Elementary Center Program for Highly Gifted Students

Overview

In the mid-1970s, MCPS first introduced elementary gifted and talented magnets in the southeastern portion of the county as part of its implementation of Board Policy ACD. With the development of the elementary center program for highly gifted students in the 1980s and 1990s, however, MCPS's approach to elementary gifted magnets shifted to consider interests other than the program's integration-focused origins. As currently operated, the elementary center program is intended to align with Board Policy IOA, *Gifted and Talented Education*, which was developed in 1978 and subsequently amended in 1986 and 1995 to affirm MCPS's commitment to gifted and talented education and to the implementation of acceleration and enrichment of instruction throughout the district's entire academic program.

Policy IOA, as well as the associated Regulation IOA-RA, emphasize the importance of addressing the cognitive and affective needs of high achieving and potentially high achieving students in order to extend each child's intellectual boundaries, expressly recognizing, consistent with Section 8-202 of the Education Article of the Maryland Annotated Code, that "*these talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor.*" The Policy mandates differentiated programs and services for gifted and talented students, including those with other special needs, to ensure that they receive the level and pace of instruction that they require within local schools and in specialized programs.

Gifted and talented programming, as stated in Policy IOA, is offered across MCPS elementary schools through a program of "*challenging instruction, flexible grouping, and scheduling arrangements that allow time with intellectual peers in in-depth study,*" as well as supplemental programs, and ongoing communication with parents. MCPS identifies and recommends students for gifted and talented programming through the Student Instructional Program Planning and Implementation (SIPPI) process, a universal screening in Grade 2 and rescreening in later elementary grades as needed. The SIPPI process uses data collected through multiple measures, including a parent input form and survey, teacher survey, classroom performance data, and student achievement on a cognitive abilities aptitude test. Pursuant to MCPS Regulation IOA-RA, MCPS provides targeted outreach "*to ensure advocacy and gifted and talented placement for students in traditionally underserved and underrepresented populations in gifted and talented programs.*"

A separate selection process is used for the elementary center program for highly gifted students, which is designed to "*meet the needs of gifted and talented students for differentiated educational programs and service beyond those normally provided by the regular school program.*"[105]

MCPS currently operates seven elementary centers located in eight schools.[106] The elementary centers were placed strategically throughout the county to maximize access for students. Transportation is provided for students through the use of centralized stops. A map of the catchment areas for each center is included in Appendix E.

Exhibit 14: Number of Seats and Geographic Areas Served by Elementary Centers for Highly Gifted Students

Elementary Center	Number of seats	Clusters served
Dr. Charles R. Drew ES	52 /grade	Blake, Springbrook, Sherwood, Paint Branch
Cold Spring ES	52 /grade	Churchill, Wootton
Chevy Chase ES	52 /grade	Bethesda-Chevy Chase, Whitman
Lucy R. Barnsley ES	78 /grade	Walter Johnson, Richard Montgomery, Rockville, Wheaton
Fox Chapel ES	52 /grade	Clarksburg (only Daly and Fox Chapel ES), Northwest, Poolesville, Quince Orchard, Seneca Valley
Clearspring ES	78 /grade	Clarksburg (except Daly and Fox Chapel ES), Damascus, Gaithersburg, Magruder, Watkins Mill
Oak View ES	26 /grade	Einstein, Kennedy, Northwood, and Montgomery Blair
Pine Crest	52 /grade	
Total	**442/grade**	

MCPS defines "highly gifted" as performing two years above grade level. The definition does not include other definitions of talent, such as artistic, creative, or leadership. The elementary center program is designed for gifted and talented students who do not have an intellectual peer group in their home school and whose individual needs cannot easily be met at their home school. The specialized instructional program was developed by MCPS staff to extend and accelerate the MCPS curriculum with enrichment materials as needed. Project-based and interdisciplinary learning are integrated into classroom instruction on a regular basis. All elementary centers include gemstone projects which are conducted during the third or fourth quarter of each year to engage students in original and authentic learning experiences, such as writing, creating, and producing original plays or operas.

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[105] http://www.montgomeryschoolsmd.org/uploadedFiles/curriculum/specialprograms/elementary/ElementaryHighlyGiftedCentersBrochure.pdf.

[106] One center is offered across two elementary schools: Oak View ES and Pine Crest ES.

Admission to the elementary centers is determined by a competitive selection process in Grade 3. Separate selection committees for each elementary center, composed of 10 to 16 MCPS staff with diverse backgrounds and professional experience, review each applicant to determine a pool of invited students, waitlisted ("waitpool") students, and not invited students. The selection committees consider the following multiple measures.

- application form;
- total and percentile scores on a cognitive reasoning assessment administered to applicants, which appraises general abstract reasoning abilities and capacity to apply abilities to verbal, quantitative, and non-verbal tasks;
- teacher recommendations and other school-based input;
- report card data and other test scores;
- student factors including FARMS eligibility and ESOL or special education needs;
- unique circumstances; and
- current school attended to determine special academic needs and the presence or absence of an intellectual peer group of other highly able students.

Feedback from district staff indicated that while the committees use multiple measures, the cognitive abilities assessment administered to applicants and other test data weigh heavily in the selection process; in addition, the process does not generally consider data from the universal gifted screening process in Grade 2, discussed above.

Outreach for elementary centers for highly gifted students is conducted through direct mailing to all Grade 3 students in MCPS, district-coordinated information meetings for parents at selected schools conducted in English and Spanish, and targeted outreach through elementary school staff. Materials are provided in English, Amharic, Chinese, French, Korean, Spanish, and Vietnamese, and are shared through PTA and school newsletters, Connect-Ed messages in English and Spanish, MCPS QuickNotes, and backpack flyers. Information about the program is included in the district's website and in its *Options* booklet. In addition to parent meetings, workshops are conducted to support parents in multiple languages with understanding and completing the application. Program materials and information are provided to all elementary school-based gifted and talented liaisons and counselors in fall meetings and with principals through memoranda and meetings.

