.

The demand for developmental education at Montgomery College was particularly high among **recent high school graduates** who accounted for 67% of all new non-AELP students in 2011:

- 79% were assessed as requiring math remediation compared to 60% of older students;
- 38% were assessed as requiring English remediation compared to 28% of older students; and
- 32% were assessed as requiring reading remediation compared to 22% of older students.

Higher remediation rates among new graduates at the College parallel state and national data describing remediation rates among community colleges. National estimates suggest that 58-68% of recent graduates at community colleges require some remediation. And according to the Maryland Higher Education Commission, 71% of new high school graduates required remediation among all community colleges in Maryland.

The demand for developmental education was also particularly high among **Black and Latino students** who accounted for 44% of all new non-AELP students at the College in 2011:

- 82% of Black students and 87% of Latino students were assessed as requiring math remediation compared to 56% of Asian students and 59% of White students;
- 42% of Black students and 50% of Latino students were assessed as requiring English remediation compared to 29% of Asian students and 21% of White students; and
- 37% of Black students and 43% of Latino students were assessed as requiring reading remediation compared to 25% of Asian students and 15% of White students.

FINDING #2: A majority of developmental students at Montgomery College are enrolled in the lowest level remedial courses.

Students requiring developmental education at Montgomery College are placed into either lower or intermediate level remedial courses based on their placement scores by subject area. As noted below, a majority of developmental students are enrolled in the lowest level courses. More specifically, 55% of developmental English students and 57% of developmental math students are enrolled in the lowest level remedial courses compared to 35% of developmental reading courses. Without course acceleration, a majority of developmental students at the College must complete two or more non-credit courses before they can begin credit-level courses in their remediated subjects.

Table 6-1: Developmental Courses at Montgomery College and 2013 Enrollment

Name of Courses	Course Numbers	2013 Enrollment	Share of Enrollment
Reading			
College Reading Skills I	RD 095	810	35%
College Reading Skills II	RD 099	1,479	65%
English			
Basic English I	EN 001	1,429	55%
Basic English II	EN 002	1,165	45%
Mathematics			
Mathematics Preparation I/II (Pre-Algebra and Algebra I)	MATH 094	6,042	57%
Intermediate Algebra (Algebra II)	MATH 097; MATH 099	4,459	43%

FINDING #3: The College’s remediation rates may overstate the need for remediation.

Among students new to higher education who have not completed a college-level course in math, English, or reading, the Maryland Higher Education Commission requires Montgomery College and other community colleges in the state to use the common rubric below to assign incoming students to developmental courses. Unlike four-year public colleges, most developmental placement decisions among Maryland community colleges rely exclusively on standardized test scores (e.g. Accuplacer).

Table 6-2: Developmental Courses at Montgomery College and Accuplacer Placement Scores

Name of Course	Course Number	Accuplacer Score
Reading		
College Reading Skills I	RD/READ 095	53-65
College Reading Skills II	RD/READ 099	66-78
English		
Basic English I	EN/ENGL 001	0-79
Basic English II	EN/ENGL 002	80-89
Mathematics		
Mathematics Preparation I/II (Pre-Algebra and Algebra I)	MATH 094/080	0-61
Intermediate Algebra (Algebra II) for <ul style="list-style-type: none"> o Liberal Arts o Business, Elementary Education, & STEM majors 	MATH 097/093	62-120
	MATH 099/096	

Yet research from the Community College Research Center (CCRC) suggests that developmental placements based on test scores alone overstate the actual need for remediation or level of remediation needed. For example, the CCRC has found that remedial placements based exclusively on test scores assign between a quarter to a third of students into remedial courses who could have passed college-level courses with a grade B or better. CCRC studies have also found that:

- Using students’ high school grade point averages and transcripts instead of placement tests were predicted to reduce placement error rates in half;
- Giving students the opportunity to use the best of their placement test or high school grade point averages to determine remediation needs increased college-level coursework and completion rates; and
- Ignoring remedial coursework recommendations and enrolling directly into college-level courses enhanced the success rates of students.

Placement tests alone may offer an insufficient picture of students’ readiness for college-level courses because students often “just show up” to take these tests rather than prepare for them. Local graduation requirements and course taking data suggest that most Montgomery College students likely completed a college-prep curriculum in high school that included Algebra II. Thus, the use of multiple measures such as high school transcripts and grade point averages to assess college-readiness would likely lower the demand for remediation and developmental courses at the College.

FINDING #4: New testing and proposed performance requirements in Maryland will likely reinforce the demand for developmental education at Montgomery College.

