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MONTGOMERY COUNTY PUBLIC SCHOOLS, ROCKVILLE, MARYLAND

Summary of the 2017-2018 Elementary and Middle School Enriched and Accelerated Program Process in Montgomery County Public Schools

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Malcolm Baldrige National Quality Award

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Background

In January 2015, the Board contracted with Metis Associates to conduct a review of choice programs in Montgomery County Public Schools (MCPS). A total of eight recommendations were shared with MCPS. This brief addresses one of the recommendations. A need to modify the selection process was highlighted in Recommendation 3a, which stated:

> Implement modifications to the selection process used for academically competitive programs in MCPS, comprising elementary centers for highly gifted students and secondary magnet programs, to focus these programs on selecting equitably from among those applicants that demonstrate a capacity to thrive in the program, that include use of noncognitive criteria, group-specific norms that benchmark student performance against school peers with comparable backgrounds, and/or a process that offers automatic admissions to the programs for students in the top 5-10% of sending elementary or middle schools in the district.

In response to this recommendation, during the 2016–2017 school year, MCPS designed and implemented a field test at the elementary school level for the Centers for Enriched Studies. The field test was implemented in 39 elementary schools that fed into two center programs: Charles R. Drew and Fox Chapel elementary schools, and included universal screening of all grade 3 students, expanding seats to the Centers for Enriched Studies (CES) – both local and regional, and implementing the Enriched Literacy Curriculum at select elementary schools during the 2017–2018 school year. This field test was expanded during the 2017–2018 school year at the elementary level to all 13 local and regional CES sites.

In addition to the expansion at the elementary level, a field test of a similar process was implemented for the middle school magnet review process during the 2017–2018 school year. The middle school magnet field test was implemented for the 80 elementary schools that fed into: Takoma Park Middle School's Mathematics, Science, Computer Science Magnet Program (Takoma Park), and Eastern Middle School's Humanities and Communication Program (Eastern). The following processes were part of this field test:

- Moved from a parent/guardian-initiated application process to a district-initiated review process of all Grade 5 students within the field test schools.
- Based on research, removed overreliance on teacher and school recommendations.
- Transitioned to an online assessment that allows for receipt of results within 24 hours.
- Transitioned from a paper file selection process to an electronic selection process that facilitated a more efficient review process.
- Considered the academic peer group at the home school in relation to the student's instructional need.

The review process is race-blind, name-blind, and school-blind to allow for a more objective review of student profiles. Although reviewers did not see race/ethnicity during the process, analysis in this report includes a summary of results by race/ethnicity. In this summary report, descriptive information on demographic characteristics and academic characteristics of students invited to CES, Takoma Park, and Eastern based on three academic measures are provided.

Two research questions were investigated:

1) What process is used to review students for invitation to elementary and middle school accelerated and enriched programming?
2) What are the commonalities of academic measures for students invited to CES? Takoma Park? And Eastern?

Purpose

The purpose of this report is to illuminate demographic and academic characteristics of students invited under the expanded and field test review process. While the review process and program consideration includes multiple measures, the focus of that academic data highlighted in this report will be on Measures of Academic Progress (MAP), the Partnership for Assessment of Readiness for College and Careers (PARCC), and the Cognitive Abilities Test (CogAT). See below for a detailed description of the measures.

Measures of Academic Progress (MAP). MAP is a computer-adaptive assessment developed by Northwest Education Association (NWEA). Scores on MAP are reported on a Rasch Unit (RIT) scale and also include a national percentile. Data from both the MAP-Mathematics (MAP-M) and MAP-Reading (MAP-R) were included for review. For the review process, national percentile ranges were organized into the following ranges: 0 – 59th percentile, 60th – 79th percentile, 80th – 94th percentile, and 95th percentile and above for the both Reading and Mathematics subtests.

Partnership for Assessment of Readiness for College and Careers (PARCC). PARCC is a State of Maryland administered, federally-mandated assessment given in the spring to students in grade 3 through grade 8 and in high school in English Language Arts (ELA) and Mathematics (Math). For the purpose of this study, PARCC scores were used in data analysis for students considered for the Takoma Park and Eastern Programs because grade 3 students considered for CES had not yet taken PARCC assessment at the time of the review process. Student academic profiles included the ELA and Math portions of the PARCC.

