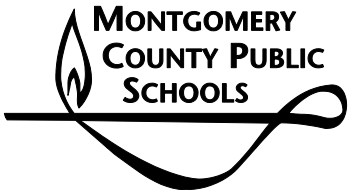

Evaluation of High School Plus in Montgomery County Public Schools

Office of Shared Accountability

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Shahpar Modarresi, Ph.D.; Julie Wade, M.S.;
Huafang Zhao, Ph.D.; and Natalie Wolanin

Montgomery County Public Schools

OFFICE OF SHARED ACCOUNTABILITY

Mr. Geoffrey T. Sanderson, Associate Superintendent
850 Hungerford Drive
Rockville, Maryland 20850
301-279-3553

Dr. Joshua P. Starr
Superintendent of Schools

Dr. Kimberly A. Statham
Deputy Superintendent
of Teaching, Learning, and Programs

Table of Contents

List of Tables

Executive Summary

The Office of Shared Accountability conducted an evaluation of the High School Plus (HS+) program implemented in Montgomery County Public Schools (MCPS). HS+ is one of the intervention programs offered by MCPS to provide additional ways of earning high school credits for students who have failed courses required for graduation. The overall goal of the evaluation was to examine the nature and extent of benefits to high school students served by the extended-day HS+ program. The evaluation findings suggest that although attendance is a problem, the HS+ program: a) serves students who are at risk of dropping out or academic failures; b) provides an opportunity for students to earn missing credits and also earn credits for a failed course; and c) helps some students learn better than the traditional course.

Evaluation Design

A multimethod design was used to conduct both formative and outcome evaluations during the 2012–2013 school year. The formative component was designed to collect data on HS+ implementation and to encourage reflection by the various program stakeholders via interviewing HS+ coordinators (n = 22) as well as surveying principals, HS+ teachers, and HS+ students. The survey response rate was 87% for high school principals (n = 20), 62% for HS+ teachers (n = 69) and 60% for HS+ students (n = 1,459). The formative evaluation addressed five questions via integrating qualitative (e.g., interviews, open-ended comments) and quantitative (e.g., closed-ended survey items) analyses.

The outcome evaluation examined student records (e.g., course performance, passing High School Assessments (HSA), class attendance, and dropout and graduation rates). Descriptive analyses were conducted to summarize HS+ students' demographic characteristics as well as several other measures in 2011–2012. Most of analyses focused on HS+ students' performance in courses required for graduation (English 10, Algebra, Biology, or U.S. History). Advanced analyses were used to compare the achievement of the HS+ students in Algebra 1 or English 10 to a matched comparison group since those courses had sufficient numbers of students.

Formative Evaluation Finding Highlights

Awareness/Selection Criteria/Enrollment

Almost all principals (95%) indicated that students were informed about HS+ primarily through administrators and counselors. Moreover, a majority of students (87%) reported that they were informed about the program through a counselor.

All of the principals and all of the HS+ coordinators reported failure of a required course for graduation or previous course failure as a criterion for HS+ student selection. Over 80% of principals indicated that selected students are contacted and encouraged to enroll. Counselors primarily handle identifying, contacting, and registering students according to HS+ coordinators. Over three fourths of the principals and about one half of teachers agreed that the HS+ student selection process and the enrollment process work well.

Alternatives to HS+

In instances where a school is not offering a HS+ course, a vast majority of principals (85%) indicated that they would send their students to a neighboring school and/or let the students know they need to go to summer school. More than one half of principals also said the student would take the course the next semester. Likewise, nearly two thirds of coordinators mentioned summer school and re-enrolling in a course the following semester. Nearly one half of students (46%) indicated that if HS+ were not offered, they would go to summer school. Grade-level analysis of student survey data reveals that nearly one half of Grade 12 students (46%) would not graduate on time if HS+ were not offered.

Class Attendance

Over two thirds of principals and three fourths of teachers agreed that attendance is a problem for the majority of HS+ students. A variety of reasons were given by principals for students not attending HS+, ranging from students' lack of motivation and having existing attendance issues to other responsibilities such as jobs, families, and other activities. Students also reported a variety of reasons with the most common being responsibilities at home, being tired, or not feeling well.

Standards for Grading

More than one half of principals, over three fourths of teachers, and almost all coordinators reported that standards for grading are the same as during the day. However, nearly two thirds of students reported that their HS+ class was easier than when they took it before.

Success of the HS+ Program

At least 80% of principals, teachers, and students agreed that HS+ is a good way for students to earn missing credits and earn credits for a failed course. There was a large variation in agreement among principals about whether HS+ is meeting the needs of their students (40% agreed, 45% disagreed, and 15% were neutral). Nonetheless, over three fourths of the teachers agreed that HS+ is meeting the needs of the students.

More than one half of principals rated the overall quality of HS+ as "fair," and less than one third as "good." Teachers were more positive, with over three fourths rating the program "good" or "excellent." Coordinators were split between good and fair with a few coordinators indicating "excellent" and "poor." More than 70% of the students reported that they would recommend HS+, and about two thirds of student respondents agreed that it helped them learn better than the traditional course.

Challenges to High School+ Implementation and Recommendations for Improvements

Big challenges reported by principals and coordinators included irregular HS+ student attendance, the requirement of having 15 students to form a HS+ class, and the availability of teachers for HS+.

Eighty-three percent of principals and 60% of teachers would like to see students (excluding those receiving Free and Reduced-price Meals System [FARMS] services) charged up to a $50 fee for HS+. Even though three fourths of the coordinators agreed with charging a fee, they thought it should be less than summer school—nominal or under $50. Nearly two thirds of principals and HS+ teachers would not like to change teacher pay to a stipend system. While nearly one half of HS+ principals would like to see substitute pay equal to their regular teacher's pay, 40% were neutral on the issue.

Although over one third of principals (35%) would like to see another program offered in addition to HS+, less than a third (29%) would like to continue with the HS+ program, but with changes. One half of the teachers would like to see HS+ continue as is, and 43% would like it continued but with changes. While 15 coordinators would recommend the continuation of HS+, five coordinators did not recommend continuation of the program in its current state.

Outcome Evaluation Findings Highlights

Descriptive Analyses

During 2011–2012, 1,957 students took HS+ in semester 1, and 2,575 students took HS+ courses in semester 2. The majority of HS+ students were in Grades 9 (semester 1 = 24%; semester 2 = 36%) and 10 (semester 1 = 40%; semester 2 = 35%), and were Hispanic/Latino (semester 1 = 47%; semester 2 = 49%) and Black or African American students (semester 1 = 39%; semester 2 = 36%). More than one half received FARMS services (semester 1 = 58%; semester 2 = 57%), and a fifth received special education services (semester 1 = 19%; semester 2 = 20%). Nearly 95% of HS+ students took only one HS+ course during each semester (see the Appendix).

Detailed analyses were further conducted to address several outcome measures for those HS+ students who took English 10, Algebra, Biology, or U.S. History semester courses in 2011–2012. The stated four courses were chosen because they are courses required for graduation. The outcome measures were as follows:

- *Course Passing Rates*. The HS+ semester course passing rate varied greatly across content areas. Of 943 HS+ students who took Algebra 1, Biology, English 10, or U.S. History in semester 1, the highest course passing rate was for English 10A (71%) among the courses with 30 or more students, while the lowest passing rate was in Algebra 1B (50%). Of the 1,098 HS+ students who took the four courses in semester 2, the highest course passing rate was in Biology A (59%) among the courses with 30 or more students, while the lowest passing rate was in Algebra 1A (43%). This part of the evaluation focused on the four HS+ courses with 30 or more students across the county because the sample size was large enough to yield stable statistics.
- *Class Absences*. The following analyses are based on courses with 30 or more HS+ students in which students had at least 18 class absences. This would mean that these HS+ students missed more than one half of the instruction time. In semester 1, the highest percentage of absences for HS+ students occurred in English 10B (n = 79, 32%). In semester 2, the highest percentage of absences for HS+ students was in Algebra 1A (n = 112, 34%).

- *Dropout rates*. Of the 1,868 Grades 9–12 HS+ students in Algebra 1, Biology, English 10, or U.S. History in 2011–2012, 49 (3%) dropped out of school by the end of the school year, compared to the 2% dropout rate for all MCPS Grades 9–12 students in 2011–2012.

Advanced Analyses

- *Algebra*. A significantly lower percentage of students in the HS+ Algebra 1 course passed the Algebra HSA by the end of 2011–2012, when compared to their comparison group (30% vs. 40%). There was no significant difference between the two groups' graduation rates for Grade 12 (77% vs. 77%). The dropout rate was significantly lower for the HS+ Algebra 1 students in Grades 9–12, compared to their matched peers in the same grades (2% vs. 4%). These analyses findings, including significant test findings, may be found in Table A15 of the Appendix.

- *English 10*. A significantly lower percentage of students in the HS+ English 10 course passed the English 10 HSA by the end of 2011–2012, when compared to their comparison group (53% vs. 67%). There were no significant differences between the HS+ English 10 group and its comparison group in their graduation rate (73% vs. 83%) for Grade 12 students or the dropout rate for students (3% vs. 5%) in Grades 9–12. These analyses findings, including significant test findings, may be found in Table A16 of the Appendix.

Recommendations

Prior to the release of this report, the MCPS HS+ program was discontinued as a standard districtwide program. Schools were given the option in 2013–2014 to do what best meets their students' needs; whether it is continuing the HS+ program format (with or without modifications) or eliminating the program format and offering an alternative process for students to recover credit.

In light of this development, specific recommendations for the HS+ program when it was evaluated are not included. However, schools should continue supporting students by providing options for earning credit. For those that decide to continue with an extended-day program such as HS+:

- Establish a system for sharing best practices between schools with similar programs and continue exploring ways to improve the program.

- Continue exploring ways to increase attendance among HS+ students. Share best practices with schools with similar programs, such as a contract requirement or dropping students who do not attend. In addition, increasing attendance and student motivation may in turn help schools attract more teachers.

- Explore ways to recruit and sustain HS+ teachers including the idea of creating a central pool of "go to" teachers among schools with similar programs.

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Background

At the request of the deputy superintendent of school support and improvement; the deputy superintendent of teaching, learning, and programs; and the chief operating officer, the Office of Shared Accountability (OSA) conducted a study of the High School Plus (HS+) program implemented in Montgomery County Public Schools (MCPS). HS+ is one of the programs offered by MCPS to provide additional ways of earning high school credits for students who have failed courses required for graduation. The overall goal for the HS+ program is for students to earn credit in courses previously failed that are required for graduation. This evaluation study examined the nature and extent of benefits to high school students served by the extended-day HS+ program.

Problem Statement

In response to rapid economic, demographic, social, and technological changes, leaders, educators, and parents nationwide are looking more closely at American high schools and their graduates. Moreover, the last decade has brought an increased level of concern about high dropout rates, low educational achievement of many students, and the large number of high school students who are required to take remedial courses in college (Chait, Muller, Goldware, & Housman, 2007).

Recent years have brought improvement in the graduation rates of American high school students. The nation's graduation rate reached nearly 75% for the class of 2010, the highest level since 1973 (*Diplomas Count*, 2013). Tyler and Lofstom (2009), however, point out the importance of considering the current graduation rate within the context of the current global economy. "Thus, schools are apparently doing about as well now as they were forty years ago in terms of graduating students. The problem is that just as the competitive pressures associated with an increasingly global economy have increased, the importance of education in determining personal and national well-being has also grown." (p. 83). Thus, they conclude, maintaining a steady rate is not enough to meet the needs brought on by the economic and technological changes in the American workplace.