New testing and performance requirements, codified under state laws and proposed regulations to implement the Common Core State Standards (CCSS) and the Maryland College- and career-readiness and Completion Act (Senate Bill 740), will likely reinforce the local demand for remediation.

With Maryland's adoption of the CCSS, school systems across the state now require that this year's 9th and 10th grade students must pass two new assessments in order to graduate: PARCC assessments for Algebra I and English 10. State and local officials anticipate that the proportion of students passing the new PARCC assessments aligned with college-ready levels of performance will likely be lower than the proportion of students deemed proficient on High School Assessments, which a vast majority of students passed.

Starting in 2015-16, SB 740 also requires that school systems assess the college-readiness of students by the end of Grade 11. Toward this end, MSDE has recommended the use of two PARCC exams in Algebra II and English 11 to assess college-readiness among 11th graders. MSDE further proposed that students earning less than a score of 4 on either assessment will be deemed "non-college-ready" and will enroll in "transitional courses" aimed at improving their college-readiness as seniors. MSDE also proposed that students passing either assessment will be deemed college-ready in tested subjects and will be able to directly enroll in credit courses in any Maryland public college.

Given the current performance of MCPS students on current standardized assessments of college-readiness, it is anticipated that the demand for transitional courses will be high and the demand for remediation at Montgomery College will continue. For example, among MCPS Class of 2013, only 41% of graduates achieved college-readiness benchmark scores of 1,650 or above on the SAT or 24 or above on the ACT. The wide achievement gaps on such measures impacting students that disproportionately enroll at the College, further suggests that the local demand for developmental education will remain unabated if current student enrollment patterns persist.

FINDING #5: State laws and regulations drive the demand for developmental education locally, but County taxpayers, students, and their families bear the brunt of the costs of funding developmental education at Montgomery College.

As noted in Findings 2 and 3, state regulations regarding placement testing among community colleges and new laws and proposed regulations expanding testing requirements and performance expectations drive the demand for remediation at Montgomery College. Yet, County taxpayers, students, and their families bear the brunt of the costs of funding developmental education programs and services locally.

At the request of OLO, Montgomery College staff estimated and calculated the annual cost of developmental education between 2007 and 2013. Based on an estimate that developmental education comprised 10.7% of total hours of enrollment at the College (billable hours), the cost of remediation was \$14.9 million at Montgomery College in 2013 for instruction, academic support and student services for students enrolled in remedial coursework.

As noted in the table below, County dollars funded about half of this total cost (\$6.5 million) in 2013 followed by \$5.6 million in tuition and related charges and \$2.1 million in State aid. But it is likely students who bear the most significant costs as they must not only pay tuition and fees for the classes but they must also delay their progress through college. Many students are discouraged when they find out that they are not eligible for college-level courses when they enroll at the College.

Table 6-3: Estimated Revenue Sources for Developmental Education, FY 2013

Source of Funds	FY 2013 Budget	% of All Revenue	Revenue for DIE split (same way, then)
Tuition and Related Charges	\$85,555,492	38%	\$5,611,508
Other Student Fees	\$1,697,759	1%	\$111,354
County Contribution	\$98,933,727	43%	\$6,488,974
State Aid	\$31,688,491	14%	\$2,078,420
Fed. State and Priv. Gifts and Grants	\$325,000	0%	\$21,316
Other Revenues	\$1,325,000	1%	\$86,906
Revenue Transfers	\$0	0%	\$0
Use of Fund Balance	\$8,202,226	4%	\$537,977
<i>Total Sources of Funds</i>	<i>\$227,727,695</i>	<i>100%</i>	<i>\$14,936,454</i>

FINDING #6: Montgomery College has revamped its developmental education programs and offers a host of additional services aimed at enhancing student outcomes.

The College recognizes that developmental education can serve as a bridge for students needing to prepare for college-level coursework and also an impediment for those desiring to immediately enroll in college-level courses. Improving the efficacy of developmental courses and reducing the amount of time that students are required to spend in remedial courses have been persistent challenges for the College. To address these concerns, the College has undertaken several changes that include -

