



**Evaluation of the
Higher Education Partnerships (HEPs) Program in MCPS**

Office of Shared Accountability

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Purpose of Study

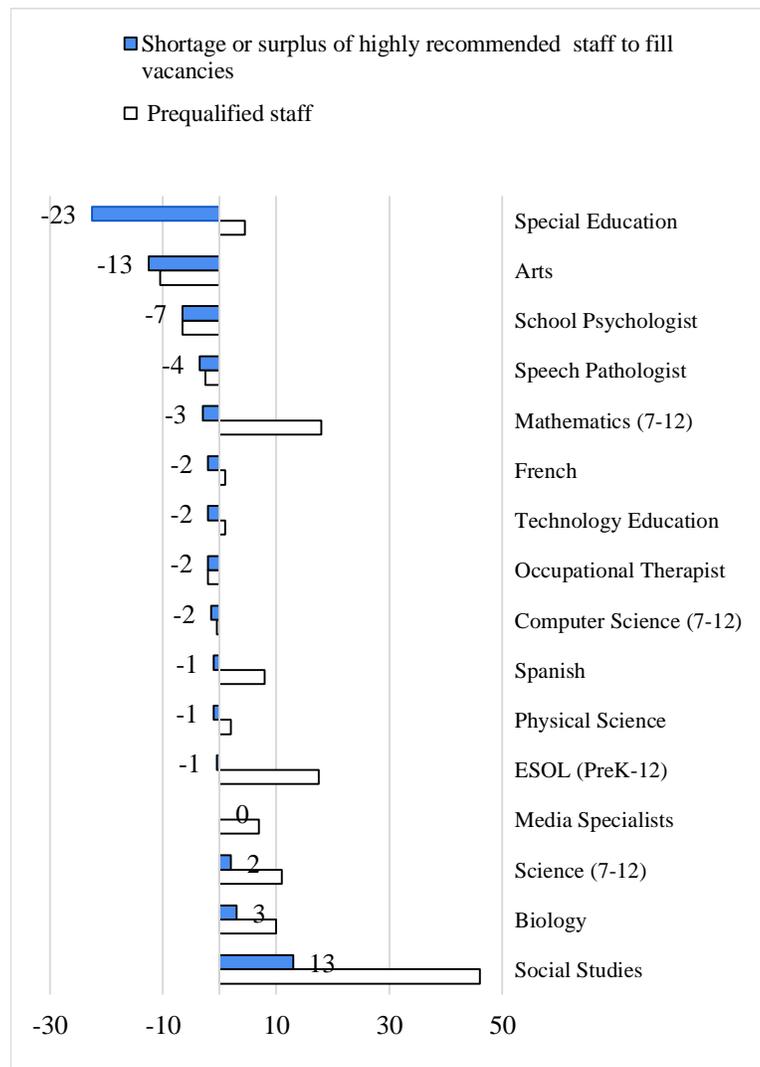
The Office of Human Resources and Development (OHRD) requested an evaluation of the higher education partnerships (HEPs) program. MCPS has partnerships with several different universities that focus on career and professional development in leadership and in critical needs staffing areas such as special education, world languages, science, and mathematics. Research questions addressed: 1) What are the current MCPS system needs? 2) To what extent do current HEPs address system needs? 3) What factors facilitate or hinder implementation of the HEPs program in meeting district needs? 4) What has MCPS spent on tuition reimbursement?

Recommendations

- Revise MOUs and recruitment processes to increase number of participants in special education HEPs and increase diversity of HEP participants.
- Discontinue or constrain leadership HEPs, and reallocate resources to HEPs that address high-vacancy areas.
- At least annually, document MCPS-specific needs by examining vacancies data.
- Create and maintain a relational database to assess whether HEPs are meeting established goals.
- Clarify staff roles and responsibilities.

What the Study Found

- 1) The most critical content need within MCPS is special education, followed by arts. The figure at right shows the gap between the number of highly recommended and prequalified candidates and the number of vacancies as of August 2017. Despite concerns about the leadership pipeline, data suggest an oversupply of leadership candidates. The need to increase diversity of the teacher workforce is evidenced by the demographic mismatch between MCPS's student body and its teacher workforce.
- 2) While three HEPs focus on special education, these programs have relatively few graduates. Among graduates of HEPs in school year 2016–2017, 60% had attended leadership programs.
- 3) Successful aspects of the HEPs program include pathways to teacher certification in high-need staffing areas and internships to allow teachers to stay employed while participating in HEPs. Challenging aspects include structural barriers that limit participation. Changes that might make HEPs more effective include increasing alignment to critical need areas.
- 4) MCPS spent approximately \$1.1 million on tuition reimbursement for the school year 2016–2017 graduates of HEPs. Of the tuition reimbursements, approximately 75% went to graduates of leadership programs and 19% went to graduates of special education programs.



Shortage or surplus of highly qualified staff by critical content needs area as of August 2017.

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Executive Summary

The Office of Shared Accountability (OSA) in Montgomery County Public Schools (MCPS) was asked by the Office of Human Resources and Development (OHRD) to conduct an evaluation of the Higher Education Partnerships (HEPs) program. MCPS has partnerships with several universities that focus on career and professional development in leadership and in critical content needs areas such as special education, world languages, and secondary STEM (Science, Technology, Engineering, and Mathematics).

The purpose of this evaluation is to a) determine if existing HEPs are meeting intended goals and system needs, and b) to offer recommendations to the OHRD for enhancements to existing programs and/or adding new programs for identified needs.

The HEPs program is a learning community that fosters collaboration between institutions of higher education and MCPS to develop staff academically in critical need areas (MCPS, 2016). While each individual partnership is different in scope and academic focus, the overall objective of the HEPs program is to develop educators who fill system needs. The goals of the existing HEPs program are to:

- 1) Establish HEPs with local universities to support individuals who aspire to become teachers and to develop certificated staff primarily in critical content needs areas;
- 2) Enhance and expand current university partnership teacher development programs so they are focused on supporting the development of the teaching workforce; and
- 3) Develop an MCPS talent pool to take on anticipated leadership positions.

This report addresses the following research questions.

1. What are the current MCPS system needs?
2. To what extent do current HEPs address intended goals and system needs?
3. What factors facilitate or hinder implementation of the HEPs program in meeting district needs?
4. What has MCPS spent on tuition reimbursement, and how much was spent in relationship to the number of persons who graduated from the program?

Summary of Methodology

OSA staff reviewed publicly available documents and gathered data from OHRD and the Employee and Retiree Service Center to examine the extent to which the HEPs are meeting MCPS needs. In addition, OSA staff created a questionnaire for OHRD staff to complete in order to better understand the a) successful aspects of the HEPs and b) aspects of the HEPs program needing improvements. Descriptive analyses were used to summarize information.

Summary of Findings

Question 1. Based on an examination of the number of vacancies and number of highly recommended candidates for the positions for the 2017–2018 school year, the most critical content

need area within MCPS is special education, followed by the arts. As of August 2017, there were 24 vacancies in special education and 14 vacancies in the arts; each area had just one highly recommended applicant, and being highly recommended does not guarantee the candidate will fill the position. While OHRD expressed concerns about the quality of the leadership pipeline, there were 151 MCPS staff eligible for Assistant School Administrator positions and just three have administrative roles in school year 2017–2018, suggesting an oversupply of leadership candidates. Diversity is articulated as a need in several MCPS documents and is evidenced by the demographic mismatch between MCPS’s student body, which is less than a third White, and its teacher workforce, nearly three-quarters of whom are White.

Question 2. Although most HEPs address critical content needs areas, the HEP programs that do so have had a relatively small number of graduates. Among graduates of HEPs in school year 2016–2017, under a fifth of the HEPs graduates had attended special education (13%) or STEM/foreign language (13%). About 60% had attended leadership programs. Of the MCPS staff who graduated from HEP programs between 2014 and 2016, 34% are working in a position that reflects their HEP degree. Among the special education graduates, 48% are working as special educators; among leadership graduates, just 16% hold a leadership position. Of these HEP graduates, 70% are White and 79% are female, suggesting the HEPs as designed are not meeting the need for increased diversity in teacher workforce.

Question 3. OHRD reported that successful aspects of HEP include having pathways to teacher certification in high-need staffing areas, built-in internships to allow teachers to stay employed while participating in the HEPs, and cohort models that allow staff to spend 2 to 3 years with peers. Challenging aspects of the HEPs program include structural barriers that limit participation, lack of clear processes or protocols for monitoring the effectiveness of HEPs, and insufficient communication between OHRD and higher education partners. OHRD staff suggested several changes to make HEPs more effective, including reducing barriers to participation and increasing alignment to critical need areas.

Question 4. We estimate that MCPS spent approximately \$1.1 million on tuition reimbursement for the school year 2016–2017 graduates of HEPs from seven programs. Of the tuition reimbursements, approximately 75% went to graduates of leadership programs, 19% went to graduates of special education programs, and about 6% went to graduates of other programs (world languages or STEM).

Recommendations

To better align the HEPs program to system needs, OHRD can:

- Revise existing Memoranda of Understanding (MOUs) and recruitment processes to increase the number of participants in special education programs and the diversity of HEP participants. Revisions might include:
 - Direct pay to reduce out-of-pocket costs to participants for programs addressing high vacancy areas in MCPS;
 - Stipends to cover textbooks and other course materials;

- Financial incentives for participants who complete special education programs and for obtaining a position in special education; and
- Include explicit goals in MOUs and guidelines for recruitment of HEP participants that address a) filling vacancies in critical content needs areas, b) increasing diversity of the teacher workforce, and/or c) meeting other documented needs.
- Discontinue or constrain the number of participants in leadership programs and reallocate resources to programs addressing high vacancy areas in MCPS.
- At least annually, document MCPS-specific needs through systematic analysis of critical content need area shortages and other needs in MCPS. Prioritize critical content needs areas by examining vacancies against the number of highly recommended applicants.
- Create and maintain a relational database that includes a unique staff identifier, so that data on HEP participants can be accessed and analyzed to assess whether HEPs are meeting established goals. The database should store information on HEP participants, including application, enrollment, progress through programs, tuition reimbursed, date of completion, and employment history before, during, and after completion of HEPs.
- Clarify the roles, responsibilities, and timelines for staff in OHRD involved in completing the above steps.

Evaluation of the Higher Education Partnerships (HEPs) Program in MCPS

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Introduction

The Office of Shared Accountability (OSA) in Montgomery County Public Schools (MCPS) was asked by the Office of Human Resources and Development (OHRD) to conduct an evaluation of the higher education partnerships (HEPs) program. MCPS has partnerships with several universities that focus on career and professional development in leadership and in critical content needs areas such as special education, world languages, and secondary STEM (Science, Technology, Engineering, and Mathematics).

OHRD is focused on developing new HEPs and establishing an approval path for stakeholders to determine new partnerships. Therefore, the purpose of this evaluation is to a) determine if existing HEPs are meeting intended goals and system needs, and b) to offer recommendations for improving future HEPs. OHRD may use the results to make appropriate enhancements or changes in existing programs and/or add new programs/partnerships for identified needs.

Background

MCPS developed HEPs with the goal of providing professional development programs that align with MCPS goals and meet Board of Education priorities (MCPS, n.d.). The mission of the HEPs program is to provide opportunities for MCPS staff and candidates seeking employment in the MCPS to further their education, extend their professional skills, and continue to enhance their capacity to meet systemwide priorities. The vision is to develop staff academically in critical need areas (MCPS, 2015). MCPS staff collaboratively work with institutions of higher education to develop HEP cohort programs of study that focus on career and professional development in critical needs staffing areas. Participation in HEPs can result in qualification for Maryland State Department of Education (MSDE)-approved teacher certification or receipt of a master's degree, doctorate, or certificate of completion. The degree programs, particularly those that target paraeducators and other supporting service employees, offer pathways for staff to ultimately be included in a pool of qualified candidates eligible for hire as teachers, in furtherance of the school system's goals of meeting the needs of its students, and in support of the Teacher Workforce Diversity Initiative (MCPS, 2014; 2016).

Overview of MCPS HEPs Program

The details for each HEPs program are specified in the respective Memorandum of Understanding (MOU).