In addition to the elementary center program for highly gifted students, the **Takoma Park ES Primary Magnet** offers a rigorous science and social studies program for high-achieving students in Grades 1 and 2. Admission to the primary magnet is a competitive process with academic admission criteria and a selection process similar to the one used for center program admissions. Students apply during their kindergarten school year. All home school students are reviewed as candidates for this primary magnet. Additionally, 16 seats in each grade are available for non-home school students through the application process, and transportation is provided for these students at centralized stops. These data were not included with the elementary center

program data because the program uses a unique curriculum model and serves students only in Grades 1 and 2.

Program-Level Findings

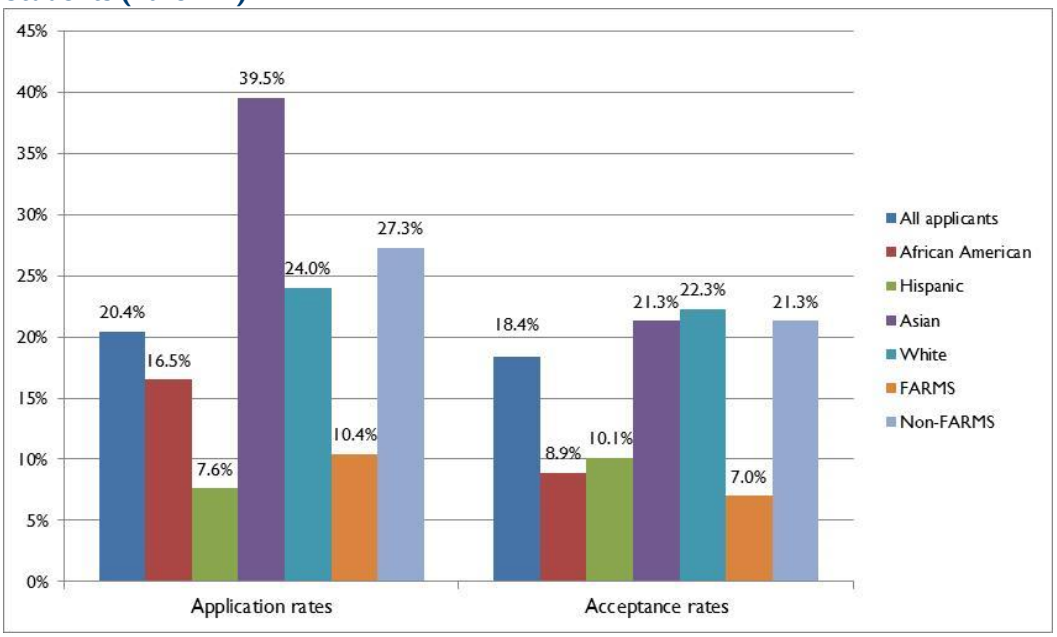
1. Number of seats and applicants

Applicants to elementary centers for highly gifted students exceed the supply of seats by more than 80%. For the 2013–14 school year, 2,431 students, representing about one-fifth (20.4%) of all Grade 3 students across MCPS, applied to an elementary center. Less than one-fifth (18.4%) of all applicants were invited to enroll in an elementary center (448 invitations out of 2,431 applicants).

Application rates are calculated by dividing the number of applicants within a subgroup by the total number of students in that subgroup. Application rates for elementary centers were highest among White and Asian students—24% of White Grade 3 students districtwide applied to an elementary center and 39.5% of Asian Grade 3 students applied. The application rates for Black/African American and Hispanic/Latino students were lower—16.5% and 7.6%, respectively. Disparities were also observed in application rates for students who were eligible for FARMS (10.4%) when compared with students who were not eligible for FARMS (27.3%); for LEP students (11.0%) compared with non-LEP students (24.1%); for general education students (22.5%) and special education students (5.9%).[107]

[107] Additional center programs are provided for gifted and talented learning disabled students pursuant to their Individualized Education Program (IEP).

Exhibit 15: Application and Acceptance Rates for Elementary Centers for Highly Gifted Students (2013–14)



Acceptance rates to elementary centers also varied across student subgroups by race/ethnicity, socioeconomic status, and English proficiency. Acceptance rates were measured by the percentage of applicants who were invited to attend an elementary center. The overall acceptance rate for all applicants was 18.4%. Reflecting broader national trends as discussed further below, the acceptance rate for Black/African American applicants (8.9%) was 9.5 percentage points lower than the overall rate, and for Hispanic/Latino applicants (10.1%) was 8.3 percentage points lower than the overall rate. Acceptance rates for Asian and White students exceeded the average acceptance rate—by 2.9 percentage points for Asian students (21.3%) and by 3.9 percentage points for White students (22.3%). Furthermore, the acceptance rate for students who were eligible for FARMS (7.0%) was 14.3 percentage points lower than for non-FARMS eligible students (21.3%).

The acceptance rate for LEP students (5.3%) was 15.4 percentage points lower than for non-LEP students (20.7%). There were no differences in the acceptance rates for general education (18.3%) and special education students (18.8%). Application and acceptance rates are presented in Exhibit 15.

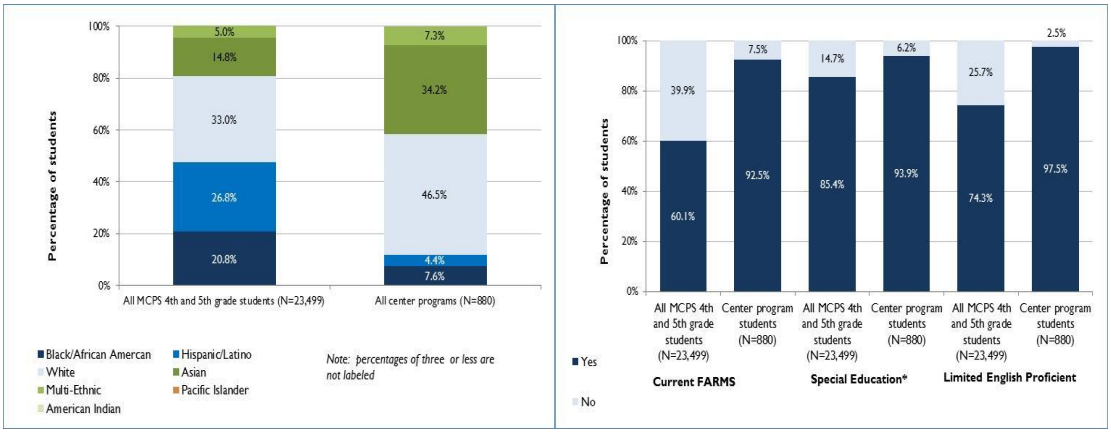
2. Profile of students in elementary centers