- Program Improvements in Math Instruction:* The College redesigned its developmental math courses in 2011, combining its Pre-Algebra and Elementary Algebra I courses into a single course – Math Preparation I and II (MATH 094). The current system provides opportunities for acceleration by combining traditional in-class instruction with self-paced modules that are internet-based. Moreover, if a student takes a break from the class, he/she can resume from whichever module was last passed. Current classes are also mastery based – students must meet an 80% performance threshold before they can move to the next level. There is also a new accelerated math option that combines MATH 097 with MATH 115A/116A for a five credit course that meets the math requirement for general studies majors.
- Program Improvements in Reading and English:* Montgomery College combined its Reading and English departments into one department this past July. With this merger, the College plans to develop integrated developmental reading and English courses that teach students how to identify and develop patterns in both reading and writing. The College also offers accelerated paths in both subjects where students earning an A/B in the lower level developmental course (College Reading Skills I/Basic English I) can bypass the intermediate developmental course (College Reading Skills II/Basic English II) and enroll directly into the gateway college-credit English course (i.e. ENG 101/101A).

The College also began the PACE program for developmental English students two years ago as an acceleration model with mainstreaming. The PACE program co-enrolls developmental and credit students into the same English course (EN 101) for a 5 hour class rather than a 3 hour class. PACE provides enrolled students access to tutors and smaller classes (18 rather than 22 students). And, with the merger of the Reading and English departments, the class sizes of all developmental English and Reading courses will decline from 22 to 20 students.

- *Student Services and Academic Supports:* The College also offers a number of additional services aimed at reducing the demand for developmental education and the successful completion of developmental coursework. These include:
 - Test Preparation via online tools, preparation courses and Accuplacer testing among select MCPS high schools;
 - Post-Accuplacer advising via the Montgomery Advisory Program where College staff recommend course pathways for students;
 - The “First Year Experience” to connect new students to campus supports that promote retention and success;
 - Use of the Starfish online student tracking system to support counseling and advising;
 - Academic Centers in Reading, Writing, Math, and Science that provide education and support services, including group lessons, computer tutorials, and individual tutoring;
 - Student Development Seminars that offer short courses designed to assist students in developing their education plans and skills for college success;
 - Disability Support Services that provide identified students with disabilities accommodations that can include additional time, tutoring, and other services; and
 - Other supports aimed at improving the retention of Black males (Boys to Men Mentoring), the transition of veterans (Combat to College), and low-income, first generation college students (TRIO Program).

FINDING #7: The vast majority of the College’s practices align with promising practices in developmental education.

Montgomery College implements in whole or in part a majority of the promising practices identified in the research literature. As noted in the table on the next page, Montgomery College’s practices at least partially align with 13 of the 14 identified promising practices.

Moreover, the College is poised to deliver more promising practices as it implements new requirements mandated under SB 740 (e.g. transitional courses). It is important to note, however, that the research also suggests that the collective implementation of these promising practices will not dramatically increase outcomes in developmental education. Most researchers and advocates suggest that a more transformational shift in developmental education is required to dramatically improve outcomes in higher education.

Table 6-4: Alignment between Promising Practices and Montgomery College Practices

Promising Practice	Current Local Practice	Alignment Status
Align High School Curriculum with College-readiness Expectations	MCPS milestones for college-readiness include Algebra II by Grade 11 and high test scores on the SAT, ACT, AP	Partial, course taking milestones do not align
Dual Enrollment and Early College Programs	Early Placement Program College Institute	No, does not deserve developmental students
Early Assessments and Transitional Courses	Accuplacer Diagnostic and My Pearson Lab Intervention at 11 MCPS high schools	Partial, will become yes with SB 740
Summer Bridge Programs	Bridge to College Success, Biomedical Scholars, and GT STEP Summer Bridge Pre-Freshman Programs	Partial, does not include developmental courses
Multiple Measure Assessments	Accuplacer cut scores and equivalents, review of placements, and pilot efforts in math course placements	Partial, multiple measures not systematically used
Preparation for Placement Tests	Online resources, Accuplacer Advancer and Fast Track courses	Yes
Accelerated Courses	Can skip intermediate reading and English courses with high grades in lower courses	Yes
Modularized Courses and Mastery Learning	Modularized and mastery based Math Preparation course curriculum	Yes
Mainstreaming	PACE English course	Yes
Contextualized Instruction	I-BEST Program in apartment maintenance and certified nursing assistance	Partial, serves basic skills not developmental
Learning Communities	Honors, at-risk, and developmental learning communities	Yes
Tutoring	Math/Science Centers Writing and Language Centers	Yes
Advising	Starfish to support advising and counseling	Yes
Student Success Courses	Student development courses	Yes

FINDING #8: Performance outcomes in developmental education at Montgomery College are low, particularly for math remediation.