The Cognitive Abilities Test (CogAT). CogAT is a gifted screening assessment of reasoning abilities using verbal (V), quantitative (Q), and nonverbal (N) cognitive tasks. Grade 3 student academic profiles included the CogAT composite score of the verbal, quantitative, and nonverbal tasks. Grade 5 student academic profiles included national percentiles for verbal, quantitative, and nonverbal subtests, as well as the composite national percentile.

Analysis

Research Question 1: What process is used to review students for invitation to elementary and middle school accelerated and enriched programming?

The review process for CES, Takoma Park, and Eastern is race-blind, name-blind, and school blind. MCPS central services staff are invited to participate in the review process. Full-time central services staff including, but not limited to, directors, supervisors, coordinators, specialists, pupil personnel workers, school psychologists, and parent community coordinators participate in the review committee process. Prior to participation in the review process, all individuals participate in a training to learn about programs, the process, and the tool that will be used.

During the review process, members of the review committee do not see racial/ethnic characteristics of students, but are able to see the gender of candidates and whether the student is a recipient of services (i.e., special education, free and reduced-priced meals status, English speakers of other languages, and 504). In the electronic tool, committee members see a comprehensive academic profile of students that includes multiple measures. Some of the information that the review committee sees include, but is not limited to, report card grades, state assessments (i.e., PARCC), Measures of Academic Progress (MAP) data, and the Cognitive Abilities Test (CogAT).

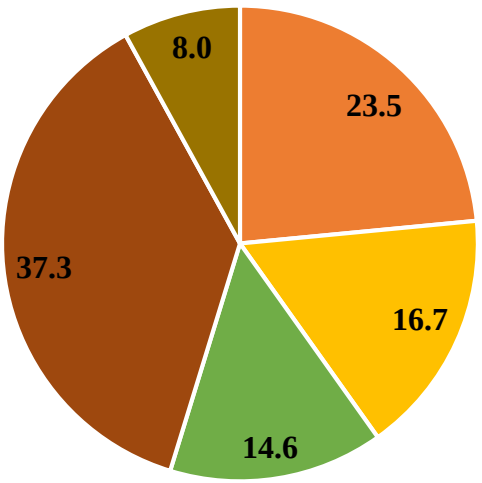
During the review process, students are reviewed up to 4 times. Review committee members review the academic profile of students individually first (review 1) and make a recommendation for program need using one of the following designations: a) limited, b) substantial, c) definitive, and d) exceptional. The first review is conducted in two rounds. The first time a committee member sees an academic profile of a student, the academic profile includes all measures except the CogAT score and program need designations only include: limited, substantial, and definitive. Once a designation is made by the committee member, the committee sees the student again with the CogAT score and can adjust the program need decision up or down one or keep it as the original designation. For example, if during the review that did not include the CogAT score a committee member selected substantial, then the options for program designation on the page that includes the CogAT score were limited, substantial, and definitive. This was developed after consultation with Dr. Carolyn Callahan, an expert in the field of gifted education, who shared this as an approach to limit the focus on one measure as the driver for program recommendation.

After the individual review, committee members review academic profiles again with a paired partner to discuss the recommendation for students to come to consensus on the recommendation for program need (review 2). If there is not agreement, the entire committee discusses the student and makes a recommendation for program need (review 3). Finally, the committee reviews students to make a recommendation for program consideration (i.e., Recommended, Wait Pool, and Not Recommended) (review 4).

Research Question 2: What are the commonalities of academic measures for students invited?

Centers for Enriched Studies (CES)

Demographic Characteristics of CES Invitees. There were a total of 715 grade 3 students invited to the CES, which excludes private school applicants. Of all invited students, 37% were White, 23% were Asian, 17% were Black or African American, and 15% were Hispanic/Latino (Figure 1)[1]. Slightly more boys were invited than girls (56% and 44%, respectively). There were low percentages of students invited to CES who were recipients of services (see Table 1). Only 16% of students invited were recipients of Free and Reduced Priced Meals System (FARMS), 6% were identified and Limited English Proficient (LEP) and 3% were recipients of special education services.