Locally, the graduation rate for the MCPS Class of 2010 was 84%, calculated with the Cumulative Promotion Index, which is used to examine graduation rates nationally in the 2013 *Diplomas Count* report.[1] Although the graduation rate in MCPS is higher than the rates for the nation (75%) and for Maryland (79%), it still means that about 16% of MCPS students—more than 1,500 students—in the Class of 2010 did not graduate. With schools focused on raising

[1] *Education Week*, June 6, 2013.

curriculum rigor, graduation rates, and readiness for college and career, it is important not to lose sight of this group of students, as they will likely require even more academic support.

Overview of the HS+ Program in MCPS

As documented in the literature, academic intervention programs (AIP) include numerous categories of programs, such as accelerated learning, extended learning time, personalized learning environment, dropout prevention and recovery, and incorporation of literacy instruction into the curriculum (Chait et al., 2007). The MCPS HS+ program is an example of an AIP, providing extended learning time and aiming to prevent students from dropping out of high school. In the 2006–2007 school year, responding to nationwide challenges reflected in increasing high school dropout rates, MCPS implemented the HS+ program. The main program objective was to enable students who failed courses required for graduation to retake these courses for credit in their home school instead of in traditional regional Evening High Schools (EHS). The HS+ program was introduced to MCPS high schools gradually. In the 2006–2007 school year, MCPS piloted the HS+ program in four high schools including Albert Einstein, John F. Kennedy, Rockville, and Wheaton. In 2007–2008, all MCPS high schools implemented the HS+ program with priority to enroll 9th and 10th graders. Students in Grades 11 and 12 continued to enroll in the EHS program (Addison-Scott, 2008). The EHS program was phased out in 2008–2009, and completely removed in the 2009–2010 school year. Since the 2009–2010 school year, HS+ courses have been available to students in Grades 9 through 12. There is no fee for students to enroll in HS+, and each school decides which courses to offer and the time and day the classes will take place.

The HS+ program enables students who have failed courses required for graduation to retake them for credit in their home school. The main goal of HS+ is to provide students an opportunity to regain lost credits in courses required for graduation (MCPS, 2012). The HS+ students are identified by using data from end-of-course grades, academic eligibility, High School Assessment (HSA) results, and input from school counselors and teachers. The individual school model of the HS+ program allows each high school to tailor courses to meet the unique needs of students. However, in practice, schools cannot always offer the HS+ courses needed due to logistical constraints, such as the required minimum enrollment of 15 students or the availability of teachers certified in the areas needed. The extended-day full-semester HS+ classes meet 100 minutes per day, at least 30 times a semester. The start and end time and the days that classes are held may vary based on student needs.

The HS+ program comprises the extended-day full-semester program as well as credit-recovery classes. In the credit-recovery classes, students work toward credit recovery by addressing course material for the marking period in which they failed the course. The current study addresses only the extended-day component of the HS+ program since it is logistically difficult to accurately identify all students in the credit-recovery classes.

Previous Study of HS+ Implementation in MCPS

Findings from an OSA unpublished implementation study of the HS+ pilot program (in four high schools) revealed an agreement among students and teachers that HS+ provides an opportunity for high school students to pass previously failed courses. The concerns raised by HS+

stakeholders in the same study included: a) securing a sufficient number of teachers to offer the courses that were in demand by students, b) the availability of snacks and beverages for students, and c) issues of student tardiness and attendance (Addison-Scott, 2007). A year later, OSA conducted another implementation study of the HS+ program. The study collected information from multiple sources including administrators, teachers, and students (Addison-Scott, 2008). The findings showed that students appreciated the opportunity to participate in the HS+ program, and a high percentage of student respondents were happy that HS+ was offered at their school. The majority of teachers and students agreed that the HS+ classes were offered at a convenient time. However, many students raised concerns about the length of time during each day when the program was offered.

Previous Study of HS+ Outcome in MCPS

In spring 2008, an outcome evaluation study was conducted by OSA. The unpublished study compared HS+ students' achievement in four HS+ pilot schools (Einstein, Kennedy, Rockville, and Wheaton) with their peers attending EHS (Modarresi, 2008). Outcome measures included the 2006–2007 end-of-course grades in courses required for graduation as well as the HSA results. The HSA results included the scores of students who took the Algebra, Biology, English, and Government HSAs in January or May 2007. Detailed comparisons regarding participation and passing rates between HS+ students and their EHS peers on several outcome measures were conducted at the semester level. Below is a summary of findings.

Student Characteristics. The analyses found the following patterns pertaining to the characteristics of students in the semester-level comparison of the two groups of students in 2007.

- The percentages of HS+ students in Grades 9, 10, and 11 were higher compared with the percentages of students in EHS who were in Grades 9, 10, and 11. On the other hand, the percentage of HS+ students in Grade 12 was much lower than the percentage of EHS students who were in Grade 12.

- The sample of EHS students had a higher percentage of both African American and White students compared with the HS+ sample. The percentage of Hispanic students, on the other hand, was lower in the EHS sample than the HS+ sample.

- A higher percentage of HS+ students were receiving English for Speakers of Other Languages (ESOL) or Free and Reduced-price Meals System (FARMS) services when compared with EHS students. A slightly higher percentage of students in EHS were receiving special education services than those in the HS+ program.

Course Grades. At the end of semester 1, the differences between the percentage of HS+ and EHS students receiving course grades of D or above were statistically significant for 2 of the 13 course comparisons. A significantly higher percentage of HS+ students passed English 11A and English 9A than did their EHS counterparts. At the end of semester 2, the differences between the percentage of HS+ and EHS students passing was significant for 5 of the 20 course comparisons made. A significantly higher percentage of EHS students earned D or above (passed) in English 10B and English 11B than did their HS+ counterparts. Conversely, a

significantly higher percentage of HS+ students obtained passing grades in Modern World History B; National, State, and Local (NSL) Government A; and NSL B.

Maryland High School Assessments (HSA). One important finding was the low participation and passing rates of both groups of students in all four HSA subjects. However, even though students in these programs at that time had to take the HSA tests, they were not required to pass them in order to graduate from high school. Further analyses found that the majority of students (from both HS+ and EHS) who took the HSA failed the test in both semesters. In semester 1, the differences between the percentage of HS+ and EHS students passing the HSA were not statistically significant for all of the four subject-level comparisons. However, in semester 2, the differences between the percentage of HS+ and EHS students passing the HSA were statistically significant for one of the four comparisons. In government, a significantly higher percentage of EHS students passed the HSA than HS+ students.[2]

The researcher concluded that "it is difficult to determine the effectiveness of the HS+ program in improving students' academic performance due to small sample sizes" (Modarresi, 2008, p. 6).

Literature Review

Nationally, the graduation rate has been on the rise in the last few years, but still about a quarter of American high school students leave school without a diploma. The overall improvement in the graduation rate has been driven in large part by strong gains by Latino and Black students, so the graduation gap between White students and their Latino and Black peers has narrowed. However, the students who leave school before graduation still are disproportionately from educationally and socioeconomically disadvantaged groups and communities. (*Diplomas Count*, 2013). The price for leaving school before graduation is high; the gaps in wages and employment opportunities between graduates and nongraduates are widening (Bureau of Labor Statistics, 2013).

According to the literature, the decision to drop out of school is usually tied to a number of factors, including student, family, school, and community, and is often the culmination of a long process of disengaging from school, rather than a sudden act (Bridgeland, Dilulio, & Morison, 2006; Tyler & Lofstom, 2009). For their report, *The Silent Epidemic: Perspectives of High School Dropouts*, Bridgeland et al. (2006) surveyed and interviewed young people aged 16–24 who had left school before graduating. The top five reasons for leaving school identified by the respondents were: classes were not interesting (47%); missed too many days and could not catch up (43%); spent time with people who were not interested in school (42%); had too much freedom and not enough rules in my life (38%); was failing in school (35%).

Consistent with the reports of the students who left school, academic performance has been identified in the literature as a strong and consistent predictor of dropping out of high school (Balfanz, Herzog, & MacIver, 2007; Rumberger & Lim, 2008). Course failure, test scores and grades, and grade retention have all been found to be associated with leaving school (Balfanz et al., 2007; Roderick & Camburn, 1999; Rumberger & Lim, 2008; Tyler & Lofstom, 2009). Grades appear to be a more consistent predictor than test scores; the stronger association

[2] Fisher's Exact Test (one sided) was used due to the small within-cell sample size.

of grades and dropping out of school may reflect a student's measure of achievement and effort over the duration of the course, rather than on a single testing occasion.

Bridgeland, et al. (2006) document that among the students who had left school and were surveyed for *The Silent Epidemic*, a large majority indicated that they might have been able to stay in school if more support and opportunities for catching up had been available. Seventy percent of the survey participants believed that more or additional opportunities at school, such as after-school tutoring, Saturday school, summer school, and extra help from teachers, would have helped them stay in school (Bridgeland et al., 2006).

Nowadays, schools are beginning to reach out to these students at risk of dropping out. In response to widespread concern surrounding high school dropout rates and students' lack of preparation for career and college, school systems have implemented a range of programs and initiatives. Drop-out prevention efforts and credit-recovery programs are being established in schools throughout the country in many different forms. Credit-recovery programs grew out of the *No Child Left Behind Act of 2001* (NCLB), as school districts tried to produce better graduation rates in response to government requirements (Chait et al., 2007).

However, no federal definition of credit recovery has been established. The most common definition is, "a structured means for students to earn missed credit in order to graduate from high school" (McCabe & St. Andrie, 2012). Credit-recovery programs take many forms, ranging from a regular classroom setting to fully online programs. Some programs are developed and run by the local school system; others are purchased from private courseware companies. A recent report (Dessoff, 2009) described three credit-recovery models used in districts across the country: 1) face-to-face, where students attend classes after school with certified regular classroom teachers; 2) fully online, where students can work at their own pace—one program has the motto "anytime, anyplace, any pace;" and 3) a blended approach, where students work online at their own pace, but they work in a lab, where a teacher is there to assist them if needed.

Despite the proliferation of credit-recovery programs, however, little research or even reports of numbers of courses and students have been produced. Part of the reason so little information has been reported about credit-recovery programs is that there is little federal oversight, and states typically do not report district- and school-level course offerings and participation (McCabe & St. Andrie, 2012). The present study aims to examine the implementation and outcomes of the HS+ program in MCPS, which is an academic intervention that fits the general definition of credit recovery.

Evaluation Design

The study used a multimethod design to conduct both formative and outcome evaluations. The formative component was designed to collect data on HS+ implementation and to encourage reflection by the various program stakeholders. The outcome evaluation addressed the program effectiveness by examining course performance, passing HSAs, class attendance, and dropout and graduation rates.

Organization of Study

This report is divided into four additional sections. Section I includes a description of the formative evaluation including study questions, data collection methods, and analytical techniques. Section II describes the outcome evaluation comprising study questions, data sources, and analytical procedures. Section III presents results from formative and outcome evaluations, organized by evaluation questions. Section IV provides a summary conclusion and limitations and strengths associated with the study as well as recommendations suggested by the study. The appendix presents the detailed findings from the outcome evaluation.

