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Evaluation of the Summer Unleash Potential (Summer UP) Elementary Program

Summer 2019

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Study of the Summer Unleash Potential (Summer UP) Program: Elementary Level

Heather M. Wilson, Ph.D.

Purpose of the Study

The Summer UP program is one in a host of MCPS strategies to expand access to academic and enrichment opportunities. The program is designed to serve rising Grades 3, 4 and 5 students demonstrating academic need and attending MCPS focus schools—elementary schools with high proportions of economically (>30%) disadvantaged students. During its second year of implementation, the Summer UP program aimed to improve academic achievement while providing access to a variety of engaging enrichment activities in the areas of STEM, the arts, computer science, and mindfulness.

This year the program served 313 students from 6 elementary schools and operated for 6.5 hours per day, for 4 weeks. The purpose of this evaluation was to provide information for future program planning by (1) surveying stakeholders about their experiences in the program and (2) assessing the changes in the academic achievement and attendance of students enrolled in the program by comparing students attending Summer UP with a matched sample of students not attending Summer UP.

PROGRAM BENEFITS: What were the perceptions of students, parents and school staff regarding program benefits?

- *Engagement.* Parents, students and teachers report high levels of student engagement with academic and enrichment activities; 99% of parents agreed their child liked the activities in the summer program; over 90% of responding students agreed that they enjoyed hands-on activities; and 97% of teachers reported that enrichment activities motivated students to attend the program;
- *Access to Opportunities:* The Summer UP program provided numerous unique learning opportunities that may not have been otherwise available to students. Almost all responding parents (98%) agreed that their child developed new interests during the program. Over 80% of students reported they participated in new activities and almost 90% report learning new skills in the summer program (Figure 1).

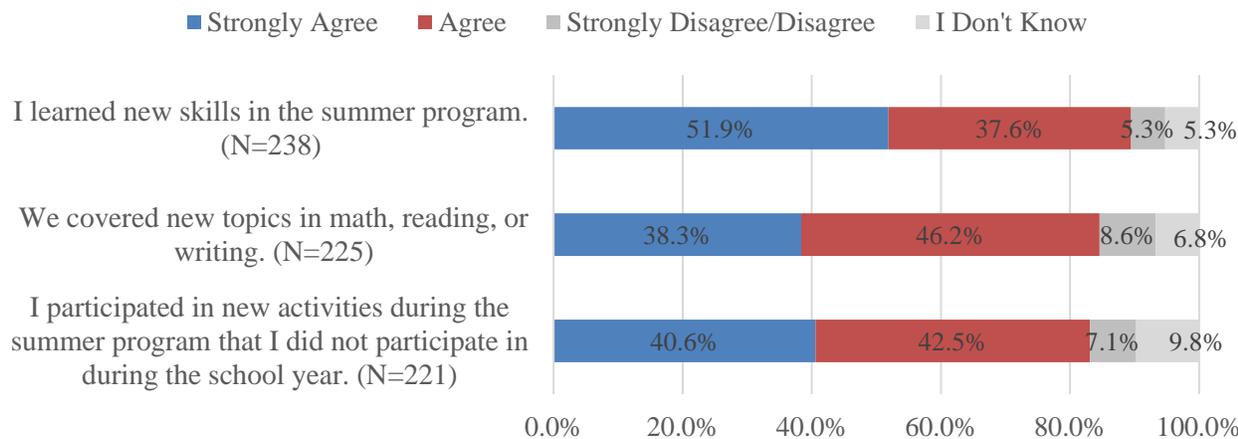


Figure 1. Student Report of New Opportunities during Summer UP

- *Physical, social and psychological (PSP) benefits.* Stakeholders reported strong positive PSP benefits like feeling a sense of belonging (students), positive adult and student relationships, increased confidence for students and positive student behavior. One hundred percent of responding teachers reported students felt comfortable in the program and 97% reported the program facilitated positive behavior among students. Over 90% of students reported strong positive agreement on items about collaboration with peers and peer relationships and over 85% agreed they had an adult they felt comfortable talking with (Figure 2).

Study of the Summer Unleash Potential (Summer UP) Program: Elementary Level

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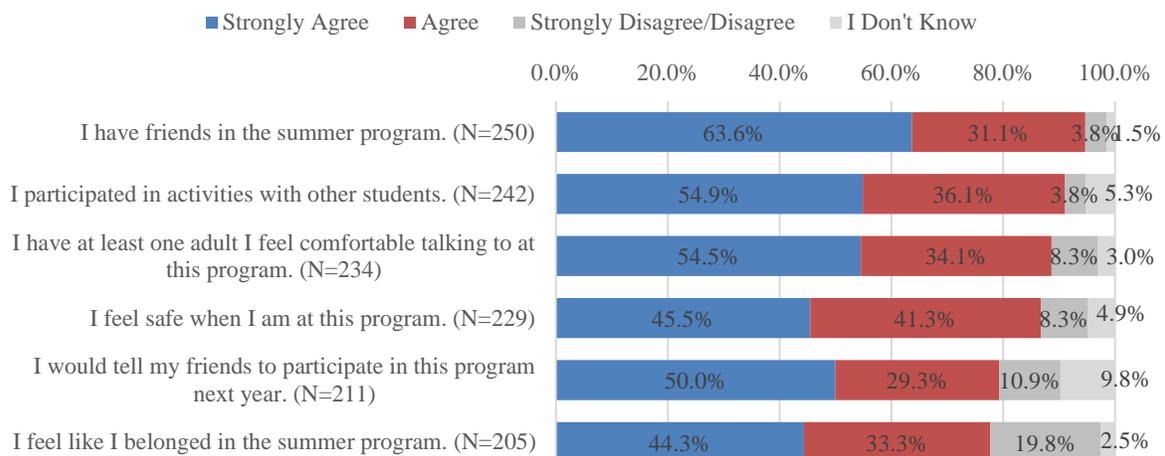


Figure 2. Student Perceptions of Physical, Social and Psychological Well-being during Summer UP

IMPACT: What was the impact of the Summer UP program on student attendance, reading and math skills?

- **Summer UP Attendance.** Three-quarters of the students enrolled in Summer UP (75%) had high attendance defined by attending 15 days or more. One quarter of the students (25%) enrolled in Summer UP had low attendance defined as attending between 1 and 14 days.
- **1st Marking Period Attendance.** First marking-period attendance rates (Fall 2019) were slightly higher for Summer UP participants compared to those who did not attend Summer UP (96% vs. 95%). Positive effects on attendance rates were seen for five of the six groups analyzed; all students attending Summer UP ($d = .23$), students receiving special education services ($d = .36$), FARMS Hispanic/Latino ($d = .18$) students receiving ESOL services ($d = .17$) and students receiving FARMS services ($d = .17$).
- **Reading and math performance.** Statistical analyses revealed practically significant positive effects for Grade 5 FARMS Hispanic/Latino students in reading ($d=.20$) and math ($d = .18$). There was no evidence in Grades 3 or 4 of an impact across all students and for any of the subgroups analyzed.

Selected Recommendations

- Continue to provide the Summer UP opportunity for rising Grades 3–5 students at MCPS focus schools. Parents indicated Summer UP provided their children with opportunities they would not otherwise have. In addition, students, staff and parents all reported high engagement in the types of academic, enrichment and field trip activities the program provided; all characteristics of quality summer program (Augustine, 2014).
- Consider expanding the program to five weeks. Research suggests that the intensity and duration of instruction can impact student outcomes and recommends three hours a day, five days per week, for five to six weeks to observe an impact (Augustine, 2016; Maina, 2019; Davila and Modarresi, 2019).
- Engage with MCPS curriculum experts to ensure the Summer UP instructional program aligns with the district’s curriculum and fits within the instructional time of the summer program (Schwartz, 2018).
- Provide staff with sufficient professional development and/ or time to familiarize themselves with the summer curriculum they were hired to teach (Schwartz, 2018).
- Explore the 5th grade Summer UP curriculum to determine potential structures, instructional techniques or enrichment activities that may have positively impacted student performance and could transfer to other grades.

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Executive Summary

Montgomery County Public Schools (MCPS) is committed to an All Means All approach for student success. This means addressing disparities in student outcomes by closing gaps in opportunity and achievement for all students. The Summer UP program is one in a host of MCPS strategies to expand access to enrichment opportunities, improve student achievement and bolster physical, social and psychological well-being for students impacted by poverty. The Office of the Superintendent of Schools asked the Office of Shared Accountability (OSA) to conduct an evaluation of the Summer Unleash Potential (UP) program in MCPS, offered for a second year during the summer of 2019. The purpose of this evaluation was to assess perceived benefits of the program as well as any changes in attendance rates or academic achievement of students enrolled in the program.

Summary of Methodology

Multiple methods were used to collect data for the evaluation of the 2019 Summer UP program. Surveys to gather feedback regarding the experiences of students, teachers, and parents in the program were administered at each of the Summer UP sites. The survey response rate was 85% for students ($N=313$), 86% for teachers ($N=36$) and 49% for parents ($N=313$). Descriptive analysis of Summer UP attendance rates provided further information regarding program implementation.

To assess school year attendance and reading and mathematics outcomes, advanced statistical analysis were conducted to compare the performance of Summer UP attendees and non-attendees while controlling for students' characteristics, including their previous attendance and initial abilities. The attendees used for analyses were 235 students in Grades 3, 4, or 5 who attended 15 days (out of 20 days) or more of the Summer UP program. The matched comparison group was made up of 225 students from the same focus schools that enrolled the Summer UP students but who did not attend the program. In both groups, about a quarter of the students were Black or African American, and over 60% were Hispanic/Latino. Approximately 68% of the attendees received English for Speakers of Other Languages (ESOL) services, more than 78% of the attendees received Free and Reduced-price Meals System (FARMS) services and just over 16% of those attending received special education services.

Summary of Evaluation Findings

Findings for Evaluation Question 1: What were the perceptions of school staff and parents with regard to implementation of the Summer UP program?

Staff and parents from each site reported positive experiences with the implementation of the Summer UP program. Program staff revealed strong positive perceptions about communication at their site, and over 95% of parents indicated strong positive agreement with survey items about program communication and logistics, like transportation. Strong positive survey responses from responding staff indicated collaboration among site-based staff is happening in order to: manage student behavior; keep abreast of activities happening in other classes; and integrate academic enrichment activities throughout the day. The only place where staff had slightly less positive in their agreement was when asked if they regularly meet with other staff to discuss how the program was going (83%). Overall reports from site staff about the Summer UP planning and curriculum

were positive; staff noted they had enough time to prepare their classrooms and lessons; and the content met the learning needs of their students. The curriculum for both academic and enrichment portion of the day were developed by teachers and program staff at each site. Two areas where program staff noted some concern were having enough supplies (87%) and feeling prepared to teach the curriculum (86%).

Findings for Evaluation Question 2: What were the perceptions of school staff, parents, and students with regard to program benefits?

Evidence from stakeholder surveys indicated respondents had positive feedback regarding the perceived benefits of the Summer UP program, including student engagement with learning activities, and enjoyment of the program. Teachers reported that students showed academic progress and improved skills, and students indicated they gained skills and covered new topics.

Teachers, parents, and students expressed positive agreement with physical, social and psychological benefits of Summer UP, such as comfort and belonging. Parents and students reported feeling safe in the program, and 97% of parents reported their child gained confidence in the program. Students report having friends in the program and over 90% report they had an adult they could talk to at the program.

Student and parent feedback indicated the Summer UP program provided participants with numerous unique learning opportunities they may not have experienced before, and may not have access to unless provided by MCPS, and 98% of parents reported that their children developed new interests while attending Summer UP. Finally, over 75% of parents indicated that their student would be at home or did not know what the student would be doing if they were not attending the Summer UP program.

Findings for Evaluation Question 3: What were the attendance rates for students who participated in Summer UP?

The program maintained relatively high levels of attendance from enrolled students. Three fourths of students enrolled in Summer UP had high attendance as defined by attending 15 days or more. Students typically attended 80% of the program days, which was similar across grades and subgroups. Over the duration of the four-week program, attendance fluctuated from 83% in week 2, to 77% in week 4.

Findings for Evaluation Question 4: Are there differences in attendance rates for the school year following Summer UP between Summer UP attendees and similar students not attending Summer UP? Do the differences vary by MCPS focus groups?

Students who attended Summer UP in 2019 had first marking period attendance rates that were slightly higher than that of the comparison group who did not attend Summer UP (96% vs. 95%). Analyses yielded no statistically significant differences between the attendance of the Summer UP attendees and their peers who did not attend Summer UP, for all grades and subgroups of students. However, analyses yielded effect sizes that were of practical significance for five of the six groups analyzed; all students attending Summer UP ($d = .23$), students receiving special education

services ($d = .36$), FARMS Hispanic/Latino ($d = .18$) students receiving ESOL services ($d = .17$) as well as students receiving FARMS services ($d = .17$).

Findings for Question 5: What was the impact of the Summer UP program on student reading skills? Did the impact of the program vary by the MCPS focus groups?

Among groups analyzed, one subgroup revealed statistically significant differences in the reading performance of Summer UP participants compared with that of non-participants—the Grade 5 FARMS Hispanic/Latino group. This finding was also practically significant ($d = .20$) in favor of Summer UP participants. The Grade 5 ESOL subgroup also yielded practically significant results ($d = .15$) although the results were not statistically significant. There was no evidence in Grades 3 or 4 of an impact across all students and subgroups analyzed – ESOL and FARMS Hispanic/Latino.

Findings for Question 6: What was the impact of the Summer UP program on student math skills? Did the impact of the program vary by the MCPS focus groups?

The Summer UP program demonstrated statistically significant findings for Grade 5 students and the two Grade 5 subgroups analyzed in math ($p < .05$). In addition, these findings were practically significant effects—all Grade 5 students performed better on MAP-M compared to their non-participant peers ($d = .15$); Grade 5 FARMS Hispanic/Latino Summer UP students performed better than their non-participant peers ($d = .36$) and students receiving ESOL services performed better than their non-participant peers on the fall MAP-M ($d = .23$). There was no evidence in Grades 3 or 4 of an impact across all students and subgroups analyzed – ESOL and FARMS Hispanic/Latino.

Conclusion

Overall, the results of this evaluation suggest that Summer UP provided an engaging summer experience as envisioned by MCPS leadership structured with many of the quality characteristics identified in the literature (e.g., Augustine, et al., 2016). The program conducted early and robust planning, developed a program where students experienced enrichment activities and academics simultaneously, and hired teachers with relevant content knowledge and grade level experience. The program also emphasized that summer learning can be fun and engaging (Schwartz, 2018). Based on outcome analysis there is evidence that attending Summer UP has a positive impact on Grade 5 students' performance in reading and math, particularly for FARMS Hispanic/Latino students and students receiving ESOL services.

Recommendations

Based on the findings of this evaluation, the following recommendations are suggested:

1. Continue to provide the opportunity for a structured summer learning enrichment program for students in Grades 3–5 at MCPS focus schools. Parents indicated Summer UP provided their children with an opportunity they would not otherwise have when asked what their child would be doing if not attending the program. In addition, students, staff

and parents all reported high engagement in the types of academic, enrichment and field activities the program provided; all characteristics of quality summer program (Augustine, 2014).