Asian American ■ Black or African American ■ Hispanic/Latino ■ White ■ Two or More Races

Figure 1. Percent of students invited to CES by racial/ethnic group.

Table 1
Percent of CES Invited Students by Student Characteristics

Student Characteristics	% of Invited Students
Male	55.5
Female	44.5
FARMS	16.2
LEP	6.3
Special Education	3.4

[1] Results for other racial/ethnic groups were suppressed due to low percentages.

Academic Characteristics of CES Invitees. In examining the MAP and CogAT data of students invited, slightly more than half (53.1%) were at the 95th national percentile or higher on the MAP-R. Roughly less than half (41.7%) were in the 80th to the 94th percentile on the MAP-M. More than half of invited students (62.1%) scored in the 95th percentile or higher on the CogAT composite screener.

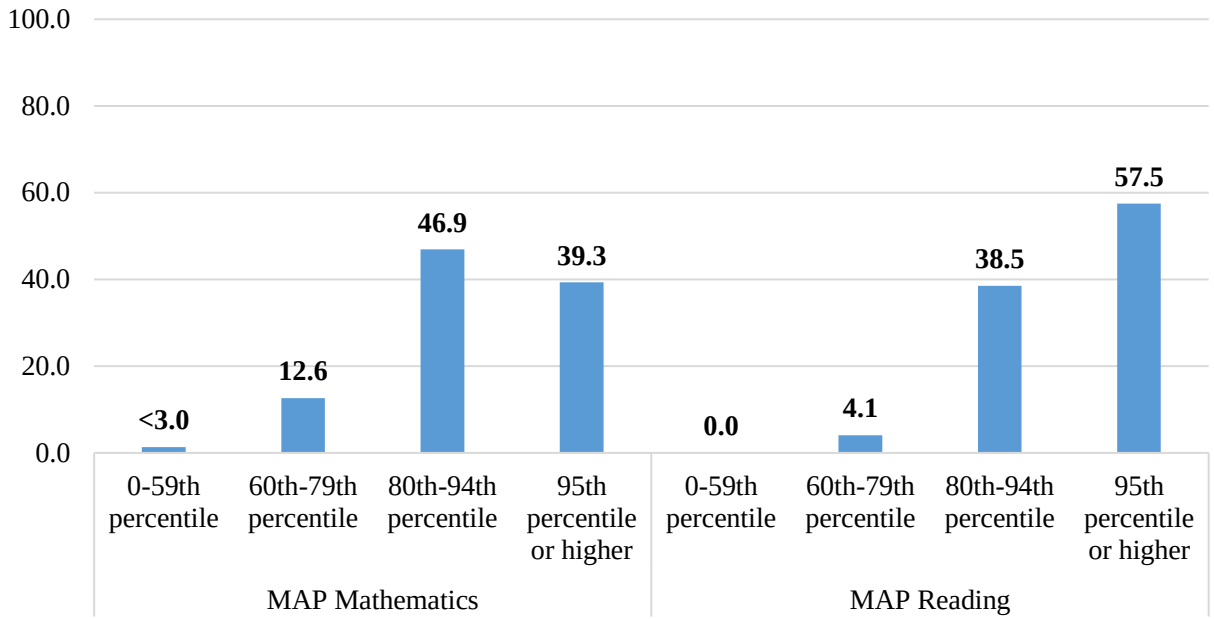


Figure 2. Percent of CES invited students within MAP percentile ranges.