The goals of the existing HEPs program are to:

1. Establish HEPs with local universities to support individuals who aspire to become teachers and to develop certificated staff primarily in critical needs content areas (MCPS, n.d).
2. Enhance and expand current university partnership teacher development programs so they are focused on supporting the development of a diverse teaching workforce (MCPS, 2014, 4.1; 2016).
3. Develop an MCPS talent pool to take on anticipated leadership positions (OHRD and OSA meeting notes, May 3, 2017).

The specific target population and eligibility criteria for HEPs vary by programmatic focus (MCPS, 2016). Programs may target current administrators, current teachers, current support staff, and potential employees (outside candidates who have potential to be hired as a paraeducator, substitute, or teacher). HEPs encompass three program types: teacher preparation programs, career enhancement programs, or leadership development programs. Teacher preparation programs are for candidates who are interested in pursuing a teaching degree and/or teacher certification; some are open to individuals who currently are not MCPS staff. Career enhancement programs are for MCPS professional staff who are interested in pursuing certification in equity studies or a master's degree in middle school math, library media science, or instructional technology. Leadership programs are for MCPS professional staff who are interested in pursuing certification or a master's degree in Administration and Supervision.

Recruitment for HEPs is a collaborative effort between MCPS and partnering institutions of higher learning. The HEPs offerings are advertised through *The Bulletin*, the MCPS website, websites of partner higher education institutions, Professional Development Online (PDO), interest meetings, and staff development teachers. Subsequently, MCPS and partner institutions collaborate on the review of applications, the interview process, and the selection of finalists. Once enrolled, a service commitment is stipulated only for candidates who receive accelerated reimbursement.

With regard to the selection of higher education partners, MCPS looks at the needs of the school system in relation to what the institution of higher education can offer candidates. For example, tuition discount, convenient location of classes, cohort model, and workplace internship are considered desirable program features.

A cross-office structure to facilitate the planning, coordination, and implementation of various aspects of HEPs follows.

1. **University Partnerships (OHRD):** Develop and manage program between an institution of higher education and MCPS that focuses on career and professional development in high needs areas for the school system.

2. **Staffing and Certification Unit (OHRD):** Department of Staffing and Certification documents and disseminates an annual list of critical content needs areas in MCPS. The MCPS Certification Unit also works directly with MSDE to provide certification services for all MCPS professional employees.
3. **Career Pathways for Supporting Services Employees (OHRD):** Provides information and resources related to pathways for support staff to become a teacher. One option is to take advantage of MCPS Higher Education Partnerships, which result in teacher certification.
4. **Tuition Reimbursement (OHRD):** Facilitates tuition reimbursement for tuition not covered by grants or scholarships. Requests for tuition reimbursement are made through PDO.
5. **Office of the General Counsel:** Provides direction in development of MOUs for HEPs.

HEPs Program Logic

The logic model (Figure 1) specifies the rationale or needs being addressed, resources and activities (structural and organizational arrangements), and the expected short- and long-term outcomes of HEPs.

Logic Model for HEPs, Inputs, Activities, Expected Results, and Anticipated Outcomes					
Context/Needs and Issues	Inputs	Outputs/Results		Outcomes	
(Rationale for HEP)	(Resources and Structures Instituted)	Activities What we do/who we reach	Participation Metrics/Immediate results	Expected Short Term Changes	Expected Lasting Changes
<ul style="list-style-type: none"> Facilitate staff pursuit of higher education Shortage of candidates for particular content areas Commitment to growing a talent pool of highly qualified teachers of diverse backgrounds 	<p>List of critical content needs areas</p> <p>Cross-office structures in OHRD (University Partnerships, Teacher Staffing, A&S Staffing) and Office of the General Counsel</p> <p>Teacher Workforce Diversity Strategic Plan</p> <p>Priorities for the 2016-2017 School Year-Why must we act?</p> <p>1 Full-time Equivalent (FTE) Instructional Specialist for HEP</p> <p>2 (0.4-0.6 FTE) staff</p>	<p>Cross department collaboration (Staffing and Certification [OHRD], Office of the General Council, and schools)</p> <p>Institute/establish HEPs</p> <ul style="list-style-type: none"> Assess critical content needs areas Liaise with/outreach to university partners, staff, employee associations Tuition reimbursement negotiated contracts Develop new or revise existing MOUs for HEPs <p>Management and coordination of HEPs</p> <ul style="list-style-type: none"> Community outreach/ recruitment of potential candidates Certification and staffing of HEP completers (reimbursements, certification, and staffing placement) Ongoing review of HEPs for relevance, quality, and alignment to system needs <p>Who we reach MCPS staff Potential MCPS staff University partners MCPS community</p>	<p>Number of partnerships/MOUs aligned with MCPS needs</p> <p>Number of programs meeting participant needs (e.g. convenient location, cohort model, reduced tuition and fees)</p> <p>Structures and processes in place to facilitate and manage HEPs</p> <ul style="list-style-type: none"> Tracking and monitoring the movement of HEP participants staff within system Documenting vacancies in critical content needs areas 	<ul style="list-style-type: none"> Number of staff participating in HEPs programs addressing critical content needs areas by year/program Increase in diversity of the candidate pool for teaching and administrative positions Completers hired in critical content needs areas Efficient data management systems in place 	<ul style="list-style-type: none"> HEP completers staffed in critical content needs areas Decrease in vacancies in critical content needs areas Majority of HEPs completers meet MCPS criteria to be highly recommended for teaching positions in their fields or in the pool for AP or Assistant School Administrator (ASA) leadership positions Increased diversity of MCPS teacher workforce Established criteria for anticipating MCPS needs Evidence regarding cost-effectiveness of developing teachers from within MCPS

Figure 1. Logic Model for HEPs.

HEPs in Place in 2016–2017

MCPS supports multiple partnerships with local universities to provide financial incentives and additional support for individuals to attain various educational degrees or certificates. As of 2016–2017 school year, MCPS had certification or master’s degree HEPs with six institutions of higher education as follows.

1. Hood College Partnership in Educational Leadership
2. Johns Hopkins University Master’s Degree in Special Education – SET-IT (Special Education Teacher Immersion Training)
3. Johns Hopkins University Professional Immersion Master of Arts in Teaching (ProMAT)
4. McDaniel College Equity and Excellence in Education Graduate Certificate
5. McDaniel College Master’s Degree in Curriculum & Instruction or Administrator I Certification
6. Montgomery College Alternative Certification for Effective Teachers (ACET)
7. Towson University Instructional Technology Program, Track II School Library Media
8. Towson University Master of Arts in Teaching (M.A.T.) in Special Education
9. Towson University Master of Education (M.Ed.) in Special Education
10. University of Maryland College Park Master of Education (M.Ed.) in Middle School Mathematics
11. University of Maryland College Park Master of Education (M.Ed.) in Elementary Education CITE Program
12. University of Maryland College Park Master of Education (M.Ed.) in STEM Education

Additional benefits for participants of the HEPs may include one or more of the following: reduced tuition and fees, reduced book costs, convenient course locations, job embedded training, possibility of full-time employment for potential employees, full or partial tuition reimbursement, and the support of a cohort group.

Literature Highlights

Nationwide, teacher shortages have been occurring in specific subject areas. Studies drawing on the nationwide Schools and Staffing Survey shed light on critical need areas. Researchers have found that the production of teachers in most areas rose steadily between 1984 and 2013, but the production of teachers in STEM and special education has remained flat (Cowan, Goldhaber, Hayes, & Theobald, 2015), and positions in STEM and special education tend to have the highest share of vacancies over time. Another study found that the percentages of public high schools that reported difficulty staffing mathematics were higher than those in almost every other subject (Malkus, Hoyer, & Sparks, 2015). After mathematics, the next highest level of staffing difficulties was in special education, followed by physical sciences and foreign languages. Maryland’s needs tend to mirror these national patterns: the Maryland State Department of Education Teacher Staffing Report 2016–2018 listed mathematics, science, special education, and foreign languages among the certification areas with critical shortages (Maryland State Department of Education, 2016).

In addition to concerns about specific subject areas, a growing body of literature suggests the importance of recruiting teachers of color and preparing teachers to be culturally responsive. Student-teacher demographic mismatch is related to outcomes such as lower student test scores and negative teacher assessments of student behavior and ability (Clotfelter, Ladd & Vitgdor, 2007; Dee, 2004; Egalite, Kisida & Winters, 2015; McGrady & Reynolds, 2013; Ouazad, 2014). For example, a study of high school teachers in Chicago found that students of African American teachers outperformed students of White teachers (Aaronson, Barrow & Sander, 2007). In particular, African American students increased their math test scores more in classrooms with a African American teacher compared to classrooms with a White teacher. In a recent study drawing on data from the Educational Longitudinal Study of 2002, researchers found that non-Black teachers have significantly lower educational expectations for Black students than Black teachers do when evaluating the same students (Gershenson, Holt & Papageorge, 2015). In addition, Black students are rated as less disruptive when they have a Black teacher (Wright, 2015). Given the high proportion of students of color in MCPS, recruiting a diverse group of teacher candidates and preparing teachers to be culturally responsive is intended to benefit the students served.

Districts have undertaken a variety of initiatives to address these shortages. Some districts have developed partnerships with institutes of higher education to develop teacher pipelines (Darling-Hammond & Sykes, 2003). For example, San Diego's school district collaborated with universities on new training programs in high-need fields. Other districts have developed "grow-your-own" teacher preparation programs to recruit, support, and prepare individuals to teach in their communities (Toshalis, 2014). Such programs can create better alignment between supply from teacher preparation programs and demands of local school districts, as well as increase the extent to which the diversity of the teacher workforce reflects that of the student population. However, it is possible for the higher education partnerships to fail to achieve desired outcomes, if teachers choose to use the credentials they have earned to obtain jobs with other employers. In one study of tuition reimbursement, researchers found that participation in tuition reimbursement reduces turnover while employees are in school, but voluntary turnover increases when individuals earn graduate degrees, though voluntary turnover is significantly reduced if they are subsequently promoted (Benson, Finegold, & Mohrman, 2004).

Evaluation Scope and Questions

The purpose of this evaluation is to a) determine if current HEPs are meeting intended goals and system needs and b) to offer recommendations for improving future higher education partnerships. We focus on the 12 HEPs that offer master's degrees or certificates, as these programs enroll the vast majority of participants. The evaluation questions are closely related to the goals of the program.

Evaluation Questions

1. What are the current MCPS system needs?
 - a. What are the critical content needs areas within MCPS?
 - b. What is the need for leadership development within MCPS?
 - c. What is the need for increasing teacher diversity within MCPS?

2. To what extent do current HEPs address intended goals and system needs?
 - a. Are the HEPs MOUs consistent with MCPS documented needs?
 - b. Among HEPs graduates, what number/percentage received degrees in each focus area?
 - c. Are graduates of HEPs working in documented areas of need?
3. What factors facilitate or hinder implementation of the HEPs program in meeting district needs?
 - a. What are the successful aspects of the HEPs program?
 - b. What are challenging aspects of implementing the HEPs program? How is OHRD addressing the challenges?
 - c. What changes are needed (if any) to make the HEPs program more effective?
4. What has MCPS spent on tuition reimbursement, and how much was spent in relationship to the number of persons who graduated from the program?

Study Design

OSA staff used secondary data analysis to address evaluation questions 1, 2, and 4, describing the extent to which HEPs in MCPS are meeting intended goals and the amount of tuition reimbursement spent on these programs. To address question 3, OHRD staff completed a questionnaire.

Data Collection, Sample, and Analysis

OHRD staff provided a list of critical content needs for school year 2017–2018. To further specify MCPS system needs, OHRD staff provided the number of vacancies and number of highly recommended candidates in critical content needs areas within MCPS as of August 2017. OSA staff used descriptive analyses to assess the magnitude of vacancies and the gap between number of vacancies and candidates in critical content needs areas for school year 2017–2018. To address the issue of leadership and diversity as system needs, evaluators reviewed publicly available documents and draft materials provided by OHRD, in addition to interviewing OHRD staff about their perceptions of system needs.