Section I. Formative Evaluation: Study Questions, Data, and Analyses

The formative study used a mixed-method design to collect data on the implementation of the HS+ program. Document reviews; interviews with program administrators and HS+ coordinators; and surveys of principals, HS+ teachers, and students were conducted for the study. The use of at least two data collection components—in this study, interviews and quantitative analysis of surveys from multiple groups of respondents—helps avoid the problem described by Brewer and Hunter: "overreliance upon any one type of method, no matter how great its advantages in other respects, is problematic because it fails to guard against the specific sources of errors which threaten that method" (1989, p. 49). Researchers have identified numerous purposes for employing a mixed-method study design, including complementarity and triangulation. Complementarity refers to data collection in which "qualitative and quantitative methods are used to measure overlapping but also distinct facets of a phenomenon, yielding an enriched, elaborated understanding of that phenomenon. This differs from triangulation in that the logic of convergence requires that the different methods assess the same conceptual phenomenon." (Greene, Caracelli, & Graham, 1989, p. 258). In this study, a mixed-method approach is used to provide both complementarity and triangulation in the collection of data. The mixed-method design allowed evaluators to gain detailed knowledge about the HS+ operations and the students it serves from a variety of perspectives and data sources.

The formative evaluation is guided by the following questions:

1. What are the characteristics of principals, teachers, students, and coordinators who participated in the study?
2. How do schools communicate, select, and enroll students for HS+?
3. What are the experiences of HS+ students, teachers, and principals pertaining to different aspects of HS+? Does HS+ meet its goals/work?
4. What are the challenges to HS+implementation?
5. What recommendations for improvements are offered by stakeholders?

Data Collection Methods

Interviews

Two types of interviews were conducted for the study: 1) preliminary interviews with current and previous HS+ central services administrators and school administrators advising the evaluation team, and 2) interviews with HS+ coordinators based in the high schools.

A semi-structured 45–60 minute interview was conducted with three current or previous central services HS+ administrators and two school administrators who were advising the evaluation team. The interviews took place during December 2012 and January 2013 and were conducted by staff from the Program Evaluation unit of OSA. Interviews were conducted in the offices of the interviewees. The purpose of this initial interview was to identify patterns of issues, benefits, experiences, or problems associated with the planning, implementation, and outcomes of the HS+ program at schools. Existing program documents and previous studies of HS+ were reviewed for assistance in developing interview questions; an interview protocol was developed for central services administrators and school administrators based on the nature of their involvement in the HS+ program. Information collected in the interviews was used to guide interview development for HS+ coordinators and survey development for principals, HS+ teachers, and students.

A semi-structured 45–60 minute interview was conducted with HS+ coordinators based in high schools. Interviews were conducted at the HS+ coordinator's school during January and February 2013 by staff from the Program Evaluation unit of OSA. Coordinators from 22 high schools were interviewed. Three high schools were not included in the coordinator interviews; two had not had a HS+ program, and one coordinator was on leave during the interview time frame. The purpose of the interviews was to collect information on topics such as the following:

- What are the student selection criteria for HS+?
- Did the HS+ program meet its goals?
- What were the unanticipated outcomes?
- What are the major challenges to its implementation?
- What additional supports would increase the HS+ program's effectiveness?

Surveys

Surveys were administered to three groups of stakeholders: principals, HS+ teachers, and HS+ students. The purpose of the surveys was to collect information pertaining to each group's experience and perception of HS+ implementation, outcomes, challenges, benefits to students, and areas for improvement. Many of the survey questions were developed from information gathered in the initial interviews. Some of the survey questions were drawn from surveys that were developed for the previous implementation study of HS+ (Addison-Scott, 2008); questions were modified as needed to make them more relevant to the purposes of the present study. To the extent possible, survey items were constructed in a closed format (e.g., multiple-choice, yes/no) rather than open-ended to minimize response burden.

Lessening Measurement Error. Measurement error in surveys is defined as the deviation of a respondent's answer to a survey question from the true value of their response to the question. According to the literature, measurement errors associated with the survey instruments may arise from instrument length, question format or question wording, sequence of questions**,** question structure, question order, the clarity of questions, and the amount of time needed to fill out the instrument (Biemer, Groves, Lyberg, Mathiowitz, & Seymour, 1991; Blair, Sudman, Bradburn, & Stocking, 1979; Catania, Gibson, Chitwood, & Coates, 1990; Groves, 1989; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Sudman & Bradburn, 1983). One way of reducing measurement error in a survey is the use of pretesting, in which the focus is on respondents' perceptions of the survey items and their actual responses to the questions. Before conducting the surveys in this evaluation study, the instruments were pretested by 10 HS+ students (student survey) and four teachers (teacher survey). The principal survey was reviewed by three principals (two who were advising the evaluation team, and one who was a principal not serving in the study schools). The purpose of pretesting the surveys was to minimize problems associated with question format or question wording and to check the amount of time needed to fill out each of the survey instruments. The pretesters were asked to examine the survey items using a checklist adapted from questions developed by Isaac & Michael (1995):

1. Are the directions/instructions for the survey clear?
2. Is the language of the questions appropriate for high school students? (student survey)
3. Are the questions easy to understand?
4. Are the response choices to the questions appropriate?
5. Are the questions leading in any way—i.e., do they suggest a particular way to answer?
6. Do any of the questions ask sensitive information that might make a student (teacher) uncomfortable?
7. Do any of the questions seem unimportant to a study of HS+?
8. Are there questions about HS+ that should be added?
9. Does the survey seem too long or too short?

Principal Survey. All MCPS high school principals except the two principals who were advising the evaluation team were asked to complete an online survey about the HS+ program in their school (23 surveys were sent out). The survey asked principals about their perceptions of HS+ outcomes, implementation challenges, benefit to students, and areas for improvement.

An e-mail introducing the survey was sent during the first week in April 2013 asking principals to complete the survey by April 26. In an effort to increase the response rate, a reminder e-mail was sent during the first week in May and the closing date was moved forward to May 20. Twenty completed surveys were received from principals, reflecting an 87% response rate (20 of 23 sent).

HS+ Teacher Survey. All HS+ teachers (N = 112) were asked to complete an online survey about the HS+ program. The survey asked about the teacher's perceptions of HS+ outcomes, implementation challenges, benefit to students, and areas for improvement.

An e-mail with the survey link was sent to the HS+ coordinator at each high school during the first week in April 2013. The coordinator was asked to forward the e-mail and link to each of the

HS+ teachers in the school. A reminder was sent during the last week of April. Of 112 HS+ teachers, 69 completed surveys, reflecting a 62% response rate.

HS+ Student Survey. All students in HS+ classes were asked to complete a paper and pencil survey during the last two weeks of April 2013. To facilitate distribution to students, the HS+ coordinator at each high school was asked to send a list of HS+ classes, with the course subject, name of the teacher, and number of students in the class, to the evaluator at OSA. A packet of student surveys was prepared and labeled for each class; packets were sent in batches to each high school via the HS+ coordinator. The HS+ coordinator distributed the packets to HS+ teachers with instructions for administering the surveys in class. To allow students to provide a confidential response to the survey, plain envelopes were distributed to students along with the surveys so they could return their completed survey in a sealed envelope. The sealed envelopes were collected and the HS+ coordinator sent them to OSA for processing.

Of the 2,437 students enrolled in HS+ during the second semester of the 2012–2013 school year, 1,459 completed and returned surveys, representing a 60% response rate. It should be noted that the total number of students enrolled in HS+ (used to compute response rate) may be larger than the total number of students who actually received surveys, since the surveys were administered on one class day, without any procedure to allow for completion of surveys by students who were absent on that day. As a result, the response rate may be underestimated.

Analytical Procedures

Interview Data

Evaluators recorded detailed notes during the interviews and later transcribed the notes onto electronic documents set up with the interview questions. Responses to interview questions were organized together in a file in order to view multiple responses to each question, identify themes, and code responses into categories. Counts of coded responses within categories and examples of quotes were used to present key findings from the responses to the interview questions.

Survey Data

Responses to closed-ended survey questions were analyzed and summarized using descriptive statistics. Descriptive information (frequency distribution, percentages, and means) were calculated and presented for the closed-ended responses in the surveys. Responses to open-ended survey questions were reviewed, categorized, and coded. Where appropriate, counts of coded responses within categories and examples of quotes were used to present key findings from the responses to the open-ended survey questions.

Section II. Outcome Evaluation: Study Questions, Data, and Analyses

The overall goal for the HS+ program is to help students meet requirements for graduation by passing required courses. An analysis of student outcomes during 2011–2012 was one component of the comprehensive HS+ program evaluation. Outcome measures for the analyses included course performance, passing HSAs, class attendance, and dropout and graduation rates. Detailed findings from the outcome analyses of the extended-day HS+ program are displayed in the Appendix.

The following evaluation questions were addressed:

1. What were the demographic characteristics of students enrolled in the HS+ program during the 2011–2012 school year?
2. Who took HS+ Algebra 1, Biology, U.S. History, and English 10 in 2011–2012, and how did they perform in the courses?
3. What was the class attendance for students in HS+ Algebra 1, Biology, U.S. History, and English 10 in 2011–2012?
4. How did the HS+ students perform on the HSAs by the end of 2011–2012?
5. What was the dropout rate for Grades 9–12 HS+ students in 2011–2012?
6. What was the graduation rate for Grade 12 HS+ students in 2011–2012?
7. How did HS+ students who took Algebra 1 or English 10 differ from their matched comparison group in course credits earned, HSA performance, and dropout and graduation rates?

Data Sources and Analytical Procedures

The samples for analyses excluded students who were enrolled in HS+ for credit recovery, which allows students to recover a credit by retaking a portion of a course rather than the entire semester course.

Descriptive analyses were conducted to summarize HS+ students' demographic characteristics as well as outcome measures. Further analyses were conducted to examine outcome measures for those HS+ students who took English 10, Algebra, Biology, or U.S. History semester courses in 2011–2012. The specified four courses were chosen because they are courses required for graduation.

Advanced analytical procedures were used to compare the performance of HS+ students in Algebra 1 or English 10 to a matched comparison group constructed using propensity scores matching method. The two courses were selected because they had sufficient numbers of HS+ students. Propensity scores (via logistic regression procedures) were generated for students who had data on the following measures: grade level, gender, race/ethnicity, participation in ESOL and FARMS services in 2011–2012, Grade 8 Maryland School Assessment (MSA) scores, and whether they failed any portion of Algebra 1 or English 10 before 2011–2012. The propensity scores were then used to create comparison groups for the HS+ groups, ensuring that the HS+ students were similar to their peers with alike academic reading and mathematics skills before high school as well as similar course experience before 2011–2012. After matching, t-test or

chi-square tests (where appropriate) were conducted to detect significant differences in course credits, HSA passing rates, and dropout and graduation rates between the HS+ students and their matched comparison group.

Section III. Results

Formative Evaluation Results

Formative Evaluation Question 1

What are the characteristics of principals, teachers, students, and coordinators who participated in the study?

Principals' Characteristics and School Experience with HS+. Principals were asked, "including this year, how many years have you been a high school principal in MCPS?" More than half of the respondents (n = 11, 55%) reported 6–10 years, six indicated 2–5 years, while three recorded more than 10 years of experience as a principal in MCPS. The number of HS+ classes as reported by the principals ranged from one to six or more classes in their schools. During the 2013 spring semester, HS+ classes were offered ranging from one class in six schools to six or more classes in nine schools (see Table 1a1). The same analyses for the 2012 fall semester revealed that a range of one class in three schools to six or more classes in seven high schools were offered.