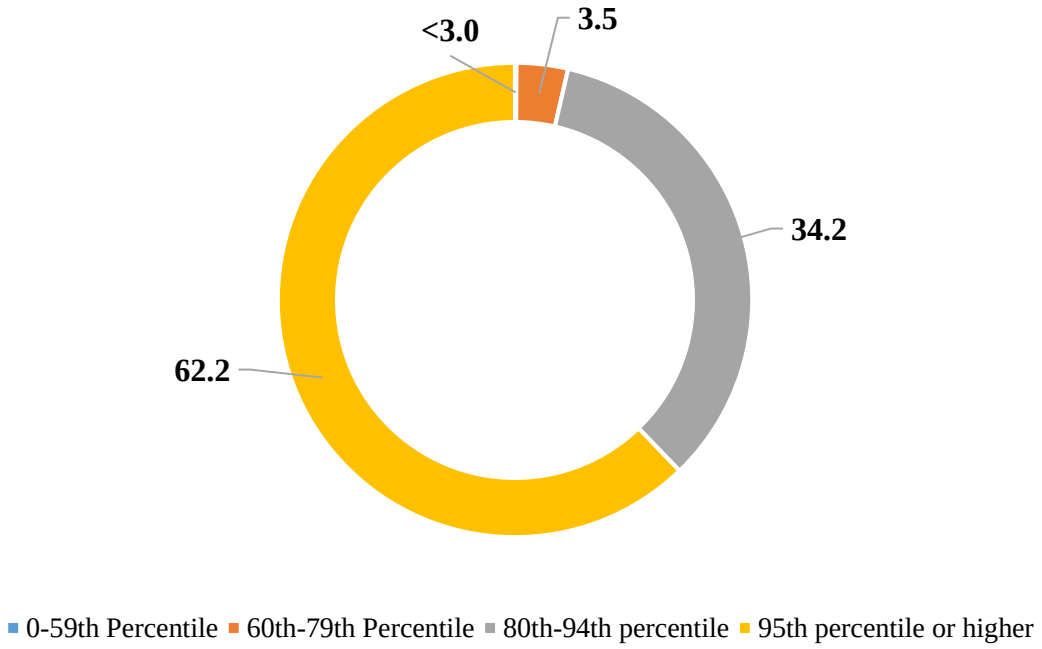


Figure 3. Percent of CES invited students by CogAT percentile ranges.

Takoma Park Middle School Mathematics, Science, and Computer Science Magnet Program[2].

Demographic Characteristics of Takoma Park Invited Students. A total of 137 grade 5 students were invited to the magnet program at Takoma Park. The majority of students invited were White (38.7%). For the remaining racial/ethnic groups, 31.4% of invited students were Asian, 13.9% were Black or African American, 8.8% were Hispanic/Latino, and 6.6% were those identified as Two or More races (Figure 4). Few students receiving services were invited to the Takoma Park Magnet program (see Table 2).

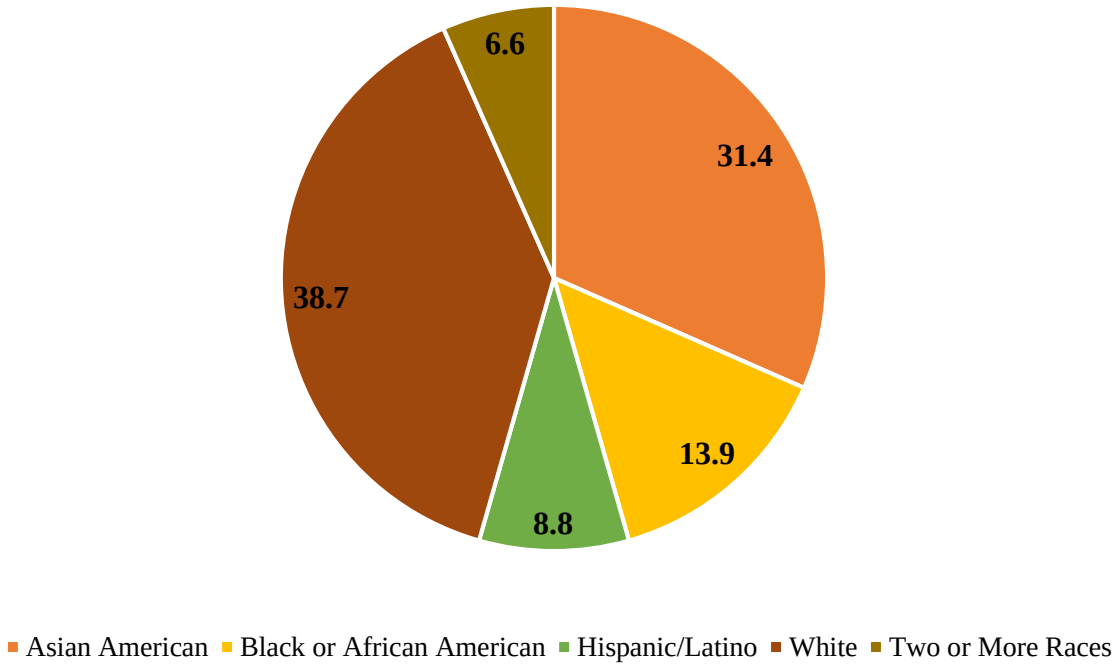


Figure 4. Percent of students invited to Takoma Park Magnet by race/ethnicity.