The profile of students in elementary centers differs markedly from the districtwide profile for students in Grades 4 and 5. In 2013–14, 880 students were enrolled in elementary centers. Almost half of the students in elementary centers (46.5%) were White and just over a third

(34.2%) were Asian. Conversely, only 7.6% of students in elementary centers were Black/African American, and 4.4% were Hispanic/Latino. As shown in Exhibit 16, the proportion of White and Asian students in elementary centers exceeded the districtwide averages for these groups by 13.5 and 19.4 percentage points, respectively; the proportions of Black/African American and Hispanic/Latino students lagged districtwide averages for these groups by 13.2 and 22.4 percentage points, respectively.

Enrollment rates for low-income and LEP students in elementary centers also lagged districtwide averages. Across the elementary centers, 7.5% of students were currently eligible for FARMS compared with 39.9% of students in Grades 4 and 5 districtwide. Furthermore, only 2.5% of elementary center students were LEP compared with 25.7% of students districtwide; and only 6.2% of elementary center students were special education students compared with 14.7% of students districtwide.

Exhibit 16: Districtwide and Program Enrollment by Race/Ethnicity, FARMS, English Proficiency, Special Education—Elementary Centers for Highly gifted Students (2013–14)



*Includes students with 504s

3. Academic outcomes of students in elementary centers

All students in elementary centers, including students in each racial/ethnic and socioeconomic subgroup, achieved the MCPS Grade 5 milestones in reading and math. Furthermore, across schools with elementary centers, achievement levels of the elementary center students exceeded the non-center student population by 15.9 percentage points in Grade 5 reading and 20.1 percentage points in Grade 5 math, with statistically significant differences.[108]

[108] Grade 5 Reading: Center students to home school students (p=.000, Cramer's V=.263); Grade 5 Math: Center students to home school students (p=.000, Cramer's V=.299).

Additionally, achievement levels of students in the elementary centers were significantly higher than district averages by 11.5 percentage points in reading and 19.8 points in math.[109]

Exhibit 17: MCPS Grade 5 Reading Data—Percentage of Students Meeting the Milestone (2013–14)

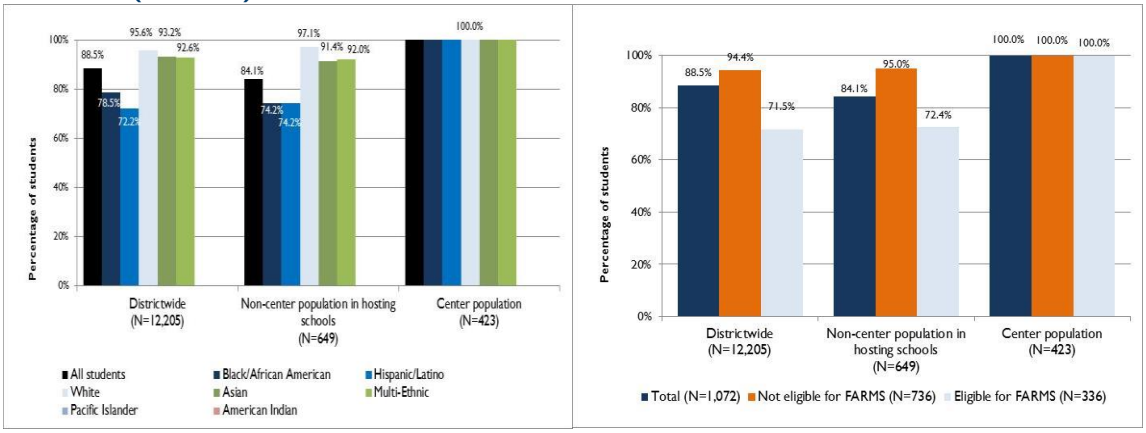
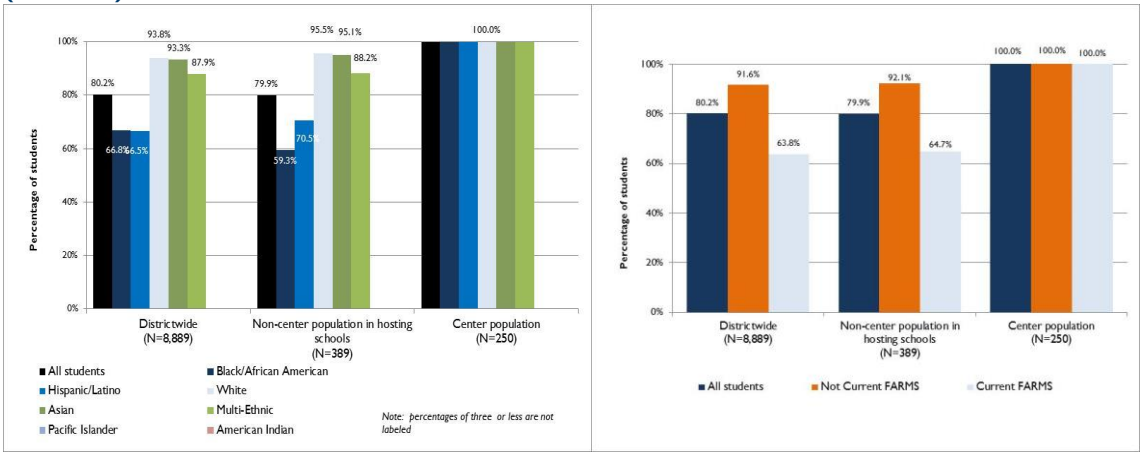


Exhibit 18: MCPS Grade 5 Math Data—Percentage of Students Meeting the Milestone (2013–14)



4. Perceptions of parents and staff

Parents and staff in elementary centers agree that they provide academic and social benefits for students. During focus groups, staff and parents in local school populations and elementary centers agreed that elementary centers can provide unique curricula and opportunities for students within a common peer group. Respondents most commonly agreed about the benefits

[109] Grade 5 Reading: Center students to districtwide (p=.000, Cramer's V=.081); Grade 5 Math: Center students to districtwide (p=.000, Cramer's V=.084).

of the self-contained environment and peer group of like students. They added that the peer group provides academic and social benefits for their children who were not challenged academically in their home school but who also struggled socially. Many staff and parents agreed that being in an elementary center has provided students with peers who are similar in these areas, which has allowed students to feel more comfortable within the class environment.

