

## **Summary Analysis of Middle School Magnet Programs and Middle School Enriched and Accelerated Courses**

Helen Y. Wang, Ph.D.

Applied Research and Evaluation Team

Beginning with the 2018–2019 school year, more than 20 middle schools offered accelerated and enriched courses, such as Applied Investigations into Math 6 (Applied IM 6) and/or Historical Inquiry into Global Humanities 6 (Global Hum 6), to Grade 6 students that demonstrated academic potential to achieve at an advanced level. These courses were developed for highly-able cohorts at local middle schools to ensure access to accelerated and enriched instruction in every zip code and in every school. As such, the students were able to remain in their local schools, while gaining access to the rigorous Social Studies and mathematics (Math) curriculum created for them. In 2018–2019, more than 1,500 and 2,300 Grade 6 students were enrolled in the Applied IM 6 and Global Hum 6 courses, respectively.

The purpose of this analysis was to investigate the extent to which students enrolled in the accelerated and enriched courses at their local schools would have similar academic achievement as their peers in the Mathematics, Science, Computer Science Magnet program at Takoma Park and Roberto W. Clemente (Takoma Park and Clemente) middle schools, or as their peers in the Humanities and Communication Magnet program at Eastern and Dr. Martin Luther King Jr. (Eastern and King) middle schools. Students' performance data on standardized assessments such as Partnership for Assessment of Readiness of College and Careers (PARCC) and Measures of Academic Progress (MAP) in both 2017–2018 and 2018–2019 school years were used for this analysis. Using data from two years made it possible to observe performance of the same cohort of students prior to their course/program enrollment when they were in Grade 5 and after their enrollment when they were in Grade 6. Students were excluded from this analysis if they did not have scores on PARCC or MAP for both years.

Tables 1 and 2 present the numbers of students enrolled in the accelerated and enriched courses or the middle school Magnet programs in 2018–2019 as well as the numbers of those students who had two-year assessment scores on PARCC or MAP.

Table 1

**Enrollment in Applied IM 6 Course and Takoma Park and Clemente Magnet Program and Number of Students with Two-Year Assessment Scores**

<b>Course/Program</b>	<b>Enrollment 2018–2019</b>	<b>Students with 2-year PARCC Math scores</b>	<b>Students with 2-year MAP-M scores</b>
Applied IM 6	1,549	1,513	1,511
Takoma Park and Clemente Magnet	203	196	196

Table 2

**Enrollment in Global Hum 6 Course and Eastern and King Magnet Program and Number of Students with Two-Year Assessment Scores**

<b>Course/Program</b>	<b>Enrollment 2018–2019</b>	<b>Students with PARCC ELA scores in both years</b>	<b>Students with MAP-R scores in both years</b>
Global HUM 6 course	2,318	2,171	2,158
Eastern and King Magnet	154	153	153

**Results for Applied IM 6 Course and Takoma Park and Clemente Magnet Program**

**Attainment of Performance Level 3 or higher on PARCC Math**

Table 3 shows that the percentage for attainment of PARCC Math performance level 3 or higher was very high among students taking the Applied IM 6 course (98.3%) and those in the Takoma Park and Clemente Magnet program (100%). Compared with the students' prior performance in Grade 5, the percentage decreased slightly, but remained extremely high in Grade 6 for the Applied IM 6 course (99.7% vs. 98.3%) and stayed at 100 percent for students in the Magnet program.

**Attainment of Performance Level 4 or higher on PARCC Math**

Nearly 90 percent (89.8%) of students in the Applied IM 6 course and all students (100%) in the Takoma Park and Clemente Magnet program met performance level 4 or higher on PARCC Math (see Table 3). The attainment rate decreased from Grade 5 to Grade 6 by 2.3 percentage points for the Applied IM 6 course (92.1% vs. 89.8%), which resulted in an increase of the between-group

## MONTGOMERY COUNTY PUBLIC SCHOOLS, ROCKVILLE, MARYLAND

difference from 7.4 percentage points (92.1% vs. 99.5%) in Grade 5 to 10.2 percentage points (89.8% vs. 100%) in Grade 6.

Table 3

**Attainment of Performance Levels on PARCC Math Before and After  
Course/Program Enrollment**

Enrollment	PARCC Math Level 3+				PARCC Math Level 4+			
	2017–2018 (Grade 5)		2018–2019 (Grade 6)		2017–2018 (Grade 5)		2018–2019 (Grade 6)	
	n	%	n	%	n	%	n	%
Applied IM 6 Course (N=1513)	1,509	99.7	1,487	98.3	1,393	92.1	1,358	89.8
Takoma Park and Clemente Magnet (N=196)	196	100	196	100	195	99.5	196	100

**Attainment of the 50<sup>th</sup> national percentile or higher on spring MAP-M**

The 50<sup>th</sup> national percentile on the MAP-M is equivalent to the median test score in a national sample of a particular grade level, where half of the test takers fall below the median score and another half are above the median score. Specifically, if a student attains the 50<sup>th</sup> national percentile or higher on the MAP-M, the student's score can be interpreted as the student performs at least better than half of the test takers of his/her grade in the nation.