Student outcomes in developmental education remain modest because the majority of students requiring remediation do not complete their developmental sequence (required remedial coursework) or first gateway (college-level) course within two years. More specifically, a review of the College's cohort data on performance among non-AELP students between 2006 and 2011 finds that:

- Although an increasing majority of students requiring English and reading remediation completed their developmental sequences within two years, less than half completed their first gateway course within two years of enrollment; and
- Less than half of students requiring math remediation completed their developmental sequences within two years, and less than a quarter completed their first gateway course within two years of enrollment.

Interestingly, the performance of recent high school graduates in remedial courses across subjects generally exceeded the performance of older students in remedial courses. However, the modularization of developmental math courses under taken by the College in 2011 with the conversion of MA 090 and 091 into MA 094 has not yet translated into improved outcomes.

B. Recommendations for Montgomery College

RECOMMENDATION #1: Pilot the Use of Multiple Measures to Assess Remediation Need

Although the College has recently begun efforts to pilot the use of multiple measures to assess the need for remediation in math, OLO offers this recommendation to support the College's current efforts and its expansion if an evaluation of the College's pilot efforts finds that it's effective.

According to the research, the use of multiple measures to assess the college-readiness of students serve as better predictors of remediation need than placement test scores alone. Yet, Montgomery College relies almost exclusively on placement test scores from the Accuplacer or alternatives such as the SAT to determine the need for developmental education among its first-time college students. Current placement practices that identify one-third of new students as needing reading or English remediation and three-quarters as needing math remediation may overstate the actual need for developmental education at the College.

To more accurately assess the need for remediation among new students, OLO recommends that the College expand its pilot approach for utilizing multiple measures of student performance to determine remediation need. Specifically, OLO recommends that the College pilot the use of high school grade point averages and course performance in relevant high school courses to determine developmental education placements in English, reading, and math. OLO also recommends that the College evaluate the multiple measures approach if expanded to discern the fidelity and effectiveness of the multiple measures placement approach on developmental outcomes at the College.

RECOMMENDATION #2: Align MCPS Coursework and the College's Expectations for College-readiness in Math

MCPS tracks the percentage of students completing Algebra II by Grade 11 with a C or better grade as a measure of college-readiness. Yet, recent high school graduates typically have to complete Pre-Calculus or a higher-level math course to score high enough on the Accuplacer to test out of developmental math because students tend to test into the second to last course completed while in high school. So, if a student's highest math course at MCPS was Algebra II, they would typically test into Algebra I at the College and would be required to complete two remedial math classes (Mathematics Preparation and Intermediate Algebra) before enrolling in a college-level math course.

Implementation of the Maryland College- and career-readiness and College Completion Act of 2013 (Senate Bill 740) will improve the alignment between MCPS' course requirements and Montgomery College's expectations for college-readiness in two ways. First, SB 740 requires that students complete a math class during their senior year beginning with this year's 9th grade cohort. This should improve students' performance on the Accuplacer during and immediately after their senior year. Proposed regulations by MSDE to implement SB 740 also recommend that Maryland's public colleges recognize passing the PARCC Algebra II test as a marker of college-readiness in math by 2015-16. If enacted, MCPS students who pass this assessment after completing Algebra II will be able to enter college-level math at Montgomery College without having to pass the Accuplacer.



Office of the President

October 31, 2014

Chris Cihlar, PhD
Director, Office of Legislative Oversight
100 Maryland Avenue
Rockville, MD 20850

Dear Dr. Cihlar:

Thank you for the opportunity to comment on the recent Office of Legislative Oversight report entitled, "Developmental Education at Montgomery College." We welcome the opportunity to engage in a conversation about the academic and administrative challenges concerning developmental education, which are well-documented in the report. Montgomery College is proud of its mission to empower students to change their lives—to welcome students, regardless of their academic backgrounds or economic resources. Montgomery County needs its community college now more than ever because, in today's economy, postsecondary education is a necessity for everyone. Unfortunately, it is not a certainty for everyone. The Board of Trustees and I are determined to close the achievement gap and to ensure more students achieve their educational goals and find success here at Montgomery College. The achievement gap and success in developmental education are two of the most vexing challenges that school districts and colleges across our state and our nation face. We look forward to a collegial exchange of ideas that will inform our efforts to enhance student success. We firmly believe that the College is and will continue to be the gateway to a strong middle class in Montgomery County.