In focus groups, parents of students in the programs and not in the programs alike adamantly agreed that there are not enough seats in these programs. Because of these factors, they added, there are large numbers of qualified students who do not have access to the programs. Data from the community survey supported this viewpoint. More than half of the respondents (57.9%) reported that there are *too few* elementary centers, compared with a third (33.9%) who said there is the *right number* of these programs, and only 8.2% who felt there are *too many*.

According to focus group participants, transportation to elementary centers is a barrier to equitable access. During focus groups, parents and staff identified long bus rides and limited awareness among parents about the elementary centers as barriers to equitable access. For example, families who live far away from an elementary center have to rely on district transportation to centralized stops or a parent who can drive the child to the program every day. This can be a challenge for working or low-income parents who may not have the same access to transportation as other families.

Furthermore, principals noted that the district's decision to delay school start times may impact parents who need to leave early for work and do not have enough time before their work day starts to drive their child to the centralized stops. Staff and parents also noted that students may have long bus rides to attend an elementary center which is difficult for young children and reduces the amount of time they have for after-school activities.

> *"I don't think there is enough of an effort put out to the Hispanic families, or non-English speaking families in general to really draw them in. An application comes home, in English, to their home, from Montgomery County Public Schools. They don't know what it is. It looks like a brochure and I'm sure that 99% of them get thrown away because they can't read it. And there is no follow up. We don't do very well at advertising it." – MCPS staff*

In addition, according to focus group participants, limited parental awareness is also a barrier to access. Despite the outreach efforts identified above, parents and staff reported that limited awareness among parents about the elementary centers, and the application process can be a barrier in student access. Respondents agreed that the district should communicate more effectively with a broad segment of the population through clear and concise messages.

Staff and parents in elementary centers reported that home schools provide different levels of information about elementary centers. For example, some schools provide a lot of information through letters, banners, and signs at the school and personal messages to parents. However,

other schools provide limited information. Focus group respondents attributed the different levels of information provided by schools to several factors. They felt that the elementary centers have created a sense of competition among schools, which may serve as a disincentive for school staff to promote the programs. They perceived that principals may be incentivized, through higher school academic outcomes, to keep highly able students in their schools, and therefore may not advertise the elementary centers to their families. Lastly, respondents perceived that some principals do not philosophically support the educational model of self-contained gifted classes and therefore may not promote the programs in their schools. As one teacher remarked:

> "*There are opportunities for families to learn about the program but there are still a lot of people who don't get to learn about the center program who should. We get students from 16 to 17 schools, but there are some schools we never get students from.*" – *MCPS staff*

Focus group participants perceive that gifted and talented instruction should be strengthened across all MCPS schools. During the focus groups, parents and staff agreed that strategies and materials used in elementary centers should be shared across schools so that all students who need enrichment and unique educational experiences can benefit from the elementary center resources. Staff added that co-planning between center and home school teachers provides valuable opportunities to share instructional resources, enrichment materials, and strategies that can be used with high achieving students who are not in the elementary centers. Some examples of shared resources that have become regularly integrated into MCPS literacy instruction are Junior Great Books developed by the Great Books Foundation and the Language Arts Curriculum developed by the College of William & Mary School of Education Center for Gifted Education. These literacy materials were originally identified as resources for gifted learners, but are now used with all students. A challenge, however, is that co-planning between center and non-center teachers is limited to schools that house elementary centers.

> "*The program takes the top students out of school but doesn't provide opportunities to the students who stay at the home school. Some of the GT [gifted and talented] curriculum could be achieved by non-GT students. That type of curriculum could be shared with other students…There are students in home schools who tested into GT but don't want to travel, don't want to stay away from friends. They should be served in some way at their home school.*" – *MCPS community leader*

5. Impact on sending schools

The operation of elementary centers has limited effect on other elementary schools across MCPS, with the exception of possible staffing implications. In 2013–14, elementary students from 124 of the 133 elementary schools across MCPS were enrolled in an elementary center rather than in their home school. Twenty-five elementary schools had 10 or more home school students (in Grades 4 and 5) who were enrolled in an elementary center at another school,

including Piney Branch and Little Bennett ES, each of which had 21 students leave to attend an elementary center, and Spark M. Matsunaga ES with 19 students and Beall ES with 18 students. Elementary schools that did not have any students enrolled in an elementary center included Brown Station, Burnt Mills, Damascus, Darnestown, Jackson Road, Monocacy, William Tyler Page, Rock Creek Valley, Watkins Mill, and Wilson Wims ES. Complete data on the number of students in elementary centers by sending school is presented in the Appendix.