The rate of attaining the 50<sup>th</sup> percentile or higher on spring MAP-M was very high among students enrolled in either the Applied IM 6 course (96.8%) or the Takoma Park and Clemente Magnet program (100%) (Table 4). The attainment rate decreased from Grade 5 to Grade 6 for the Applied IM 6 course by 1.6 percentage points (98.4% vs. 96.8%), which slightly widened its difference with the Magnet program, from 1.1 percentage points in Grade 5 (98.4% vs. 99.5%) to 3.2 percentage points in Grade 6 (96.8% vs. 100%).

Table 4

**Attainment of 50<sup>th</sup> Percentile or Higher on Spring MAP-M  
Before and After Course/Program Enrollment**

Enrollment	50 <sup>th</sup> percentile+ 2017–2018 (Grade 5)		50 <sup>th</sup> percentile+ 2018–2019 (Grade 6)	
	n	%	n	%
Applied IM 6 (N=1,511)	1,487	98.4	1,462	96.8
Takoma Park and Clemente Magnet (N=196)	195	99.5	196	100.0

**Mean spring MAP-M RIT scores**

There was a negligible increase for the between-group difference in the mean spring MAP-M RIT score, from 13.8 (247.7 vs. 261.5) in Grade 5 to 14.4 (248.2 vs. 262.6) in Grade 6 (Table 5). In addition, there was a small increase in the group mean score from Grade 5 to Grade 6 for both groups, with an 0.5-point increase for the Applied IM 6 course (247.7 vs. 248.2) and an 1.1 point increase for the Takoma Park and Clemente Magnet program (261.5 vs. 262.6).

Table 5

**Mean Spring MAP-M RIT Scores Before and After Course/Program  
Enrollment**

Enrollment	2017–2018 (Grade 5)	2018–2019 (Grade 6)
	Mean RIT (SD)	Mean RIT (SD)
Applied IM 6 (N=1,511)	247.7 (12.5)	248.2 (11.2)
Takoma Park and Clemente Magnet (N=196)	261.5 (11.5)	262.6 (10.9)

**Results for Global Hum 6 Course and Eastern and King Magnet Program**

**Attainment of Performance Level 3 or higher on PARCC ELA**

The percentage for attainment of PARCC ELA performance level 3 or higher also was very high among students taking the Global Hum 6 course (97.4%) and those in the Eastern and King Magnet program (100%) (Table 6). Compared with the students' prior performance in Grade 5, the

## MONTGOMERY COUNTY PUBLIC SCHOOLS, ROCKVILLE, MARYLAND

attainment rate increased by 1.3 percentage points for the Global Hum 6 course (96.1% vs. 97.4%) and stay at 100 percent for the Eastern and King Magnet program.

### Attainment of Performance Level 4 or higher on PARCC ELA

Nearly 85 percent of students in the Global Hum 6 course and 98 percent of those in the Eastern and King Magnet program met performance level 4 or higher in PARCC ELA (Table 6). There was a between-group difference of 13.2 percentage points (84.8% vs. 98.0%) in Grade 6, which was a narrowing of the difference from Grade 5 of 17 percentage points (82.3% vs. 99.3%). The reduced between-group difference may be attributed to a 2.5-percentage-point increase for the Global Hum 6 course (82.3% vs. 84.8%) and a 1.3-percentage-point decrease for the Magnet program (99.3% vs. 98.0%).

**Table 6**

**Attainment of Performance Levels on PARCC ELA  
Before and After Course/Program Enrollment**

Enrollment	PARCC ELA Level 3+				PARCC ELA Level 4+			
	2017–2018 (Grade 5)		2018–2019 (Grade 6)		2017–2018 (Grade 5)		2018–2019 (Grade 6)	
	n	%	n	%	n	%	n	%
Global Hum 6 (N=2,171)	2,087	96.1	2,114	97.4	1,786	82.3	1,841	84.8
Eastern and King Magnet (N=153)	153	100	153	100	152	99.3	150	98.0

### Attainment of the 50<sup>th</sup> percentile or higher on spring MAP-R

A high rate of attaining the 50<sup>th</sup> percentile or higher on spring MAP-R was observed among students enrolled in the Global Hum 6 course (92.7%) and those enrolled in the Eastern and King Magnet program (100%) (Table 7). The attainment rate increased slightly from Grade 5 to Grade 6 for the Global Hum 6 course by 0.8 percentage points (91.9% vs. 92.7%) and stayed at 100 percent for the Magnet program. Therefore, the difference between the two groups of students slightly narrowed from 8.1 percentage points in Grade 5 (91.9% vs. 100%) to 7.3 percentage points in Grade 6 (92.7% vs. 100%).



and enriched courses were able to maintain high-level performance as well. Specifically, participants in the Global Hum 6 course improved their performance and narrowed the difference with their Eastern and King Magnet counterparts on PARCC ELA and MAP-R performance after course/program enrollment. Participants in the Applied IM 6 course also were able to maintain high achievement on PARCC Math and MAP-M as expected. However, it is important to note that there was a small increase in the between-group difference associated with the attainment rate for PARCC Math level 4 or higher due to a small decrease from Grade 5 among students taking the Applied IM 6 course.