2. Consider expanding the program to five weeks. National and local research suggests that the intensity and duration of instruction can impact student outcomes and recommends three hours a day, five days per week, for five to six weeks to observe an impact (Augustine, 2016; Maina, 2019; Davila and Modaresi, 2019).
3. Ensure sites comply with criteria for student enrollment in Summer UP. There is reported variation in the academic achievement criteria used to invite students to enroll in the program. Summer UP aimed to provide services to students who were academically at-risk.
4. Engage with MCPS curriculum experts to ensure the Summer UP instructional program aligns with the district's curriculum and fits within the instructional time of the summer program (Schwartz, 2018).
5. Provide staff with sufficient professional development and/ or time to familiarize themselves with the summer curriculum they were hired to teach as research recommends (Schwartz, 2018). Explore the Grade 5 Summer UP curriculum to determine potential structures, instructional techniques or enrichment activities that may have positively impacted student performance and could transfer to other grades.
6. Continue to coordinate meetings for administrators and site coordinators prior to Summer UP implementation that provide detailed information related to staffing, payroll, transportation, supplies and field trips. Use that time as an opportunity to discuss program successes and opportunities for improvement, particularly as it relates to curriculum development and protecting instructional time.
7. Continue to track attendance and engage in outreach to students whose attendance decreases over the course of the program. Recognize and reward good (not only perfect) attendance. Research found some districts improved attendance by providing incentives like by offering raffles and small prizes to students (McCombs, 2016). Include attendance procedures and requirements in the Summer UP Handbook provided by central office.

Evaluation of the Summer UP Learning Program in MCPS

The Office of the Superintendent of Schools asked the Office of Shared Accountability (OSA) to conduct an evaluation of the Summer Unleash Potential (UP) program in Montgomery County Public Schools (MCPS), offered for a second year during the summer of 2019. The Summer UP program provided expanded learning opportunities for students in MCPS focus schools.¹ The program aimed to increase students' academic skills and attendance while increasing students' interest in school, and improving students' physical, social and psychological well-being. The purpose of this evaluation was to provide information to facilitate future program planning as well as to assess the changes in the academic achievement and school-year attendance of students enrolled in the program. This report provides a formative and outcome evaluation for the Summer UP program implemented for the second consecutive year at the elementary level in Grades 3 through 5.

Background

MCPS is committed to an All Means All approach for student success. This means addressing disparities in student outcomes by closing gaps in opportunity and achievement for all students. To ensure students reach their full potential, MCPS is strategically working to ensure equitable access to resources and programs that will close gaps in opportunity and achievement.

One important way MCPS has expanded access for underserved students is to provide extended learning opportunities aimed at improving academic achievement. MCPS programs like Extended Learning Opportunities-Summer Adventures in Learning (ELO-SAIL) and ELO-Summer Title I Enrichment Program (STEP) have provided academic instruction combined with a mix of enrichment opportunities. Following this model of programming, MCPS launched a pilot program called Summer Unleash Potential (Summer UP) in summer 2018 for selected rising third through eighth graders. The program is designed to expand summer opportunities beyond Title 1 schools and serve students attending MCPS focus schools—elementary schools with high proportions of economically disadvantaged students. The goals of Summer UP are to improve academic achievement and provide access to a variety of engaging enrichment activities in the areas of Science, Technology, Engineering, and Math (STEM), the arts, computer science, and mindfulness, as well as weekly field trips.

Program Description

The Summer UP program was designed to achieve the following goals:

- Increase student's literacy and math skills
- Increase students' interest in school by providing engaging enrichment activities with hands on and project based learning
- Increase students' access to enrichment opportunities that build background knowledge
- Improve students' physical, social, and psychological well-being

¹ A focus school is defined as a school that does *not meet* the level of poverty for Title I designation, but has a high percentage of students identified as receiving Free and Reduced-price Meals System (FARMS) services.

Central Office Coordination and Support. During winter 2018–2019, the Office of School Support and Improvement (OSSI) solicited applications from selected elementary schools to take part in the 2019 Summer UP program. The application included the purpose and criteria for delivering the program. Three school site applications were approved by OSSI. In collaboration with the School and Financial Operations team, OSSI associate superintendents and directors held orientation meetings with the school site administrators to review procedures, policies and answer questions. A Summer UP Handbook for school-site administrators, coordinators, and timekeepers was developed by OSSI and the School Financial Operations team and was disseminated to the three school sites. To address specific needs, the School Financial Operations team offered a face-to-face meeting about payroll and related duties for school-site timekeepers prior to the start of the program.

Participating Schools, Students, and Staff. The Summer UP program was located in three MCPS elementary school sites during the summer of 2019. The elementary schools selected to participate were strategically chosen from among the 43 MCPS focus schools to include three separate clusters of the district. Two of the Summer UP sites—Oakland Terrace and Stedwick elementary schools—recruited students from their own school and from another school that was geographically close by. The third site, Forest Knolls elementary school, recruited students from Highland View, Pine Crest and Montgomery Knolls elementary schools, but did not recruit students from the Forest Knolls Elementary School area. The participating elementary Summer UP schools and their school sites are as follows:

- Oakland Terrace and Rock View elementary schools, located at Rock View Elementary School.
- Fox Chapel and Stedwick elementary schools, located at Stedwick Elementary School.
- Highland View, Pine Crest, and Montgomery Knolls elementary schools, located at Forest Knolls Elementary School.

The target population for the program was rising third through fifth grade students from the sites listed above who were receiving FARMS services and showed academic need. Staff at each site consisted of a site coordinator, six academic teachers, and six enrichment teachers. Site coordinators and all teachers were hired by school administration and MCPS staff members.

Criteria for Selection. The Summer UP target population program was rising Grades 3–5 students in MCPS focus schools¹ who were receiving FARMS services. In addition, the schools used the MCPS Evidence of Learning (EOL) Framework to select students based on academic need and/or academic promise. The EOL Framework uses multiple sources of evidence of student learning and examines them at multiple points in time to monitor student progress.

Program Recruitment. A description of the Summer UP program and an application was sent to parents/guardians of students who were identified as eligible. Program enrollment was done on a first come, first served basis.

Program Structure. The elementary Summer UP program operated 6.5 hours per day, five days a week, for four weeks starting on July 8 through August 2, 2019. Certified teachers delivered

academic learning and enrichment opportunities each day. At most sites, one day per week was devoted to a field trip, so classroom instruction typically was provided for four days per week.

Elementary school sites designed their own academic and enrichment program for Summer UP. Students received academic instruction in reading and mathematics combined with enrichment activities in various areas like STEM, art, yoga, technology, culture and physical education. For the enrichment component, each site planned six rotations of enrichment experiences that were tailored to their site. Academic and enrichment teachers focused on a delivering a wide variety of hands-on learning experiences and project-based learning opportunities. Staff collaborated to integrate content between the academic and enrichment classes. Students rotated through enrichment experiences aligned with academic instruction to build background knowledge, extend their academic learning while engaging in activities that support student engagement and social and emotional learning.

A weekly theme provided a cohesive thread through the math, English/language arts curriculum and the enrichment classes. The theme typically was aligned with field trips. Students participated in two or three field trips over the course of the program and usually one day of the week was dedicated to a field trip experience. Field trip destinations varied by school, although there was overlap across sites. Places visited included but were not limited to the American History Museum, the National Building Museum, the Baltimore Aquarium, the Smithsonian Air and Space Museum, and the College Park Aviation Museum. An example of a site schedule is included in Attachment A. Two of the sites hosted activities from outside community groups on some weeks in lieu of field trips, like Reptiles Alive!, Mad Science, and Native American dancers.

Table 1 details the program characteristics for Summer UP across school sites.

Table 1
Elementary Summer UP Program Characteristics

Program Characteristics	Fox Chapel/Stedwick @ Stedwick	Highland View/Pine Crest / Montgomery Knolls @ Forest Knolls	Oakland Terrace/Rock View @ Rock View
Duration	July 8 – August 2 8:30 – 3:00 p.m.	July 8 – August 2 8:30 – 3:00 p.m.	July 8 – August 2 8:30 – 3:00 p.m.
Criteria for selection	<ul style="list-style-type: none"> • FARMS status • Academic need 	<ul style="list-style-type: none"> • FARMS status • Academic need 	<ul style="list-style-type: none"> • FARMS status • Academic need
Program Structure	Integrated academic content with rotating specials with focus on project based learning	Integrated academic content with rotating specials with focus on project based learning	Integrated academic content with rotating specials with focus on project based learning
Academic Components	<ul style="list-style-type: none"> • Reading/Language Arts • Math 	<ul style="list-style-type: none"> • Reading/Language Arts • Math 	<ul style="list-style-type: none"> • Reading/Language Arts • Math
Enrichment Component	<ul style="list-style-type: none"> • STEM • Art • Spanish culture class • Physical Education • Sports 	<ul style="list-style-type: none"> • Mindfulness/Yoga • Computer Coding • Science • Art • Drama • Physical Education 	<ul style="list-style-type: none"> • STEM - coding • Arts • Music • Physical Education
Overarching Theme	Science (Under the Sea, Landforms, Space, Into the Future)	The Community and the Environment	Travel through North America as Little Einsteins
Field Trips (1 day per week, on average)	<ul style="list-style-type: none"> • American History Museum • National History Museum • National Aquarium • Goddard Space Flight Center 	<ul style="list-style-type: none"> • American History Museum • College Park Aviation Museum • National Geographic Museum • Reptile show (in-house) 	<ul style="list-style-type: none"> • American History Museum • Natural History Museum • Native American Dancers (in-house) • Mad Science (in-house)

Program and Operating Costs. According to the MCPS School and Financial Operations Team office, the cost of the program at the elementary level was \$393,626 including teachers, transportation, meals, instructional materials, supplies and field trip costs. That amount does not include the costs of substitutes or building services.

Updated Review of Select Literature

Over the past decade, the number of summer programs increased nationwide as an emerging body of research provided evidence that all types of summer programs could lead to achievement gains. A recent randomized controlled study demonstrated a positive impact in math and reading achievement for high-attending students, although the effects tended to fade over time. (McCombs, et al., 2011; Augustine, et al., 2016).

Locally, a consistent body of research on MCPS summer programs also indicates some positive academic gains for students who attended a summer programs. Like the larger national study by McCombs and Augustine, these local studies suggest greater positive impacts in the fall than at the end of the school year (Cooper-Martin, Wolanin, Jang, Modarresi, and Zhao, 2016), and positive findings in math and reading for students impacted by poverty (Cooper-Martin and Zhao, 2016) (Zhao, Modarresi and Jang, 2016). Similarly, a 2019 study examined the impact of the MCPS ELO-STEP on math and reading achievement and found positive effects in math and reading across multiple student subgroups (Maina and Wolanin, 2019).

However, in an analysis of the first year of the Summer UP pilot program on elementary math and reading achievement, Wilson and Wade (2019) found no differences in reading or math achievement between students that attended the Summer UP program and those that did not attend. Implementation analysis did show that three-fourths of students had high attendance as defined by attending 15 days or more. Over 85 percent of parents indicated that if not attending the Summer UP program their child would be staying at home, staying at the home of a friend or family member, or they were not sure what their child would be doing during that time.

One consistently replicable finding from a newer body of research on summer learning is that nearly all children, no matter how advantaged, learn much more slowly during summer vacation than during the school. Researchers recommend that summer programs could, by providing academic instruction, decrease the achievement gap between high and low income students. They suggest that summer interventions do not prevent gaps from opening but rather help shrink achievement gaps that were there on the first day of kindergarten. (Kuhfeld, 2019; VonHippel, 2019).

Evaluation Scope and Questions

This evaluation was conducted using formative and outcome studies. The formative evaluation provides information regarding the perspectives and experiences of stakeholders that can be used for program improvement. In addition, attendance rates during the program were examined, as research shows that students with high attendance benefit more from summer programming (Augustine et al., 2016) than students who attend fewer days. The outcome evaluation compares the academic performance (reading and math) of students enrolled in the 2019 Summer UP

program to a matched sample of students who did not attend the program. The outcome analysis also compares the two groups’ school attendance rates for marking period 1 in 2019.

The following questions guided the evaluation:

1. What were the perceptions of school staff and parents with regard to implementation of the Summer UP program?
2. What were the perceptions of staff, parents, and students with regard to program benefits?
3. What were the Summer UP attendance rates for students who participated in Summer UP?
4. Are there differences in attendance rates for the school year following the program between students attending the Summer UP program and similar students not attending the Summer UP program? Do the differences vary by MCPS focus groups?²
5. For grades 3–5, are there differences in the reading performance from Spring 2019 to Fall 2019 in students that attended the Summer UP program compared to similar students that did not attend the Summer UP program? Do the differences vary by MCPS focus groups?
6. For grades 3–5, are there differences in the math performance of students from Spring 2019 to Fall 2019 that attended the Summer UP program compared to similar students that did not attend the Summer UP program? Do the differences vary by MCPS focus groups?³

Methodology

Evaluation Design

Table 2 provides a summary of the evaluation questions, methodology and data sources.

Table 2

Summer UP Evaluation Questions, Methodology, and Data Sources

Evaluation Question	Proposed Methodology	Data Source
1	What were the perceptions of school staff and parents with regard to implementation of the Summer UP program?	Surveys Academic and enrichment teachers, site based coordinators, and parents/guardians
2	What were the perceptions of school staff, parents, and students with regard to program benefits?	Surveys Academic and enrichment teachers, parents/guardians, and students
3	What were the program attendance rates for students who participated in Summer UP?	Descriptive data analysis School site attendance records
4	Are there differences in attendance rates for the school year following the program between students attending the	Data Analysis - ANCOVA MCPS quarterly attendance files

² MCPS focus groups are defined as 1) non-FARMS All Other Students (not African American nor Hispanic), 2) non-FARMS Black or African American, 3) non-FARMS Hispanic/Latino, 4) FARMS All Other Students, 5) FARMS Black or African American, and 6) FARMS Hispanic/Latino.

	Evaluation Question	Proposed Methodology	Data Source
	Summer UP program and similar students not attending the Summer UP program? Do the differences vary by MCPS focus groups?		
5	For grades 3 – 5, are there differences in the reading performance from Spring 2019 to Fall 2019 of students that attended the Summer UP program compared to similar students that did not attend the Summer UP program? Do the differences vary by MCPS focus groups?	Data Analysis - ANCOVA	MCPS-APPR Spring 2019 NWEA MAP-R – Spring 2019 and Fall 2019
6	For grades 3 – 5, are there differences in the math performance from Spring 2019 to Fall 2019 of students that attended the Summer UP program compared to similar students that did not attend the Summer UP program? Do the differences vary by MCPS focus groups?	Data Analysis – ANCOVA	MAP-P Spring 2019 NWEA MAP-M – Spring 2019 and Fall 2019

Evaluation Questions 1 through 3 used a nonexperimental design. Stakeholder surveys provided information on program implementation, processes and stakeholder experiences. A descriptive analysis of program attendance records addressed Evaluation Question 3.

Evaluation Questions 4 through 6 will use a quasi-experimental design (Shadish, Cook & Campbell, 2002) as shown in Figure 1. Results from this type of study are considered “promising” under the *Every Student Succeeds Act of 2015*. Reading and mathematics performance of two groups—students attending the program and students in a matched comparison group—were compared. This design maximizes the internal validity of the study by controlling for confounding in two ways: control by study design and control by statistical techniques.