As a first round nominee for the prestigious Aspen Institute Prize for Community College Excellence, Montgomery College has focused considerable resources on identifying and supporting the needs of those students who come to us without the academic skills for success in college-level coursework. As noted on page 50 of the OLO report, Montgomery College is engaged in 13 of the 14 identified "promising practices" in developmental education. These include the following initiatives:

- Accelerated courses in reading and English with the opportunity for students to advance through levels of developmental work
- Modularized and mastery-based developmental math curricula—allowing students to complete coursework on their own schedule, enabling a student to save time and money
- Mainstreamed developmental students into college-level courses in English
- Utilized learning communities that link courses to raise content relevance for students
- Provided tutoring centers for outside-of-class supplemental instruction
- Integrated new technologies for instruction and advising

Montgomery College continues to employ promising practices as academic leaders and faculty members learn from professional organizations and consult with their colleagues at other community colleges in order to learn effective practices in developmental education. For example, Montgomery College faculty members participate in the National Association for Developmental Education, the Two-Year College Association of the National Council of Teachers of English, the College Reading and Learning Association, and the American Mathematical Association of Two-Year Colleges. All of these professional organizations share their best practices in addressing the national conversation about developmental education and inform the curriculum at Montgomery College.

One of the key national conversations is about the use of standardized testing to identify students who need developmental instruction. The OLO report contains a recommendation for Montgomery College to pilot multiple measures to assess the remediation need for students. We support this recommendation. The College is currently piloting just such a process. Specifically, we will review the high school transcripts of students who test into the upper levels of developmental coursework. It is our hope that this pilot can help us determine how best to place students who test near-ready for college-level coursework. At this juncture, the College is not positioned to implement such individualized placement processes for all new students. First, as a member of the 16 community college consortium in Maryland, Montgomery College must use the Accuplacer instrument and common placement scores that have been sanctioned by the Maryland Higher Education Commission. Students may demonstrate college readiness through SAT or ACT scores set by statewide policy, or they may do so by achieving the Accuplacer score required by all community colleges throughout the state. Second, as the largest community college in the state, Montgomery College experiences a large influx of new students each semester and simply does not have the resources to provide an individualized application and transcript review process that may be available in selective institutions of higher education.

The second recommendation in the OLO report suggests greater alignment of Montgomery County Public Schools (MCPS) coursework and the College's expectations for college readiness in math. We support this recommendation and certainly welcome any and all opportunities to work with MCPS to enhance student success. At this moment, statewide policy dictates that a student's readiness for math—at or above college-level algebra—is defined by the student's performance on any of the standardized instruments, specifically, SAT, ACT, or Accuplacer. However, the OLO report's findings about developmental math are indicative of the national debate about the misalignments between K-12 education and all levels of higher education, and cite some of the reforms that have been implemented in Texas and Colorado (p. 46). In fact, the Maryland higher education community is having similar conversations. While Montgomery College is very interested in programs such as Mathway and Statway, such curricular change would most likely necessitate a change in the Code of Maryland Regulations, which defines the math general education requirement for all colleges and universities, no matter the degree program, as "at or above college-level algebra." This issue is the subject of the statewide math conference to be held today, October 31, 2014, at which Dr. Philip Uri Trisman will speak. He is a leading advocate on changing the general education requirements for math, and he received a warm welcome when he spoke several years ago at the annual Maryland Community College Completion Summit. We are also hopeful that implementation of Common Core curricula will

Chris Cihlar, PhD
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drive greater alignment between secondary and postsecondary curricula. Nevertheless, until Common Core and the related Partnership for Assessment of Readiness for College and Careers tests have been fully implemented—including adoption of the appropriate cut scores—or the general education requirements and the measurements of college readiness are changed statewide, Montgomery College will continue to implement promising practices to help our students achieve those state-defined competencies.

In conclusion, Montgomery College welcomes the continuing conversation about developmental education in Montgomery County. We share the County Council's commitment to serving the best interests of its residents and in using public funds responsibly and effectively. As the College continues to work with its colleague institutions in the state to shape curricula and assessment practices, we look forward to your partnership in shaping the public policy and resource allocation that will enable us to best serve all Montgomery College students.

Sincerely,

A handwritten signature in black ink, reading "DeRionne P. Pollard". The signature is written in a cursive style with a large, looping initial "D".