To evaluate the extent to which HEPs are addressing system needs, evaluators collected the MOUs for each of the current HEPs from OHRD staff. The authors used the MOUs to develop summaries of the content areas addressed by the 12 HEPs that provide certificates or master's degrees. HEPs that provide doctoral degrees were not part of the analyses in this report, as very few individuals participate in these programs. Information on the number of HEP graduates from each program was contained in publicly available memoranda to the Board of Education from the end of each of the past four school years. OHRD staff also provided documents listing the graduates of HEPs by program and by year. Evaluators were able to obtain employee identification numbers for 383 of the 405 individuals who graduated from HEPs programs between 2014 and 2016. This information was then linked to data provided by the Employee and Retiree Service Center (ERSC), OHRD data on Assistant Principal (AP) and Assistant School Administrator (ASA) eligibility pools, 2017 Student-Course-Grade-Teacher (SCGT) file, and other relevant data from the Online Administrative Student Information System (OASIS) to generate descriptive statistics on the

demographic characteristics and positions held by these HEP graduates held in school year 2016–2017.

To address the third evaluation question, the authors developed a questionnaire for staff in units within OHRD (Appendix A). The questionnaire was sent to seven staff members within OHRD, representing University Partnerships and Teacher Staffing. Five questionnaires were completed individually; two staff members jointly completed the questionnaire. The authors applied the Appreciative Inquiry (AI) process (Cooperider, 2012; Preskill & Catsambas (2006) to analyze information. Appreciative Inquiry is a process of gauging what is working well and gathering information that would improve performance and efficiency (Appendix D). The AI process was used because it is effective in eliciting solution-focused results. In addition, with AI, the data analysis ends with a compilation of the ways that the stakeholders would redesign the HEP program to make it more effective. The content of the office level question questionnaire and notes from meetings with program staff were analyzed to identify themes that reflect a) successful aspects of HEPs, b) challenges to implementing HEPs, c) ways that OHRD was addressing the challenges, and d) stakeholders' recommendations for making HEPs more effective and efficient based on respondents' experience.

To address the fourth evaluation question, the authors obtained information from OHRD's fiscal office staff on MCPS tuition reimbursement, which was combined with information on 136 HEP graduates in 2016–2017 from seven programs (obtained through publicly available memoranda to the Board) to estimate the amount of tuition reimbursed to these graduates over the course of their programs.

Strengths and Limitations of the Methodology

A variety of data sources and measures were analyzed; this was a strength because it reflects the multidimensional nature of the HEPs program and its goals.

To address question 1, OSA staff had planned to review critical content areas for last four years. OHRD provided only current documentation of MCPS critical content needs areas and data on vacancies for the current school year. As such, the authors were unable to assess whether the needs have changed over time and the extent to which current HEPs map to the most intense needs of the last couple of years.

While the authors had planned to examine whether teachers moved into a position in the area in which they obtained their degree (not just whether they were currently in a position in the area of the degree), the data available could not be used to address this question. The subject taught by the teacher is not captured in the Human Resources Information System, and department code is not a reliable indicator of teachers' positions.

Additionally, OHRD does not currently have a system for capturing the type of degree received by HEPs graduates. As such, for the analyses for question 2, OSA staff were not always able to distinguish whether a graduate was in STEM or world languages. To conduct the analysis to

address question 4, OSA staff assumed that half of the graduates of programs that offered both certificates and master's degrees received certificates, and half received master's degrees.

In addressing the question of what factors facilitate or hinder implementation of the HEPs program in meeting district needs, the data were collected from a small number of staff who are directly involved in implementing the HEPs program. As such the information reflects only the perspective of program staff and do not include the experiences of university partners or the participants of the HEPs program. Typical of survey data, these data consisted of self-reports.

A full cost analysis, which would calculate the costs of all resources required to run the HEPs, is beyond the scope of this evaluation. For example, the researchers were unable to obtain the costs to the university partners such as faculty salary and benefits, or costs to participants such as time allocated to coursework and commuting to class.

Results

Findings for Question 1: What are the current MCPS system needs?

What are the critical content needs areas within MCPS?

Critical content needs areas refer to areas where there are more positions open than candidates to fill them (MSDE, 2016). OHRD provided a list of the MCPS critical content needs areas for school year 2017–2018 (Figure 2). The areas of teacher shortage in MCPS fall within the subject matter areas identified in a list of statewide academic discipline or subject matter designated as teacher shortage areas during school year 2017–2018 (Appendix B). According to the documentation provided by OHRD, MCPS shortage areas are aligned with the Teacher Shortage Areas Nationwide Listing 1990–1991 through 2016–2017, Maryland Teacher Staffing Report 2016–2018, and MCPS hiring data for school year 2016–2017.

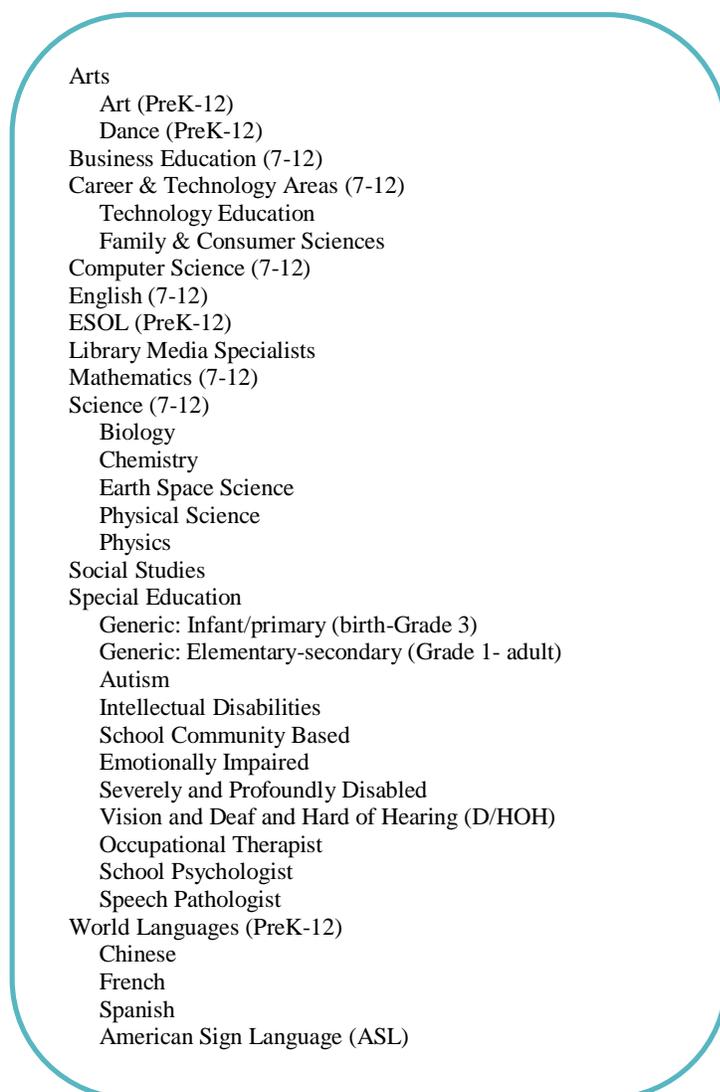


Figure 2. MCPS critical content needs areas SY 2017–2018.

As indicated in Figure 3, special education had the most vacancies (23.5) as of August 2017, followed by the arts with 13.5 vacancies (part-time vacancies are counted as .5). Several of the critical content needs areas identified had no vacancies as of August 2017.

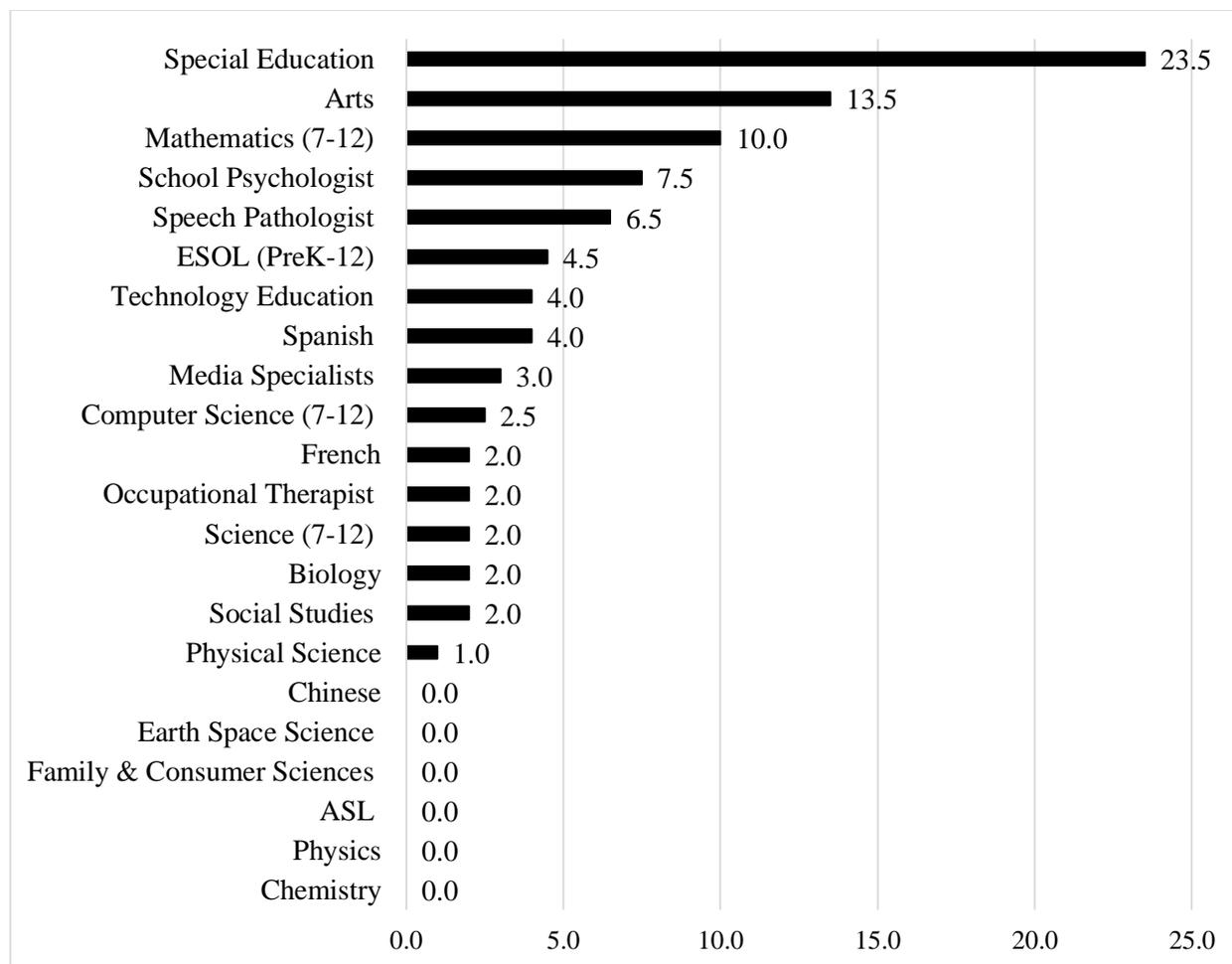


Figure 3. Number of vacancies (adjusted for part time positions) by critical content need area.

Figure 4 displays the differences between the number of highly recommended and prequalified candidates and the number of vacancies, for critical content need areas with vacancies as of August 2017. While prequalified candidates meet minimum job requirements, highly recommended candidates have been recommended by a school leader. In special education, MCPS had 5 more prequalified candidates than vacancies, but 23 more vacancies than highly recommended candidates. This suggests that MCPS would need to fill some special education positions with candidates who are prequalified, but who have not been highly recommended by a school leader. In the arts, MCPS would need an additional 11 prequalified candidates and an additional 13 highly recommended candidates to match the number of vacancies. At the other end of the extreme, MCPS had more prequalified and highly recommended social studies teachers than vacancies in social studies.