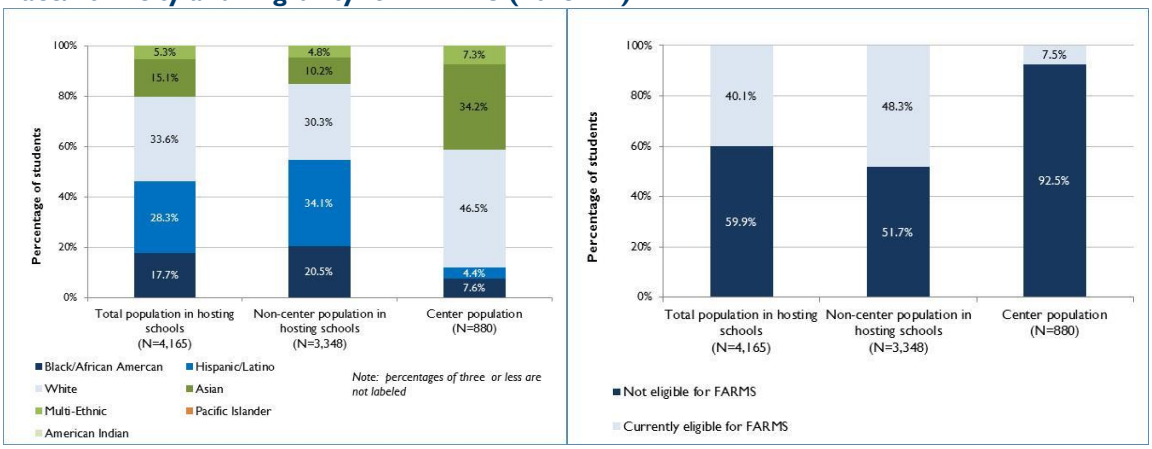
An analysis of MCPS elementary milestone data indicated that the transfer of students from home schools to elementary centers for highly gifted students had minimal impacts on the sending schools' academic data. Across the elementary schools that had students who left to enroll in an elementary center at another school, the overall proportions of students in each school who met the Grade 5 milestones in reading and math were impacted by two percentage points or less by the movement of these students.

Elementary schools could lose staff positions when the number of students who chose to attend an elementary center is large enough to reduce the number of classes at one or more grade levels. For example, if a school has 60 rising Grade 4 students in its home school population and six or seven of these students chose to leave and attend an elementary center, the number of Grade 4 class sections could decrease from three to two sections. The decrease could entail moving a teacher to another grade level or out of the school building. Additionally, as reported during parent and staff focus groups, students in home schools can be impacted by the movement of high-achieving students to elementary centers when it results in the reduction or loss of an academic peer group for the high achieving students who do not transfer.

6. Impact on schools in which the programs are located

There are concerns within the MCPS community that elementary centers create levels of within-school separation. These concerns are spurred by the differences in the demographic profiles of students in elementary centers and home student populations in schools that house the programs. These differences, in terms of proportion of students by race/ethnicity and eligibility for FARMS, are displayed in Exhibit 19.

Exhibit 19: Comparison of Student Populations in Schools with Elementary Centers by Race/Ethnicity and Eligibility for FARMS (2013–14)



These differences can lead to within-school separation and, as some staff and parents reported, a sense of "haves and have-nots" between center and non-center students. During focus groups, parents and staff stated that the elementary centers have strong benefits for home schools, in that they provide higher levels of rigor and academic expectations and can bring greater racial and economic diversity to the school. However, they also added that the self-contained classes limit the ability for center students to interact with home school students in a meaningful or substantive way. The interactions are primarily during recess or lunch, when students tend to self-segregate with friends from their own classes. Staff and principals in the schools that were visited reported that school staff and teachers have made strong attempts to integrate the two groups, such as through common field trips, specials, and non-instructional activities, but that the divide remains due to the self-contained nature of the instructional program.

7. Staffing and transportation costs for elementary centers

According to data provided by MCPS, the additional incremental costs for staffing and transportation costs associated with the elementary center program for highly gifted students for the current school year (2015–16) totals approximately $1,272,539. This total includes $72,612 to support testing and selection of students, including the costs of the test, scoring, and staffing for the selection process. Additionally, it includes $434,927 allocated for district-level staff and program resources, including portions of the salaries of program directors, supervisors, instructional specialists, a data management coordinator, and administrative staff to support program enrollment, as well as resources to support program training, membership in recognized gifted and talented organizations, office supplies (to support program training), and local travel to support program implementation. School-based staffing for the program is allocated within the local allocation, and elementary centers do not receive additional incremental staffing at the school level.

In addition, MCPS allocates approximately $765,000 for the additional incremental costs of transportation for students to elementary centers using centralized stops. The budget paid for 13.75 additional bus routes, including the cost of staff, fuel, equipment, and repairs.

8. Benchmarking and research

Limited racial, ethnic, and socioeconomic diversity in MCPS's elementary centers is a challenge observed in gifted and talented programs nationally. Across the county, there is an underrepresentation of Black/African American and Hispanic/Latino students in gifted and talented programs. Statistics from the U.S. Department of Education in 2011 indicate that while Black/African American students constituted 16.7% of the student population, they represented just 9.8% of students in gifted programs. Similarly, Hispanic/Latino students represented 22.3% of all students, but only 15.4% of students receiving gifted services.[110]

There is considerable evidence in the research to suggest that the underrepresentation of racial and ethnic subgroups and low-income students in gifted and talented programs can be attributed in large part to characteristics of the gifted identification processes, including and over-reliance on assessments to define giftedness. Academic research has attributed disparities in identification for gifted and talented services based on race and ethnicity due to systems of narrow, achievement-centered definitions of giftedness.[111] For example, processes that rely heavily on test scores lead to under-identification of students by income or race/ethnicity. This can be due to lower levels of access to outside test preparation or private psychologists or consultants who can test for giftedness outside the school.[112] Furthermore, research associates underrepresentation in gifted programs to educational inequities resulting from the overrepresentation of Black/African American, Hispanic/Latino, and low-income students in lower performing schools and in classrooms that are taught by less qualified and less experienced teachers.[113] In addition, tracking of students at early ages by academic ability separates students by academic and nonacademic factors, which serves to perpetuate educational inequities.[114] These educational inequities in turn impact the rate of gifted identification.[115]

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[110] Grissom, Jason A. & Redding, Christopher (2016). Discretion and Disproportionality: Explaining the Underrepresentation of High-Achieving Students of Color in Gifted Programs. *AERA Open, 2*(1),-1-25.