DeRionne P. Pollard, PhD
President



MONTGOMERY COUNTY PUBLIC SCHOOLS

www.montgomeryschoolsmd.org

MARYLAND

January 22, 2015



Dr. Chris Cihlar, Director
Dr. Elaine Bonner-Tompkins, Senior Legislative Analyst
Montgomery County Office of Legislative Oversight
Stella B. Wemer Office Building
100 Maryland Avenue
Rockville, Maryland 20850

Dear Drs. Cihlar and Bonner-Tompkins:

Thank you for providing Montgomery County Public Schools (MCPS) with the opportunity to review and provide comment on the draft Office of Legislative Oversight (OLO) report, Developmental Education at Montgomery College. Students graduating high school and entering college with the need for remediation is a concern in MCPS and across the nation. This concern persists despite the fact that MCPS students continue to outperform their peers in the state of Maryland and the nation on standardized tests such as the SAT, and thousands of MCPS students graduate with millions of dollars in scholarships and successfully enter college and earn postsecondary degrees. Decreasing the number of MCPS students who are required to take developmental courses and increasing college readiness for all students is a responsibility shared by both MCPS and Montgomery College. Driven by that commitment, both institutions have built an infrastructure for collaboration.

Our institutional leaders have long recognized the value of strong collaborative partnerships. Throughout the years MCPS and Montgomery College have built a solid foundation of communication and innovative educational initiatives for the benefit of students in Montgomery County. During the past three years, many of these initiatives have expanded to the K-16 arena, and as a result, deepen collaboration with our partners at The Universities at Shady Grove (USG). Our joint efforts have allowed us to build an educational and career pathway for college ready students, while simultaneously placing programs and supports in place to enable success for the most vulnerable students in the county.

The MCPS Strategic Framework, *Building Our Future Together. Students, Staff and Community* challenges us to ensure that every student has the academic, creative problem solving, and social emotional skills to be successful in college and career. As a data-driven institution, information and data relevant to and supportive of this mission is critical. Therefore, MCPS collects data on the postsecondary destination of our students and readiness for college-level work. Much of the information included in the OLO report validates internal findings and research completed by the MCPS Office of Shared Accountability (OSA), specifically around placement tests and the need for transformational change in developmental education and college completion. MCPS has and will continue to work closely with Montgomery College partners, as well as USG, to support using multiple measures to determine readiness of our graduates.

Office of the Superintendent of Schools

850 Hungerford Drive, Room 122 ♦ Rockville, Maryland 20850 ♦ 301-279-3381

Current Initiatives

While establishing guidelines and determining criteria for placement into developmental education is not within the purview of MCPS, ensuring that students graduate from MCPS college and career ready is a high priority. Several initiatives are in place to support college readiness and decrease the need for developmental work by MCPS graduates who attend Montgomery College. This work may be organized into the following four areas:

- Programs, new state standards, curriculum, and assessments that enable college and career readiness.
- Platforms and projects that use data to determine areas of student need and support.
- Partnerships that enhance college and career readiness.
- Planned discussions with Montgomery College in support of OLO recommendations.

I. Programs, Common Core State Standards (CCSS) and Curriculum 2.0, Partnership for Assessment of Readiness for College and Careers (PARCC)

ACES Readiness—Achieving Collegiate Excellence and Success (ACES) is a MCPS, Montgomery College, and USG partnership initiative. It comprises Grades 11 and 12 students from ten MCPS high schools.

The program is designed to create a seamless educational pathway and support structure from high school through Montgomery College and USG for students who will be the first in their families to attend college. This emphasis reflects the rapidly changing demographics of our county. The ACES program provides comprehensive interventions and supports to help students stay on track for graduation, college enrollment, and college completion. Students in Grade 8 are invited to participate in a week-long summer readiness program at their home school during June and are supported by college and career information coordinators throughout Grades 9 and 10. Approximately 2,400 students may be served in this pre-ACES program each year, setting the stage for participation in ACES, and enhancing their transition to Montgomery College and college-level work.

High School ACCUPLACER Program (HSAP)—Briefly noted in the OLO report, HSAP is an academic intervention program implemented in MCPS with support from Montgomery College. To achieve its goals of decreasing the percentage of students placed in developmental courses at Montgomery College and increasing college readiness, the program uses the following strategies:

- Increases awareness and understanding of the ACCUPLACER placement test among high school students, their parents, and high school staff members.
- Improves student preparation for the ACCUPLACER placement test.
- Administers the ACCUPLACER placement test at students' high schools, not at Montgomery College.

The following five components comprise HSAP:

- Schools provide information about the ACCUPLACER placement test, including its purpose, use, and format.