To control by study design, a propensity score matching procedure was used to create comparison groups from the nonparticipating student population based on students’ background characteristics (e.g., race, gender, and receipt of FARMS, English for Speakers of Other Languages (ESOL), or special education services). Matching was done through IBM SPSS software. Advanced statistical analyses was conducted to further improve the internal validity of the findings by controlling for the students’ prior achievement and demographic characteristics where appropriate.

- *Control by study design.* The key component of the quasi-experimental design is the use of appropriate comparison groups when evaluating a program’s outcomes. In this evaluation, comparison groups in each grade were selected from a pool of students who attended school at the Summer UP sites but did not attend the Summer UP program. Propensity scores were computed for matching students with similar characteristics (i.e., grade level, gender,

race/ethnicity, receipt of FARMS, ESOL, or special education services). Matching was done through IBM SPSS software.

- *Control by statistical techniques.* Since students were not randomly assigned to the treatment or comparison group, the possibility remains that pre-existing differences may influence the outcome, which can affect the validity of the findings. To control for other factors that may influence the association between the independent and dependent variables, ANCOVA procedures were used in this study to control for differences in demographic characteristics and prior attendance and achievement.

	<i>Pre-program</i>	<i>Summer UP</i>	<i>Post-program</i>
Summer UP student group	O_1	$\Rightarrow X \Rightarrow$	O_2
Comparison group (Non-Summer UP)	O_1	$\Rightarrow C \Rightarrow$	O_2

O_1 – Spring 2019 local assessment results for rising Grades 3 through 5 in Reading and Mathematics; 2019 attendance rates.

X – Four weeks of summer program treatment from July 8, 2019 through August 2, 2019

C – Non-Summer Program (no summer program treatment)

O_2 – Fall 2019 local assessment results for Grades 3 through 5 in Reading and Mathematics; 2020 marking period 1 attendance rates

Figure 1. Design of the 2019 Summer UP Program Evaluation

Data Sources and Measures: Formative Evaluation

Program documents and records. Program documents and records were reviewed, including program descriptions, records of attendance for students, and classroom schedules. When needed, program staff provided clarity and details if items were not clear from the documents.

Students’ online surveys. Student surveys were administered online to students during the last week of the program. Surveys were offered in English or Spanish, and paper and pencil surveys were available if needed. Surveys were developed by the evaluator in collaboration with Summer UP administrators; questions pertained to the students’ experiences with the summer program, including academic instruction and enrichment opportunities.

Parent surveys. A paper-pencil parent survey was administered to parents during the last week of the program and collected at the school site. Surveys were developed by the evaluator in collaboration with Summer UP administrators; questions pertained to the parents’ experience with the summer program. Program staff and the evaluator determined that a paper and pencil version was most appropriate given electronic accessibility for some families; parents returned surveys to the school, and school staff returned the surveys to the Office of Shared Accountability.

Teachers’ online surveys. Online teacher surveys were administered to academic and enrichment staff during the last week of the program. Surveys were developed by the evaluator in collaboration with Summer UP administrators; questions pertained to the teachers’ experience with the summer program, including collaboration, instructional techniques, assessment and support.

A 5-point Likert scale was used to measure the degree to which stakeholders agreed with statements on the survey. Survey response rates were reported as follows for the elementary Summer UP program.

Table 3
Summer UP Survey Response Rates

Stakeholder	N	<i>n</i>	Response rate (%)
Students	313	266	85.0
Parents	313	153	48.9
Teachers	36	31	86.1

Data Sources and Measures: Outcome Evaluation

MCPS student data. MCPS student records were used provide demographic data (race, gender, and receipt of ESOL, FARMS, Multidisciplinary Educational Training and Support, or special education services) for students in the summer program and students in the matched comparison group.

Program attendance. Student attendance at the summer program was recorded daily by staff at each summer program site. Student-level attendance data were provided by the program to OSA to monitor attendance rates and to limit the sample of students included in the analysis.

Reading achievement. For the rising Grade 3 students, fall 2019 (following the summer program) Rasch Unit (RIT scores) from Measures of Academic Progress-Reading (MAP-R) were used as the outcome (or post-program) measure. MCPS administers the MAP-R in Grades 3–8 in fall, winter, and spring of each school year. The spring 2019 Assessment Program in Primary Reading (MCPS AP-PR) was used as the pre-program measure. In advanced analyses, the pre-program measure can be any measure prior to the program that is highly correlated with the post-program measure. For the rising Grades 4–5 students, fall 2019 MAP-R were used as the outcome (or post-program) measure and spring 2019 MAP-R were used as the pre-program measure.

Mathematics achievement. For the rising Grade 3 students, RIT scores for mathematics from the fall 2019 MAP-Mathematics (M) were used as the outcome or post-program measure. RIT scores for mathematics from the spring 2019 MAP-Primary Grades (P) were used as the pre-program measure. For the rising Grade 4 through 5 students, the fall 2019 MAP-M was used as the outcome (or post-program) measure and the spring 2019 MAP-M served as the pre-program measure.

Scores on MAP-R and MAP-M are reported in the RIT scale. The equal-interval property of the RIT scale scores makes them especially appropriate for various statistical purposes, including measuring change over time.

School year attendance. For all students, Grades 3–5, the marking period 1 attendance file from the 2019–2020 school year was used to calculate attendance rates. The 2018–2019 official end of year attendance file were used to control for prior attendance.

Sample

Summer UP Attendees. A total of 330 students enrolled in the 2019 Summer UP program during the registration period. Seventeen students on the rosters attended the program for zero days bringing the total to 313 students attending the Summer UP program one day or more. Of the students who attended 1 day or more, 78 students attended fewer than 15 days. The number of students attending the Summer UP program for 15 or more days (out of 20 days) was 225 or approximately 75% of the 313 students who attended. Demographic characteristics for students attending for any length of time are included in Appendix A.

Analytical Sample. Two groups of students make up the samples used for the outcome analysis: 225 students who attended Summer UP for 15 or more days; and a matched comparison group of 225 students from the six Summer UP schools who did not attend the Summer UP program. The attendees were limited to students with high attendance (≥ 15 days), thus ensuring that students who received low dosages of the program were not included. Research shows the impact of high attendance during extended learning opportunities provides near term academic benefits, particularly in mathematics (Augustine, 2016; Cooper-Martin 2016). It is suggested that 15 to 20 days has the most impact on student outcomes. Summer UP was a shorter program than other MCPS summer programs and after reviewing the distribution of attendance, 15 days was chosen as the threshold.

The comparison group is comprised of students matched to the Summer UP attendees using propensity scores. The comparison group was selected from a pool of 1,703 students attending the six Summer UP schools who did not attend the Summer UP program. Propensity scores were computed for each grade (3, 4, and 5) using gender, race and receipt of FARMS, ESOL or special education services.

Table 4 presents the demographic characteristics of the two groups comprising the analytic sample: the Summer UP attendees, and the comparison group. In both groups, Hispanic/Latino students comprised the majority of the population, although the Summer UP group had a higher percentage (72%) compared to the comparison group (63%). This was followed by Black or African American students, which comprised about 20 to 24% of the population for each group. About 8 out of 10 students (79% in Summer UP and 80% in the comparison group) received FARMS services, which is not surprising since the Summer UP program targeted MCPS focus schools. More students received ESOL services in the Summer UP group versus the comparison group (68% vs. 65%). Conversely, fewer students in the Summer UP group received special education services versus the comparison group (17% vs. 32%). Finally, there was a higher percentage of FARMS Hispanic/Latino students in the Summer UP group (61%) than in the comparison group (55%).

Table 4
Characteristics of the 2019 Summer UP Participants and Comparison Group

	Summer UP Participants		Comparison Group	
	N	%	N	%
Total	225	100	225	100
Grade level as of fall 2019				
Grade 3	81	36.0	81	36.0
Grade 4	66	29.3	66	29.3
Grade 5	78	34.7	78	34.7
Race/ethnicity				
Asian	9	4.0	9	4.0
Black or African American	45	20.0	55	24.4
Hispanic/Latino	162	72.0	142	63.1
White	--	--	13	5.8
Two or More Races	--	--	--	--
Receipt of services during the school year 2018–2019				
ESOL	154	68.4	146	64.9
FARMS	177	78.7	181	80.4
Special education	38	16.9	73	32.4
Gender				
Female	115	51.1	91	40.4
Male	110	48.9	134	59.6
Focus groups				
Non-FARMS All Other Student Groups	8	3.6	15	6.7
Non-FARMS Black or African American	15	6.7	10	4.4
Non-FARMS Hispanic/Latino	25	11.1	19	8.4
FARMS All Other Student Groups	10	4.4	13	5.8
FARMS Black or African American	30	13.3	45	20.0
FARMS Hispanic/Latino	137	60.9	123	54.7

Note. Results are not reported (--) for groups with fewer than 10 students. There were no students in the Native American or Pacific Islander categories.

^aLimited to students who attended Summer UP for 15 or more days.

Analytical Procedures

To address the first and second evaluation question, data collected from stakeholder surveys were analyzed. Descriptive statistics were used to summarize survey results across schools; responses from students were disaggregated by grade level.

To address the third evaluation question, the summer program attendance records were analyzed using descriptive statistics. To address the fourth, fifth and sixth evaluation questions, both statistical significance tests and effect sizes were used (where appropriate). Effect sizes were calculated to judge whether the observed differences among student groups (summer program vs.

comparison) were large enough to be of practical significance to educators (American Psychological Association, 2010).

Analysis of Covariance (ANCOVA) was used to test for significant differences between the two groups' attendance rates and mean RIT scores on the Measures of Academic Progress for reading and math. Campbell and Stanley (1963) and Judd and colleagues (1991) advise that in order to observe the true effects of treatment in nonequivalent control group design, analysis of covariance (ANCOVA) should be conducted.

For attendance outcomes, the marking period 1 attendance data were used to compare the two groups of students while controlling for prior attendance (end of previous year attendance rate). Similar techniques were used for academic outcomes, using achievement data. The fall 2019 MAP scale scores in reading and math were compared for the two groups of students (Summer UP participants and comparison group) while controlling for prior achievement (Spring 2019 reading and math scores). Analyses were conducted separately for each grade level for academic achievement.

Effect sizes were calculated using Cohen's d to judge whether the observed differences between student groups (Summer UP vs. comparison) were large enough to be of practical significance to educators (American Psychological Association, 2010). Many studies compare the overall program effect size to Cohen's (1988) definitions of a small effect within the behavioral sciences, $d = .20$; a medium effect, $d = .50$; and a large effect, $d = .80$ (Cohen, 1988). However, a study examining evaluations of 346 education programs for at-risk children reported that the average effect size, adjusted for methodological characteristics, was $d = .12$ (Borman, Hewes, Overman, & Brown, 2002). According to Lipsey et al. (2012), the mean effect size of interventions that focus on curriculum or broad instructional programs is 0.13 and the median effect size is 0.08. As such, in this study, an effect size of 0.15 was considered an appropriate level for the threshold for a small practically significant effect, $d = .50$ the threshold for a medium effect, and $d = .80$ the threshold for a large effect.

When subgroups were large enough to yield reliable statistics, student data was also examined by the five recently defined focus groups and a the monitoring group, Non-FARMS All Other Students 1) non-FARMS Black or African American, 2) non-FARMS Hispanic/Latino, 3) FARMS All Other Students (not African American nor Hispanic) 4) FARMS Black or African American, and 5) FARMS Hispanic/Latino.

Strengths and Limitations

Strengths. The outcome findings presented in this report are based on a sound evaluation design and appropriate analyses. The author employed two control techniques for improving the internal validity of the findings and for estimating a less biased effect of the Summer UP program: control by study design and control by statistical techniques.

Analyses included both statistical and practical significance tests when interpreting results. In addition, analysis of Summer UP participation was limited to students with high attendance (15 or more days), thus ensuring that students who were in the Summer UP group had an adequate "dose" of the program.

In this study, the census administration of the surveys guarded against the sampling error by including all the major Summer UP stakeholders (teachers, students, parents) in the sampling frame so that everyone had a chance to participate. The response rates in this study were high for students (84.7%) and teachers (86.1%). In addition, 48.7% of parents responded to the elementary parent survey, which is higher than the percentage of elementary level parents that responded to the last MCPS environment survey given in 2018–2019 (19%).

Limitations. As mentioned previously, this study relied on a quasi-experimental design, comparing the outcomes of students who participated in the program to a comparison group of students who did not participate. Nonetheless, only a classical experiment with a random assignment of students to the program or a control group safeguards against each of the sources that may threaten internal validity, such as selection bias, maturation, history, or attrition. (Babbie, 1992; Judd, Smith, & Kidder, 1991; Hedrick et al., 1993). Therefore, causality may not be inferred from this study due to the lack of an experimental design. Further, although the comparison group in this study did not attend Summer UP, it is not known whether these students received a similar type of academic or enrichment program during the summer, or whether they differed from attendees in other ways (e.g., motivation, academic need).

This evaluation measured the effectiveness of Summer UP by using students' scores in MAP-M and MAP-R from spring and fall 2019. However, the gap in time between the end of the summer program and the post-program test administration during the school year could have allowed other factors, different from the program, to influence students' performance. In the case of fall 2019 assessments, the window to administer MAP-R or MAP-M was almost two months (from September 9 to November 3, 2019). Participants who took these tests at the end of the assessment period rather than at the beginning were more likely to be exposed to other factors, such as more instructional days, not necessarily attributed to the program. Additionally, the effectiveness of this program was mainly assessed by the academic performance of students in reading and mathematics. Other program effects (e.g., having better critical thinking, collaborative problem solving skills, etc.) were not addressed by this study.

Another limitation is that statistical analysis could not be performed on several specific demographic groups due to the small number of students in those groups.

Results

Results for implementation (evaluation questions 1 through 3) are presented below followed by the results of the outcome analysis (evaluation questions 4 through 6).

Findings for Evaluation Question 1: What were the perceptions of site based coordinators, academic and enrichment teachers, and parents/guardians with regard to the curriculum and program operations?

The following section describes the survey responses from site based staff and parents about the Summer UP curriculum and related program operations.

Academic teacher perceptions of Summer UP program curriculum and operations

Curriculum Preparation and Planning. Teachers who responded to the survey indicated strong positive agreement across survey items related to curriculum preparation and planning (Table 5). All responding teachers agreed they had a sufficient amount of time to set up their classroom (100%), the content they taught fit the learning needs of their students (100%), and they “had the instructional resources I needed to do my job well” (100%). Similarly, over ninety percent agreed that they were provided a sufficient amount of time for lesson planning (97%). Responding teachers reported less positive agreement on the following items: an adequate amount of supplies were available (87%) and feeling prepared to teach the curriculum for their class (86%).

Table 5
Elementary Teachers’ Satisfaction with Summer UP Preparation and Planning

<i>Please indicate your overall level of agreement...</i>	N	Strongly Agree or Agree	
		<i>n</i>	%
I was provided a sufficient amount of time to set up my classroom.	30	30	100.0
I was provided a sufficient amount of time for lesson planning.	31	30	96.7
I found that the content I taught fit the learning needs of my students.	31	31	100.0
An adequate amount of supplies (e.g. paper, markers, pens, etc.) were available.	30	26	86.7
I felt prepared to teach the curriculum for my class.	28	24	85.7
I had the instructional resources (e.g. leveled reading materials, manipulatives, etc.) I needed to do my job well.	31	31	100.0

Note: Responses were based on a 4-point Likert scale: Strongly Agree, Agree, Disagree, Strongly Disagree.