Table 1a1. Principal Respondents' Background and Number of HS+ Classes at School

		N = 20	
		n	%
Years of experience as a principal in MCPS	2–5 years	6	30.0
	6–10 years	11	55.0
	More than 10 years	3	15.0
Number of classes offered in your school during the current semester (Spring 2013)	1 class	6	30.0
	3 classes	2	10.0
	4 classes	1	5.0
	5 classes	2	10.0
	6 or more classes	9	45.0
Number of classes offered in your school during the previous semester (Fall 2012)[a]	1 class	3	16.7
	2 classes	1	5.6
	3 classes	2	11.1
	4 classes	1	5.6
	5 classes	4	22.2
	6 or more classes	7	38.9

[a] N = 18

Teachers' Characteristics. In the survey, teachers were asked, "including this year, how many years have you been a HS+ teacher?" Teachers' responses are shown in Table 1b1. About 37% of teachers (n = 25 of 67) reported three to four years, 18 (27%) said that this is their first year, while 10 (15%) indicated that this was their second year of teaching HS+ in MCPS. About 21% of teachers (n = 14) noted five or more years of experience at being a HS+ teacher. In response to a question asking "how many years have you been a teacher with MCPS?," more than one third (n = 27 of 69 teachers, 39%) reported five or more years, about a third (n = 21,

30%) indicated two years, and less than a third (*n* = 19, 28%) said three to four years (Table 1b1). Only two teachers reported one year of experience working as a teacher in MCPS.

Most of the responding teachers (*n* = 62 of 69, 90%) reported that they were certified in the subject(s) they were teaching in HS+.

Table 1b1. Teacher Respondents' Background Information

		N = 69	
		n	%
Years of experience as a HS+ teacher[a]	1 year	18	26.9
	2 years	10	14.9
	3–4 years	25	37.3
	5+ years	14	20.9
Years of experience as an MCPS teacher	1 year	2	2.9
	2 years	21	30.4
	3–4 years	19	27.5
	5+ year	27	39.1
Certification in HS+ subject	Yes	62	89.9
	No	7	10.1

[a] *N* = 67

When asked to indicate the HS+ course(s) they taught, teachers reported a variety of courses as displayed in Table 1b2. The most cited courses were Algebra I, U.S. History, and Geometry (*n* = 12, 10, and 8, respectively). The next most cited courses were English 9 (*n* = 7), Special Education/Special Education Support (*n* = 7), followed closely by Biology, English 11, and English 12 (each cited by six teachers).

Table 1b2. HS+ Courses Taught by HS+ Teacher Respondents

	N = 69	
HS+ courses (A or B)	*n*	%
Algebra I	12	17.4
U.S. History	10	14.5
Geometry	8	11.6
English 9	7	10.1
Special Education/Special Education Support	7	10.1
Biology	6	8.7
English 11	6	8.7
English 12	6	8.7
English 10	5	7.2
NSL	2	2.9
World History	2	2.9
Matter & Energy	2	2.9
Quantitative Literacy	2	2.9
Algebra 2	1	1.4
Chemistry	1	1.4

Note. Total may exceed 100% because respondents could mark more than one response.

Two responding teachers indicated that they taught a combination class: one had a class with all English levels and another had English 11 and English 12.

Coordinators' Characteristics. Coordinators from 22 high schools were interviewed. Three high schools are not represented in the interviews: two have not had a HS+ program, and one coordinator was on leave during the interview time frame. The 22 HS+ coordinators who were interviewed held the following positions at schools: 17 were assistant principals; 4 were assistant school administrators; and 1 was an Alternative I teacher. The number of years in the coordinator position ranged from one to seven years (mean = 3.3; median = 3; mode = 3).

Students' Characteristics. Among the sample of HS+ students who responded to the survey, the highest percentage were Grade 10 students (31%), and the lowest percentage were Grade 12 students (19%). A majority of students (73%) were taking HS+ in their home school, and more than one half (57%) were taking a HS+ class for the first time (Table 1c1). Less than one half of responding students (42%) had taken HS+ before.

Table 1c1. Student Respondents' Background Information

		N = 1,459	
		n	%
Grade level	Grade 9	349	23.9
	Grade 10	456	31.3
	Grade 11	364	24.9
	Grade 12	283	19.4
	Did not answer	7	0.5
HS+ located in home school	Yes	1,065	73.0
	No	228	15.6
	Did not answer	166	11.4
HS+ experience	Taken HS+ before	611	41.9
	First time in HS+	833	57.1
	Did not answer	15	1.0

In the survey, students were asked, "What HS+ class are you taking during this semester?" Students were allowed to cite multiple classes, if applicable. The most cited classes were Algebra I, Geometry, U.S. History, and English 10 (14%, 14%, 11%, and 11% of students, respectively). These were closely followed by English 9 and Biology reported by 9% and 8% of the responding students, respectively. Students also reported a lower frequency in taking other HS+ classes as shown in Table 1c2.

Table 1c2. HS+ Courses Currently Taken by Student Respondents

HS+ courses (A or B)	*N* = 1,436	
	n	%
Algebra I	204	14.2
Geometry	198	13.8
U.S. History	164	11.4
English 10	157	10.9
English 9	135	9.4
Biology	119	8.3
English 11	78	5.4
English 12	77	5.4
World History	57	4.0
Algebra II	55	3.8
Bridge to Algebra II	50	3.5
Quantitative Literacy	47	3.3
National, Science and Local Government	46	3.2
Matter and Energy	44	3.1
Health	34	2.4
Tech/Foundations of Technology	21	1.5
Chemistry	20	1.4
Physical Science	11	0.8

Note. Total may exceed 100% because respondents could mark more than one response.

Summary for Formative Evaluation Question 1

Twenty principals responded to the survey, with 14 having six or more years of experience as an MCPS principal. Of the 69 HS+ teachers who responded to surveys, just over one fourth were in their first year as a HS+ teacher and over one half had three or more years of experience as a HS+ teacher. About 90% of teachers reported they are certified to teach the HS+ subject they are teaching, which includes mathematics (i.e., Algebra, Geometry, and Quantitative Literacy), social sciences (e.g., History, NSL), English, science (e.g. Biology, Chemistry, Matter and Energy), and special education courses or support. Twenty-two HS+ coordinators were interviewed; they had an average of three years' experience in the position, and 21 of them were assistant principals or assistant school administrators.

HS+ students were surveyed in their classrooms. A total of 1,459 students ranging from Grades 9 to 12 completed surveys. Almost three fourths were taking HS+ in their home school, and over one half were taking HS+ for the first time.

Formative Evaluation Question 2

How do schools communicate, select, and enroll students for HS+?

Data collected from principal, teacher, and student surveys as well as coordinators' interviews are used to provide information for this evaluation question. In this section, a summary of findings for each group of respondents—principals, teachers, coordinators, and students—is reported separately. Following the report of findings for each group, a summary of the data collected from all stakeholders is presented, allowing an examination across the respondent groups.

Principals' Responses. Principals' survey responses addressing this evaluation question are organized into the following areas: student awareness of HS+, students' selection criteria, student enrollment procedures, alternatives to HS+, and teacher selection.

- *Student Awareness of HS+*. Principals were asked, "How are students informed about the HS+ program?" A summary of principals' responses are shown in Table 2a1. The most frequently cited responses were "administrators" (principals, assistant principals, HS+ coordinators) and "counselors," each reported by 19 of 20 principals. More than two thirds (n = 14, 70%) indicated that students were informed by "teachers," and more than one half (n = 12, 60%) reported "announcements" as a way of informing HS+ students. Moreover, less than one half of principals (n = 9, 45%) reported students were informed by the use of the "website," slightly more than one fifth (n = 6, 30%) cited "flyer" followed by less than one fifth (n = 4, 20%) noting "ConnectEd" for communicating with students pertaining to HS+. The "letter to parents or students" was reported by only two of the principals as a method of informing HS+ students.

Table 2a1. Students Informed About HS+ as Reported by Principal Respondents

In your school, how are students informed about the HS+ program?	N = 20	
	n	%
Administrator	19	95.0
Counselor	19	95.0
Teacher	14	70.0
Announcements	12	60.0
Website	9	45.0
Flyer	6	30.0
ConnectEd	4	20.0
Other: Letter to parents, to student	2	10.0

Note. Total exceeds 100% because respondents could mark more than one response.

- *Student Selection Criteria*. As presented in Table 2a2, all responding principals reported failing a required course for graduation as a criterion for student selection during the 2012–2013 school year. More than one half (n = 13, 65%) cited missing credits required for graduation, and one half (n = 10, 50%) reported a student's inability to fit a class in the regular day schedule as HS+ student selection criteria. Only one principal named students' need to complete the course to be promoted to next grade level, as one of the HS+ selection criteria.

Table 2a2. HS+ Students Selection Criteria Reported by Principal Respondents

Please indicate how students were selected for HS+ during 2012–2013 in your school.	N = 20	
	n	%
Failed a course required for graduation	20	100.0
Missing credit required for graduation	13	65.0
Unable to fit class in schedule	10	50.0
Other: Need the course to be promoted to next grade	1	5.0

Note. Total exceeds 100% because respondents could mark more than one response.

- *Student Enrollment Procedures.* In the survey, principals were asked to indicate the procedures used in their schools to enroll students in HS+ (Table 2a3). Eighteen of the 20 principals reported that the selected HS+ students are contacted and encouraged to enroll. Sixteen principals reported that in their schools, students are encouraged to enroll

in HS+ immediately following a course failure or a loss of credit. According to 10 principals, "Students are required to get a signed form from their parent to enroll in a HS+ class," while another 10 reported, "Enrollment in HS+ is prioritized, so that records of 12th graders are reviewed first." Finally, five principals noted, "Students who are selected are automatically enrolled and then they are informed."

Table 2a3. HS+ Student Enrollment Procedures Reported by Principal Respondents

Please indicate the procedures used in your school to enroll students for HS+ during the 2012-13 school year.	*N* = 20	
	n	%
Students who are selected are contacted and encouraged to enroll	18	90.0
Students are encouraged to enroll in HS+ immediately following a course failure or loss of credit	16	80.0
Students are required to get a signed form from their parent to enroll in a HS+ class	10	50.0
Enrollment in HS+ is prioritized, so that records of 12th graders are reviewed first…	10	50.0
Students who are selected are automatically enrolled and then they are informed.	5	25.0

Note. Total exceeds 100% because respondents could mark more than one response.

- *Alternatives to HS+*. When asked, "What does your school do to help students who need a HS+ class but your school is not offering the course," 17 of 20 principals said that they would send them to a neighboring school. Another 17 reported that they let the students know that they need to go to summer school, while 11 said they would have students double up in the subject the next semester (i.e., take two English courses). Only three principals reported that they offer credit recovery, an online class, or a repeater course. One principal noted that their school regularly offers HS+ classes for all needed courses (Table 2a4).

Table 2a4. Alternatives to HS+ Reported by Principal Respondents

What does your school do to help students who need a HS+ class but your school is not offering the course?	*N* = 20	
	n	%
Send them to a neighboring school	17	85.0
Tell students they need to go to summer school	17	85.0
Have students double up in the subject during the next semester	11	55.0
Has not happened; our school regularly offers HS+ classes for all needed courses	1	5.0
Other: offer credit recovery/online/repeater course	3	15.0

Note. Total exceeds 100% because respondents could mark more than one response.