Table 2
Percent of Students Invited to Takoma Park Magnet by Student Characteristics

Student Characteristics	% of Invited Students
Male	57.7
Female	42.3
FARMS	13.1
LEP	<3.0
Special Education	<3.0

[2] Results were suppressed groups where the number of students was small. Analysis excludes student for whom data was missing.

Academic Characteristics of Takoma Invitees. The majority of invited students (92.7%) were at the 95th national percentile or higher on the MAP-M (see figure 5). More than half (66.4%) of the invited students were in the 95th percentile or higher on the MAP-R.

Most students invited scored at or above the 95th national percentile on the three CogAT subtests. More specifically, 62.8% scored at the 95th national percentile or higher on the Verbal subtest, 82.5% scored at or above the 95th on the quantitative subtest, and 63.2% scored at or above the 95th national percentile on the Nonverbal subtest (see Table 3). Thus, a majority of students (79.3%) had a CogAT composite score at or above the 95th national percentile.

Most students invited to the Takoma Park magnet performed at levels 4 or 5 on PARCC. There were approximately 71.5% of students who performed at a Level 5 rating on the PARCC Math, and 22.6% who performed at a Level 4. Thirty-five percent of invited students performed at Level 4 and 59.1% scored at Level 5 on the PARCC ELA assessment.

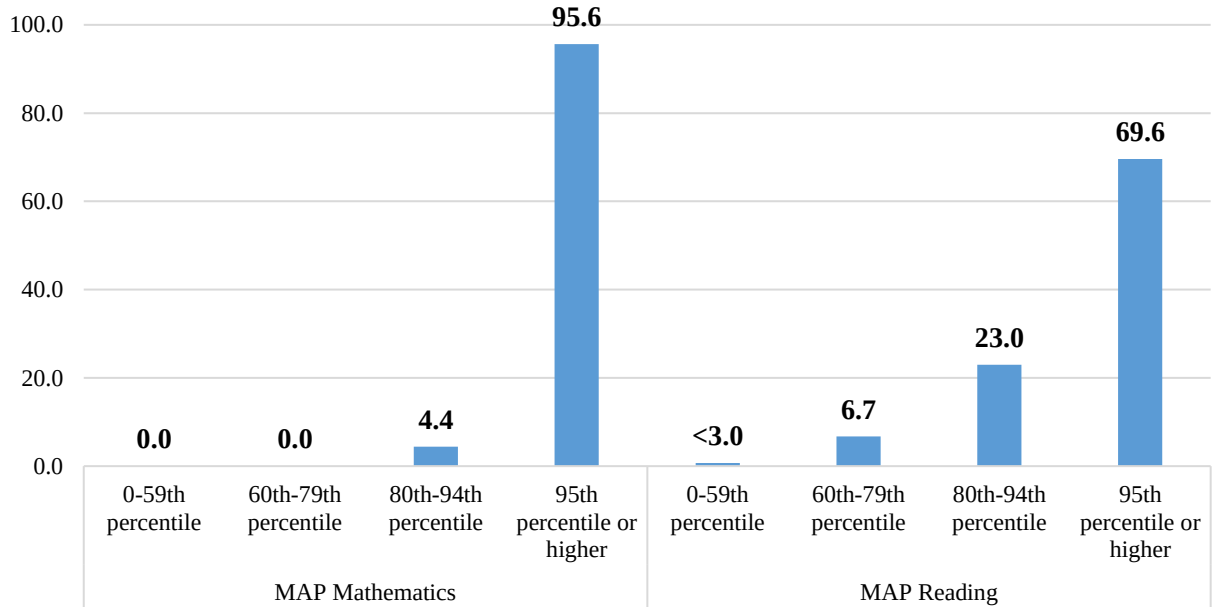


Figure 5. Percent of Takoma Park Magnet invited students within MAP percentile ranges.