Program Communication and Collaboration. On survey items related to communication and collaboration, responding teachers reported overall strong positive agreement (Table 6). All teachers agreed that Summer UP site leaders were available when needed (100%) and almost all agreed they collaborated with other staff about managing student behavior (97%). The item with the lowest percentage of teachers reporting positive agreement was when asked if they regularly met with other staff to discuss how the program was going (83%).

Table 6
Elementary Teachers’ Satisfaction
with Summer UP Communication and Collaboration

<i>Please indicate your overall level of agreement...</i>	Strongly Agree or Agree		
	<i>N</i>	<i>n</i>	%
Site leaders were available when I needed assistance.	30	30	100.0
I received regular communication during the summer program from my site leaders.	31	29	93.5
I received information on procedures for the summer program (e.g., transportation, fire drills, substitutes, schedules, discipline, etc.)	30	28	93.3
My site leaders clearly communicated the expectations around my job role and responsibilities.	31	27	87.1
<i>Collaboration</i>			
I collaborated with other staff about managing student behavior.	30	29	96.7
I knew what type of activities were happening in the classes students rotated through each day.	31	29	93.5
I collaborated with other staff to integrate enrichment activities with learning tasks.	30	27	90.0
I regularly met with other staff to discuss how the program was going.	30	25	83.3

Note: Responses were based on a 4-point Likert scale: Strongly Agree, Agree, Disagree, Strongly Disagree.

Parent perceptions of Summer UP program operations

Parents responding to the survey indicated overwhelmingly positive agreement to all survey questions related to program operations (Table 7). Responding parents indicated strong positive agreement to the statement that a full day of the summer program was convenient for them (98%). For items related to program operations, the percentage of parents indicating positive agreement was over 95% on all items such as; information was communicated in a timely manner (96%), transportation was adequate (95%) and information was easy to understand (97%).

Table 7
Parents' Level of Agreement with Aspects of the Summer UP Program Operations

<i>Please indicate your level of agreement ...</i>	<i>N</i>	<i>Strongly Agree or Agree</i>	
		<i>n</i>	<i>%</i>
The fact that the summer program was a full day was convenient for me.	148	145	98.0
Information about the summer program was communicated to me in a way that I could easily understand.	149	145	97.3
Information about the program was communicated in a timely manner.	145	139	95.9
Transportation for the program was adequate.	144	137	95.1

Note: Responses were based on a 4-point Likert scale: Strongly Agree, Agree, Disagree, Strongly Disagree.

Summary of Findings for Evaluation Question 1

To address Evaluation Question 1, the perceptions of academic and enrichment teachers, and parents were gathered through surveys. A summary of findings is presented below, organized by key topics.

Curriculum Preparation and Planning.

- Teachers unanimously (100%) agreed that they had sufficient time setting up the classroom, had appropriate instructional content for the students and had enough instructional resources do their job well.
- Almost all teachers agreed they had plenty of time for lesson planning (97%).
- Just under 90% of responding teachers agreed they had adequate supplies (87%) and felt prepared to teach the curriculum (86%).

Site Staff Collaboration

- For items about collaboration, a high percentage of staff reported positive agreement like interactions with other staff about student behavior (97%) and integrating activities between classes (94%).
- Fewer responding teachers agreed they regularly met with other program staff to see how the program going (83%).

Program Communication and Operations.

- A majority of teachers (94%) and parents (96%) agreed that communication regarding Summer UP was timely and consistent.
- In addition, over 90% of teachers agreed when asked about receiving regular communication (94%) and understanding activities and processes at the Summer UP site (93%).
- Almost all responding parents agreed or strongly agreed that the full-day program was convenient (98%) and that transportation was adequate (95%).

Findings for Evaluation Question 2: What were the perceptions of academic teachers, enrichment staff, parents/guardians, and students with regard to program benefits?

Academic Teacher perceptions of Summer UP Program benefits.

Teachers responding to the survey overwhelmingly reported strong positive agreement on all survey items related to the benefits of the Summer UP Program. Table 7 shows the percentage of teacher agreement with survey items addressing the student engagement and motivation during the program as well as overall benefits of the program.

On almost all survey items addressing perceptions of student engagement and interest in the program, responding teacher indicated a range of 95 to 100 percent positive agreement (Table 8). Teachers agreed that students completed work assigned (97%), students enjoyed learning activities implemented in the classroom (100%); their class was successful in helping students engage in work that would help them for school in the fall (100%); enrichment activities offered during the program motivated students to attend the program (97%) and that the program was the right mix of enrichment activities and academic learning (97%).

The next set of survey items in Table 8 related to the overall academic and physical, social and psychological benefits of the program. One hundred percent of responding teachers reported positive agreement with statements that students showed progress in the summer class, that they improved their academic skills, and that the program had a positive impact academically. Similarly, for questions related to physical, social and psychological benefits, 100% of teachers agreed that students felt comfortable in the program and 97% agreed the program facilitated positive behavior among students.

Table 8

Elementary Teachers' Perceptions of Student Enjoyment and Engagement and Program Benefits

<i>Please indicate your overall level of agreement...</i>	N	Strongly Agree or Agree	
		<i>n</i>	%
<i>Student Enjoyment and Engagement</i>			
In my class, students enjoyed the learning activities I implemented in the classroom.	31	31	100.0
I felt my class was successful in helping students engage in work that will help them for school in the fall.	31	31	100.0
In my class, students completed the work I assigned.	31	30	96.8
The enrichment activities offered during the program motivated students to attend the summer program.	31	30	96.8
Overall, the program was the right mix of enrichment activities and academic learning.	29	28	96.6
<i>Program Benefits</i>			
Overall, students showed progress in the summer class I taught.	31	31	100.0

Overall, students improved their academic skills in the summer class I taught.	29	29	100.0
Overall, the program had a positive impact on my students academically.	31	31	100.0
Overall, students seemed comfortable in the summer program.	31	31	100.0
Overall, the program facilitated positive behavior among students.	30	29	96.7

Note: Responses were based on a 4-point Likert scale: Strongly Agree, Agree, Disagree, Strongly Disagree.

Teacher responses to open-ended questions

In response to two open-ended survey questions about the strengths of the Summer UP program and what they might change about the program, staff provided further information about their perceptions of and experiences in the program. Twenty-four teachers commented on the strengths of the program, which included:

- Engaging instruction and enrichment opportunities (n=15)
- The integration of academic and enrichment opportunities (n=10)
- The time to work on academic skills (n=9)
- Providing new opportunities and activities for background knowledge (n=8)
- Consistent themes across instruction and enrichment opportunities (n=4)
- Small class size to differentiate instruction (n=3)
- Project based learning activities (n=2)

Staff named opportunities for improvement of the Summer UP program in response to a second open-ended question. Twenty staff left comments regarding opportunities for improvement. Staff most frequently noted the need to improve field trips by offering different field trips across the years and selecting field trip sites that will engage students since students attend the program across multiple years. The same number of staff also reported that communication at the site or between sites could be improved related to expectations for staff and scheduling. Teachers also reported that behavioral expectation need to be established when the program began (n=3). Categories of responses to this question are listed below:

- Need different field trips across the years or engaging field trips (n=7)
- Communication at the site and across sites (n=6)
- Adjust schedule for Summer UP (shorter or longer) (n=4)
- Set student behavioral expectations up front (n=3)
- More collaborative planning between colleagues at the site and across sites (n=2)
- Other (n=6)

Parent perceptions of Summer UP program benefits

Parents responding to the survey were overwhelmingly positive in their agreement with statements regarding the benefits of the Summer UP program (Table 9). Almost 100% of responding parents indicated positive agreement with the statements around motivation and engagement, such as: their

child liked the activities in the program (99%); their child enjoyed attending the summer program (99%) and Summer UP helped their child develop new interests (98%). Nearly all parents agreed with statements about physical, social and psychological well-being, such as their child felt comfortable going to the program (99%); the program helped their child's confidence (97%), their child felt safe at the program (99%), and their child had friends in the program (97%).

Table 9
Parent Perceptions of Program Activities and Benefits

<i>Please indicate your level of agreement ...</i>	<i>N</i>	<i>Strongly Agree or Agree</i>	
		<i>n</i>	<i>%</i>
<i>Student Enjoyment and Engagement</i>			
My child liked the activities in the summer program.	149	148	99.3
My child enjoyed attending the summer program.	150	148	98.7
The program helped my child develop new interests.	146	143	97.9
<i>Physical, Social and Psychological Well-being</i>			
My child was comfortable going to the summer program.	147	146	99.3
The non-academic activities increased my child's interest in attending the summer program.	141	140	99.3
My child felt safe in the summer program.	150	148	98.7
My child had friends in the summer program.	147	143	97.3
The program helped my child to be more confident.	148	143	96.6

Note: Responses were based on a 4-point Likert scale: Strongly Agree, Agree, Disagree, Strongly Disagree.

Parent responses to open-ended questions.

In response to two open-ended survey questions about their favorite parts of the Summer UP program and what they might change about the program, parents provided further information about their experiences in the program.

One hundred twenty-nine parents named their favorite aspect of the Summer UP program in response to an open-ended question (Table 10). Almost one-quarter of responding parents noted that enrichment courses provided were their favorite aspect (24%) of the Summer UP program. The next most frequently noted favorite aspects of the program was how happy, entertained or engaged their child was while at the Summer UP program (16%). About 13% of the parents responded that their favorite aspect was the learning of new academic skills or reinforcing academic skills (13%) followed by the physical, social and psychological aspects of the program (12%).

Table 10
Favorite Aspects of Summer UP
 Reported by Parents Responding to Open-End Survey Questions ($N=129$)

<i>Favorite Part</i>	<i>n</i>	<i>%</i>
Enrichment courses (STEM, art, yoga, culture, technology)	49	24.4
Fun/entertaining/engaging	33	16.4
Learning Academic skills (reinforcement of previous skills or new skills)	27	13.4
Physical, Social Psychological Factors (physical activity, staff and student relationships, building confidence, student well-being)	24	11.9
Field Trips	22	10.9
Everything	13	6.5
Miscellaneous	13	6.5
Hands on activities	12	6.0
Schedule	8	4.0

Note. Respondents may respond with more than one item.

In response to a survey question asking what they would change about Summer UP, 111 parents provided a comment. Parents most frequently noted they would not change anything (66%). About 8% of the responding parents suggested changing the schedule by either extending the number of days of the program or changing the hours during the day (Table 11).

Table 11
Parents' Suggested Changes to the Summer UP Program
 Reported by Parents Responding to an Open-End Survey Question ($N=111$)

<i>Suggested Change</i>	<i>n</i>	<i>%</i>
Nothing/Everything is Perfect	74	65.5
Schedule	10	8.8
Different activities	7	6.2
More or better food	5	4.4
Miscellaneous	6	5.3
Behavior	4	3.5
Open enrollment to more students	3	2.7
Transportation	2	1.8
Provide different field trips	2	1.8

Note. Respondents may respond with more than one item.

Parents were asked what their child would be doing if they were not attending this program. Figure 2 shows that over three quarters (77%) of parent respondents indicated their child would be staying

at home if they were not attending the Summer UP program. Only 14 percent of parent respondents indicated their student would attend another summer program if not attending Summer UP, 5% said they did not know what their child be doing, and 5% said they would be hanging out with friends supervised.

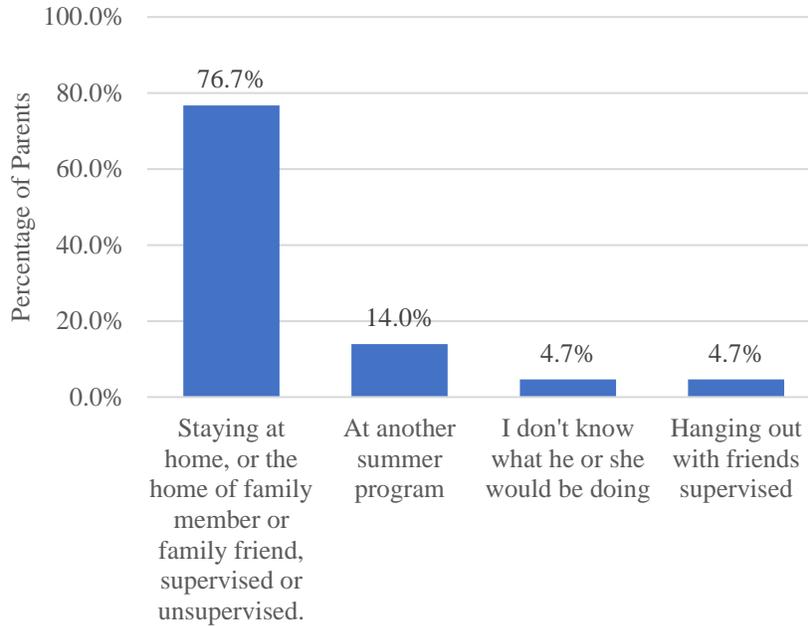


Figure 2. Parent reports of what their child would be doing if not attending Summer UP (N=129)

Student perceptions of Summer UP benefits.

Enjoyment and Engagement. Survey responses from elementary students were generally quite positive toward the Summer UP program (Figure 3). On survey items related to enjoyment and engagement during instruction 90 percent or more of students indicated positive agreement with statements about enjoying the hands on activities (91%) and teachers using many different ways to explain things (91%). Eighty-eight percent of responding students agree that they were excited about coming to the summer program. A lower percentage of responding students agreed they would participate again next year if given the chance (75%).