- *Teacher Selection*. In an open-ended question, principals were asked, "How are HS+ teachers selected (i.e., what are key requirements and considerations for the position)?" Eleven principals responded and provided a variety of HS+ teacher selection criteria including:
  - Willing or motivated to teach HS+ (*n* = 6, 55%)
  - Certified or have subject knowledge (*n* = 4, 36%)
  - Successful or effective (*n* = 3, 27%)
  - Recommended by resource teachers or administrative team (*n* = 2, 18%)

Teachers' Responses. Findings from teachers' survey responses addressing Evaluation Question 2 are summarized below.

- *Teacher Awareness of HS+*. Teachers were asked, "How, or from whom did you find out about the opportunity to teach a HS+ course?" Teachers' responses are summarized in Table 2b1. More than one half of the teachers (*n* = 41, 59%) reported that they found out about HS+ from an "assistant principal or HS+ coordinator," about one third (*n* = 23, 33%) found out through "other teachers," less than one third (*n* = 19, 28%) said that they knew about HS+ because they "taught HS+ previously," or found out (*n* = 17, 25%) via a "staff bulletin or e-mail."

Table 2b1. Teachers' Awareness about the HS+ Program Reported by Teachers

How, or from whom, did you find out about the opportunity to teach a HS+ course?	*N* = 69	
	n	%
Assistant Principal/HS+ Coordinator	41	59.4
Other teacher	23	33.3
Taught previously	19	27.5
Staff bulletin or email	17	24.6
Principal	6	8.7
Website	2	2.9
Flyer	1	1.4
Counselor	0	0.0

Note. Total exceeds 100% because respondents could mark more than one response

Coordinators' Responses. Findings from interviews with coordinators addressing this evaluation question are organized into the following areas: student awareness of HS+, student selection criteria, enrollment processes, courses offered, and recruiting HS+ teachers.

- *Student Awareness of HS+*. Coordinators were asked through interviews how students (and their parents) were informed about HS+. The analyses of the interview data revealed a range of methods including: a) school announcement (school website, the information board outside the school, flyers/posters, and morning announcement); b) Connect-Ed.; c) PTA meeting announcement and parent newsletter; d) list serve; and e) the agenda book.

- *Student Selection Criteria*. In their interviews, all of the coordinators noted that the students selected for HS+ must have failed a course (*n* = 22 of 22 coordinators). Ten of the 22 coordinators further indicated that the students must have failed a core course or a course needed for graduation. Seven of the 22 coordinators noted that they first look for seniors who need the course to graduate. A few other coordinators also said, "There are some special circumstances where a student may be allowed to enroll in a HS+ course for the first time," "the student may have lost credit in a class," and "they may have been allowed to continue with a class under the 15 enrollment requirement."

- *Enrollment Processes*. When describing procedures at their schools, coordinators reported that the counselors primarily handle identifying and registering students. More than half of the coordinators (13 of 22 coordinators) stated that counselors meet with

students to talk about their enrollment in HS+. Less than one half (9 of 22 coordinators) reported that they contact parents about the course through phone or e-mail. Moreover, five coordinators noted that they require a signature or verbal agreement from the parent for the student to enroll in HS+. At some schools (reported by nine coordinators), students are automatically enrolled in HS+ if they fail a course, and most of the coordinators reported that students are then called in to be notified. Seven of the coordinators stated that they must have an agreement from the student before enrolling them in HS+.

- *Courses Offered*. The majority of interviewed coordinators (*n* = 14 of 22, 64%) reported that the "core courses" or courses needed to graduate are offered in HS+; specifically mathematics and English were mentioned most often. Also mentioned, was that it depends on the needs of the students and on teacher availability. Two coordinators noted that they are not able to offer electives, although one would like to see the offerings expand to technology and foreign language, since both are needed for graduation. Three coordinators noted they are able to offer electives, but only two reported that their school is offering electives; one cited technology, and one cited health or foreign language. The majority of coordinators noted that a minimum of 15 students is needed to offer the course (17 of 22).

- *Recruiting HS+ Teachers*. In response to a general question about staffing, many coordinators reported that only teachers certified or highly qualified are hired to teach HS+ (18 of 22). Several coordinators reported difficulties getting teachers for HS+ courses, one mentioned that she has to "charm" teachers to participate, two noted that certified mathematics teachers have been most difficult to get, while two reported that their school could not offer a course because they could not find a teacher for it. One coordinator noted that if a teacher is not certified, then they at least need to have background in the subject, and one reported that they hire special education teachers to meet their needs. When asked to rate the availability of teachers as a challenge to HS+, 13 of 22 coordinators chose, "Very Often" and "Often."

- *Alternatives to HS+*. During the interviews, a question was asked by coordinators to describe "Other ways that HS+ students can recover credits." Three main options were reported by coordinators: Summer school (*n* = 17); double up/re-enroll in course next semester (*n* = 14); and Online Pathway to Graduation (OPTG) (*n* = 7).

Students' Responses. Findings from student surveys addressing this evaluation question are organized in the following areas: awareness of HS+ and reasons to participate in HS+.

- *Awareness of HS+*. Students were asked, "How were you informed about enrolling in HS+?" (Table 2c1). A large majority of students (*n* = 1,251; 87%) reported that they were informed by a "counselor" while only 10% of students (*n* = 145) said that they were informed by a "school administrator" or a "teacher." Less than 10% of students (*n* = 95, 7%) reported "I or parent initiated enrollment." Four percent of students checked the "other" category in the survey. The most frequent sources of communication in the "other" category referred to either being informed by "friend/sibling," "appeared on my schedule," or "got a letter," cited by 26, 14, and 9 students, respectively.

Table 2c1. Students' Awareness of HS+ Reported by Students

How were you informed about enrolling in HS+?	*N* = 1,443	
	n	%
Counselor	1,251	86.7
Administrator	145	10.0
Teacher	137	9.5
I (or parent) initiated enrollment	95	6.6
Other	58	4.0

Note. Total exceeds 100% because respondents could mark more than one response.

Another question in the survey asked, "Did you know about HS+ before you were contacted about enrolling? If so, how?" Students' responses are summarized in Table 2c2. More than one third of the students said that they knew about HS+ from another student or a friend (*n* = 620, 43%), one third (*n* = 476, 33%) heard about it "from a teacher." One fifth of students (*n* = 283, 20%) cited "morning/afternoon announcement," while another one fifth (*n* = 279, 20%) said, "they never heard about it prior to enrolling." The "flyer," "school website," and "other" resources also were reported by a small proportion of students, 6%, 3%, and 4% of students, respectively. The most frequent sources of students' awareness in the "other" category cited by respondents were counselor (*n* = 14) and past experience (*n* = 8).

Table 2c2. Knowledge of HS+ Prior to Enrolling Reported by Students

Did you know about HS+ before you were contacted about enrolling? If so, how?	*N* = 1,429	
	n	%
From another student/Other: friend	620	43.4
From a teacher	476	33.3
Never heard of it prior	283	19.8
Morning/afternoon announcements	279	19.5
Flyer	91	6.4
School website	44	3.1
Connect Ed	13	0.9
Other	52	3.6

Note. Total exceeds 100% because respondents could mark more than one response.

- *Reasons to Participate in HS+*. As shown in Table 2c3, a vast majority of students (*n* = 1,081; 74%) participated in HS+ due to failing a course. While more than one fifth (*n* = 413, 28%) said they needed the course to graduate, about one fifth (*n* = 281, 19%) reported their reason for participation was lost credit in a course. The most frequent reasons that students cited in the "other" category were "credit didn't transfer/from another country/missing credit (*n* = 9)," and "to get ahead/graduate early (*n* = 8)."

Table 2c3. Reasons for Participation in HS+ Reported by Students

	N = 1,453	
Why did you participate in High School Plus?	*n*	%
Failed a course	1081	74.4
Need this course to graduate	413	28.4
Lost credit in a course	281	19.3
Could not fit this course into my schedule	102	7.0
Other	29	2.0

Note. Total exceeds 100% because respondents could mark more than one response.

- *Alternatives to HS+*. In the survey, students were asked, "If HS+ was not offered, what would you do instead?" In response (Table 2c4), nearly one half (*n* = 661, 46%) said they would "take the class at summer school," nearly one third (*n* = 414, 29%) indicated that they would "take the class during the day," and about one quarter of the students (*n* = 320, 22%) reported that they "would not graduate on time."

Table 2c4. Alternatives to HS+ Reported by Students (*N* = 1,431)

		n	%
Alternative to HS+ (*N* = 1,431)	Take the class at summer school	661	46.2
	Take the class during the day	414	28.9
	I would not graduate on time	320	22.4
	Other: Would take another year/Senior year	15	1.0
	Other	21	1.5

Students' responses to the survey question, "If HS+ was not offered, what would you do instead?" are displayed by grade in Table 2c5. Grade 10 students had the highest percentage of respondents indicating that if HS+ was not offered they would take the class at summer school (51%); Grade 12 students had the lowest percentage indicating they would take the class at summer school (32%). On the other hand, Grade 9 students responded in higher percentages than students in other grades that they would take the class during the day (37%). As expected, Grade 12 had the highest percentage of students who reported that "if HS+ was not offered, I would not graduate on time" (46%).

Table 2c5. Students' Responses Regarding Alternatives to HS+ by Grade Level

If HS+ was not offered, what would you do instead?	Grade 9 (*N* = 340)		Grade 10 (*N* = 448)		Grade 11 (*N* = 357)		Grade 12 (*N* = 280)	
	n	%	*n*	%	*n*	%	*n*	%
Take the class at summer school	165	48.5	228	50.9	175	49.0	90	32.1
Take the class during the day	124	36.5	147	32.8	91	25.5	52	18.6
I would not graduate on time	45	13.2	64	14.3	79	22.1	129	46.1
Other	6	1.8	9	2.0	12	3.4	9	3.2

Summary for Formative Evaluation Question 2

To address Evaluation Question 2, the survey responses of principals, teachers, and students, and the interviews of coordinators were examined. Their responses are summarized here, organized by key topics.

Student Notification, Selection Criteria, and Enrollment. Principals reported that students were informed about the HS+ program primarily through administrators and counselors (95%); most students (87%) reported they were informed about the program through a counselor. Teachers (59%) indicated they found out about HS+ teaching opportunities through an assistant principal or HS+ coordinator. Students, who were asked if they knew about HS+ prior to entering the program, said they had heard about the program from another student/friend (43%) or a teacher (33%).

Survey and interview participants from the different groups had similar responses regarding the criteria for taking a HS+ course. All principals reported failure of a required course for graduation as a criterion for student selection, and approximately one half also cited missing required credits for graduation and inability to fit a class into a student's schedule. All HS+ coordinators reported failing a course as the criterion for student selection, with one half specifically noting that the course was needed for graduation. One third of coordinators also explained that they first looked at seniors' needs, and a few coordinators said that there were other special circumstances when a student might need to be enrolled. The majority of students (74%) reported that their reason for taking HS+ was that they had previously failed the course. Other reasons given were that they needed the course to graduate, had lost credit in a course, or could not fit the course into their regular schedule.