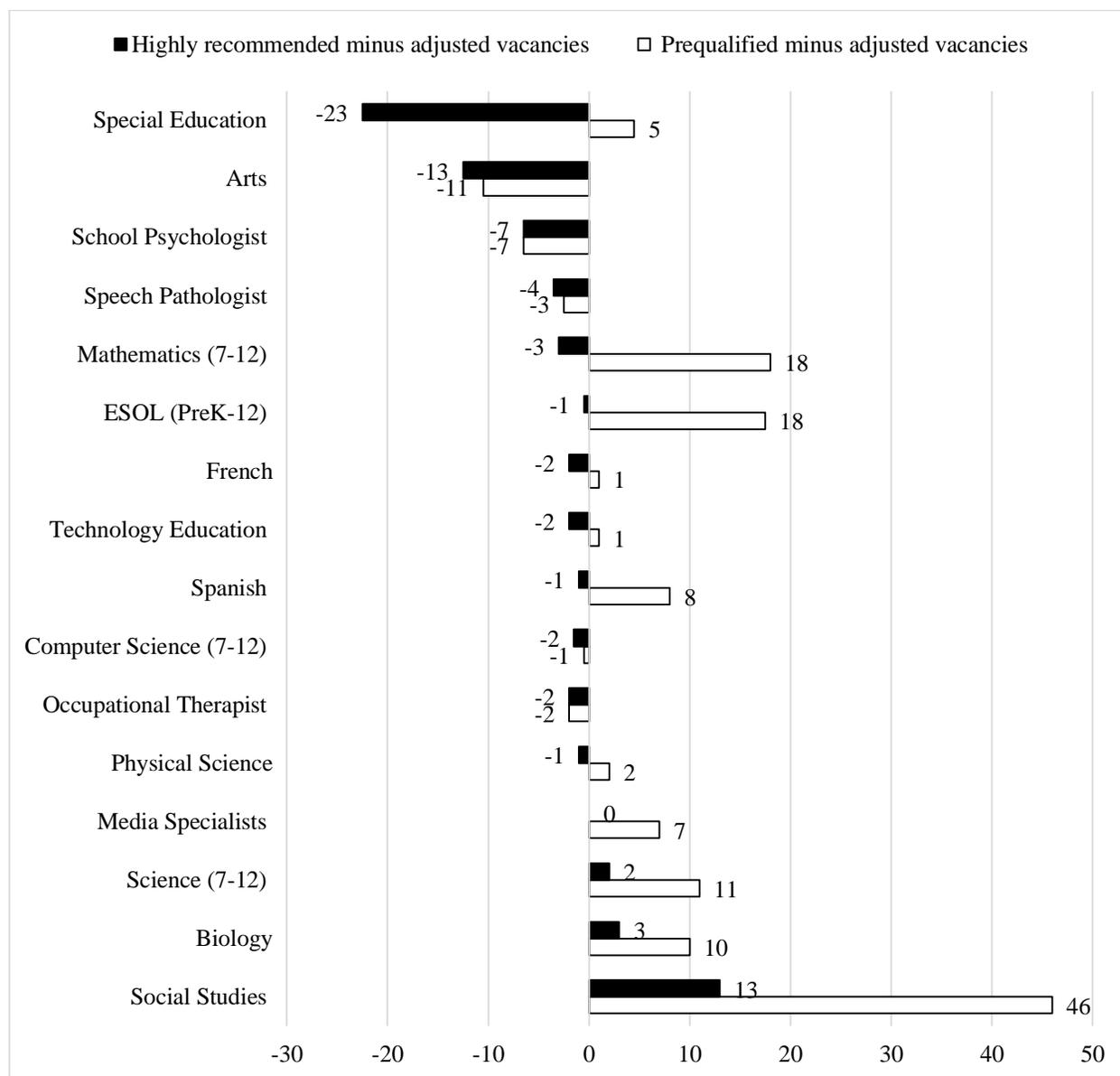


Figure 4. Shortage or surplus of highly recommended/prequalified candidates (adjusted for part time positions), by critical content need area, as of August 2017.

What is the need for leadership development in MCPS?

To be eligible for AP or ASA positions, applicants must upload a resume, letter of interest, and proof of completed coursework, along with three recommendation forms. According to documentation from OHRD staff, 151 MCPS staff were eligible for ASA positions. Of these, just three have administrative roles (director or coordinator) during SY 2017–2018. AP applicants also must complete a written assessment and receive a satisfactory review from an interview panel to be eligible. As of August 2017, MCPS had 81 internal candidates and 25 external candidates eligible for AP positions. Of the 81 internal candidates, 13 held positions as assistant school

administrators and another 8 held director, supervisor, or coordinator positions during school year 2017–2018.

OHRD staff recalled that there was a dearth of leadership candidates in the late 1980s, when demand for school leaders increased as elementary schools added assistant principals. Leadership programs were developed and encouraged at that time. Though information from several meetings with OHRD and other anecdotal information indicated that OHRD was often not satisfied with the quality of the applicants, no specific document articulating leadership as system need, either currently or at the time many of the HEPs were developed, was available. As of August 17, 2017, the numbers of staff eligible for ASA and AP pools do not suggest a need either quantitatively or qualitatively, as to be in the pool, a candidate must have three positive recommendations and “meets standards” evaluations.

What is the need for increasing teacher diversity within MCPS?

Teacher workforce diversity is articulated as a need in several MCPS documents. The OHRD website notes that partnerships are expected to focus on expanding the candidate pool with respect to applicants representing diverse backgrounds (MCPS, 2017). Additionally, the *Teacher Workforce Diversity Strategic Plan* emphasized that the first focus area of MCPS’ human capital management strategy is to increase the diversity of our teacher workforce (MCPS, 2014). Specifically, in the plan, MCPS set out to revise and refocus the recruitment, selection, and retention processes to prioritize workforce diversity, and to expand and redesign local teacher pipeline programs that develop the internal talent within MCPS. While “teacher diversity manifests in many ways” the plan also notes “that a particular focus of our work must be to expand opportunities for teachers of color” (MCPS, 2014). This focus is intended to address the discrepancy between the backgrounds of MCPS students, less than a third of whom are white, and teachers. Nearly three-quarters of MCPS teachers (i.e., staff represented by the Montgomery County Education Association [MCEA]) are White, as seen in Figure 5 (MCPS, 2017b).¹ The need to “invest in and shape a workforce that reflects and embraces the diversity of our community” also was identified as a priority focus for MCPS in *Priorities for the 2016–2017 School Year: Why Must We Act?* (MCPS, 2016).

¹ The employee associations are: the Montgomery County Association of Administrators and Principals (MCAAP/MCBOA); MCEA; and the Service Employees International Union (SEIU) Local 500.

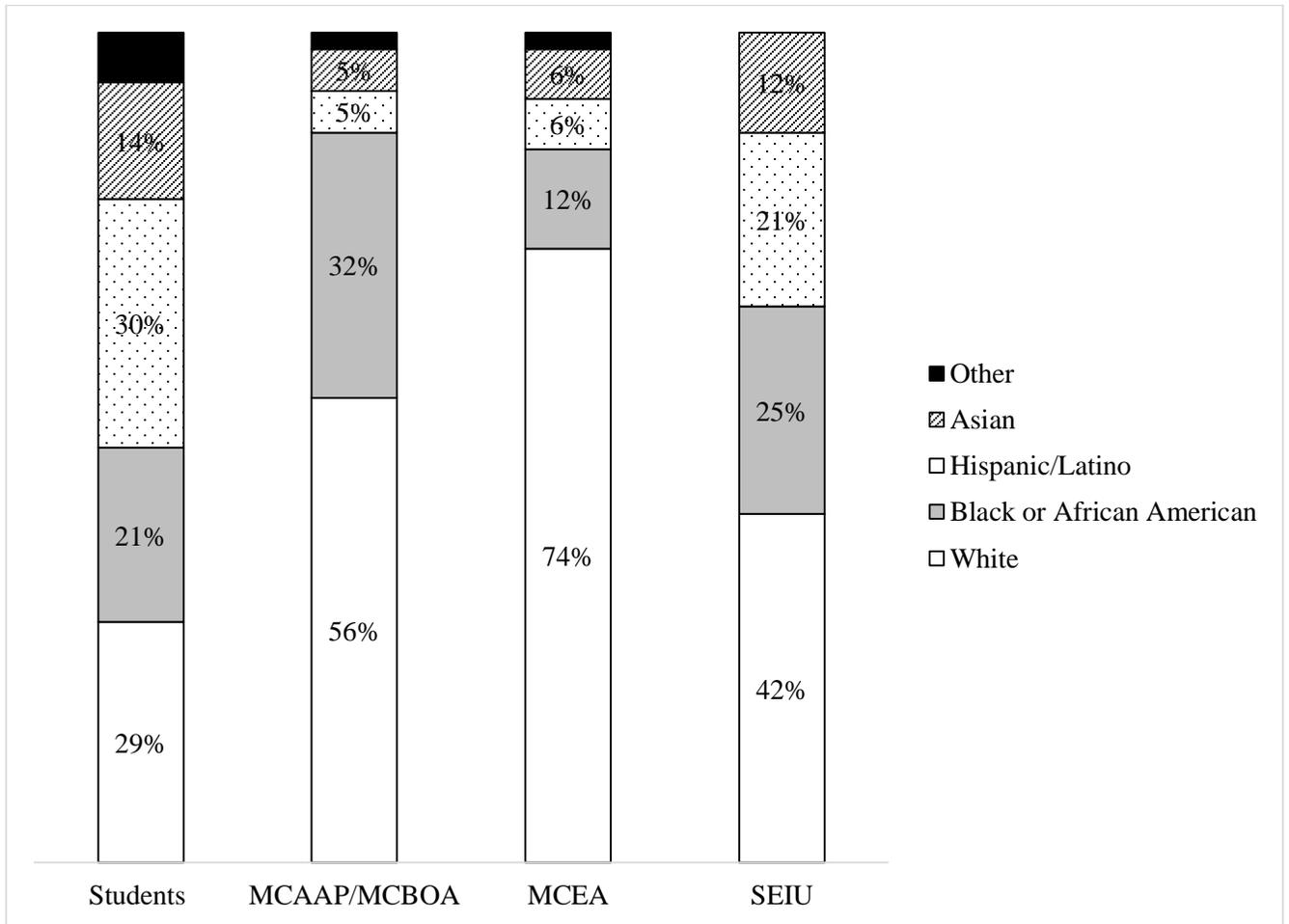


Figure 5. Race/ethnicity of MCPS students and employees by employee association (source: MCPS 2017b).

OHRD staff has begun to develop a Framework for the Future of Partnership Programs for Support Professionals, which notes that “developing the talent within our own county will play a critical role in ensuring that our teaching workforce is as broadly diverse as the students we serve” (MCPS, 2017a). The framework also cites recent research on the impact of same-race teachers and states that “a particular focus of our work must be to recruit teachers of color and others with backgrounds and experiences that are underrepresented in our current workforce.” Recruiting teachers of color and others with backgrounds that are underrepresented in MCPS current workforce remains a system goal (MCPS, 2017b).

Findings for Question 2: To what extent do current HEPs address intended goals and system needs?

Are the HEPs MOUs consistent with MCPS documented needs?

As noted in the scope of the evaluation, this question focused on the 12 current HEPs that offer master's degrees or certificates. In Table 1, we present information on the structure of these 12 programs, listed in alphabetical order by focus area. One program is an elementary education teacher preparation program; one is an equity-focused career enhancement program; two are leadership programs; one is a mathematics career enhancement program; one is a media career enhancement program; three focus on special education—two teacher preparation and one career enhancement; and three focus on STEM or foreign language—again, two teacher preparation and one career enhancement. As noted previously, the career enhancement and leadership programs are for current MCPS professional staff. Of the five teacher preparation programs, three limit admission to current MCPS employees; two (JHU ProMAT and Montgomery College ACET) are open to individuals who are not current MCPS employees. The Cost to Candidates column provides the out-of-pocket costs net of tuition reimbursement. In the case of direct pay programs, the higher education partner directly bills MCPS for tuition, so participants have minimal out-of-pocket tuition expenses.