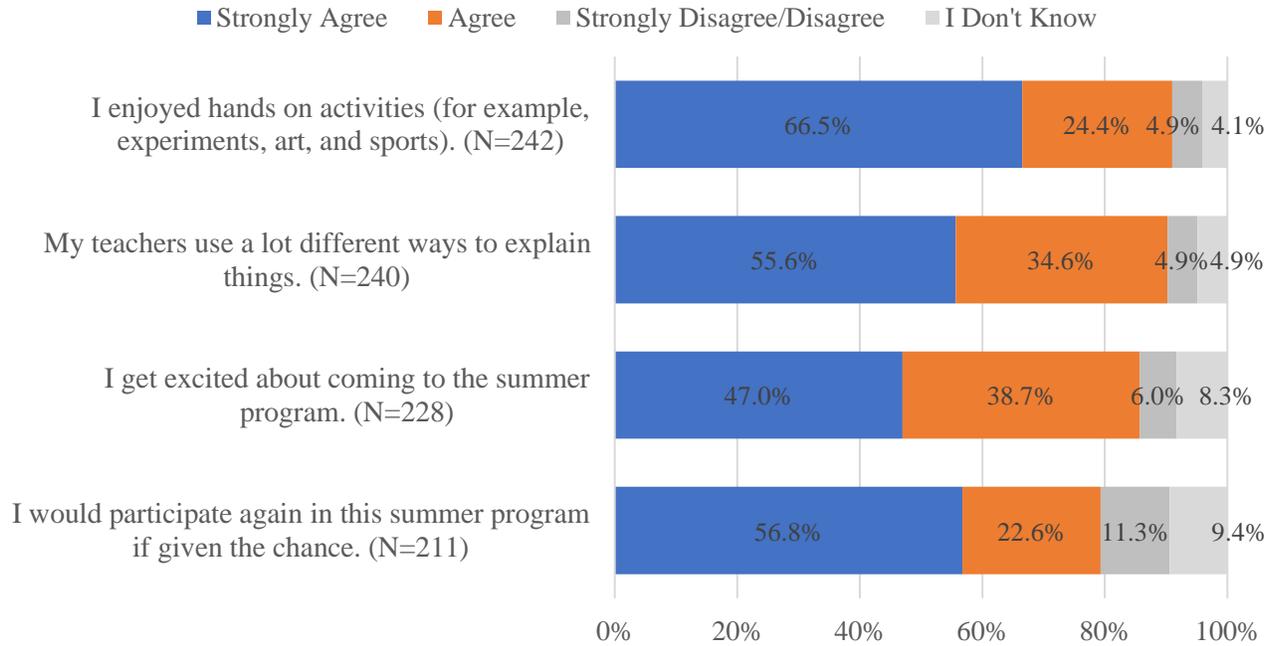


Figure 3. Student Perceptions of Enjoyment/Engagement in the Summer UP Program (N = 266)

Table 12 shows student responses by grade level to survey items about motivation and engagement. In general, third graders reported a higher percentage of agreement with survey items related to enjoyment and engagement than other grades. Over 90% of third graders reported that their teachers used many different ways to explain things (94%) compared to Grade 4 and 5 responding students (86% and 90%). A slightly higher percentage of third graders agreed (88%) they were excited about coming to the summer program compared to Grades 4 and 5 students (85% and 84%). On one question, a higher percentage of fifth graders agreed that they enjoyed the hands on activities (93%) compared to the percentage of Grade 3 students (92%) and Grade 4 students (88%).

Table 12
Number and Percent of Responding Grades 3, 4, and 5 Students Indicating Level of Agreement with Questions about Enjoyment and Engagement During Summer UP

<i>Please indicate your level of agreement...</i>	Strongly Agree or Agree								
	Grade 3			Grade 4			Grade 5		
	N	n	%	N	n	%	N	n	%
I enjoyed hands on activities (for example, experiments, art, and sport).	97	89	91.8	80	70	87.5	89	83	93.3
My teachers use a lot different ways to explain things.	97	91	93.8	80	69	86.3	89	80	89.9
I get excited about coming to the summer program.	97	85	87.6	80	68	85.0	89	75	84.3
I would participate again in this summer program if given the chance.	97	80	82.5	80	64	80.0	89	67	75.3

Note: Responses were based on a 4-point Likert scale: Strongly Agree, Agree, Disagree, Strongly Disagree.

Access to New Opportunities. On all survey items related to access to opportunities at Summer UP (Figure 4), over 80% of students strongly agreed or agreed with items such as: they learned new skills in the summer program (90%); covered new topics in math, reading, or writing (85%) and participated in new activities they did not participate in during the school year (83%).

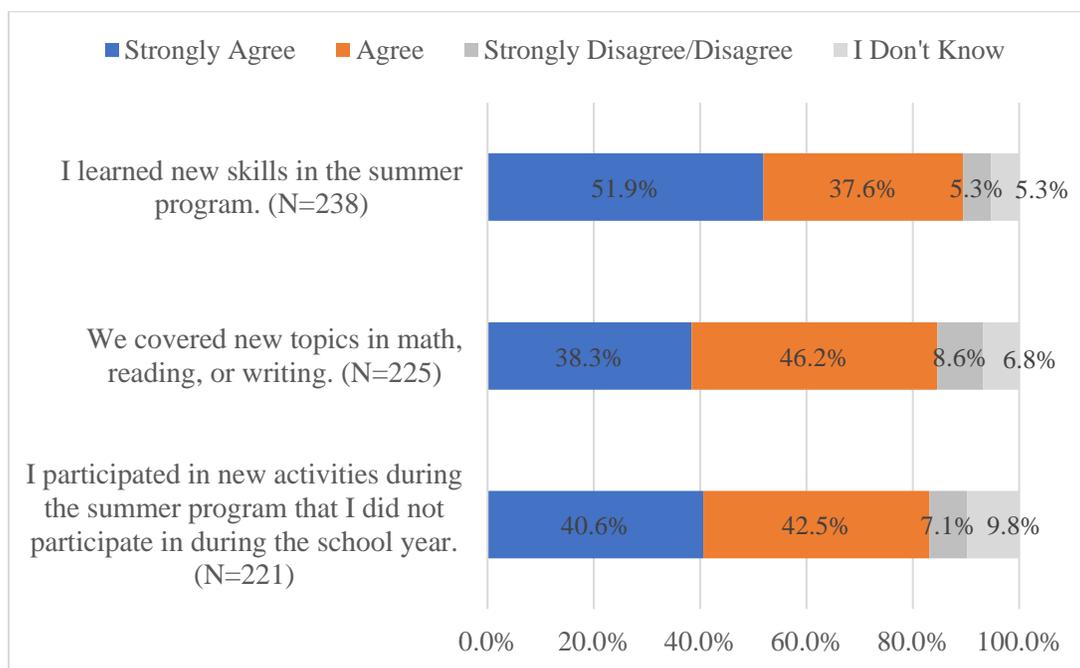


Figure 4. Student Report of New Opportunities during Summer UP

Table 13 shows student responses by grade level to survey items about new opportunities at Summer UP. Agreement on items related to a student’s perceptions about new opportunities during Summer UP varied slightly by grade level. A higher percentage of Grade 3 students (92%) compared to Grade 4 and 5 students (86% and 90%) agreed they learned new skills in the summer program and that they participated in activities they did not participate in during the school year (85% vs. 81% and 83%). However, a slightly higher percentage of 4th graders (86%) compared to Grades 3 and 5 students (84% and 84%) agreed they covered new topics in math, reading or writing.

Table 13
Number and Percent of Responding Grades 3, 4, and 5 Students Indicating Level of Agreement with Questions about New Opportunities during Summer UP

<i>Please indicate your level of agreement...</i>	Strongly Agree or Agree								
	Grade 3			Grade 4			Grade 5		
	N	n	%	N	n	%	N	n	%
I learned new skills in the summer program.	97	89	91.8	80	69	86.3	89	80	89.9
We covered in new topics in math, reading, or writing.	97	81	83.5	80	69	86.3	89	75	84.3
I participated in new activities during the summer program that I did not participated in during the school year.	97	82	84.5	80	65	81.3	89	74	83.1

Note: Responses were based on a 4-point Likert scale: Strongly Agree, Agree, Disagree, Strongly Disagree.

Physical, Social, and Psychological Well-being. Figure 5 shows survey items related to physical, social, and psychological well-being. For items related to peer relationships and collaboration, over 90% of students agreed with items like: “I had friends in the summer program” (95%) and “I participated in activities with other students” (91%). Additionally, on items related to safety and adult relationships, over 85 percent of responding students agreed they had an adult they felt comfortable talking to at this program (89%) and they felt safe at the program (87%). On two items, the percentage of students reporting agreement dipped slightly below 80%; 79% of responding students agreed with statements saying they would tell their friends to participate in the program next year and 78% felt like they belonged in the summer program.

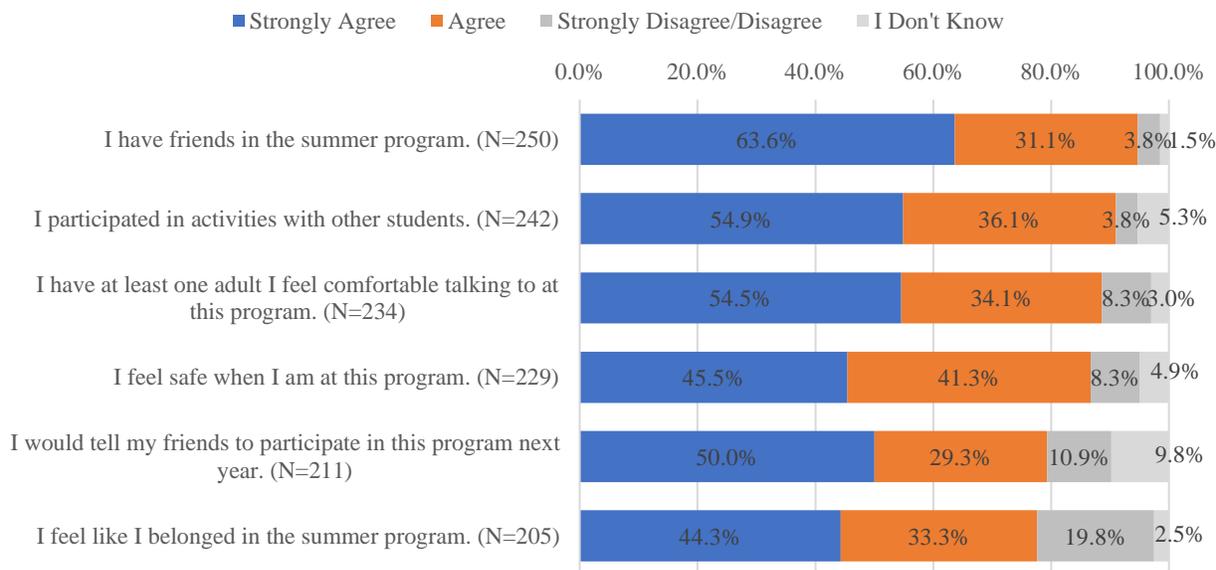


Figure 5. Student Perceptions of Physical, Social, and Psychological Well-being during Summer UP

Table 14 shows student responses by grade level to survey items about physical, social and psychological well-being. Compared to fourth and fifth graders, a higher percentage of third graders reported the positive agreement across several items related to physical, social and psychological well-being (Table 14). Almost all (98%) grade 3 students agreed they had friends in the summer program compared to Grades 4 and 5 students (92% and 93%). When asked if they felt safe at the program, a higher percentage of Grade 3 students (92%) reported positive agreement compared to Grades 4 and 5 students (84% and 84%). For one item, a higher percentage of fifth graders reported positive agreement than Grades 3 and 4 students; over 95% of fifth graders (96%) agreed they participated in activities with other students compared to students in Grades 3 and 4 (89% and 89%). However, a substantially lower percentage of Grade 5 students (71%) compared with Grade 3 and 4 students (84% and 84%) agreed that they would tell their friends to attend this program next year. A lower percentage of fifth graders (73%) compared with Grade 3 and 4 students (79% and 82%) reported that they felt like they belonged at the program.

Table 14
Number and Percent of Responding Grades 3, 4, and 5 Students Indicating Level of Agreement with Questions about Physical, Social and Psychological Well-being

Please indicate your level of agreement...	Strongly Agree or Agree								
	Grade 3			Grade 4			Grade 5		
	N	<i>n</i>	%	N	<i>n</i>	%	N	<i>n</i>	%
I have friends in the summer program.	97	95	97.9	79	73	92.4	88	82	93.2
I participated in activities with other students.	97	86	88.7	80	71	88.8	89	85	95.5
I have at least one adult I feel comfortable talking to at this program.	97	85	87.6	79	71	89.9	88	78	88.6
I feel safe when I am at this program.	97	89	91.8	79	66	83.5	88	74	84.1
I would tell my friends to participate in this program next year.	97	81	83.5	80	67	83.8	89	63	70.8
I feel like I belonged in the summer program.	97	79	81.4	79	62	78.0	88	64	72.7

Note: Responses were based on a 4-point Likert scale: Strongly Agree, Agree, Disagree, Strongly Disagree.

Student responses to open-ended survey questions. In response to an open-ended survey questions about their favorite parts of the Summer UP program, students provided further information about their experiences in the program. Table 15 shows the parts of the program that students named as their favorites.

Table 15
Favorite Parts of Summer UP Program Reported by Elementary Students Responding to an Open-End Survey Question (N = 259)

Program activity	<i>n</i>	%
Physical Education	54	20.8
STEM	49	18.9
Field Trips	35	13.5
Art	32	12.4
Everything	22	8.5
Miscellaneous	21	8.1
Math	19	7.3
Hands On Learning/Projects	15	5.8
Teachers	12	4.6
Drama	9	3.5
Friends	5	1.9

Note: Respondents could provide multiple responses.

^aMiscellaneous items included specific games, reading, eating, specific classes

The largest percent of student respondents named physical education (21%) and STEM (19%) as their favorite part of the Summer UP program. Other favorite program components were field trips (13%) and art (12%).

Many students gave positive feedback when asked about their favorite experiences in the Summer UP program. Some representative examples of students' comments are shown here:

- *My favorite part was learning.*
- *When I learned how to do math well.*
- *Technology, science and P.E.!*
- *My favorite part is science because we get to do a lot of thing that we don't get to do in school.*
- *How we learned things in a fun and exciting way. 😊*
- *My favorite part is when we made the pyramids of Giza....*
- *Making new friends from a different school.*
- *My favorite part is we have teachers from both schools that are participating.*
- *We got to make friends and I liked all of the teachers.*
- *My friends and catching up on work.*

Summary of Findings for Evaluation Question 2

To address Evaluation Question 2 about the benefits of the Summer UP program, the perceptions of staff, parents and students were gathered through surveys. Their responses are summarized here and organized by key topics.

Academic Benefits

- All responding teachers (100%) agreed that students showed academic progress, improved academic skills, and the program had a positive academic impact.
- Over 85% of the students agreed that they learned new skills (90%) and covered new topics in language arts and math (85%).

Enjoyment and Engagement

- One hundred percent of teachers agreed that students enjoyed the activities and that their class was successful in helping students engage in work that will help them for school in the fall.
- A high percentage of teachers also reported that enrichment activities motivated students to attend the program (97%) and that the program was the right mix of enrichment and academic learning (97%).
- Over 90% of responding students agreed that they enjoyed hands-on activities their teachers always used different ways to explain things, and they were excited about coming to the program.
- Responding parents indicated strong agreement that their child liked the activities in the program, and that their child enjoyed attending the summer program.

Opportunity for new experiences

- Eighty-three percent of students reported that they participated in new activities.
- Almost all parents reported very strong positive agreement when asked if their child developed new interests (98%).

Physical, Social and Psychological Well-being

- Evidence from stakeholder surveys indicated respondents had positive feedback about the physical, social and psychological benefits of the Summer UP program including student feelings of belonging, positive adult and student relationships, increased confidence and positive student behavior.
- Responding teachers indicated strong positive agreement with statements about PSP factors such as students felt comfortable in the program (100%) and the program facilitated positive behavior among students (97%).
- Students reported the strongest positive agreement with items addressing peer and adult relationships: over 90% indicated strong positive agreement on survey items related to collaboration with peers and peer relationships. In addition, over 85% felt they had an adult they felt comfortable talking with.
- Just under 80% of students reported feeling they belonged (79%) and that they would recommend the program to their friends (79%), with fifth grade students reporting the lowest levels of agreement.
- Nearly all parents, 95% or more, indicated positive agreement that: Summer UP improved their child's confidence, their child had friends in the program, their child felt safe at the program, and their child's confidence increased while attending the program.
- Over three quarters (77%) of parent respondents indicated their child would be staying at home if they were not attending the Summer UP program. Another 10% of parents indicated they did not know what their child would be doing or that their child would be hanging out with friends supervised. These responses suggest that the Summer UP program provides a structured summer program for students who might not otherwise have it.