Over 80% or more of principal respondents indicated that selected students are contacted and encouraged to enroll, and students who fail a course are encouraged to enroll immediately. HS+ coordinators stated that the counselors primarily handle identifying, contacting, and registering students. At least 25% or more of principals and coordinators indicated that students are automatically enrolled and then notified about their enrollment. One half of the principals and one fourth of coordinators indicated that students are required to get a parent's signature to enroll in HS+.

Alternatives to HS+. In instances where a school is not offering a HS+ course, a large majority of principals (85%) indicated that they would send their students to a neighboring school and/or let the students know they need to go to summer school; more than one half also said the student would take the course the next semester. Nearly two thirds or more of coordinators also mentioned summer school and re-enrolling in a course the following semester; one third also named OPTG. If HS+ was not offered, nearly one half of all students surveyed said they would go to summer school; however, more students in Grade 12 (46%) stated they would not graduate on time and over one third of Grade 9 students stated they would take the class during the day.

Courses Offered. A majority of coordinators (64%) interviewed reported that core courses, specifically mathematics and English, are offered as HS+ classes; but some coordinators also mentioned that it depends on the needs of the students and teacher availability. Four coordinators reported that their school program was not allowed to offer electives, but three

stated they were. The majority of coordinators (17 of 22) noted a minimum of 15 students were needed to offer a class, but some also mentioned, when talking about selection criteria, that they have been allowed to continue with a class under 15.

Teacher Selection. There were a variety of considerations among the 11 principals who responded to the question about how they select HS+ teachers, such as willingness to teach a HS+ class (n = 6), certification or having the needed subject knowledge (n = 4), being a successful or effective teacher (n = 3) or having a recommendation (n = 2). Over three fourths of the interviewed coordinators reported that only teachers certified or highly qualified are hired to teach HS+. Over one half of the HS+ coordinators rated the availability of HS+ teachers as challenging, especially in certain subjects.

Formative Evaluation Question 3

What are the experiences of HS+ students, teachers, and principals pertaining to different aspects of HS+? Does HS+ meet its goals/work?

Data collected from principal, teacher, and student surveys as well as coordinators' interviews are used to provide information for this evaluation question. In this section addressing Evaluation Question 3, survey or interview findings for each group of respondents is reported separately. Following the report of findings for each group, a summary of the data collected from all stakeholders is presented, allowing an examination across the respondent groups.

Principals' Responses. The principals' experiences of HS+, as measured by several survey items, are listed in Table 3a1. The item mean scores for principals' experience ranged from 3.05 (neutral) for the item "The systemwide policies for HS+ work well in this school," to 4.15 (agree) for the item, "The start time of HS+ at my school is convenient."

Table 3a1. Experience of Principals Regarding Various Aspects of HS+ (N = 20)

Indicate how strongly you agree or disagree….	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean* (SD)**
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	
The start time of HS+ at my school is convenient.	7	35.0	10	50.0	2	10.	1	5.0	0	0.0	4.15 (.81)
The student selection process for HS+ works well.	7	35.0	9	45.0	3	15.0	1	5.0	0	0.0	4.10 (.85)
The enrollment process for HS+ works well.	4	20.0	12	60.0	2	10.0	2	10.0	0	0.0	3.90 (.85)
HS+ class attendance is a problem for the majority of students in HS+.	6	30.0	8	40.0	3	15.0	2	10.0	1	5.0	3.80 (1.15)
The systemwide policies for HS+ from central office have been communicated to me clearly.	4	20.0	10	50.0	1	5.0	5	25.0	0	0.0	3.65 (1.09)
The expectations for learning and classwork for students in the HS+ courses are the same as for during the day.[a]	3	15.8	8	42.1	4	21.1	3	15.8	1	5.3	3.47 (1.12)
Standards for grading are the same in the HS+ course as in the course during the day.	4	20.0	8	40.0	2	10.0	5	25.0	1	5.0	3.45 (1.23)
The systemwide policies for HS+ work well in this school.[a]	3	15.8	2	10.5	7	36.8	7	36.8	0	0.0	3.05 (1.08)

*Mean on a 5-point Likert-type scale: 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree.
**SD = Standard Deviation.
[a]N = 19.

The analysis of percentages (Table 3a1) reveals that a large majority of principals strongly agreed or agreed that the start time of HS+ at their school is convenient (n = 17, 85%), the student selection process (n = 16, 80%), and the enrollment process for HS+ works well (n = 16, 80%). More than two thirds strongly agreed or agreed that the systemwide policies for HS+ from central services have been communicated to them clearly (n = 14, 70%) and that HS+ attendance is a problem for the majority of students (n = 14, 70%). More than one half of principals strongly agreed or agreed, "Standards for grading are the same in the HS+ course as the course during the day (n = 12, 60%), and yet nearly one third disagreed or strongly disagreed with this statement. Furthermore, more than one half of the principals also strongly agreed or agreed that, "The expectations for learning and classwork for students in the HS+ classes are the same as during the day" (n = 11, 58%). Only a little more than a fourth of principals (n = 5, 26%) strongly agreed or agreed that the systemwide policies for HS+ work well in their schools, and more than one third disagreed (n = 7, 37%) (Table 3a1).

Student Absence/Attendance. In an open-ended question principals were asked, "What do you think are the reasons for poor student attendance when it occurs?" Thirteen principals commented and nearly half of them (n = 6) reported the reason as, "students having other responsibilities" such as jobs or family or other types of activities. One half of the commenting principals cited lack of students' motivation or interest, while four of them said that, "they generally have attendance issues during the day." Three of the principals also cited "tiredness" or "the long day" as a reason for student attendance related issues.

In another open-ended question principals were asked, "Please describe the procedure, if any, for handling unexcused absences." Ten principals responded to this question. Six of the ten commenting principals noted that someone (teacher, counselor, or administer) meets with students. An equal number of principals (6) reported that the parent is called by someone (teacher, counselor, secretary) or contacted by a letter. Three of those commenting principals noted that the same attendance policy is followed in HS+ classes as the one implemented during the day.

Principals also were asked, "Is a student withdrawn due to their lack of consistent attendance? If so, at what point?" Principals provided a variety of responses (as listed in Table 3a2) to the questions. The most cited response was, "no, they are not withdrawn," as reported by six principals.

Table 3a2. HS+ Students' Withdraw Procedures Reported by Principals

Is a student withdrawn due to their lack of consistent attendance? If so, at what point?	*N* = 19	
	n	%
No, they are not withdrawn	6	31.6
After 3 unexcused absences	1	5.3
After 5 or more unexcused absences	2	10.5
Don't know	2	10.5
Other	8	42.1

Note. Total exceeds 100% because respondents could mark more than one response.

Does the HS+ program work for students? Table 3a3 summarizes the level of agreement associated with the survey items addressing whether or not HS+ works. On average, the mean rating by principals responding to the survey question that it is helpful for students to have HS+ courses at their home school where they know teachers and other students was 4.50 (between agree and strongly agree). Further, the mean rating by principals that HS+ is a good way for students to earn credit for a course that was previously failed was 4.10 (agree), and 4.00 (agree) that HS+ is a good way for students to earn missing credits needed for graduation. The average response for the following statement: "HS+ is meeting the needs of students in our school," was close to neutral (mean = 3.10) with a relatively high standard deviation (SD = 1.17), indicating a large variation among principals' responses.

Table 3a3. Principals' Reponses Regarding Positive Aspects of HS+ (What Worked) (*N* = 20)

Indicate how strongly you agree or disagree….	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean* (SD)**
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	
It is helpful for students to have HS+ courses at their home school where they know teachers and other students.	10	50.0	10	50.0	0	00.0	0	0.00	0	0.0	4.50 (0.51)
HS+ is a good way for students to earn credit for a course that was previously failed.	7	35.0	10	50.0	1	5.0	2	10.0	0	0.0	4.10 (0.91)
HS+ is a good way for students to earn missing credits that are needed for graduation.	7	35.0	8	40.0	3	15.0	2	10.0	0	0.0	4.00 (0.97)
HS+ is meeting the needs of students in our school.	3	15.0	5	25.0	3	15.0	9	45.0	0	0.0	3.10 (1.17)

*Mean on a 5-point Likert-type scale: 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree
**SD = Standard Deviation

Analyses of percentages reveal that all principals (*n* = 20, 100%) strongly agreed or agreed that it is helpful for students to have HS+ courses at their home school where they know teachers and other students. Three fourths or more of principals strongly agreed or agreed that HS+ is a good way for students to earn credit for a course that was previously failed (*n* = 17, 85%) or that HS+ is a good way for students to earn missing credits that are needed for graduation (*n* = 15, 75%). Yet, less than one half of principals (*n* = 8, 40%) agreed that HS+ is meeting the needs of students in their schools (Table 3a3).

Principals were given an opportunity to make additional, open-ended comments in the survey regarding what works well in HS+. Ten of 19 principals provided a variety of comments. The most frequent comments (cited by 6 of the 10 principals) were in regard to the opportunity provided by HS+ as a way for students to earn credit and remain on track to graduate. Three principals commented about the HS+ teachers' commitment, motivation, or the good job they are doing.

Overall Rating of HS+. Principals were asked to rate the overall quality of HS+ (Table 3a4). Slightly more than one half of principals (*n* = 11, 58%) rated the quality as "fair," slightly less than a third (*n* = 6, 32%) as "good," and two (11%) gave a poor rating to the overall quality of HS+.

Table 3a4. Principals' Rating of Overall Quality of HS+

	N = 19	
How would you rate the overall quality of HS+	*n*	%
Excellent	0	0.0
Good	6	31.6
Fair	11	57.9
Poor	2	10.5

Teachers' Responses. A series of statements were provided in the survey to address the teachers' experiences pertaining to HS+ (Table 3b1). On average, responding teachers' mean ratings ranged from 2.96 (neutral) to 4.52 (between agree and strongly agree). Analysis of percentages suggests that all (*n* = 68, 99%) except one strongly agreed or agreed that the start of HS+ at their schools is convenient. A majority of teachers reported that standards for grading are the same in the HS+ course that they teach as those in the course during the day (*n* = 57, 83%), and that they (the teacher) are able to address the needs of individual students in the HS+ classes (*n* = 52, 75%).

More than three fourths of responding teachers agreed with the statements, "There is enough time to cover all the HS+ course material" (*n* = 55, 80%) and "The expectations for learning and classwork for students in the HS+ course is the same as for the course during the day" (*n* = 55, 81%). These are closely followed by about 77% of teachers reporting their agreement with the statements, "I have the support I need to teach HS+" (*n* = 53, 78%) and "HS+ class attendance is a problem for the majority of students in my course" (*n* = 53, 77%). Slightly more than one half (*n* = 35, 52%) strongly agreed or agreed that the student selection process for HS+ works well, while half (*n* = 34, 50%) strongly agreed or agreed that the enrollment process for HS+ works well. Only one third or more of teachers (*n* = 24, 35%) agreed that students take HS+ seriously (Table 3b1).