**Table 1
Higher Education Partnerships Descriptions**

HEP Short Name	Focus Area	Program Type	# Credits	Cost to Candidates
UMCP (M.Ed.) in Elementary Education CITE	elementary education	teacher prep	37	\$11,674
McDaniel College Equity and Excellence (certificate & MA)	equity	career enhancement	15/36 ^a	Minimal
Hood: Educational Leadership (certificate & MA)	leadership	leadership	18/36 ^a	Minimal
McDaniel Curriculum & Instruction or Administrator I (certificate & MA)	leadership	leadership	19/34.5 ^a	Minimal
UMCP (M.Ed.) in Middle School Mathematics	mathematics ^b	career enhancement	30	\$9,825
Towson School Library Media	library media ^b	career enhancement	36	^c
JHU Master's in Special Education (SET-IT)	special education ^b	teacher prep	39	\$16,185
Towson (M.A.T.) in Special Education	special education ^b	teacher prep	39 40	\$1,950
Towson (M.Ed.) in Special Education	special education ^b	career enhancement	36	Set to MCPS reimbursement rate
UMCP (M.Ed.) in STEM Education	STEM ^b	career enhancement	30	\$9,825
JHU ProMAT	STEM or foreign language ^b	teacher prep	39	Minimal
MC ACET ^e	STEM or foreign language ^b	teacher prep	^c	\$11,103 ^d

Note. Data on number of credits obtained from MOUs. Data on cost to candidates obtained from OHRD, document sent 6/14/17. OHRD calculations are an approximation based on number of credits and tuition reimbursement in FY 2017. Direct pay contingent on receiving a grade of B or higher. ^aThe first number is the number of credits for a certificate and the second is the number of credits for a master's degree. ^bCritical content needs area SY 17–18. ^cInformation not available. ^dCost is for non-MCPS employees; most ACET participants are not MCPS employees when they enter the program. ^eSecondary level.

As listed in Table 1, 8 of the 12 HEPs address critical content needs areas identified in the findings to the first evaluation question. Of the other four programs, two programs focus on leadership. As noted in the findings for the first evaluation question, leadership is perceived as a need by OHRD staff, but data suggest that MCPS has many qualified candidates available in the ASA and AP pools. One HEP is an elementary teacher preparation program. This program is intended to

assist support staff, who are more diverse than the teaching workforce, in becoming teachers; hence, it is designed to increase diversity. Finally, one program focuses on equity.

The HEPs vary in terms of time commitment (reflected by the number of credits) and costs to candidates. Both leadership programs offer a less time-intensive certificate option and are direct pay, requiring minimal out-of-pocket tuition from candidates. In contrast, some programs have a high time commitment and require candidates to spend more than \$10,000 in tuition. Both of the teacher preparation programs in special education have a high time commitment and one is among the most expensive HEPs. OHRD staff has indicated that moving support staff into teaching positions is one strategy for diversification of the workforce, since support staff are more diverse than the current teaching staff, but this strategy faces barriers due to the high time commitment and out-of-pocket costs of these teacher preparation HEPs.

Among HEP graduates, what number/percentage received degrees in each focus area?

The analytical sample for this question was comprised of HEP graduates from 2013–2014 to 2016–2017. In the school years between 2013–2014 and 2016–2017, under a fifth of the HEPs graduates (between 13 and 17 individuals) attended special education programs, based on the number of HEPs graduates from each program indicated in memoranda to the Board. None of graduates attended arts programs as there are no HEPs in this area. Very few HEPs graduates attended STEM/world languages (between 6 and 13 individuals) or library media programs (at most 5 individuals). The leadership programs have had the highest number of participants (between 40 and 60 individuals a year).

Figure 6 presents the proportion of HEP graduates by focus area, for school years 2013–2014 through 2016–2017. The information is presented in order of the proportion of graduates by degree area as of 2016–2017. As noted, the highest proportion of HEP graduates in each of the past four years have been from leadership programs, with more than twice as many graduates than special education in all four years.

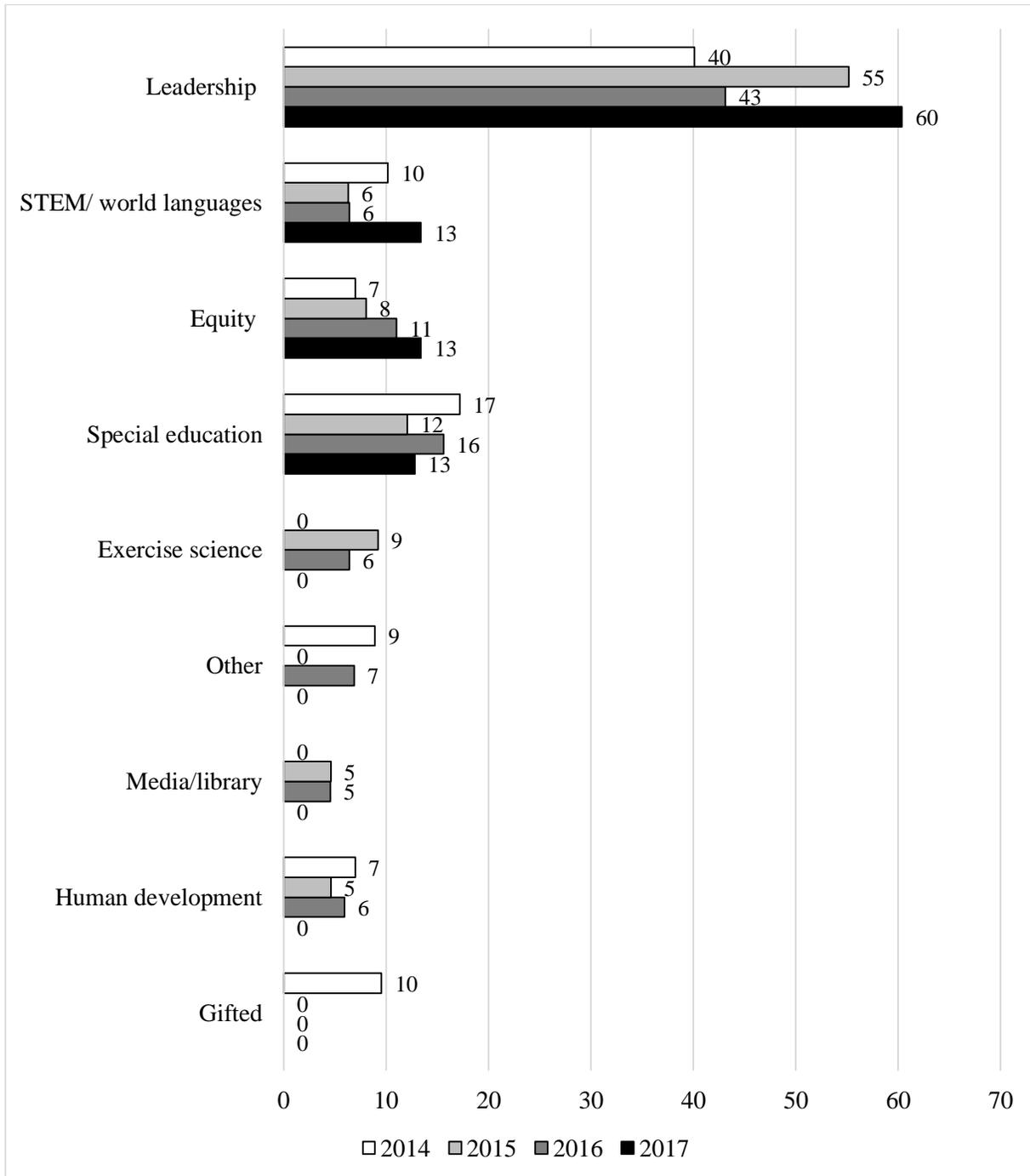


Figure 6. Proportion of graduates by focus area, by year.

Over time, the HEPs have evolved. For example, programs related to gifted students, human development, and exercise science have been discontinued. However, leadership remains the area with by far the highest proportion of HEPs graduates, as seen in Figure 7. The equity program has demonstrated an upward trend in the number of graduates between 2014 and 2017. In school year

2016–2017, more than four times as many HEPs graduates had attended leadership programs than had attended special education, STEM/world languages, or equity programs.

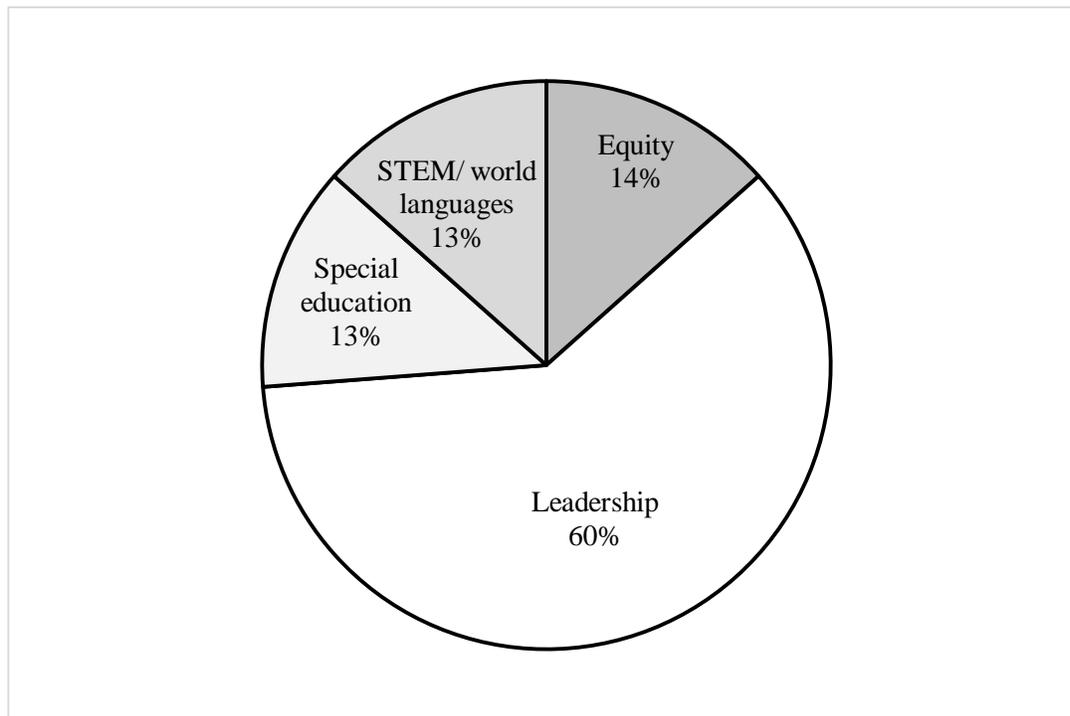


Figure 7. SY 2016–2017 HEP graduates, by focus area.

Are graduates of HEPs working in documented areas of need or in focus areas?

The HEPs will only meet system needs if graduates obtain positions in documented areas of need. To get a sense of the extent to which HEPs graduates are meeting system needs, we examined the school year 2016–2017 positions of individuals who graduated from HEPs between 2014 and 2016. Figure 8 summarizes the positions of the 383 individuals included in these data. While about a third of these graduates were working in a field designated as a critical content needs area (indicated by black bars on the left side of Figure 8), the majority held positions that are not on the critical content needs list (indicated by the diagonally striped bars on the right).²

² In a few cases, the course code was missing. Thus, it is possible that a few more math and STEM graduates obtained positions in field than is reflected here.