- Students complete the ACCUPLACER placement test at their home schools in the fall or winter. Students who test college ready exit the HSAP program.
- Students who score below the college-ready level on the ACCUPLACER placement test complete the ACCUPLACER diagnostic tests to identify their weaknesses and strengths in each of the subject areas—reading, English, and mathematics.
- Students complete academic interventions in their area(s) of academic weakness using an online resource, ACCUPLACER/MyFoundationsLab, in course, after school, and/or independently.
- Students complete the ACCUPLACER placement test at their home schools in the spring.

In 2012, HSAP was offered at 13 of the 25 MCPS comprehensive high schools. As a result of recommendations presented in an OSA evaluation, HSAP was expanded to all 25 high schools in summer 2014. School-based staff members were provided with training and resources to support students. The OSA evaluation of HSAP is available online at:

http://montgomeryschoolsmd.org/departments/sharedaccountability/reports/2012/Report%20ACCUPLACER_13.03.11.pdf.

CCSS, Curriculum 2.0, and PARCC—A rigorous high school curriculum has long been identified as one of the significant factors contributing to college readiness and degree attainment. MCPS and Montgomery College have partnered to ensure that curriculum and expectations are fully aligned. MCPS has been developing and implementing curriculum, professional development, and classroom instruction in support of CCSS since its adoption by the Montgomery County Board of Education in 2010.

CCSS (<http://www.corestandards.org/>) were “designed to ensure that students graduating from high school are prepared to take credit-bearing introductory courses in two- or four-year college programs or enter the workforce.” An essential part of curriculum development also has been the revision of all formative and summative assessments, including semester examinations, to align with the high-level expectations of CCSS. More information on Curriculum 2.0 may be viewed at: <http://www.montgomeryschoolsmd.org/curriculum/2.0/>.

During the past year, professional learning has focused on the assessment of CCSS using PARCC assessments. In 2013–2014 MCPS participated in the pilot PARCC assessments and in 2014–2015 all students in Grades 3–8, Algebra 1, Algebra 2, and English 10 will participate in the first full administration of PARCC assessments. The Maryland State Department of Education (MSDE) reports that results of these assessments will be available in December 2015.

MSDE recently renamed the CCSS as the Maryland College and Career-Ready Standards to reflect the high level of preparation students will need to demonstrate to reach proficiency. MCPS believes the standards, properly implemented, will help significantly reduce the number of students who graduate in need of remedial mathematics or English classes.

II. Platforms and Projects that Use Data to Determine Areas of Student Need and Support

College Readiness Monitoring Tools—MCPS monitors students' progress toward college readiness using course grades to assessment data. The College Readiness Monitoring Tools developed and implemented in 2011 by OSA were created to help schools achieve readiness of all students for college and career. The tools include: a Grade 9 course completion monitoring tool, a Grade 10 SAT prediction tool, and a Grade 11 and Grade 12 SAT/ACT/ACCUPLACER monitoring tool. The course completion monitoring tool predicts whether students will earn four or more core course credits by the end of Grade 9. The SAT prediction tool identifies students who may need additional support to be college ready. The SAT/ACT/ACCUPLACER monitoring tool displays individual students' predicted SAT scores; the predictors of the ACCUPLACER placement test; actual SAT, ACT, and ACCUPLACER scores; and information on students' progress in English, mathematics, and Advanced Placement (AP)/International Baccalaureate (IB) courses. The College Readiness Monitoring Tools are updated year-round to enable schools to support students in Grades 9–12.

The College Readiness Monitoring Tools are designed to serve high schools in four ways. They allow schools to monitor students' course attainment in English and mathematics. Schools may use these research-based tools to place students in AP or IB courses. Because colleges use standardized tests to gauge students' readiness for college-level courses, these research-based tools empower schools to use the predictors to measure students' readiness for these assessments. Finally, they provide timely information on the SAT, ACT, and ACCUPLACER placement tests for monitoring purposes.

Data Sharing Agreement with Montgomery College—In 2009, a data-sharing Memorandum of Understanding (MOU) was developed between MCPS and Montgomery College. The primary purpose of the MOU was to establish and affirm an ongoing relationship between the two institutions for the purpose of sharing data related to MCPS students (past or present) who attend Montgomery College and to establish a process for sharing information regarding the college readiness and outcomes of MCPS graduates who attend Montgomery College. Aggregated data are received annually from Montgomery College, allowing MCPS to monitor the trends in graduates entering Montgomery College college-ready, and implications of these trends. In summer 2014, data were disaggregated. Student-level data allow MCPS to develop academic profiles and support the success of current students based on findings.