Table 3b1. Experience of HS+ Reported by Teachers (N = 69)

Indicate how strongly you agree or disagree….	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean** (SD)*
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	
The start time of HS+ at my school is convenient.	37	53.6	31	44.9	1	1.4	0	0.0	0	0.0	4.52 (0.53)
HS+ class attendance is a problem for the majority of students in my course.	32	46.4	21	30.4	10	14.5	6	8.7	0	0.0	4.14 (0.97)
There is enough time to cover all the HS+ course material.	29	42.0	26	37.7	5	7.2	6	8.7	3	4.3	4.04 (1.11)
Standards for grading are the same in the HS+ course I teach as in the course during the day.	20	29.0	37	53.6	5	7.2	5	7.2	2	2.9	3.99 (0.96)
I have the support I need to teach HS+.[a]	17	25.0	36	52.9	12	17.6	3	4.4	0	0.0	3.99 (0.78)
The expectations for learning and classwork for students in the HS+ course is the same as for the course during the day.[a]	20	29.4	35	51.5	6	8.8	5	7.4	2	2.9	3.97 (0.98)
I am able to address the needs of individual students in the HS+ course that I teach.	15	21.7	37	53.6	8	11.6	8	11.6	1	1.4	3.83 (0.95)
The enrollment process for HS+ works well.[a]	11	16.2	23	33.8	23	33.8	10	14.7	1	1.5	3.49 (0.99)
The student selection process for HS+ works well.	11	16.2	24	35.3	19	27.9	11	16.2	3	4.4	3.43 (1.08)
Students take HS+ seriously.	3	4.3	21	30.4	20	29.0	20	29.0	5	7.2	2.96 (1.04)

*Mean on a 5-point Likert-type scale: 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree.
**SD = Standard Deviation.
[a]*N* = 68.

Student Absence/Attendance. In an open-ended question, teachers were asked what procedures exist for handling HS+ students' unexcused absences. Fifty-seven teachers provided a variety of responses. The most frequently cited responses were: a) parents are contacted (*n* = 23); b) administrators or school staff talks with those students (*n* = 23); c) students have the opportunity to make up the missed work (*n* = 13); and d) students are not allowed to make up missed work and receive zero for any work that day (*n* = 7). Teachers reported that parents are "notified" or called by phone (*n* = 7), contacted via personal phone calls by school staff (*n* = 16), or automatic calls or e-mail (*n* = 4) in regard to their children's absences. Nine teachers reported that when parents are contacted, it is often after three absences. A few teachers reported parents are contacted immediately or after two absences (*n* = 3).

Sixty-two teachers provided responses to another open-ended question, "What do you think are the reasons for poor student attendance when it occurs?" A vast majority of responses (*n* = 47) included either students are not interested, motivated, accountable (no consequences), or serious, or students are tired at the end of a long day. Twenty-seven teachers' comments concerned students' other obligations (e.g., parents make appointments, babysitting siblings, jobs, sports). Already existing poor school attendance was cited by 10 of the 62 teachers who commented. The remaining teacher responses covered a variety of infrequent reasons such as, "forget to stay," "don't understand the impact that they won't graduate or that they will have to go to summer school," "sickness," or "lack of parental involvement."

Teachers also were asked, "Is a student withdrawn from HS+ due to their lack of consistent attendance? If so, at what point?" While over one third of teachers (*n* = 25, 36%) reported that students are not withdrawn, about one fourth (*n* = 18, 26%) said students are withdrawn either after three unexcused absences (*n* = 1), four unexcused absences (*n* = 3), or five (or more) unexcused absences (*n* = 14). Eighteen teachers did not know whether HS+ students were withdrawn due to their lack of consistent attendance while eight of them checked the "other" category of the response options providing a variety of infrequent comments (see Table 3b2).

Table 3b2. Withdrawal Practices of HS+ Students Reported by Teachers

Is a student withdrawn from HS+ due to their lack of consistent attendance? If so, at what point?	*N* = 69	
	n	%
No, they are not withdrawn	25	36.2
After 3 unexcused absences	1	1.4
After 4 unexcused absences	3	4.3
After 5 or more unexcused absences	14	20.3
I don't know	18	26.1
Other	8	11.6

Does the HS+ program work for students? Teachers expressed positive experiences regarding a variety of statements addressing different aspects of HS+ (Table 3b3). On average, using a 5-point scale, teachers strongly agreed that it is helpful for students to have HS+ courses at their home school where they know teachers and other students (mean = 4.55); agreed that HS+ is a good way for students to earn credit for a course that was previously failed (mean = 4.38); agreed that HS+ is a good way for students to earn missing credits that are needed for graduation (mean = 4.36); and agreed that HS+ is meeting the needs of students in their school (mean = 4.13). Analyses of percentages reveal that almost all teachers strongly agreed or agreed that it is helpful for students to have HS+ courses at their home school where they know teachers and other students (*n* = 64, 93%). More than three fourths of teachers strongly agreed or agreed that HS+ is a good way for students to earn credit for a course that was previously failed (*n* = 60, 87%) or to earn missing credits that are needed for graduation (*n* = 59, 86%). Finally, 79% (*n* = 53) of teachers reported that HS+ is meeting the needs of students in their schools.

Table 3b3. Teachers' Reponses Regarding Different Aspects of HS+ (What Worked) (*N* = 69)

Indicate how strongly you agree or disagree….	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean* (SD)**
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	
It is helpful for students to have HS+ courses at their home school where they know teachers and other students.	43	62.3	21	30.4	5	7.2	0	0.0	0	0.0	4.55 (0.63)
HS+ is a good way for students to earn credit for a course that was previously failed.	37	53.6	23	33.3	7	10.1	2	2.9	0	0.0	4.38 (0.79)
HS+ is a good way for students to earn missing credits that are needed for graduation.	39	56.5	20	29.0	7	10.1	2	2.9	1	1.4	4.36 (0.89)
HS+ is meeting the needs of students in our school.[a]	27	40.3	26	38.8	10	14.9	4	6.0	0	0.0	4.13 (0.89)

*Mean on a 5-point Likert-type scale: 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree.
**SD = Standard Deviation.
[a]*N* = 67.

Teachers were given an opportunity to make additional, open-ended comments regarding what they think is working well in HS+. Fifty-two teachers provided comments. The most frequent pattern of comments (*n* = 21, 40%) revealed that HS+ is a second chance (a great opportunity) for students to earn credits. The second most frequent pattern of comments (*n* = 18, 35%) suggested that HS+ works for those students who take it seriously, attend the class, and are motivated. Less frequent comments involved the small size of HS+ classes in which students might receive more individual attention (*n* = 13, 25%) and the HS+ time slot as well as the length of class (1.5 hour) (*n* = 8, 15%).

Overall rating of HS+. The overall ratings of the quality of HS+ as reported by teachers are shown in Table 3b4. A majority of responding teachers (*n* = 45, 66%) rated the overall quality of HS+ as "Good," while less than a quarter (*n* = 15, 22%) rated it as "Fair." Furthermore, about 12% (*n* = 8) rated the HS+ quality as "Excellent," and none gave a "Poor" rating.

Table 3b4. Teachers' Ratings of Overall Quality of HS+

How would you rate the overall quality of HS+?	*N* = 68	
	n	%
Excellent	8	11.8
Good	45	66.2
Fair	15	22.1
Poor	0	0.0

Coordinator Responses

HS+ Student Grading. In interviews with HS+ coordinators, all 19 coordinators who responded to grading and reporting questions said that the grading and reporting procedure is the same as during the day; one coordinator noted, however, that they thought the class might be "watered down a bit," and another noted "there is more support offered with the HS+ classes."

Monitoring HS+ Student Attendance. The interview data revealed that in some schools the teacher monitors attendance and calls the student and/or parent if the student is absent several times. In 15 schools the teacher notifies the assistant principal, HS+ coordinator, or counselor to contact the student or parent. Many or all schools use the MCPS message system to contact a student's home when the student has been absent. The counselor or HS+ coordinator calls or meets with students or sometimes with parents, to try to find out why attendance is a problem and to work on issues. In some cases (reported by three coordinators) the student is required to sign a contract agreeing to attend. Coordinators at four schools reported that if students show no improvement in attendance they will be dropped from the course.

Does the HS+ program work for students? All 22 HS+ coordinators interviewed responded to the question, "What aspects of HS+ are working well?" The most frequent responses received from coordinators are summarized below:

- We have great teachers who are managing the curriculum and providing students with the individual attention they need (*n* = 8 of 22 coordinators).
- Because we know the majority of students enrolled in HS+ courses, there are not as many discipline problems…we know these kids and see them all day. Having it at their school provides a comfort level (*n* = 7 of 22 coordinators).
- Time right after school means kids don't have to leave and come back (*n* = 7 of 22 coordinators).
- For students who are motivated…they get their credit and good instruction… (*n* = 4 of 22 coordinators).
- Kids have opportunity to earn the credit for free instead of paying for night school courses or summer school (*n* = 3 of 22 coordinators).
- Food is a big bonus—an incentive (*n* = 3 of 22 coordinators).
- Schools get to self-select courses they need for their students (*n* = 3 of 22 coordinators).

Coordinators also were asked, "What have been the unanticipated outcomes associated with HS+ implementation?" Eighteen of the 22 coordinators noted unanticipated outcomes. The most frequently reported unanticipated outcomes (four coordinators reported each) were the difficulty getting teachers needed to teach the HS+ courses and that students don't take advantage of HS+. Two coordinators noted the difficulty or hours spent by schools to make the program run effectively.

Overall Ratings. Coordinators were asked, "How would you rate the implementation and operation of the HS+ program (e.g., scheduling, enrolling, courses offered, communication)? Of the 21 responding coordinators, 19 rated the implementation as "good" (*n* = 14) or "excellent" (*n* = 5). The rest of the responding coordinators (*n* = 2) gave a fair rating to the implementation of HS+ in their schools. In addition, coordinators were asked, "How would you rate the overall quality of the HS+ program in your school or how would you rate HS+ in terms of its overall worth? Eight coordinators rated the overall quality of HS+ as "good," while only two rated as "excellent." Furthermore, eight rated the HS+ quality as "fair" and three coordinators gave a "poor" rating.

Students' Responses. Students' responses regarding their experiences associated with HS+ were generally positive, as shown in Table 3c1. On average, respondents strongly agreed or agreed with the statements addressing their experiences with HS+ (means range from 3.82 to 4.55). Among respondents, a large majority of students strongly agreed or agreed that HS+ is a good way to earn missing credit (*n* = 1,312; 91%); that the location of HS+ is convenient (*n* = 1,287; 89%); that succeeding in their HS+ course is important for achieving their future goals (*n* = 1,258; 87%); and that expectations for this course are clear (*n* = 1,211; 84%). More than three fourths strongly agreed or agreed with the statements, "My teacher helps me be successful in this course" (*n* = 1,133; 79%) and "My teacher cares about how I am doing in this course" (*n* = 1,111; 78%).