Table 3

Percent of Takoma Park Magnet Invited Students Within CogAT Percentile Ranges

Percentile Range	Verbal	Quantitative	Nonverbal	Composite
0-59th percentile	≤3.0	0.0	0.0	0.0
60th-79th percentile	3.6	≤3.0	8.8	≤3.0
80th-94th percentile	31.4	15.3	27.9	19.9
95th percentile or higher	62.8	82.5	63.2	79.4

Eastern Middle School Humanities and Communication Magnet Program

Demographic Characteristics of Students Invited to Eastern. There were a total of 142 grade 5 students that were invited to Eastern of which 15.5% were FARMS recipients, and 4.4% were recipients of special education services. There were no students identified as Limited English Proficient invited. In examining invitation by race/ethnicity, White students represented was the largest with 39% followed by Asian (18.3%), Hispanic/Latino (16.2%), and Black or African American (14.8%) (see Figure 6).

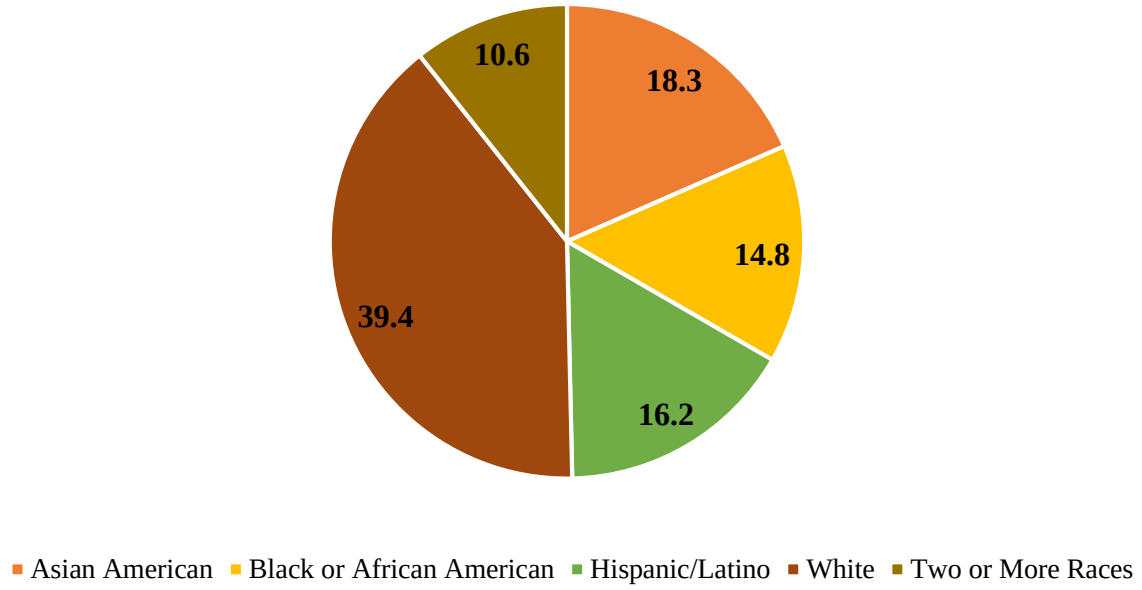


Figure 6. Percent of students invited to Eastern Magnet by race/ethnicity.

Academic Characteristics of Eastern Invitees. As depicted in figure 7, the majority of invited students were at the 95th percentile or higher on the MAP-R (84.5%). Roughly more than half of invited students were at the 95th percentile or higher on the MAP-M (65.5%).

An examination of performance on the CogAT revealed that the majority of students invited scored at or above the 95th percentile on the Verbal (77.5%), Quantitative (54.2%), and Nonverbal (43.7%) subtests. Similarly, a large percentage of students had composite scores that were at or above 95th percentile (76.1%). The Verbal subtest had the highest percentage of students that were in the 95th percentile or higher range.

Analysis of PARCC performance revealed that 21.8% of students performed at Level 4 and 67.6% at Level 5 score on their PARCC ELA. For PARCC Math, 40.1% of students invited to Eastern performed at Level 4 and 50.0% scored at a Level 5.