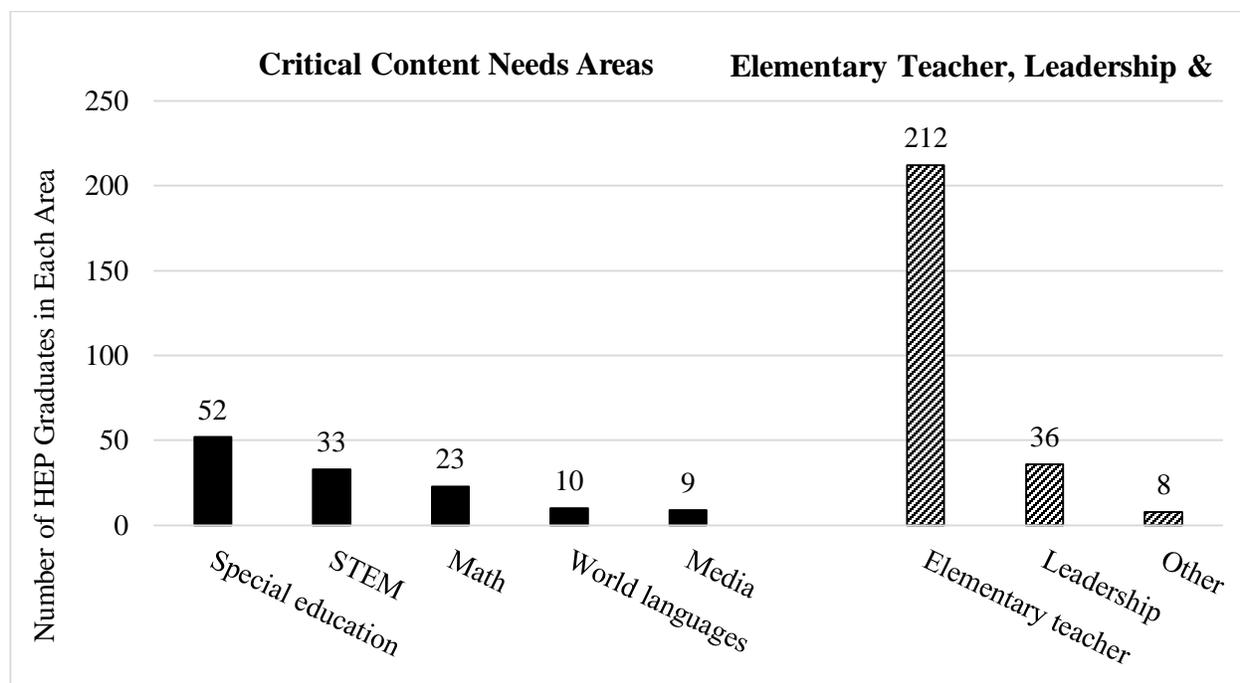


Figure 8. SY 2016–2017 positions of SY 2013–2014 through SY 2015–2016 HEP graduates.

Regardless of whether graduates were working in areas of documented system needs, the HEPs would have met intended goals if graduates obtained positions consistent with the focus area of the degree. To address whether HEPs are successful in this regard, we examined whether individuals were working in the area in which they received a degree. To do so, we used information on program graduates from one or more years, available for 11 of the 12 programs. Data availability is detailed in the appendix (Appendix D, Table D1).

Table 2 presents, on average across all program areas, about a third of the 383 school year 2013–2014 through school year 2015–2016 HEP graduates were working in the area in which they received a degree. Among the HEPs focused on critical content needs areas, the highest percentages in the area of the degree were for graduates of library media programs (eight of the nine graduates were in library media specialist positions). About three-quarters of STEM/foreign language programs were in STEM or world languages positions.³ Among graduates of special education programs, nearly half of the graduates were working in special education positions. Among HEPs with other focus areas, the highest percentages in the area of the degree were for graduates of elementary teacher preparation programs (96% were teachers). As seen in Table 2 and Figure 9 (a graphical depiction of Table 2), among graduates of math/STEM specific programs, fewer than 20 percent are working in math or STEM positions. Only about 16 percent of HEP graduates of leadership programs are in leadership positions.

³ JHU Promat and MC ACET are both STEM/foreign language, and data for these programs were not disaggregated by content area. UMCP STEM and math programs had very small numbers of participants, so they were combined into Math/STEM.

Table 2
Number and Percent of SY 2013–2014 through SY 2015–2016 HEP Graduates Working in Area of Degree

HEP program	# In area of degree	Total Graduates	% In area of degree
Total	132	383	34
Critical Content Needs Areas			
Library media	8	9	89
Math/STEM ^a	5	28	18
Special education	29	60	48
STEM/world languages ^b	30	39	77
Other Focus Areas			
Elementary teacher	24	25	96
Leadership	36	222	16

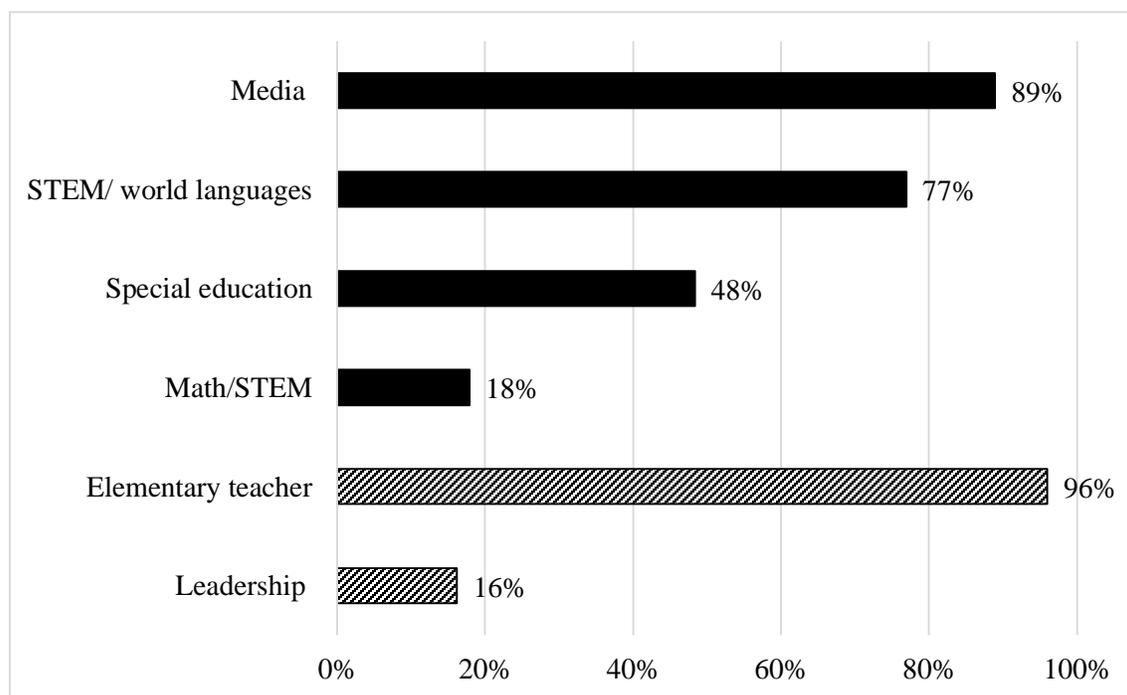


Figure 9. Portion of SY 2013–2014 through SY 2015–2016 HEP graduates in the area of degree, by program area.

In addition to examining whether current positions are in critical content needs areas, we also explored whether HEPs are meeting other system needs, such as increasing the pool of candidates eligible for leadership positions. We found that thirty-five of the 222 leadership graduates from 2014, 2015, or 2016 were in the ASA pool. In addition, 21 of the 222 leadership graduates from 2014, 2015, or 2016 were in the pool of staff eligible to apply for AP positions as of August 2017. Eight of the leadership graduates were in both pools; as such, 48 leadership graduates (22%) were

in the ASA, AP, or both pools. Figure 10 indicates these HEPs graduates made up about a quarter each of the ASA (23%) and AP (26%) pools as of August 2017, indicating these HEP graduates are in the pool of staff being considered for leadership positions.

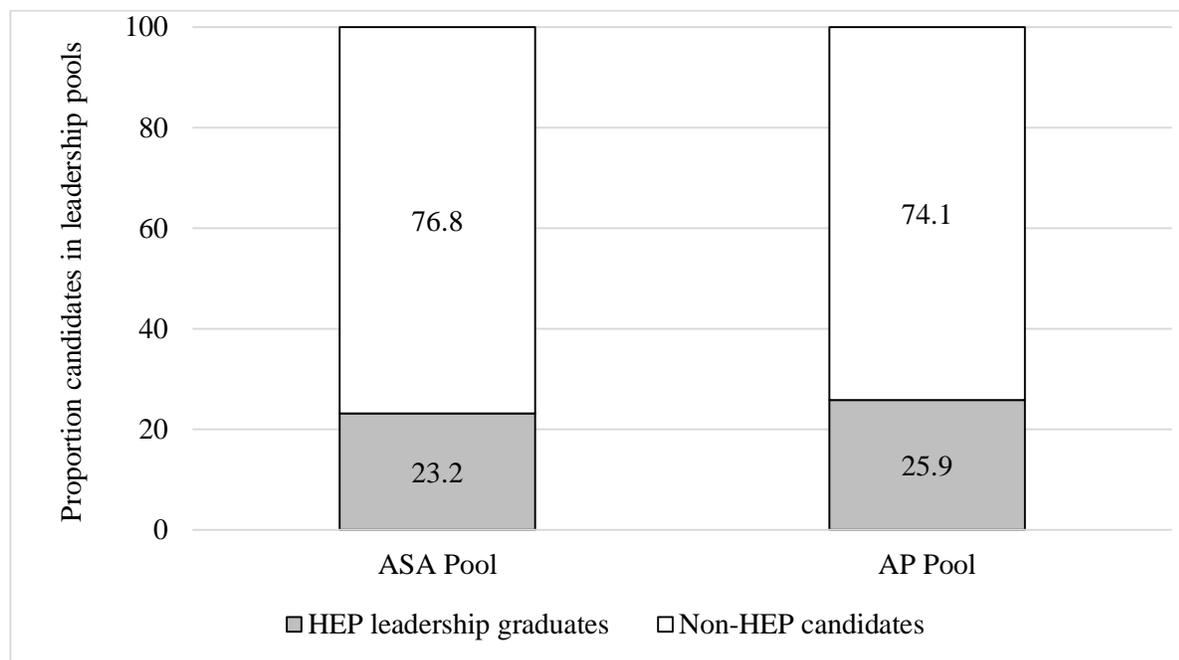


Figure 10. Proportionate contribution of HEP leadership graduates to ASA and AP pools.

Next, we explored whether HEPs are meeting the identified need to increase diversity. To address this question, we analyzed data on HEPs graduates’ race/ethnicity. Among these school year 2013–2014 through school year 2015–2016 HEP graduates, nearly 70 percent were white. Overall, HEPs graduates were more diverse than MCPS teachers (Figure 5), but less diverse than MCPS students. The special education and library media programs were less diverse than the current teacher workforce. Math/STEM and STEM/ foreign language programs had relatively high proportions of Hispanic graduates (21% of 28 graduates and 15% of 39 graduates, respectively), while leadership programs had a high proportion of Black or African American graduates (19% of 222 graduates).

Table 3
Race/Ethnicity of SY 2013–2014 through SY 2015–2016 HEP Graduates

HEPs Program	N	White		Hispanic/ Latino		Black/ African American	
		n	%	n	%	n	%
Total	383	266	70	25	7	60	16
Critical Content Needs Areas							
Library media	9	7	78	1	11	0	0
Math/STEM	28	15	54	6	21	3	11
Special education	60	50	83	2	3	6	10
STEM/world languages	39	26	67	6	15	5	13
Other Focus Areas							
Elementary teacher	25	15	60	1	4	3	12
Leadership	222	153	69	9	4	43	19

We also examined diversity with regard to gender and years of experience. About 80 percent of HEPs graduates were female. On average, school year 2013–2014 through school year 2015–2016 HEPs graduates had eight and a half years of experience (Table 4). Experience varied across programs. Graduates of leadership programs had the most experience on average (11.5 years), as well as the widest range in years of teaching experience in MCPS. Graduates of the teacher preparation program had the least years of teaching experience in MCPS on average (1.6 years).

Table 4
Gender and Years of MCPS Teaching Experience of SY 2013–2014 through SY 2015–2016 HEP Graduates

HEP program	N	Female %	Mean	Standard Deviation	Minimum	Maximum
Total	383	79	8.5	5.7	0	29
Critical Content Needs Areas						
Library media	9	100	4.5	4.8	1	16
Math/STEM	28	92	7.6	3.3	5	19
Special education	60	90	4.7	3.4	0	16
STEM/ world languages	39	67	2.9	1.4	0	8
Other Focus Areas						
Elementary teacher	25	76	1.6	1.0	0	3
Leadership	222	76	11.5	5.0	0	29

Findings for Question 3: What factors facilitate or hinder implementation of the HEP program in meeting district needs?