[111] Ford, D. Y. (1998). The underrepresentation of minority students in gifted education: Problems and promises in recruitment and retention. *Journal of Special Education*, *32*(1), 4–14.

[112] Mickelson R. (2003). When are racial disparities in education the result of racial discrimination? A social science perspective. *Teachers College Record.* 105(6), 1052–1086.

[113] Grissom, Jason A. & Redding, Christopher (2016). Discretion and Disproportionality: Explaining the Underrepresentation of High-Achieving Students of Color in Gifted Programs. *AERA Open, 2*(1),-1-25.

[114] Ibid.

[119.] Ibid.

Supplemental measures in the identification process, those beyond test scores, often rely on teacher ratings or recommendation, which have also been shown to under-identify students of color and low-income students.[116] Research suggests that methods used to solicit teacher input into the identification process can impact its effectiveness. For example, studies have shown that published and validated teacher-rating instruments, such as the *Gifted Rating Scales* or the *Scales for Identifying Gifted Students*, can be effective in identifying students.[117] Furthermore, when scales are highly correlated to academic achievement, the effectiveness diminishes, as they are duplicating information learned from standardized tests. Other studies have highlighted the association of teacher race with identification of gifted students from underrepresented groups. For instance, a recent AERA study indicated that Black/African-American students are referred to gifted programs, particularly in reading, at significantly lower rates when taught by non-Black/African American teachers—a concerning result given the relatively low incidence of assignment to same-race teachers among Black/African American students.[118]

Additionally, students of color have been shown to be impacted by what researchers Steele and Aronson called the "stereotype threat" in which student performance on assessments is suppressed due to the "*threat of being judged by a negative societal stereotype, or suspicion, about their group's intellectual ability and competence.*"[119] With this dynamic at play, the challenges of confronting racial isolation for students who are one of the only or a very few participants of color in a program may deter applications from other families, along with the lack of culturally relevant pedagogy.[120]

All districts used to benchmark MCPS practices offer gifted programming, but only three have elementary gifted centers. Like MCPS, all seven of the benchmark districts provide gifted and talented programming across all elementary schools. Three districts—Fairfax County Public Schools (FCPS), Houston Independent School District (HISD), and Jefferson County Public Schools (JCPS)—provide elementary center models as well as home school gifted programming. Four other districts—Baltimore County Public Schools (BCPS), Wake County Public School System (WCPSS), Clark County School District (CCSD) and Hillsborough County School District (HCSD)—provide gifted programming only in local schools.

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[116] Ibid.

[117] Peters, Scott, J. & Gentry, Marcia (2012). Group-Specific Norms and Teacher-Rating Scales: Implications for Underrepresentation. *Journal of Advanced Academics 23*(2), 125-144.

[118] Grissom, Jason A. & Redding, Christopher (2016). Discretion and Disproportionality: Explaining the Underrepresentation of High-Achieving Students of Color in Gifted Programs. *AERA Open, 2*(1), 1-25.

[119] Steele, Claude M. & Aronson, Joshua. (1995) Stereotype Threat and the Intellectual Test Performance of African Americans. *Journal of Personality and Social Psychology, 69*(5), 797-811.

[120] Ford, Donna. (2010). Integrating Multicultural and Gifted Education: A Curricular Framework. *Theory into Practice*, *44*(2), 125–137.

- In **FCPS**, the continuum includes embedding critical and creative thinking strategies into classroom lessons, differential lessons in areas of academic strength, and part-time advanced academics (Grades 3-6 only)—all of which are provided in local elementary schools using a local screening committee. Students in Grades 3-6 who require more intensive programming enroll in the full-time advanced academic program (AAP) that is provided in center locations and based on a central selection process. The process for AAP identification uses multiple criteria, including cognitive abilities testing, achievement testing, gifted behaviors rating scales completed by school staff, and parent questionnaires.[121]

- **HISD** offers a continuum of elementary gifted and talented programs through its Vanguard neighborhood and magnet programs, which are designed to meet the needs of students who "*excel in general intellectual ability in combination with creative/productive thinking and/or leadership ability*."[122] Vanguard neighborhood programs are offered in all elementary schools. The 10 Vanguard magnet programs are designed for students who seek to attend a school outside their neighborhood elementary school. The selection process for Vanguard neighborhood and magnet programs includes an application with information on family income; standardized test scores; cognitive ability tests scores; and teacher recommendation forms that assess students' demonstration of general intellectual ability, creative ability, and leadership ability. For the Vanguard magnet program, HISD conducts a lottery if there are more qualified applicants than there are spaces available.

- **JCPS** offers gifted programs, called Advance Programs, at its elementary schools, as well as a gifted and talented magnet program at King ES. King ES is a whole school magnet that offers two programs, gifted and talented and visual and performing arts, to address the idea that talent is demonstrated through traditional academic coursework as well as creative thinking in the arts. Students receive magnet instruction through elective courses and pull-out gifted and talented instruction. Admission to the gifted and talented magnet is based on student writing and math samples and teacher and parent recommendations.

Some districts are experimenting with different criteria and measures for identification of gifted and talented students and placement in elementary programs. MCPS's process for selecting students for elementary center programs utilizes multiple indicators to identify qualified

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[121] http://www.fcps.edu/is/aap/.