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II. Partnerships that Enhance College and Career Readiness

Business, Industry, and Higher Education Partnerships—Partnerships with business, industry, and higher education comprise a key strategy to ensure that our students are college and career ready. MCPS leverages industry expertise to provide feedback on our curriculum and instructional program.

Currently, MCPS seeks input and feedback on Career and Technology Education curriculum and instruction through Program Advisory Committees and the Montgomery County Collaboration Board. Additionally, an advisory board at Wheaton High School informed development of project-based learning initiatives. Project-based learning engages students and enhances their learning. These types of advisory opportunities are being expanded to include other content areas.

MCPS will work with Montgomery College, other higher education partners, and industry to redefine capstone experiences. Activities, including internships and research projects, will be examined to ensure the experiences are based on the latest demands in the workforce and higher education and enhance classroom learning.

Montgomery College Middle College (MC²) at Northwest and Northwood High Schools—The goal of MC² is to provide students the opportunity to earn college credits towards an associate's degree in a STEM-related field from Montgomery College while simultaneously earning a high school diploma. The program aims to recruit greater numbers of students from subgroups that are underrepresented in higher education and in STEM career fields, so that at least one fifth of the students in each cohort will be from underrepresented groups.

MC² is being implemented in two MCPS high schools: Northwood High School, where students have the opportunity to earn college credits towards a Chemistry and Biochemistry associate's degree; and Northwest High School, where students have the opportunity to earn at least 30 college credits toward an associate's degree in Engineering. The first cohorts at both schools began the program in the fall of 2014.

As a result of funds awarded through the Maryland Early College Innovation grant, components of MC² were designed and include academic interventions and activities to enable college readiness of high school students. These components allow more students to take advantage of the middle college opportunity and graduate without the need for developmental courses.

IV. Planned Discussions with Montgomery College in Support of OLO Recommendations

OLO Recommendation #1: Pilot the Use of Multiple Measures to Assess Remediation Need—MCPS OSA staff members have researched the topic of college readiness as measured by the ACCUPLACER in 2012 and can affirm the findings of the OLO report. You may view the detailed report at:

http://montgomeryschoolsmd.org/departments/sharedaccountability/reports/2012/HS%20Factors%20Contributing%20to%20College%20Readiness%20as%20Measured%20by%20ACCUPLACER_13.08.13.pdf

In addition to a rigorous curriculum, research notes that high school grade point average (GPA) is another significant predictor of college readiness, performance, and degree attainment. The use of GPA and other factors such as indicators of academic behavior (e.g., attendance) and placement testing may indeed reduce college course placement errors and placement into developmental courses at Montgomery College.

Montgomery College leaders have shared information with MCPS staff members regarding their current pilot to review high school transcripts of students identified for placement consideration and will continue discussions around this pilot and scalability. One of the barriers Montgomery College has noted to expanding the pilot is staff capacity and the ability to effectively provide individualized placement and transcript review for all incoming students. Montgomery College may benefit from

Dr. Chris Cihlar
Dr. Elaine Bonner-Tompkins

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January 22, 2015

developing tools similar to the MCPS models OSA has built using multiple factors to identify students. A meeting is planned in spring 2015 to share the model and discuss additional ways support may be provided. Although the 16 community colleges in the state of Maryland use the ACCUPLACER and common placement scores as allowed by the Maryland Higher Education Commission, Montgomery College has long been a trail blazer in change and MCPS is confident that with data and research as its foundation, Montgomery College leadership may be champions for change regarding developmental education in the state.

OLO Recommendation #2: Align MCPS Coursework and the College's Expectation for Proficiency in Mathematics— Montgomery College and MCPS mathematics and English content leaders began instructional dialogues in 2013. Montgomery College and MCPS have joint sessions focusing on CCSS and PARCC updates. We are equally hopeful that efforts related to CCSS will increase alignment between secondary and postsecondary institutions, and will positively impact students. Currently the math departments at MCPS and Montgomery College are working on a number of projects designed to increase alignment, provide professional development, and develop shared expectations. For now, instructional dialogues will continue as we collaborate to decrease numbers of MCPS graduates placed into developmental courses at Montgomery College.

Thank you again for the opportunity to provide comments on this OLO report. We look forward to continuing our conversation with the County Council to ensure that all children are prepared to be college and career ready.

Sincerely,



Joshua P. Starr, Ed.D.
Superintendent of Schools

JPS:dr

Copy to:
Mr. Leggett
Mr. Leventhal
Members of the Board of Education
Executive Staff
Dr. Pollard