All seven staff OHRD surveyed responded to the questionnaire. The responses gathered from the staff questionnaire provided information on the successful aspects of the existing HEPs, areas needing improvement, as well as changes underway by the OHRD staff members to review and improve processes.

The responses from the staff questionnaire are organized according to successful aspects, challenges, ongoing improvements and changes OHRD is making, and suggestions for improving the HEP program.

Successful aspects of the existing HEPs program

OHRD staff mentioned several successful aspects of the HEPs program. As intended, the HEPs program offers MCPS staff members multiple opportunities to learn and develop professionally. Overall, the respondents mentioned that MCPS staff express high interest in participating in the HEPs. The vision of HEPs is supported by the needs of stakeholders, with extensive opportunities for staff members seeking special education certification (one of the most critical content needs areas). In particular, HEPs offers convenient programs at a discounted rate. OHRD staff identified the following aspects among the successful aspects:

- a. pathways to teacher certification in high-needs staffing areas (mainly STEM), for support employees, outside candidates, and career changers;
- b. built-in internships that allow teachers to stay employed while receiving health benefits and salary; and
- c. A cohort model during which staff members spend two to three years with peers and build an immediate network of colleagues and support systems when they enter the teaching profession.

Challenges to implementing effective HEPs programs

Despite its many benefits, many challenges arise in partnering with colleges and universities to develop programs. Some challenges include structural barriers that may limit participation, a lack of protocols and data systems to monitor HEP program effectiveness, and barriers in collaborating with partners that make it difficult to adapt programs to meet system needs. These obstacles are expounded on below.

Structural barriers limit the participation of MCPS employees from diverse backgrounds. There are currently no opportunities for employees with less than a bachelor's degree. Additionally, participants have mentioned that the available payment options for certain HEPs are not convenient, which discourages enrollment. Some employees are unsure of the HEPs program details, including how much a program will cost or whether they need to go on leave. Due to the lack of clarity, MCPS staff members spend a fair amount of time assessing whether they should apply or enter a program.

OHRD does not have clear processes or protocols for monitoring the effectiveness of the existing HEP programs. The OHRD staff indicated that it is difficult to track the employees who

are in partnerships; they struggle to monitor participants' progress in the program, current employment, and whether or not HEPs graduates have switched into positions aligned to degrees earned. This challenge was confounded by the absence of archival information on MCPS content needs areas over the years by which to assess the changes in MCPS needs over the years and what to anticipate in the coming years. The absence of an established timeline to achieve system goals and a longitudinal relational data system with retrievable data increases this challenge. In addition, only one staff member was solely responsible for completing this work. Data on each aspect of HEPs are spread out throughout several units of OHRD.

OHRD's systems were not built to track outcomes of HEP participants. Data related to HEPs resided in different offices within OHRD or MCPS. Some of these office-specific datasets did not include unique staff identifiers and therefore were not structured to enable staff to determine if graduates are staying in MCPS or are being placed in positions that reflect the degree obtained. Since the "data systems don't talk to each other", determining which MCPS staff were enrolled in each program, who had completed programs, and whether current positions in MCPS matched the degree obtained required considerable time to build datasets and analyze the data.

Insufficient avenues of collaboration and communication between OHRD and higher education partners, which limits ability to adapt HEPs to better meet system needs. The responses expressed a need to create stronger collaboration and communication practices between MCPS and HEPs partners. As one example, the process for securing executive signatures for MOUs and other agreements is time consuming. This limits OHRD's ability to quickly and efficiently respond to issues raised regarding the HEPs and to adapt MOUs to better meet system needs.

How OHRD is addressing these challenges

One of the items on the OHRD staff questionnaire asked how OHRD was responding to challenges (if any) to implementing the HEPs program optimally. Interactions with OHRD staff as well as their responses made it clear that they are cognizant of the challenges mentioned above. Starting during the 2016–2017 school year, OHRD is focused on reviewing, overhauling, and streamlining the processes related to HEPs programs. To this end, OHRD is nearing completion of the *Framework for the Future of Partnerships for Support Professionals*. The framework is designed to guide the work of OHRD in "selecting one or more Institutions of Higher Education (IHE) that will collaborate with MCPS to provide opportunities for MCPS support professionals (e.g., building services, food services, paraeducators, security staff, and transportation employees) with widely varying educational backgrounds and experiences to become highly effective and committed classroom teachers" (MCPS, 2017). OHRD is also working with local institutions to identify a variety of approaches to meet the needs of support staff members who are interested in earning degrees in teaching.

OHRD has also started an internal process of monitoring the effectiveness of the HEPs program. OHRD is revising its current processes to ensure that MCPS keeps close track of the individuals participating in the partnerships and how those individuals use the knowledge gained therein to pursue future employment and leadership opportunities within MCPS. Other activities under way include the following:

1. Developing a request for proposals to address the needs of support professionals who are interested in pursuing degrees in teaching;

2. Reevaluating tuition reimbursement to make the process easier to follow and more efficient;
3. Streamlining the process of supporting the development of college students pursuing degrees in teaching from local institutions;
4. Conducting review of current MCPS MOUs to identify upgrades;
5. Streamlining the MOU process; and
6. Holding frequent meetings with partner institutions to a) gain a better understanding of the programs and challenges faced by MCPS employees and partners and b) build and strengthen relationships with current and prospective partners.

What changes could OHRD staff members make to ensure efficient and timely operations of the HEPs program?

In addition to the current improvements underway, a list of changes the OHRD staff would make to the HEPs program to improve in its effectiveness was compiled. The changes mentioned included:

- Establishing ways for OHRD leadership to clearly communicate the goals of HEPs to MCPS and HEPs partners
- Devise a strategy and timeline for achieving the established goals
- Involve all MCPS staff members working on any aspect of HEPs in the decision-making processes (intern placement, fiscal, etc.)
- Institute a clear and efficient process for securing executive signatures for MOUs and other agreements
- Cut back on the time spent on the MOU development process through the use of a live document (e.g. Google Doc) so that MCPS and HEP partners can make collective changes.
- Reduce the number of professional development schools to make them more effective and manageable

What changes will be needed in the design (scope, functions, and activities) to address MCPS staff and system needs? OHRD staff recommended changing the design of the HEPs program to reduce barriers to access and participation and increase alignment to critical needs areas. They also envisioned designing HEPs to have greater emphasis on the areas of need in the county and creating incentives in specific areas to get more individuals interested in pursuing those options, ultimately helping address the current critical need areas. OHRD suggested instituting a process to ensure consistent monitoring of implementation and outcomes of HEPs program, with regular updates for each HEP cohort. In particular, some respondents suggested that monitoring could be done on a virtual platform accessible to MCPS OHRD and college/university staff (for example, a live Google Doc). OHRD staff also suggested a requirement for a service commitment from all HEP cohort candidates.

Respondents expressed the need to reduce barriers specifically for support professionals to access and participate in HEPs program. For example, one respondent said, “Currently, the leadership program MOUs offer direct pay options, when, in reality, those direct pay options need to be in place for our support professionals as well.” The following changes were suggested by the OHRD:

- Create more convenient HEP program payment options for employees to encourage enrollment;

- Provide supports for employees to earn qualifying scores for the PRAXIS and other measures that are currently barriers to program acceptance or advancement;
- Identify ways employees can remain employed but also satisfy MSDE requirements for internships/practicums; and
- Provide differentiated supports based on the needs of the participants.

Also highlighted is the need to broaden the options available to support staff professionals. OHRD staff said existing HEPs do not have enough viable options for individuals “interested in teaching at the secondary level in a field other than special education,” despite having current HEPs with Johns Hopkins University, Montgomery College, and the University of Maryland that aim to prepare teachers in mathematics, science, technology or world languages. Furthermore, OHRD staff mentioned that many employees who have an associate’s degree or 60-credit equivalent want to become teachers. Currently, MCPS does not offer a HEP program that admits participants without a bachelor's degree.

Additionally, one aspect related to the design of HEPs is that many MCPS employees want to further their education but are not interested in teaching. To address this issue, a respondent suggested, “MCPS should consider offering an MBA program or other programs that target staff working in operations departments.” However, there is no evidence regarding whether including HEPs for staff working in operations and who are not interested in entering teaching would meet the system needs as specified—particularly to reduce teacher shortages in critical content needs areas and contributing to a diverse teacher workforce.

Findings for Question 4: What has MCPS spent on tuition reimbursement, and how much was spent in relationship to the number of persons who graduated from the program?

To estimate what MCPS spent on tuition reimbursement, we combined information on tuition reimbursement rates by year, details of when credits were accrued for each HEP program, and data on the number of graduates per HEP from memoranda to the Board. We estimated that MCPS spent approximately \$1.1 million on tuition reimbursement for the school year 2016–2017 graduates of HEPs from seven different programs. As seen in Figure 11, the majority of tuition reimbursements went to the leadership programs (Hood and McDaniel’s MA and certificate programs).

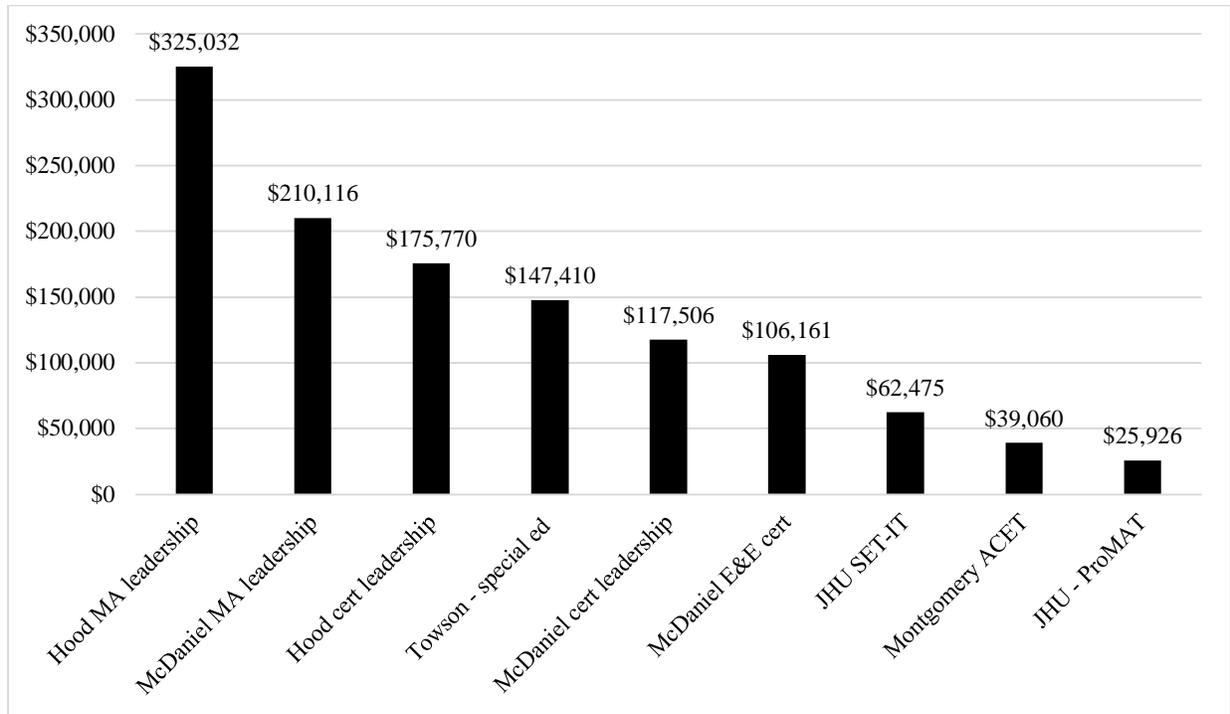


Figure 11. Tuition reimbursement for SY 2016–2017 HEP graduates, by program.

In Figure 12, we examined the relative amounts of tuition reimbursement by content area of the programs. Despite being a relatively high need area, special education HEPs accounted for just 19% of the tuition reimbursements for school year 2016–2017 graduates, with reimbursements totaling approximately \$210,000. In contrast, leadership constituted about 75% of the tuition reimbursements for school year 2016–2017 graduates, totaling about \$830,000. Tuition reimbursements for other programs totaled about \$65,000. The smaller amount of tuition for special education and other programs largely reflects the relatively small number of participants in these programs.