[122] HISD, Vanguard Magnet Programs, http://www.houstonisd.org/Page/106709; HISD, Magnet Programs, Frequently Asked Questions, http://hisdchoice.com/faq.

applicants. However, there are concerns regarding the heavy reliance on assessment scores as it may contribute to identifying only a narrow band of highly able students. Other districts are broadening screening to include universal screening, which is currently used by MCPS for regular gifted identification but not for elementary centers. For example, a study conducted in 2015 in a large school district in Florida found that universal screening of students, without any changes in standards used in the identification process, led to increases in the number of economically disadvantaged students and minorities placed in gifted programs.[123]

Research also highlights the value of identifying students for gifted education using local or group-specific norms that benchmark student performance against school peers with comparable backgrounds, such as by income level, or within a local context, such as district or school, rather than compare students with national norms that draw from a demographically heterogeneous group. Using national norms has been found to disadvantage low-income students due to the strong correlation of family income and achievement. Furthermore, the use of group-specific norms can be effective because it allows educators to control for variations among students' previous "opportunity to learn." Previous opportunity to learn can impact achievement levels of low-income students in comparison with higher-income peers and may mask academic potential.[124] The practice of using group-specific norms has been tested in school districts across the state of Florida which apply a targeted methodology, called Plan B, which includes multi-dimensional indicators of giftedness to help ensure students from low-income and English Language learner backgrounds are not overlooked in gifted education.[125]

Furthermore, the use of non-cognitive measures can be important in ensuring the students are identified at an early age for gifted and talented instruction or given opportunities in elementary school to adequately prepare them for admissions to selective secondary programs. Early identification is an essential component to developing an equitable pathway for students throughout the K-12 experience. The work of the Jack Kent Cooke Foundation exemplifies the importance of providing support at an early age. As stated by the Foundation, this work is important because "*the disparity between low- and higher- income students who reach advanced levels of academic performance appears in elementary school and continues through college. In short, smart but poor students who start off their academic careers scoring 'advanced' on standardized tests over time fall behind the wealthier students who started in the same place.*"[126] In order to provide equal opportunities for low-income students, the Foundation provides support to students starting in elementary school and

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[123] Giuliano, L., & Card, D. (2014). Does Gifted Education Work? For Which Students? *The National Bureau of Economic Research*. Retrieved November 17, 2015, from https://aagc.ssri.duke.edu/bright-idea-http://www.nber.org/papers/w21519.

[124] Peters, Scott, J. & Gentry, Marcia (2012). Group-Specific Norms and Teacher-Rating Scales: Implications for Underrepresentation. *Journal of Advanced Academics 23*(2), 125-144.

[125] Ibid.

[126] http://www.jkcf.org/about-us/

extending through graduate school to help students develop talents and excel educationally. Cooke scholars are selected from a national pool of students using a wide range of factors including academic achievement, financial need, grit, determination, and social commitment.[127]

Broad-based talent development programming is an effective means for increasing racial, ethnic, and socioeconomic diversity in elementary centers. An important corollary to the non-traditional methods for identification of underrepresented students for gifted and talented programs is the use of talent development programs to identify and nurture potential and diverse talents among young children and prepare them to pursue gifted education programs. According to a 2014 survey of gifted and talented programs conducted by the National Research Center on the Gifted and Talented at the University of Virginia's Curry School of Education, 51% of elementary school districts across the country currently offer talent development programs. MCPS currently offers programming in this area, but not on a broad scale.

The Young Scholars Program, first implemented in FCPS and expanded in numerous districts across the country, seeks to identify gifted students in early elementary school to prepare them for gifted education and other rigorous programming in upper elementary, middle, and high school. Beginning in kindergarten, students are identified through teacher observations, student work samples, and nonverbal ability tests. The students receive challenging academic coursework, summer school programming, after-school sessions, and field trips. Each school participating in this program has a half-time resource teacher credentialed in gifted education who implements the program. In addition, program staff has been trained in identifying and serving gifted learners and receive ongoing professional development.[128] In 2014, the University of Connecticut received funding through a Jacob K. Javits grant to implement Project SPARK (Supporting and Promoting Advanced Readiness in Kids), a scale-up model of the Young Scholars Program across New England to address the region's high achievement gaps and limited state support for gifted programming, and to test the model's effectiveness using a rigorous experimental research design. Maryville University has also adopted the Young Scholars Program model to develop an alternative identification process used in school districts in the St. Louis area. Other school districts, including multiple districts across Minnesota, are also implementing the Young Scholars Program model.

Another program aimed at nurturing and promoting the eligibility of underrepresented students for gifted programs is Project Bright IDEA (Interest Development Early Abilities) in Wake County, which is also supported by funding from a Jacob K. Javits grant. Implemented in 16 elementary schools as part of a study with Duke University, this program uses an evidence-based

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[127] Ibid.

[128] Clarenbach, Jane (2015). Expanding the View of Giftedness. *School Administrator, 72*(8), 18.

K–2 program model focused on fostering students' critical thinking skills. Participating teachers have received intensive training on the program model. The goal of this study is to identify more academically gifted students when students are tested for giftedness in Grade 3. Although the study is still underway, teacher observations indicate that students are already demonstrating cognitive improvement.[129]

JCPS offers a Talent Development magnet program at Byck ES following Howard Gardner's Theory of Multiple Intelligences. The program model includes use of learning centers, cluster grouping, differentiation, project-based learning, and choice boards which are graphic organizers to tap into student individual learning styles, as driving instructional strategies in all classrooms. Students also participate in discovery elective classes to help them realize their learning styles, artist-in-residence activities, and after-school programs.

Finally, in 2014, the College of Charleston began Project Talentum Academe, an initiative with Charleston County School District to create talent development academies (TDA) in schools serving large numbers of economically-disadvantaged students. Similar to the Young Scholars Program model, the TDAs are providing enrichment, after-school, and summer experiences to identify and foster talent in underrepresented groups. Furthermore, the TDAs include teacher development in the areas of gifted and talented education, culturally responsive teaching, and education psychology principles around motivation. Through this aspect of the model, this district is training a pool of K-5 teachers to serve as talent scouts and developers of the project in Title I schools.[130]

Other districts offer a variety of special programs at the elementary level, including an array of non-selective magnet programs, many of which use a "whole school' model. The programs described below are in addition to the gifted centers and immersion programs for these districts described in benchmarking sections above.

- **Clark County School District (CCSD)**, for example, offers non-selective magnet programs in nine elementary schools. The magnet themes include: IB Primary Years Programme; communications and creative arts; science, technology, engineering and math; science, technology, engineering, arts and math; and international studies. There are no academic admission criteria for CCSD's elementary magnet schools. Students are selected through a lottery that includes a preference for siblings and also takes into account geography and feeder schools. All of the elementary magnet schools are "whole language" magnet schools.

[129] https://aagc.ssri.duke.edu/bright-idea-3.