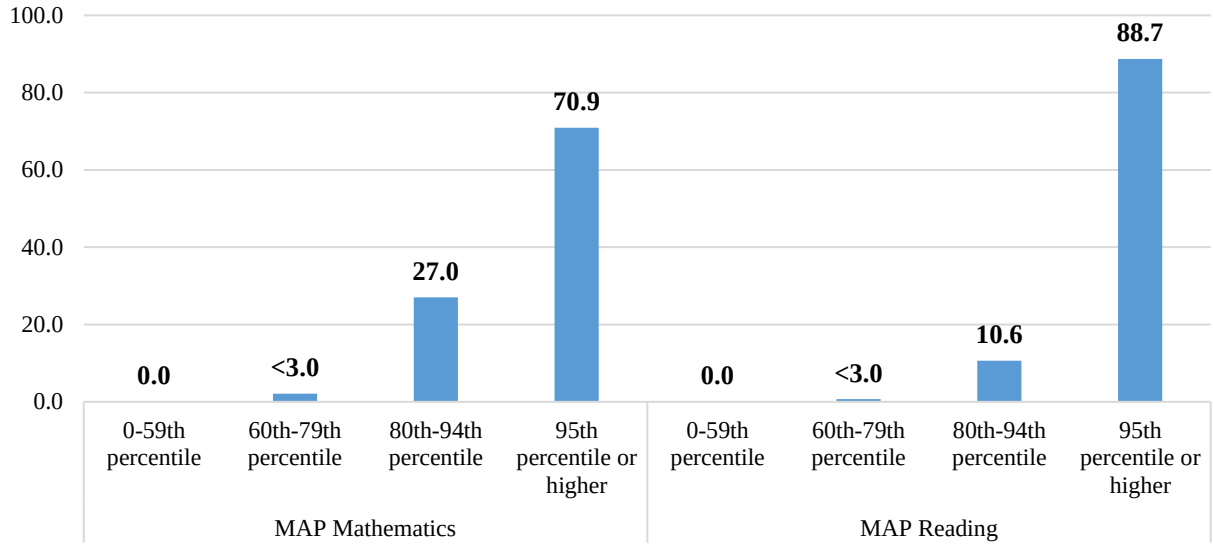


Figure 7. Percent of Eastern Magnet invited students within MAP percentile ranges.

Table 4

Percent of Eastern Magnet Invited Students Within CogAT Percentile Ranges

Percentile Range	Verbal	Quantitative	Nonverbal	Composite
0-59th percentile	0.0	0.0	0.0	0.0
60th-79th percentile	≤3.0	12.0	9.9	≤3.0
80th-94th percentile	21.8	33.8	46.5	23.2
95th percentile or higher	77.5	54.2	43.7	76.1

Summary

The descriptive analysis of demographic characteristics of students invited to CES, Takoma Park, and Eastern showed few students receiving services (i.e., FARMS, LEP, and special education). As noted in Research Question 1, the review process was race-, name-, and school-blind. It was observed that White and Asian students represented the majority of invited students. Traditionally underrepresented minority groups (i.e., Black or African American and Hispanic/Latino) accounted for at least 10% of all invited students to each center with an exception at Takoma Park where Hispanic/Latino students represented 8.8% of invited students. This finding is in alignment with the 2015 Choice Study Recommendation 3a to move toward ensuring equitable access to these programs.

> Recommendation 3a: Implement modifications to the selection process used for academically competitive programs in MCPS, comprising elementary centers for highly gifted students and secondary magnet programs, to focus these programs on selecting equitably from among those applicants that demonstrate a capacity to thrive in the program, that include use of noncognitive criteria, group-specific norms that benchmark student performance against school peers with comparable backgrounds, and/or a process that offers automatic admissions to the programs for students in the top 5-10% of sending elementary or middle schools in the district.