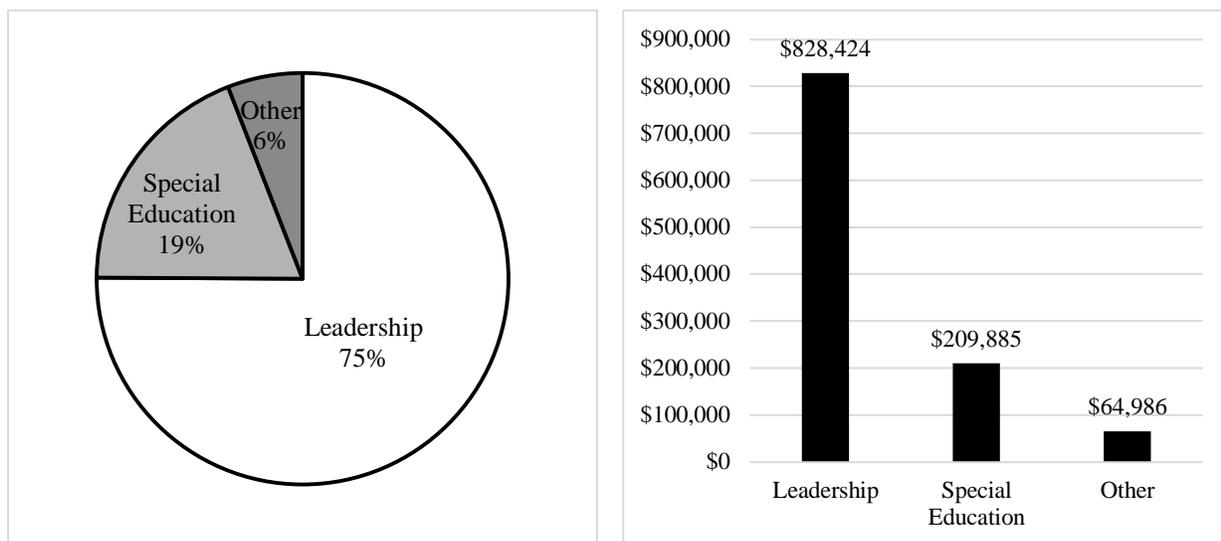


Figure 12. Percentage of Total Tuition Reimbursement for SY 2016–2017 HEP graduates and Amount of Tuition Reimbursement for SY 2016–2017 by Area of Study.

Summary of Findings

While the HEPs have great potential to extend professional skills and enhance capacity to meet systemwide priorities, not all aspects of the HEPs are consistent with system needs. Some HEPs focus on areas such as leadership that may no longer be a need, and other HEPs may be too time-consuming or expensive to attract a diverse group of applicants.

Certain critical content areas continue to have more vacancies than highly recommended candidates for positions. Based on the most recent data, the primary system critical content need area that is not being adequately addressed is special education. To a lesser extent, filling positions in arts appears to have been a challenge for school year 2017–2018. While OHRD has created three HEPs aimed at developing more special educators, the number of participants in these programs has been small. No HEP currently exists for arts education.

Since the application and enrollment in the HEPs program is voluntary, patterns of enrollment in the HEPs program may reflect differences in the structure of the programs (Table 1) or the incentives associated with different degrees. Most HEP participants enroll in leadership programs, which have the lowest out-of-pocket costs to participants (since MCPS has a direct-pay agreement with these programs), and provide some of the credentials needed for a switch to an administrative pay scale. In contrast, other programs require participants to pay out-of-pocket and be reimbursed for part of the cost at a later date. Furthermore, the total tuition paid by the participant varies across programs, with two of the three special education programs among the most expensive options. Finally, the degrees offered have varying implications for subsequent pay scales. Obtaining a

degree for a specific teaching content area may result in higher pay on the teachers' salary scale, but does not lead to the higher pay of the administrative pay scale. Experienced support staff members who enroll in teacher preparation programs may end up earning a lower rate of pay if they become teachers.

As currently structured, HEPs have done little to diversify the teacher pipeline along the dimensions of race and ethnicity, which is a goal for MCPS if not explicitly a goal of the HEPs. Though diversification remains a desired outcome, if the underlying goal is to increase the cultural responsiveness of staff, equity-focused career enhancement programs may also support that goal. While the HEP graduates may possess many other attributes or distinctive experiences that would contribute to diversity, those aspects were not captured through the data available to OSA researchers.

A more comprehensive inventory of data related to HEP participants would be extremely valuable to OHRD for monitoring effectiveness of HEPs and establishing whether HEPs are meeting system needs.

Recommendations

To better align the HEPs program to system needs, OHRD can:

- Revise existing MOUs and recruitment processes to increase the number of participants in special education programs and the diversity of HEP participants. Revisions might include:
 - Direct pay to reduce out-of-pocket costs to participants for programs addressing high vacancy areas in MCPS;
 - Stipends to cover textbooks and other course materials;
 - Financial incentives for participants who complete special education programs and for obtaining a position in special education; and
 - Explicit goals in MOUs and guidelines for recruitment of HEP participants that address a) filling vacancies in critical content needs areas, b) increasing diversity of the teacher workforce, and/or c) meeting other documented needs.
- Discontinue or constrain the number of participants in leadership programs and reallocate resources to programs addressing high vacancy areas in MCPS.
- At least annually, document MCPS-specific needs through systematic analysis of critical content need area shortages and other needs in MCPS. Prioritize critical content needs areas by examining vacancies against the number of highly recommended applicants.
- Create and maintain a relational database that includes a unique staff identifier, so that data on HEP participants can be accessed and analyzed to assess whether HEPs are meeting established goals. The database should store information on HEP participants, including application, enrollment, progress through programs, tuition reimbursed, date of completion, and employment history before, during, and after completion of HEPs.
- Clarify the roles, responsibilities, and timelines for staff in OHRD involved in completing above steps.

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Appendices

Appendix A: HEP Program Staff Questionnaire



HEP Program Staff Questionnaire

Based on your observations, what are the most successful aspects of the existing MCPS HEP programs?

Please list the top 3 challenges (if any) to implementing an effective HEP program.

How is your office/unit addressing the challenges?

What changes (if any) will be needed in the design (e.g., scope, functions, activities, and components) of the HEP program to address the needs of MCPS staff and schools?

What changes (if any) would you (or your unit) make to the processes of the HEP program to ensure "efficient and timely operations" across MCPS offices?

Online Survey Software Powered by novisurvey.net

Appendix B: Statewide Academic Discipline or Subject Matter Designated as Teacher Shortage Areas SY 2016–2017



January 11, 2017

Michelle Dunkle
 Program Approval Specialist
 Maryland Approved Alternative Preparation Programs Coordinator
 Division of Educator Effectiveness
 Maryland State Department of Education
 200 West Baltimore Street, Baltimore, MD 21201

Dear Michelle Dunkle:

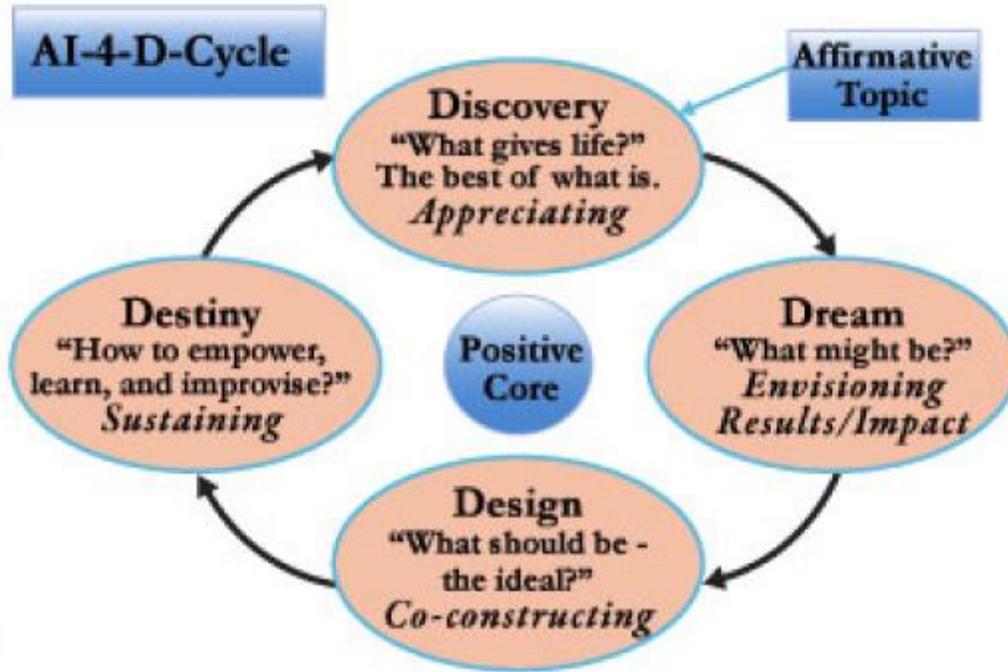
Thank you for submitting a report of your State's proposed teacher shortage areas, and providing the appropriate supporting information. The U.S. Department of Education (Department) has evaluated your proposed teacher shortage areas pursuant to specific provisions addressed in regulations concerning Federal student financial aid programs. In particular, 34 CFR Sec. 682.210(q)(6) and 682.210(q)(7) address the prescribed and alternative methodologies to calculate the proposed designated teacher shortage areas as well as the supporting documentation and assurances that must accompany the requested shortage areas.

In response to your submission, the Department has designated the following academic disciplines or subject matter (noted at specific grade levels, if provided) and geographic regions (if reported) as teacher shortage areas during the 2016-2017 school year:

Statewide Academic Disciplines or Subject Matter

<ul style="list-style-type: none"> Arts (Pre-K–Grade 12) Dance Career and Technology Areas (Grades 7–12) Family and Consumer Sciences Technology Education Business Education (Grades 7–12) Computer Science (Grades 7–12) English (Grades 7–12) ESOL (Pre-K–Grade 12) Mathematics (Grades 7–12) Middle School Education (Grades 4–9) English/Language Arts Mathematics Science Social Studies 	<ul style="list-style-type: none"> Science Areas (Grades 7–12) Biology Chemistry Earth/Space Science Physical Science Physics Special Education Areas Generic: Infant/Primary (Birth–Grade 3) Generic: Elementary/Middle School (Grades 1–8) Generic: Secondary/Adult (Grade 6–Adult) Blind and Visually Impaired Hearing Impaired World Language Areas (Pre-K–Grade 12)
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Appendix C: Appreciative Inquiry (AI) “4 D” Cycle Model



Source. Cooperider, D. (2012). What is appreciate inquiry? <http://www.davidcooperrider.com/ai-process/>.

Appendix D: Data Available on Current Placement of HEP Graduates, by Program and Year

Program Type	Program	2012	2013	2014	2015	2016
Career enhancement	McDaniel College Equity and Excellence	No	No	No	No	No
Career enhancement	Towson (M.Ed.) in Special Education	No	Yes	Yes	No	Yes
Career enhancement	Towson School Library Media	Yes	No	No	No	Yes
Career enhancement	UMCP (M.Ed.) in Middle School Mathematics	Yes	No	No	Yes	Yes
Career enhancement	UMCP (M.Ed.) in STEM Education	No	No	No	No	Yes
Leadership	Hood: Educational Leadership	Yes	Yes	Yes	Yes	Yes
Leadership	McDaniel Master's C&I or Admin I	No	No	Yes	Yes	Yes
Teacher preparation	JHU Master's in Special Education	No	No	Yes	No	Yes
Teacher preparation	JHU (ProMAT)	No	No	No	Yes	Yes
Teacher preparation	MC (ACET)	No	No	No	Yes	Yes
Teacher preparation	Towson (M.A.T.) in Special Education	No	Yes	Yes	Yes	Yes
Teacher preparation	UMCP (M.Ed.) in Elem Ed (CITE)	No	No	Yes	No	Yes