Findings for Evaluation Question 3: What were the attendance rates for students who participated in Summer UP?

To answer this question, a descriptive analysis of attendance records is provided. Each Summer UP site electronically tracked student attendance on a daily basis. At the completion of the program, each site sent their records to the evaluation team.

Attendance Rates by Demographic Characteristics and School

Three-hundred thirteen students enrolled and attended the Summer UP program in 2019 for at least one day. Table 16 displays the attendance rates for students who attended at least one day of the program by demographic characteristics and Summer UP site. Students who attended at least one day of the program (n=313) attended on average about 80 percent of the program days. Attendance rates varied across grades; Grade 3 had the highest attendance rate, with an average 84% of program days, Grade 5 attended an average of 79% of program days and Grade 4 had the lowest attendance rate, an average of 77% of program days.

Attendance rates varied across all MCPS focus groups from 74.0% for FARMS All Other students to 85.5% for non-FARMS Hispanic/Latino students. Attendance rates were lower for MCPS focus groups receiving FARMS than MCPS focus groups not receiving FARMS. Of the students receiving FARMS, FARMS Hispanic/Latino students had the highest attendance rate at about 80%. Attendance rates for females and males varied slightly at 82.0% and 78.7% respectively.

Table 16
Attendance Rates by Demographic Characteristics and Program Site for
Students Attending at Least One Day of Summer UP Program 2019^a

	<i>n</i>	Attendance Rate for Students Attending At Least One Day	Attendance Range (Students Attending At Least One Day)
Total	313	80.3%	5.0 - 100.0
<i>By Grade</i>			
Grade 3	115	84.3%	5.0 - 100.0
Grade 4	100	77.0%	5.0 - 100.0
Grade 5	98	79.0%	25.0 -100.0
<i>By Site</i>			
Forest Knolls ES	97	81.7%	20.0 -100.0
Rock View ES	102	75.1%	5.0 - 100.0
Stedwick ES	114	83.8%	5.0 - 100.0
<i>By MCPS Focus Group</i>			
non-FARMS All Other Students	11	84.1%	35.0 - 100.0
non-FARMS Black or AA	21	84.3%	25.0 - 100.0
non-FARMS Hispanic/Latino	31	85.5%	40.0 - 100.0
FARMS All Other Students	15	74.0%	5.0 - 100.0
FARMS Black or AA	47	78.9%	20.0 - 100.0
FARMS Hispanic/Latino	188	79.6%	5.0 - 100.0
<i>Gender</i>			
Female	148	82.0%	20.0 -100.0
Male	165	78.7%	5.0 - 100.0

^aIncludes students who attended at least one day.

Attendance Rates by Week

To get a sense of attendance rates over the duration of the program, Figure 6 displays the percentage of program days attended during each week of the program. Rates are based on attendance of all students who attended at least one day. The student attendance rate increased from week 1 (79%) to week 2 (83%) and then declined to 82% for week 3 and 77% for week 4.

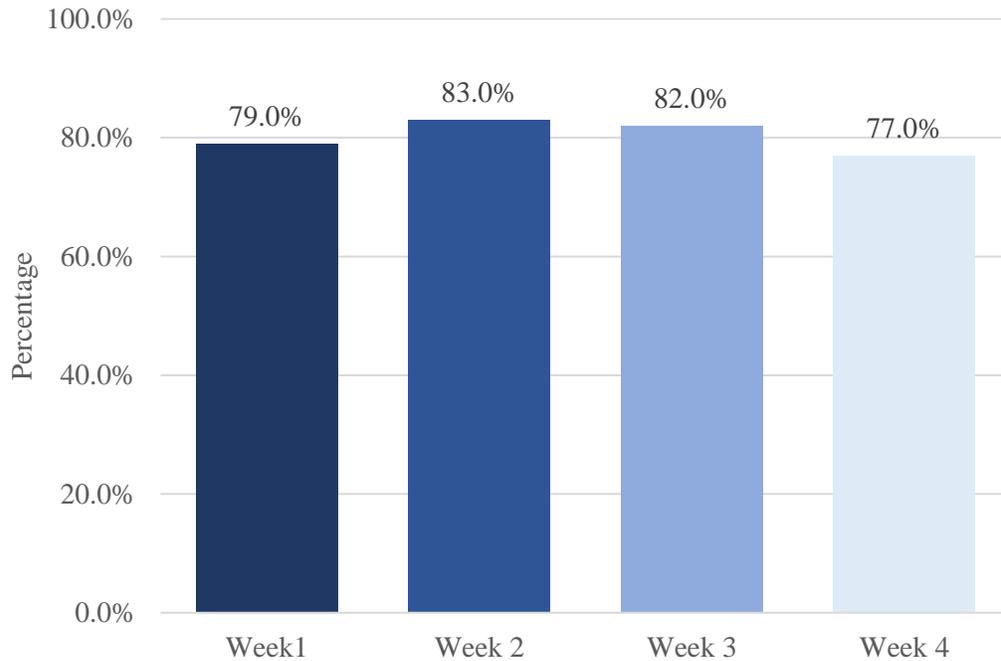


Figure 6. Summer UP Elementary Attendance Rates by Week, Summer 2019

High Attenders and Low Attenders

Figure 7 displays the attendance results for the percentage of students with relatively low attendance (attended from one to 14 days) and the percentage of students with relatively high attendance (15 or more days). High attendance was classified as 15 or more days based on previous research and analyses of Summer UP data to define an attendance threshold. Of the 313 students initially enrolled, 75.1% were high attenders (15 or more days) and 24.9% were low attenders (1-14 days).

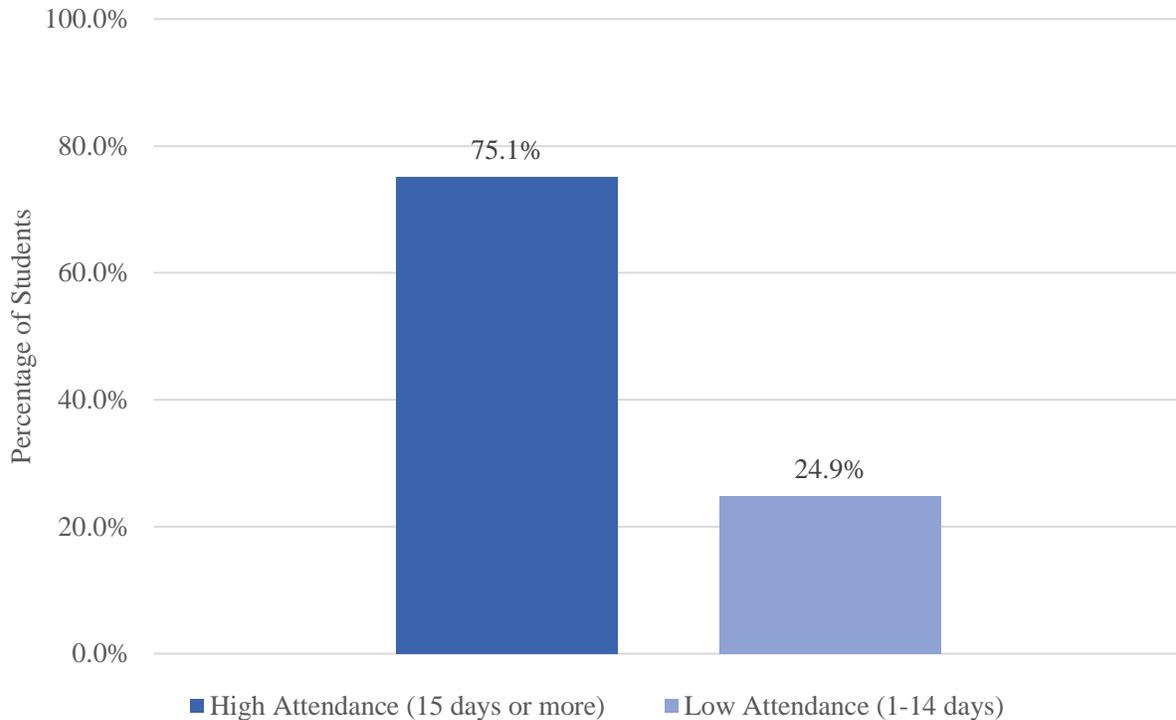


Figure 7. Percentage of students attending Summer UP by number of days attended

Summary of Findings for Evaluation Question 3

Overall, students attending at least one day of the Summer UP program in 2019 typically attended 80% of the program days.

- Grade 3 students show the highest attendance rate (84.3%) which is higher than Grade 4 (76.2%) and Grade 5 (79.0%).
- Disaggregation by subgroups reveals some variation in rates by gender and MCPS focus groups. Females had higher attendance rates (81.5%) compared to males (78.7%).
- Attendance rates by focus groups ranged from 74.0% for non-FARMS All Other Students to 82.2% for FARMS All Other Students. MCPS focus groups receiving FARMS had the lowest attendance rates at around 80% or less across the three groups.
- Over the duration of the four-week program, there was an increase in attendance from week 1 to week 2 (79% and 83%). After week 2 attendance rates declined to 82% in week 3 to 77% in week 4.
- Three-quarters of the students enrolled in Summer UP (75%) had high attendance defined by attending 15 days or more. One quarter of the students (25%) enrolled in Summer UP had low attendance defined as attending between 1 and 14 days.

Findings for Evaluation Question 4: Are there differences in attendance rates for the school year following Summer UP between Summer UP attendees and similar students not attending Summer UP? Do the differences vary by MCPS focus groups?

Table 17 displays the average attendance rates for 2019 marking period 1 for students who attended Summer UP and their comparison group of peers who did not attend Summer UP. An initial examination of the average attendance rates of the two groups shows that the fall attendance rates for Summer UP attendees were slightly higher than attendance rates for non-attendees. (96.4% vs 95.1%).³ Across the ESOL, FARMS and special education subgroups, the attendance rates were slightly higher for students who attended Summer UP compared to students who did not attend Summer UP. Similarly, across the MCPS focus groups the attendance rates were higher for Summer UP attendees with the exception of the non-FARMS Black or African American students.

Table 17
Summer UP Students' Attendance After Summer UP:
Comparison of 2019 MP 1 Mean Percent Days Attended for
Summer UP Attendees and Non-Attendees

	Summer UP Participants			Comparison Group		
	Attendance Mean % of Days Attended – Fall 2019, Marking Period 1			Attendance Mean % of Days Attended – Fall 2019, Marking Period 1		
	<i>n</i>	Unadjusted Mean	Std. Deviation	<i>n</i>	Unadjusted Mean	Std. Deviation
All Students	225	96.4	3.9	225	95.1	5.0
Receipt of Services during the school year 2018—2019						
ESOL	154	96.6	4.1	146	95.0	5.2
FARMS	177	96.4	3.9	181	94.8	5.2
Special ED	38	96.4	3.5	73	94.5	5.8
Focus Groups						
Non-FARMS All Other Students (monitoring group)	--	--	--	--	--	--
Non-FARMS Black or African American	15	96.8	3.0	10	96.8	2.9
Non-FARMS Hispanic/Latino	25	96.7	3.0	19	95.7	3.3
FARMS All Other Students	10	96.5	2.2	13	94.0	7.1
FARMS Black or African American	30	96.2	3.8	45	94.9	5.5
FARMS Hispanic/Latino	137	96.5	4.0	123	94.8	4.9

Note. Results are not reported (--) for groups with fewer than 10 students.

When previous attendance and demographics were controlled, analyses did not yield any statistically significant differences in first marking period attendance rates between students

³ MSDE's proficient rate for attendance is 94% and the advanced standard is 96%.

Data Source: MSDE website <https://msp2018.msde.maryland.gov/Graphs/#/Demographics/AttendanceRate/3/17/3/3/3/3/3/3/3/3/6/15/XXXX>

attending Summer UP and the comparison group (Table 18). Analyses yielded effect sizes that were of practical significance for 5 of the six groups analyzed; all students attending Summer UP ($d=.23$), students receiving special education services ($d=.36$) and FARMS Hispanic/Latino ($d=.18$) and students receiving ESOL ($d=.17$) and students receiving FARMS services ($d=.17$). These differences were not statistically significant.

Table 18
Adjusted Mean Percent Days Attended Summer UP Attendees and Comparison Students:
Comparison of 2019 MP 1

	Means of Percent Days Attended				Summer UP Program Effect			
	Summer UP Participants		Nonparticipants		Summer UP vs. Comparison			
	<i>N</i>	Adjusted mean	<i>N</i>	Adjusted Mean	Adjusted Mean Difference	Std. Error	<i>p</i>	Effect Size (<i>d</i>)
All Students	175	96.4	169	95.4	1.0	0.03	.14	0.23
ESOL	117	96.2	111	95.4	0.8	0.04	.14	0.17
FARMS	141	96.0	139	95.2	0.8	0.03	.12	0.17
Special Education	33	96.4	63	94.5	1.9	0.08	.24	0.36
FARMS Black/African American	22	95.4	34	95.5	-0.1	0.01	.98	-0.02
FARMS Hispanic/Latino	112	96.1	96	95.3	0.8	0.04	.19	0.18

Note. * $p < .05$, ** $p < .01$

Results are not reported for groups with fewer than 10 students.

Bold indicates a practical significant difference (effect size $d \geq .15$)

Findings for Question 5: What was the impact of the Summer UP program on student reading skills? Did the impact of the program vary by the MCPS focus groups?

Study results for academic performance are reported for each grade separately. First, mean MAP-R scale scores, without adjustment for differences in the demographic characteristics of the groups or for previous reading performance are shown for Summer UP attendees and non-attendees. These unadjusted mean MAP-R scale scores are reported for all students in the grade level, and for subgroups with 10 or more students, based on gender, race/ethnicity, service (ESOL, FARMS, special education) groups, and MCPS focus groups.

Second, program impact was determined by using advanced statistical analyses to compare the fall 2019 MAP-R scores of Summer UP attendees with that of non-attendees. Statistical analyses were conducted for all students by grade and for MCPS focus groups by grade when the number of students in each group was large enough. In each grade, only one MCPS focus groups had enough students for statistical analysis: FARMS Hispanic/Latino. In addition to MCPS focus groups, analysis was conducted for students receiving ESOL services as they comprise a large proportion of the Summer UP population. Analysis for students receiving FARMS services were not conducted since they are part of the MCPS focus groups; and, analysis for students receiving special education services was not conducted due to small sample size. MAP-R scale scores, adjusted for demographic characteristics of the groups and prior performance, are shown for all students in the grade and for subgroups tested. Effect sizes were calculated to show if the program impact was practically significant in an educational setting (i.e., $d \geq .15$).

Grade 3 Students

As shown in Table 19, an initial examination of the unadjusted means of the two groups shows that the fall mean MAP-R scores for Summer UP attendees was slightly higher than those for non-attendees for all Grade 3 students (177.0 vs 176.1). The unadjusted means were similar across the FARMS, special education, and Black or African American subgroups. For ESOL and FARMS Hispanic/Latino, the unadjusted mean was slightly lower among Summer UP participants than non-participants.