Academic profiles showed variability in MAP scores for all invited students. The CES program is not content specific, so it is expected that there would be variability in performance for students. CES had more invited students in the 95th percentile or higher for math than for reading. Reading percentiles demonstrated there were a higher percentage of students in the 80th to 94th percentile than in the 95th percentile or higher. There was a larger percentage of students invited to Takoma Park in the 95th percentile or higher in math (approximately 90%), which should be expected given the focus of the program is math and science. There was more variability in students reading percentiles; about 65% of students were in the 95th percentile or higher. The opposite pattern was found with students invited to Eastern given the focus is humanities. Majority of students invited to Eastern were in the 95th percentile or higher in reading (approximately 80%). Students math percentiles showed that only about 65% of students were in the 95th percentile or higher in math and 24% in the 80th to 94th percentile. The patterns in MAP performance for invited students by program were reflective of program focus. In other words, because Takoma Park offers special programming in mathematics, it was expected that there would be less variability in mathematics scores compared to students' reading scores. This finding is also in alignment with the 2015 Choice Study recommendation that modifications be made for students that demonstrate a capacity to thrive in the program. Students were selected based on cognitive and non-cognitive criteria and capacity to thrive in the program.

Majority of invited students to each center were in 95th percentile or higher range in the CogAT. Less than 10% of invited students were in the 80th percentile or lower range, indicating that most students were at the 81st percentile or higher. Students that were in the 95th percentile or higher

represented the majority. Takoma Park and Eastern also had majority of invited students in the 95th percentile or higher range for their composite score. Takoma Park had more students in the 95th percentile or higher range for quantitative scores compared to verbal and nonverbal. Eastern had more students in the 95th percentile or higher range for verbal scores compared to quantitative and nonverbal. Again, these findings are to be expected as they align with the program focus at each school.

Appendix A: Student Demographic Data by Center for Enriched Studies[3]

Center for Enriched Studies	Student Characteristics	Percent of Students Invited
Chevy Chase Elementary	Asian	22.8
	Black or African American	6.3
	Hispanic/Latino	15.2
	White	49.4
	Two or More Races	6.3
	FARMS	3.8
Clearspring Elementary	Asian	42.1
	Black or African American	5.3
	Hispanic/Latino	10.5
	White	33.3
	Two or More Races	8.8
	FARMS	21.1
Cold Spring Elementary	Asian	70.2
	Black or African American	3.5
	Hispanic/Latino	7.0
	White	12.3
	Two or More Races	4.0
	FARMS	0.0
Dr. Charles Drew Elementary	Asian	7.0
	Black or African American	59.6
	Hispanic/Latino	7.0
	White	24.6
	Two or More Races	≤3.0
	FARMS	28.1
Fox Chapel Elementary	Asian	25.0
	Black or African American	21.4
	Hispanic/Latino	19.6
	White	33.9
	Two or More Races	0.0
	FARMS	23.2
Lucy Barnsley Elementary	Asian	19.3
	Black or African American	14.5
	Hispanic/Latino	26.5
	White	33.7
	Two or More Races	6.0
	FARMS	32.5

[3] Results for students receiving special education services and identified as Limited English Proficient are excluded due to low numbers by school.

Center for Enriched Studies	Student Characteristics	Percent of Students Invited
Spark M. Matsunaga Elementary*	Asian	61.5
	Black or African American	3.8
	Hispanic/Latino	3.8
	White	23.1
	Two or More Races	7.7
	FARMS	3.8
Mill Creek Towne Elementary	Asian	13.6
	Black or African American	32.2
	Hispanic/Latino	22.0
	White	22.0
	Two or More Races	10.2
	FARMS	20.3
Oak View Elementary	Asian	≤3.0
	Black or African American	9.4
	Hispanic/Latino	17.0
	White	62.3
	Two or More Races	9.4
	FARMS	11.3
Pine Crest Elementary	Asian	7.0
	Black or African American	26.3
	Hispanic/Latino	22.8
	White	29.8
	Two or More Races	14.0
	FARMS	31.6
Piney Branch Elementary*	Asian	3.8
	Black or African American	5.8
	Hispanic/Latino	7.7
	White	65.4
	Two or More Races	17.3
	FARMS	3.8
Rachel Carson Elementary*	Asian	39.6
	Black or African American	3.8
	Hispanic/Latino	5.7
	White	47.2
	Two or More Races	3.8
	FARMS	7.5
Stonegate Elementary*	Asian	0.0
	Black or African American	24.0
	Hispanic/Latino	8.0
	White	48.0
	Two or More Races	20.0
	FARMS	8.0

* Local Program