[130] http://orga.cofc.edu/pub/get_data.plx?data=psv02&html=htt03&phead=hdr01&pfoot=ftr01&pkey=1412347632.

- **Wake County Public School System (WCPSS)** offers magnet programs in 25 elementary schools, including 22 whole-school magnets. The elementary magnet themes include: engineering; museums; creative arts and science; leadership; active learning and technology; IB Primary Years Programme; gifted and talented/AIG Basics; leadership and world languages; language immersion; Spanish and IB Primary Years Programme; Montessori/STEM; gifted and talented/Center for Play and Ingenuity; language immersion; and international studies. Except for 50% of the seats in its gifted and talented/AIG Basics magnet programs, the district does not use any academic criteria for elementary programs. Instead, it uses at weighted random lottery process to select students for its elementary magnet programs. For the lottery, each applicant is assigned a random number that is generated by the selection software. Then, points are awarded to applicants who meet any of the selection priorities, including sibling link and school capacity.

- **JCPS** offers magnet programs in 28 elementary schools. Fourteen are districtwide magnets, 13 have local magnet programs, and one offers an optional program which is open to all students in JCPS. The district only provides transportation to students who live within the elementary cluster where the optional program is located. The magnet themes include: excellence in teaching and learning; Waldorf; communications; environmental studies; gifted and talented; health and fitness for accelerated learning; international/cultural studies and language program; IB Primary Years Programme; leadership; math/science and technology; micro-society; Montessori; preforming arts; self-directed learning; talent development; technology; traditional education, visual and performing arts; and visual arts. Schools may develop and use criteria for admission to magnet programs, such as a student work samples, test scores, report cards, progress reports or checklists from teacher of childcare provider. The criteria are reviewed by the magnet staff. Schools select students based on their criteria.

- **HCSD** offers magnet programs in 12 elementary schools. The magnet themes include: IB Primary Years Programme; cultural arts and humanities; performing arts and environmental studies; animal science, medical and health; world studies; visual and performing arts; STEM and STEM gifted and talented development academy. All 12 of the elementary schools are "whole school" magnets. HCSD does not use academic criteria for admission to its magnet schools. Students are admitted to the magnet programs through a random lottery process. Siblings and students living within walking distance to the magnet school are given a preference.

- **HISD** offers magnet programs magnet programs at more than 50 schools, all of which are "whole school" magnets, in addition to the language immersion and Vanguard magnet programs discussed above. Examples of the magnet themes include: fine arts, Montessori; STEM; STEAM; animal and environmental sciences; emerging medical scholars; science and technology; communications; SMaRT; and math and science.

Unlike HISD's Vanguard magnet programs, none of these elementary magnets utilize academic selection criteria.

- **BCPS** currently offers magnet programs in six elementary schools, and will offer programs in three elementary schools for the 2016-17 school year, two of which will be "whole school' magnets. BCPS does not have use any academic criteria for admission to these elementary magnet programs. Students are selected based on a random lottery, with priority for siblings.

Conclusion and Program-Level Recommendations

Qualitative and quantitative data presented in this section indicate the following overarching findings about the elementary center program for highly gifted students.

- There is a strong demand for the elementary center program for highly gifted students—over 20% of all Grade 3 students apply. However, the supply of seats is limited, as only 18% of all applicants are invited to an elementary center. These data suggest the demand exceeds supply, a fact that is exacerbated by an increasing district enrollment without any increases in the number of elementary center seats over the past ten years.

- Black/African American, Hispanic/Latino, LEP, special education, and low-income students apply to the elementary center program at lower rates than White, Asian, and higher income students. This finding suggests that MCPS needs to continue to expand its efforts to target and identify highly able students from underrepresented groups. Furthermore, acceptance rates for these underrepresented groups are lower than for White, Asian, and higher-income students.

- These challenges notwithstanding, MCPS stakeholders who were interviewed for the study agreed on the value of gifted and talented instruction, but emphasized that programming should be improved across all home schools to enable all students, those in elementary centers or not, to have access to rigorous instruction.

- The additional incremental costs for staffing and transportation costs associated with the elementary center program for highly gifted students for the 2015–16 school year totaled approximately $1,272,539. The costs include testing and selection of students, district-level staff and program resources, training, membership in recognized gifted and talented organizations, office supplies, local travel for program implementation, school-based staffing, and transportation of students to centers with 13.75 additional bus routes.
- The research and benchmarking show that the underrepresentation of racial and ethnic groups in gifted education is a challenge shared in many school districts across the

country. Academic research attributes the underrepresentation of student subgroups to a variety of factors, including educational inequities, gifted identification processes, and over-reliance on academic performance to define giftedness. In response, some districts are experimenting with different criteria and measures for identification of gifted and talented students and placement in elementary programs. Additionally, many districts, as is MCPS, are implementing broad-based talent development programming as an effective means for increasing racial, ethnic, and socioeconomic diversity in elementary centers. Expansion of these programs provides a promising strategy for increasing diversity in gifted programming.

In light of these findings, MCPS should consider the following recommendations for the elementary center program for highly gifted students:

- Work to address barriers to equitable access in the elementary center program by revising Board Policy IOA to broaden the definition of giftedness to focus on identifying students who are highly able from all backgrounds and implementing modifications to the identification process that have been developed in other districts and at the secondary and postsecondary levels, as discussed in the section on middle and high school magnets below.

- Develop and expand talent development programs and outreach efforts designed to identify, target, and recruit highly able students from underrepresented groups, including Black/African American and Hispanic/Latino students, non-native English speakers, and low-income students, to apply to the highly gifted centers.

- Develop new and enhance existing practices for all elementary centers to ensure that students in the center program and other students in hosting schools have meaningful social and academic interactions, such as expanded use of specials, common lunch or recess periods, and extracurricular programs.

- To the extent that MCPS considers expanding seat capacity for elementary centers for highly gifted students to keep pace with the overall growth in the district's population that has occurred since the last seat expansion in 2006, the district should ensure that any expansion is fully aligned with efforts to ensure equitable access to the highly gifted programs.