Table 19
Grade 3 Students: Unadjusted Mean MAP-R Scale Scores for
Summer UP Attendees and Comparison Students, Fall 2019

	Summer UP Participants			Comparison Group		
	MAP-R RIT Scores Fall 2019			MAP-R RIT Scores Fall 2019		
	<i>n</i>	Unadjusted Mean	Std. Deviation	<i>n</i>	Unadjusted Mean	Std. Deviation
All Grade 3 students	74	177.0	17.93	72	176.1	18.30
Gender						
Female	39	178.5	14.4	26	178.4	16.4
Male	42	175.3	15.4	55	176.5	19.3
Race/ethnicity						
Asian	--	--	--	--	--	--
Black or African American	16	178.4	13.6	18	175.5	21.8
White	--	--	--	--	--	--
Hispanic/Latino	59	175.1	14.8	50	176.6	16.0
Receipt of Services during the school year 2018–2019						
ESOL	59	175.9	15.3	55	177.8	15.2
FARMS	67	176.0	14.3	66	176.8	17.8
Special ED	11	166.1	9.9	26	166.9	19.7
Focus Groups						
Non-FARMS All Other Students (monitoring group)	--	--	--	--	--	--
Non-FARMS Black or African American	--	--	--	--	--	--
Non-FARMS Hispanic/Latino	--	--	--	--	--	--
FARMS All Other Students	--	--	--	--	--	--
FARMS Black or African American	12	176.3	12.7	16	176.2	22.5
FARMS Hispanic/Latino	50	175.0	14.7	45	177.2	16.3

Note. Results are not reported (--) for groups with fewer than 10 students.

The MAP-R scale scores, adjusted for demographic characteristics of the groups and prior performance, are shown in Table 20 for Summer UP and comparison groups. Advanced statistical analysis of fall reading performance for all Grade 3 Summer UP participants and non-participants revealed no statistically or practically significant differences in the performance of the two groups. Analysis by two groups also revealed no statistically significant ($p > .05$) differences between Summer UP attendees and non-attendees as measured by fall 2019 MAP-R scores. In addition, sib group comparisons did not reveal any effect sizes large enough to be of practical significance to educators.

Table 20
Grade 3 Students: Comparison of Adjusted Mean MAP-R Scale Scores for
Summer UP Attendees and Comparison Students

	MAP-R RIT Scores in Fall 2019				Summer UP Program Effect			
	Summer UP Participants		Non-participants		Summer UP vs. Non-Summer UP			
	<i>N</i>	Adjusted mean	<i>N</i>	Adjusted Mean	Adjusted Mean Difference	St. Error	<i>p</i>	Effect Size (<i>d</i>)
All Grade 3 Students	74	178.05	72	176.11	1.94	1.56	.387	0.12
ESOL	53	177.97	49	175.84	2.13	1.73	.424	0.14
FARMS Hispanic/ Latino	45	177.23	42	175.20	-2.62	1.81	.531	0.13

Note. * $p < .05$, ** $p < .01$

Results are not reported for groups with fewer than 10 students.

Bold indicates a practical significant difference (effect size $d \geq .15$)

Grade 4 Students

An initial examination of the unadjusted means of Grade 4 students in the two groups, presented in Table 21, shows that the mean MAP-R scale scores for Summer UP attendees was lower (188.0) than non-attendees (192.6) for all Grade 4 students as well as across the focus groups large enough to be analyzed. The same holds true across service group and racial/ethnic subgroups. The one exception is Hispanic/Latino students where the unadjusted mean is the same (186.2) as the comparison groups unadjusted mean (186.8).

Table 21
Grade 4 Students: Unadjusted Mean MAP-R Scale Scores for
Summer UP Attendees and Comparison Students, Fall 2019

	Summer UP Participants			Comparison Group		
	MAP-R RIT Scores Fall 2019			MAP-R RIT Scores Fall 2019		
	<i>n</i>	Unadjusted Mean	Std. Deviation	<i>n</i>	Unadjusted Mean	Std. Deviation
All Grade 4 Students	66	188.0	15.4	66	192.6	16.1
Gender						
Female	35	186.8	13.9	24	198.5	17.1
Male	31	189.3	17.0	42	190.1	19.2
Race/Ethnicity						
Asian						
Black or African American	17	191.4	17.3	22	199.2	14.9
White	--	--	--	--	--	--
Hispanic/Latino	44	186.2	14.8	35	186.8	20.7
Two or More Races	--	--	--	--	--	--
Receipt of services during the school year 2018—2019						
ESOL	33	184.2	16.2	36	187.2	19.5
FARMS	46	187.2	15.4	51	193.1	19.0
Special Education	--	--	--	--	--	--
Focus Groups						
Non-FARMS All Other Students	--	--	--	--	--	--
Non-FARMS Black or African American	--	--	--	--	--	--
Non-FARMS Hispanic/Latino	--	--	--	--	--	--
FARMS All Other Students	--	--	--	--	--	--
FARMS Black or African American	10	190.8	21.7	17	200.5	15.5
FARMS Hispanic/Latino	35	186.2	13.5	28	188.5	21.3

Note. Results are not reported (--) for groups with fewer than 10 students.

Advanced statistical analysis of reading performance for all Grade 4 Summer UP participants and non-participants revealed no statistically significant difference in the performance of the two groups (Table 22). The analysis also revealed that there was no practical significance in the difference in performance between attendees and non-attendees for all Grade 4 students as well as within the two subgroups analyzed (Table 21).

Table 22
Grade 4 Students: Comparison of Adjusted Mean MAP-R Scale Scores for
Summer UP Attendees and Comparison Students

	Means of MAP-R RIT Scores in Fall 2019				Summer UP Program Effect			
	Summer UP Participants		Nonparticipants		Summer UP vs. Comparison			
	<i>N</i>	Adjusted mean	<i>N</i>	Adjusted Mean	Adjusted Mean Difference	Std. Error	<i>p</i>	Effect Size (<i>d</i>)
All Grade 4 Students	61	190.62	53	190.21	0.47	1.28	.759	0.02
ESOL	29	186.34	28	185.83	0.51	1.05	.435	0.03
FARMS Hispanic/Latino	33	187.50	23	186.63	0.88	1.23	.573	0.05

Note. * $p < .05$, ** $p < .01$

Results are not reported for groups with fewer than 10 students.

Grade 5 Students

An initial examination of the unadjusted means of reading achievement for the two groups, presented in Table 23, shows that the mean MAP-R scale scores for Summer UP attendees (191.2) was lower than that of non-attendees (195.8) for all Grade 5 students, as well as within all of the subgroups.

Table 23
Grade 5 Students: Unadjusted Mean MAP-R Scale Scores for
Summer UP Attendees and Comparison Students Fall 2019

	Summer UP Participants			Comparison Group		
	RIT score MAP-R			RIT score MAP-R		
	<i>n</i>	Unadjusted Mean	Std. Deviation	<i>n</i>	Unadjusted Mean	Std. Deviation
All Grade 5 Students	78	191.2	16.9	78	195.8	16.7
Gender						
Female	41	191.6	12.0	41	195.3	17.3
Male	37	190.7	21.6	37	196.3	16.2
Race/Ethnicity						
Asian	7	195.0	21.2	14	208.9	14.7
Black or African American	12	190.9	15.3	15	201.9	16.5
White	--	--	--	--	--	--
Hispanic/Latino	59	190.8	17.6	57	193.6	16.6
Two or More Races	--	--	--	--	--	--
Receipt of services during the school year 2018–2019						
ESOL	62	188.8	16.6	55	191.2	15.9
FARMS	64	191.6	18.1	64	195.5	16.7
Special ED	20	180.8	16.4	25	182.8	19.5
Focus Groups						
Non-FARMS All Other Students	--	--	--	--	--	--
Non-FARMS Black or African American	--	--	--	--	--	--
Non-FARMS Hispanic/Latino	--	--	--	--	--	--
FARMS All Other Students	--	--	--	--	--	--
FARMS Black or African American	8	190.7	19.3	12	202.8	16.7
FARMS Hispanic/Latino	52	190.9	18.0	50	193.2	16.5

Note. Results are not reported (--) for groups with fewer than 10 students.

The MAP-R scale scores, adjusted for demographic characteristics of the groups and prior achievement, are shown in Table 24 for Summer UP and comparison groups. Advanced statistical analysis of reading performance for all Grade 5 Summer UP participants and non-participants was neither statistically ($p = .17$) nor practically significant ($d = .11$).

The impact of the Summer UP program on Grade 5 students in MCPS focus groups was statistically significant for FARMS Hispanic/Latino group ($F(1, 91) = 6.22, p = .02$), and analysis revealed a practically significant effect ($d = .20$) indicating a difference in favor of the Summer UP group that was large enough to be of significance to educators. Although not statistically significant) the mean difference (2.21) among students receiving ESOL services yielded a small but practically significant effect ($d = 0.15$).

Table 24
Grade 5 Students: Comparison of Adjusted Mean MAP-R Scale Scores for Summer UP Attendees and Comparison Students

	Means of MAP-R RIT Scores in Fall 2019				Summer UP Program Effect			
	Summer UP Participants		Nonparticipants		Summer UP vs. Comparison			
	<i>N</i>	Adjusted mean	<i>N</i>	Adjusted Mean	Adjusted Mean Difference	Std. Error	<i>p</i>	Effect Size (<i>d</i>)
All Grade 5 Students	71	194.97	70	193.25	1.72	1.39	.17	0.11
ESOL	56	191.69	50	189.49	2.21	1.00	.10	0.15
FARMS Hispanic/Latino	48	194.06	44	190.78	3.29	1.05	.02	0.20*

Note. **p* < .05, ***p* < .01

Results are not reported for groups with fewer than 10 students.

Bold indicates a practical significant difference (effect size *d* ≥ .15)

Summary of Findings for Evaluation Question 5: Reading

Figure 8 summarizes the results of comparisons for reading performance between Summer UP attendees and non-attendees. Results of statistical tests as well as effect sizes are shown in Figure 8. Among groups analyzed, one subgroup revealed statistically significant differences in the reading performance of Summer UP participants compared with that of non-participants—the Grade 5 FARMS Hispanic/Latino group ($F(1, 88) = 6.22, p = .02$). This finding was also practically significant (*d* = .20) in favor of Summer UP participants. The Grade 5 ESOL subgroup also yielded practically significant results (*d* = .15) although the results were not statistically significant.

READING: Statistical Significance and Effect Sizes for Summer UP Participants vs. Comparison Students

Group	Measure	Grade 3	Grade 4	Grade 5
All Students	MAP-R (all grades)	<i>d</i> = 0.12	<i>d</i> = 0.02	<i>d</i> = 0.11
ESOL	MAP-R (all grades)	<i>d</i> = 0.14	<i>d</i> = 0.03	<i>d</i> = 0.15
FARMS Hispanic/Latino	MAP-R (all grades)	<i>d</i> = 0.13	<i>d</i> = 0.05	<i>d</i> = 0.20*

Figure 8. Statistical and practical significance of comparisons in reading

* *p* < .05, ** *p* < .01

Notes. Only groups with 10 or more students in each analytic group are reported. Effect size *d* ≥ .15 was considered a finding of practical significance, and is indicated in bold. Shaded cells indicate positive effects, statistically and practically significant.

Findings for Question 6: What was the impact of the Summer UP program on student math skills? Did the impact of the program vary by the MCPS focus groups?

Study results for math performance are reported for each grade separately. First, mean MAP-M scale scores, without adjustment for differences in the demographic characteristics of the groups or for previous mathematics performance are shown for Summer UP attendees and non-attendees. These unadjusted mean MAP-M scale scores are reported for all students in the grade level, and for subgroups based on gender, race/ethnicity, service (ESOL, FARMS, special education) groups, and MCPS focus groups.

Second, program impact was determined by using advanced statistical analyses to compare the fall 2019 MAP-M scores of Summer UP attendees with that of non-attendees. Statistical analyses were conducted for all students by grade, and for MCPS focus groups students by grade when the number of students in each group was large enough. Only two MCPS focus groups had enough students for statistical analysis: FARMS Black or African American and FARMS Hispanic/Latino. MAP-M scale scores, adjusted for demographic characteristics of the groups and prior performance, are shown for all students in the grade and for subgroups tested. Effect sizes were calculated to show if the program impact was practically significant in an educational setting ($d \geq .15$).

Grade 3 Students

An examination of the unadjusted means of the two groups, presented in Table 25, shows that the mean MAP-M scale scores for Summer UP attendees was slightly lower than the mean MAP-M scale scores for non-attendees (181.2 vs 182.0). Similar results were observed across almost all subgroups; the unadjusted mean scale scores for the Summer UP attendees were lower than the mean scale scores for non-attendees. There were two exceptions; Black or African American students (181.3 vs. 176.4) and FARMS Black or African American students (181.3 and 177.2).

Table 25
Grade 3 Students: Unadjusted Mean MAP-M Scale Scores for
Summer UP Attendees and Comparison Students, Fall 2019

	Summer UP Participants			Comparison Group		
	RIT score MAP-M			RIT score MAP-M		
	<i>n</i>	Unadjusted Mean	Std. Deviation	<i>n</i>	Unadjusted Mean	Std. Deviation
All Grade 3 students	81	181.2	13.1	81	182.0	16.8
Gender						
Female	39	179.6	13.2	26	181.0	15.0
Male	42	182.5	13.0	55	182.5	17.8
Race/Ethnicity						
Asian	--	--	--	--	--	--
Black or African American	16	181.3	13.9	18	176.4	24.5
White	--	--	--	--	--	--
Hispanic/Latino	59	180.7	13.5	50	183.1	12.2
Two or More Races	--	--	--	--	--	--
Receipt of services during the school year 2018—2019						
ESOL	59	181.1	13.2	55	185.5	11.7
FARMS	67	181.4	13.7	66	182.3	15.9
Special ED	11	171.4	11.2	26	174.1	22.0
Focus Groups						
Non-FARMS All Other Students	--	--	--	--	--	--
Non-FARMS Black or African American	--	--	--	--	--	--
Non-FARMS Hispanic/Latino	--	--	--	--	--	--
FARMS All Other Students	--	--	--	--	--	--
FARMS Black or African American	12	181.3	13.5	16	177.2	23.1
FARMS Hispanic/Latino	50	180.91	14.4	45	183.5	12.2

Note: Results not reported (--) for groups with fewer than 10 students.

The MAP-M scale scores, adjusted for demographic characteristics of the groups and prior performance, are shown in Table 26 for the Summer UP and comparison groups. Advanced statistical analysis of mathematics performance for all Grade 3 Summer UP participants and non-participants revealed no statistically significant difference in the performance of the two groups. In addition, the difference between the mathematics performance of attendees and non-attendees of all Grade 3 students was not practically significant.

Analyses by focus groups did not find any statistically significant ($p > .05$) differences in performance between Summer UP attendees and non-attendees in the two focus groups for the fall

2019 MAP-M scores. In addition, there were no practically significant differences in the performance of attendees and non-attendees for the two Grade 3 focus groups.

Table 26
Grade 3 Students: Comparison of Adjusted Mean MAP-M Scale Scores for
Summer UP Attendees and Comparison Students

	Means of MAP-M RIT Scores in Fall 2019				Summer UP Program Effect			
	Summer UP Participants		Nonparticipants		Summer UP vs. Comparison			
	<i>N</i>	Adjusted mean	<i>N</i>	Adjusted Mean	Adjusted Mean Difference	St. Error	<i>p</i>	Effect Size (<i>d</i>)
All Grade 3 Students	70	181.96	72	182.18	-0.52	.806	.85	-0.04
ESOL	53	182.96	49	183.57	-0.61	.958	.64	-0.05
FARMS Hispanic/Latino	43	182.01	42	182.36	-0.35	1.08	.86	-0.03

Note. * $p < .05$, ** $p < .01$

Results not reported for groups with fewer than 10 students.

Bold indicates a practical significant difference (effect size $d \geq .15$)

Grade 4 Students

An examination of the unadjusted means of the two groups, presented in Table 27, shows that the mean MAP-M scale scores for all Summer UP attendees was lower than the mean MAP-M scale scores for non-attendees among Grade 4 students (193.8 vs. 196.4). Males attending Summer UP achieved a higher mean scale score than males not attending (197.0 vs 193.1). Similarly, the special education subgroup achieved a higher mean scale score than non-participants (183.0 vs. 176.4). Across all other subgroups the adjusted mean scale scores for the Summer UP attendees was lower than the mean scale scores for non-attendees.

Table 27
Grade 4 Students: Unadjusted Mean MAP-M Scale Scores for
Summer UP Attendees and Comparison Students, Fall 2019

	Summer UP Participants			Comparison Group		
	RIT score MAP-M			RIT score MAP-M		
	<i>n</i>	Mean	Std. Deviation	<i>n</i>	Unadjusted Mean	Std. Deviation
All Grade 4 Students	66	193.8	11.8	66	196.4	18.0
Gender						
Female	35	190.8	10.7	24	204.6	12.8
Male	31	197.0	12.2	42	193.1	18.8
Race/Ethnicity						
Asian	--	--	--	--	--	--
Black or African American	17	195.8	12.9	22	201.44	17.2
White	--	--	--	--	--	--
Hispanic/Latino	2	187.0	4.2	5	199.20	11.4
Two or More Races	--	--	--	--	--	--
Receipt of services during the school year 2018—2019						
ESOL	33	190.7	11.8	36	191.2	19.2
FARMS	46	193.3	11.9	51	196.8	17.4
Special ED	7	183.0	12.4	22	176.4	18.1
Focus Groups						
Non-FARMS All Other Students	--	--	--	--	--	--
Non-FARMS Black or African American	--	--	--	--	--	--
Non-FARMS Hispanic/Latino	--	--	--	--	--	--
FARMS All Other Students	--	--	--	--	--	--
FARMS Black or African American	10	197.7	15.4	17	204.1	12.1
FARMS Hispanic/Latino	35	192.1	10.7	28	192.3	20.0

Note: Results not reported (--) for groups with fewer than 10 students.

The MAP-M scale scores, adjusted for demographic characteristics of the groups and prior achievement, are shown in Table 28 for Summer UP and comparison groups. For all Grade 4 students, the adjusted mean difference was neither statistically nor practically significant, indicating that Summer UP attendees performed similarly to non-attendees as measured by fall 2019 MAP-M scores. Similarly, comparisons of mathematics performance for Summer UP attendees and non-attendees by subgroups revealed no statistically significant differences among FARMS Hispanic/Latino students and students receiving ESOL services. The analysis also revealed no practically significant effects.

Table 28
Grade 4 Student Subgroups: Comparison of Adjusted Mean MAP-M Scale Scores for Summer UP Attendees and Comparison Students

	Means of MAP-M RIT Scores in Fall 2019				Summer UP Program Effect			
	Summer UP Participants		Nonparticipants		Summer UP vs. Comparison			
	<i>N</i>	Adjusted mean	<i>N</i>	Adjusted Mean	Adjusted Mean Difference	St. Error	<i>p</i>	Effect Size (<i>d</i>)
All Grade 4 Students	61	195.52	55	194.24	1.29	0.81	.28	0.09
ESOL	30	190.95	30	190.98	-0.03	1.29	.75	0.00
FARMS Hispanic/Latino	31	191.44	24	192.35	-0.90	1.30	.72	-0.06

Note. **p* < .05, ***p* < .01

Results are not reported for groups with fewer than 10 students.

Bold indicates a practical significant difference (effect size *d* ≥ .15)

Grade 5 Students

An initial examination of the unadjusted means of the two groups of Grade 5 students, reported in Table 29, shows that the mean MAP-M scale scores for Summer UP attendees (201.6) was the same as that of non-attendees (201.5) for all Grade 5 students. Across subgroups, the mean MAP-M scale scores for Summer UP attendees was comparable or higher than non-attendees except for Black or African American students which was 198.5 for Summer UP attendees compared to 210.1 for non-attendees. Grade 5 Summer UP students receiving ESOL services achieved higher mean scores than non participants (200.6 vs 197.1); the special education subgroup achieved a higher mean scale score than non-participants (195.1 vs. 186.6); and the FARMS Hispanic/Latino subgroup achieved a higher mean scale score than non-participants (201.8 vs. 198.5).

Table 29
Grade 5 Students: Unadjusted Mean MAP-M Scale Scores for
Summer UP Attendees and Comparison Students, Fall 2019

	Summer UP Participants			Comparison Group		
	RIT score MAP-M			RIT score MAP-M		
	<i>n</i>	Unadjusted Mean	Std. Deviation	<i>n</i>	Unadjusted Mean	Std. Deviation
All Grade 5 Students	78	201.6	13.0	78	201.5	17.7
Gender						
Female	41	199.1	12.3	41	198.8	18.4
Male	37	204.6	13.5	37	204.8	16.5
Race/Ethnicity						
Asian						
Black or African American	12	198.5	12.8	15	210.1	16.6
White	--	--	--	--	--	--
Hispanic/Latino	59	201.7	13.0	57	198.7	16.8
Two or More Races	--	--	--	--	--	--
Receipt of services during the school year 2018—2019						
ESOL	62	200.6	12.5	55	197.1	17.3
FARMS	64	201.9	14.1	64	201.5	17.5
Special ED	20	195.1	14.6	25	186.6	19.5
Focus Groups						
Non-FARMS All Other Students	--	--	--	--	--	--
Non-FARMS Black or African American	--	--	--	--	--	--
Non-FARMS Hispanic/Latino	--	--	--	--	--	--
FARMS All Other Students	--	--	--	--	--	--
FARMS Black or African American	--	--	--	--	--	--
FARMS Hispanic/Latino	52	201.78	13.5	50	198.48	16.5

Note: Results not reported (--) for groups with fewer than 10 students.

The MAP-M scale scores, adjusted for demographic characteristics of the groups and prior achievement, are shown in Table 30 for Summer UP and the comparison groups. Advanced statistical analysis of math performance for all Grade 5 Summer UP participants and non-participants revealed statistically and practically significant differences.

Analysis of the mathematics performance for all Grade 5 Summer UP participants and non-participants revealed statistically significant differences in the performance of the two groups ($F(1,137) = 4.86, p = .03$) (Table 30). In addition, there was a small practically significant effect ($d = .15$) in favor of the all Grade 5 Summer UP participants compared to non-participants.

The impact of the Summer UP program was statistically significant on Grade 5 students in the FARMS Hispanic/Latino focus group ($F(1,92) = 4.39, p = .04$) and for students receiving ESOL services ($F(1, 106) = 7.55, p = .01$). The analysis also produced a practically significant effect for both groups with a moderate effect size of $d = .23$ for FARMS Hispanic/Latino subgroup and a small effect size of $d = .18$ for students receiving ESOL services (Table 30).

Table 30
Grade 5 Student Subgroups: Comparison of Adjusted Mean MAP-M Scale Scores for Summer UP Attendees and Comparison Students

	Means of MAP-M RIT Scores in Fall 2019				Summer UP Program Effect			
	Summer UP Participants		Nonparticipants		Summer UP vs. Comparison			
	<i>N</i>	Adjusted mean	<i>N</i>	Adjusted Mean	Adjusted Mean Difference	St. Error	<i>p</i>	Effect Size (<i>d</i>)
All Grade 5 Students	71	202.92	70	200.54	2.38*	0.17	.03	0.15*
ESOL	57	200.84	50	197.40	3.44*	0.86	.01	0.23**
FARMS Hispanic/Latino	49	201.51	44	198.78	2.73*	0.94	.04	0.18*

Note. * $p < .05$, ** $p < .01$

Results are not reported for groups with fewer than 10 students.

Bold indicates a practical significant difference (effect size $d \geq .15$)

Summary of Findings for Evaluation Question 6: Mathematics

Figure 9 summarizes the results of comparisons for math performance between Summer UP attendees and students in the comparison group. Results of statistical tests as well as effect sizes are shown. The Summer UP program demonstrated statistically significant findings for Grade 5 students and the two subgroups analyzed in math ($p < .05$). In addition, these findings were practically significant effects—all Grade 5 students performed better on MAP-M compared to their non-participant peers ($d = .15$); students receiving ESOL services performed better than their non-participant peers on the fall MAP-M ($d = .23$) and Grade 5 FARMS Hispanic/Latino Summer UP students performed better than their non-participant peers ($d = .18$).

The analyses for Grades 3 and 4 did not find any statistically significant ($p > .05$) differences in performance between Summer UP attendees and non-attendees for all students as well as for ESOL or FARMS/Hispanic students as measured by fall 2019 MAP-M scores. In addition, there was no practical significance across Grades 3 and 4 and the subgroups analyzed in the difference in performance of attendees and non-attendees.

MATH: Statistical Significance and Effect Sizes for Summer UP Participants vs. Comparison Students

Group	Measure	Grade 3	Grade 4	Grade 5
All Students	MAP-P (Grade 3 only) & MAP-M (all grades)	$d = -0.04$	$d = 0.09$	$d = 0.15^*$
English Speakers of Other Languages (ESOL)	MAP-P (Grade 3 only) & MAP-M (all grades)	$d = -0.05$	$d = 0.00$	$d = 0.23^*$
FARMS Hispanic/Latino	MAP-P (Grade 3 only) & MAP-M (all grades)	$d = -0.03$	$d = -0.06$	$d = 0.18^{**}$

Figure 9. Statistical and practical significance of comparisons in math

* $p < .05$, ** $p < .01$

Notes. Only groups with 15 or more students in each analytic group are reported. Effect size $d \geq .15$ was considered a finding of practical significance, and is indicated in bold. Shaded cells indicate positive effects, statistically and practically significant.

Conclusion and Discussion

The Summer UP program is one in a host of MCPS strategies to expand access to enrichment opportunities, improve student achievement and bolster physical, social and psychological well-being for students impacted by poverty. This evaluation examined the second year of implementation and outcomes of the Summer UP program, offered during the summer of 2019.

Feedback from students, parents and staff indicated positive experiences with Summer UP. The program delivered a wide range of engaging activities in areas such as STEM, mindfulness and art. Families indicated the program provided a place for participating students to go during the summer and provided access to new opportunities for students. Responses across stakeholder surveys indicated students may be reaping physical, social and psychological benefits from Summer UP in that it provided a safe place for students where they could positively interact with adults and peers.

Statistical analysis revealed a positive impact for attending the Summer UP program on student's performance in Grade 5 reading and math, particularly for FARMS Hispanic students and students receiving ESOL services. Analyses for Grades 3 and 4 revealed no statistically or practically significant results for Summer UP participants compared to their peers that did not attend Summer UP. While the analysis showed that certain group of Summer Up participants significantly outperformed their non-Summer UP peers in math and reading, the performance of the Summer UP participants was below the 20th percentile on the Measures of Academic Progress for both math and reading.

While analysis of student participation in Summer UP and school attendance did not reveal statistically significant findings, practically significant effects were found for all students attending the program and students receiving special education services. The findings suggest students who attended Summer UP will see an increase of almost one day of attendance during marking period 1 compared to their peers who did not attend Summer UP.

The positive academic outcome findings in reading and math for Grade 5 students attending Summer UP differ than the outcome findings from the previous evaluation of the 2018 Summer UP program. The difference may be that the 2019 academic and enrichment curriculum was designed wholly by MCPS staff whereas in 2018 the enrichment curriculum was designed in collaboration with an outside provider. The reasons for this finding need to be explored before it can be fully explained.

Recommendations

Based on the findings of this evaluation, the following recommendations are suggested:

1. Continue to provide the opportunity for a structured summer learning enrichment program for students in Grades 3–5 at MCPS focus schools. Parents indicated Summer UP provided their children with an opportunity they would not otherwise have when asked what their child would be doing if not attending the program. In addition, students, staff and parents all reported high engagement in the types of academic, enrichment and field activities the program provided; all characteristics of quality summer program (Augustine, 2014).
2. Consider expanding the program to five weeks. National and local research suggests that the intensity and duration of instruction can impact student outcomes and recommends three hours a day, five days per week, for five to six weeks to observe an impact (Augustine, 2016; Maina, 2019; Davila and Modarresi, 2019).
3. Ensure sites comply with criteria for student enrollment in Summer UP. There is reported variation in the academic achievement criteria used to invite students to enroll in the program. Summer UP aimed to provide services to students who were academically at-risk.
4. Engage with MCPS Summer UP curriculum experts to ensure the Summer UP instructional program aligns with the district's curriculum and fits within the instructional time of the summer program (Schwartz, 2018).
5. Provide staff with sufficient professional development and/ or time to familiarize themselves with the summer curriculum they were hired to teach as research recommends (Schwartz, 2018). Explore the Grade 5 curriculum to determine potential structures, instructional techniques or enrichment activities that may have positively impacted student performance and could transfer to other grades.
6. Continue to coordinate meetings for administrators and site coordinators prior to Summer UP implementation that provide detailed information related to staffing, payroll, transportation, supplies and field trips. Use that time as an opportunity to discuss program successes and opportunities for improvement, particularly as it relates to curriculum development and protecting instructional time.

7. Continue to track attendance and engage in outreach to students whose attendance decreases over the course of the program. Recognize and reward good (not only perfect) attendance. Research found some districts improved attendance by providing incentives like by offering raffles and small prizes to students (McCombs, 2016). Include attendance procedures and requirements in the Summer UP Handbook provided by central office.

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Appendix A

Characteristics of 2019 Summer UP Participants
Students Attending One or More Days

	All Participants	
	<i>N</i>	<i>%</i>
Total		
Grade level as of fall 2019		
Grade 3	115	36.7
Grade 4	100	31.9
Grade 5	98	31.3
Gender		
Female	148	47.3
Male	165	52.7
Race/ethnicity		
American Indian	≤ 5	≤ 1.0
Asian	12	3.8
Black or African American	68	21.7
Hispanic/Latino	219	70.0
White	≤ 5	≤ 1.0
Two or More Races	≤ 5	≤ 1.0
Receipt of services during school year 2018–2019		
ESOL	196	62.6
FARMS	250	79.9
Special education	57	18.2
Focus groups		
All Other Students: Non-FARMS (monitoring)	11	3.5
Black or African American: Non-FARMS	21	6.7
Hispanic/Latino: Non-FARMS	31	9.9
All Other Students: FARMS	15	4.8
Black or African American: FARMS	47	15.0
Hispanic/Latino: FARMS	188	60.1