Table 3c1. Experience of HS+ Reported by Students

Indicate how strongly you agree or disagree….	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean* (SD)**
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	
HS+ is a good way to earn missing credit for graduation or earn credit for a course that was previously failed (*N* = 1,435).	960	66.9	352	24.5	89	6.2	15	1.0	19	1.3	4.55 (0.78)
The location of HS+ is convenient for me (*N* = 1,448).	895	61.8	392	27.1	116	8.0	27	1.9	18	1.2	4.46 (0.82)
Succeeding in my HS+ course is important for achieving my future goals (*N* = 1,442).	836	58.0	422	29.3	140	9.7	23	1.6	21	1.5	4.41 (0.84)
Expectations for this course are clear (*N* = 1,440).	696	48.3	515	35.8	180	12.5	33	2.3	16	1.1	4.28 (0.85)
My teacher helps me be successful in this course (*N* = 1,435).	680	47.4	453	31.6	217	15.1	49	3.4	36	2.5	4.18 (0.98)
My teacher cares about how I'm doing in this course (*N* = 1,435).	648	45.2	463	32.3	217	15.1	64	4.5	43	3.0	4.12 (1.02)
Transportation to HS+ is not a problem (answer only if not your home school) (*N* = 948).	433	45.7	276	29.1	153	16.1	42	4.4	44	4.6	4.07 (1.10)
The start time of HS+ is convenient for me (*N* = 1,432).	598	41.8	450	31.4	241	16.8	101	7.1	42	2.9	4.02 (1.06)
Transportation home is not a problem (*N* = 1,422).	612	43.0	400	28.1	242	17	92	6.5	76	5.3	3.97 (1.16)
I was given enough time between learning about my enrollment in HS+ and the first day HS+ started (*N* = 1,437).	481	33.5	527	36.7	256	17.8	106	7.4	67	4.7	3.87 (1.10)
Absences are handled the same as during the day (*N* = 1,407).	455	32.3	488	34.7	282	20.0	114	8.1	68	4.8	3.82 (1.12)

* Mean on a 5-point Likert-type scale: 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree.
**SD = Standard Deviation.

As shown in Table 3c1, at least 70% of the students strongly agreed or agreed that transportation to HS+ (for those not attending their home school) is not a problem (*n* = 709, 75%); that the start time of HS+ is convenient for them (*n* = 1,048; 73%); that transportation home is not a problem (*n* = 1,012; 71%); and finally that they were given enough time between their enrollment in HS+ and the day that HS+ started (*n* = 1,008; 70%). Moreover, 67% strongly agreed or agreed that absences are handled the same as during the day (*n* = 943).

Classroom Experiences. In their current HS+ course as reported in Table 3c2, three fourths (75%) of students reported that they had a different teacher than when they took the class before. nearly two thirds (63%) noted that the HS+ class that they were currently taking was easier than when they took it before, yet about one third (29%) said that the HS+ class difficulty is the same as the one they took before (during the day).

Table 3c2. HS+ Student's Classroom Experiences

		n	%
Teacher status (*N* = 1,021)	1. Yes, same teacher	255	25.0
	2. No, I had a different teacher	766	75.0
Difficulty of class (*N* = 1,137)	Easier than when I took it before, during the day	714	62.8
	The same as when I took it before, during the day	324	28.5
	Harder than when I took it before, during the day	99	8.7

Absence/Attendance. In the survey, students were asked, "Have you had any unexcused absences this semester for HS+?" Students' responses for several response options provided in the survey are summarized in Table 3c3. The most frequent response option checked by 43% (*n* = 609) of students was "Yes, one or two unexcused absences" followed by 26% (*n* = 368) of students citing, "None, no unexcused absences." This was closely followed by 22% (*n* = 310) of students checking the response option, "Yes, about 3–4 unexcused absences."

Table 3c3. Students' Responses Regarding Unexcused Absences in HS+

	N = 1,433	
Have you had any unexcused absences this semester for HS+?	*n*	%
None, No unexcused absences	368	25.7
Yes, 1 or 2 unexcused absences	609	42.5
Yes, about 3–4 unexcused absences	310	21.6
Yes, about 5–8 unexcused absences	98	6.8
Yes, more than 8 unexcused absences	48	3.3

An additional survey question asked, "If you had unexcused absences, what were the reasons?" Students were asked to check all the response options that were applicable. The most frequent responses were: "I was needed at home" or "family emergency," cited by 44% (*n* = 453); "I did not feel good," cited by 42% (*n* = 441); "tired after the long day," cited by 27% (*n* = 282). A relatively low percentage of students said they did not want to go (*n* = 184, 18%) or had a job commitment (*n* = 166, 16%). About 14% of students (*n* = 143) checked the "other" category and cited, "had an appointment" (*n* = 39, 4%), "wasn't aware of the start day/my enrollment" (*n* = 23, 2%), "sport or activity commitment" (*n* = 18, 2%), and a variety of less frequent reasons (Table 3c4).

Table 3c4. Reasons for Unexcused Absences

If you had unexcused absences, what were the reasons?	*N* = 1,042 *n*	%
I was needed at home or family emergency	453	43.5
I didn't feel good	441	42.3
Tired after the long day	282	27.1
I didn't want to go	184	17.7
Job commitment	166	15.9
Other	143	13.7

Note. Total exceeds 100% because respondents could mark more than one response.

Students were then asked, "If you had unexcused absences, did any of the following occur?" Again, students were asked to check all the response options that were applicable. As shown in Table 3c5, nearly 44% (*n* = 509) cited, "my teacher spoke with me," about 28% (*n* = 324) reported, "nothing was done," and 22% (*n* = 256) indicated, "my parents were contacted." Moreover, about 16% (*n* = 187) recorded, "my counselor spoke with me," and 11% (*n* = 130) indicated, "I was warned about being withdrawn from HS+." A low percentage of students reported that an administrator spoke to them (*n* = 110, 10%) or that a recorded message was sent home (*n* = 77, 7%).

Table 3c5. What Happened After Unexcused Absences

If you had unexcused absences, did any of the following occur?	*N* =1,162 *n*	%
My teacher spoke with me.	509	43.8
Nothing was done.	324	27.9
My parent(s) were contacted.	256	22.0
My counselor spoke with me.	187	16.1
I was warned about being withdrawn from HS+.	130	11.2
An administrator spoke with me.	110	9.5
A ConnectEd (recorded message) was sent home.	77	6.6
Other: letter sent home.	9	0.8
Other.	13	1.1

Note. Respondents could give more than one comment, thus percentages may not add to 100.

Does the HS+ program work for students? Via a closed-end question, students also were asked "What do you like about HS+?" Several response options were provided to students and they could choose as many responses as applied to their experiences. Students provided a variety of responses as summarized in Table 3c6. The majority of respondents indicated the following response options: "HS+ is a way for me to get credits for a course" (83%) and "It is free" (69%). About a half (51%) selected, "the teacher," less than a third (32%) noted "the location," one fourth (25%) chose, "the format of the class (i.e., class size, how the class is run)," and less than one fourth (21%) noted, "the other students." Eighteen percent of the students liked "The start time" and 16% checked, "that I get free food." The rest of the students' responses were less frequent as shown in Table 3c6.

Table 3c6. Students' Responses Regarding What They Liked About HS+

What do you like about HS+?	*N* =1,400 *n*	%
A way for me to get credit for a course	1,163	83.1
That it is free	968	69.1
The teacher	713	50.9
The location	441	31.5
The format of the class (i.e., class size, how the class is run)	355	25.4
The other students in the class	292	20.9
The start time	258	18.4
That I get free food (snack or meal)	227	16.2
HS+ staff other than the teacher	92	6.6
10 Other: Helps me to graduate	16	1.1
Other: It's easier	9	0.6
Other: No summer school	5	0.4
Other	41	2.9

Note. Total exceeds 100% because respondents could mark more than one response.

Overall Rating of HS+. About 81% of students agreed or strongly agreed with the statement, "I would recommend a HS+ class to friends if they failed a class." Furthermore, 73% of students agreed or strongly agreed with the statement, "Overall, I am satisfied with my experience in HS+," while 19% of students had a neutral attitude for the same statements (Table 3c7). More than two thirds (68%) of students said, "HS+ helps me learn better than the traditional course during the school day," while 22% were neutral in their response.

Table 3c7. HS+ Ratings Reported by Students

Indicate how strongly you agree or disagree….	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean* (SD)**
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	
I would recommend a HS+ class to friends if they failed a class (*N* = 1,441).	738	51.2	431	29.9	170	11.8	46	3.2	56	3.9	4.21 (1.03)
Overall, I am satisfied with my experience in HS+ (*N* = 1,441).	573	39.8	480	33.3	273	18.9	67	4.6	48	3.3	4.02 (1.04)
HS+ helps me learn better than the traditional course during the school day (*N* = 1,440).	574	39.9	399	27.7	321	22.3	93	6.5	53	3.7	3.94 (1.10)

*Mean on a 5-point Likert-type scale: 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree.
**SD = Standard Deviation.

Summary for Formative Evaluation Question 3

To address Evaluation Question 3, the perceptions of principals, teachers, and students were gathered through surveys, and coordinators were interviewed to elicit their experiences with HS+. Their responses are summarized here, organized by the key topics covered.

Program Administration and Systemwide Policies. A majority of the principals (85%), nearly three fourths of the students, and nearly all teachers agreed that the start time for HS+ is convenient. Three fourths of the students agreed that transportation to HS+ and home is not a problem; about 10% disagreed. Over three fourths of the principals and about one half of

teachers agreed that the student selection process and the enrollment process works well. About one fourth of principals agreed that systemwide policies work well for their school and more than one third disagreed. Furthermore, although 70% of principals agreed that systemwide policies have been clearly communicated, one fourth disagreed.

Class Attendance. Over two thirds of principals and three fourths of teachers agreed that attendance is a problem for the majority of students. A variety of ways, as reported by HS+ coordinators in 15 of 22 schools, are used to follow up with students not attending class. Schools' methods ranged from teachers talking to students about not attending class to staff calling home to talk to parents. Three coordinators indicated that a student having attendance problems is required to sign a contract agreeing to attend class in their school. In addition, four coordinators and three principals and about one fourth of teachers, reported that students are dropped from HS+ classes due to lack of attendance.

A variety of reasons were given by principals for students not attending HS+, ranging from students' lack of motivation and having existing attendance issues to other responsibilities such as jobs, families, and other activities. Students also reported a variety of reasons with the most common being responsibilities at home and tired or not feeling well.

Standards for Grading. More than one half of principals agreed (and one fourth or more disagreed) that standards for grading are the same as during the day. Eighty-three percent of teachers reported that standards for grading are the same. All HS+ coordinators (n = 19) who responded to the question about grading and reporting for the program said it was the same as during the day, although one coordinator stated they thought the classes might be "watered down." Nearly two thirds of students reported that their HS+ class was easier than when they took it before, yet about one third said the level of difficulty was the same.

Expectations for Learning. More than one half of principals and more than three fourths of teachers agreed that the expectations for learning and classwork were the same as during the day. Eighty-seven percent of students agreed that succeeding in their course is important for achieving their goals. However, only 35% of teachers agreed that students take HS+ seriously.

Success of Program. Overall, at least 80% of principals, teachers, and students agreed that HS+ is a good way for students to earn missing credits and earn credits for a failed course. However, there was a large variation in agreement among principals about whether HS+ is meeting the needs of their students (40% agreed, 45% disagreed, and 15% were neutral). Over three fourths of the teachers, though, agreed that HS+ is meeting the needs of the students. More than one half of principals rated the overall quality of HS+ as "fair" and less than one third as "good" in a scale which also included excellent and poor. Teachers were more positive, with over three fourths rating the program "good" or "excellent" and less than one fourth saying "fair." Coordinators were split between good and fair with a few coordinators indicating "excellent" and "poor." More than 70% of the students reported that they would recommend HS+ and that they were satisfied with their experience. About two thirds of student respondents agreed that it helped them learn better than the traditional course.

Other Comments. Many teachers (21 of 52) went on to comment that HS+ provides a second chance and a great opportunity for students and that it works for those students who take it seriously and attend class (18). Several coordinators (4 of 18) commented that an unanticipated

challenge was the difficulty schools had getting teachers and that there are students who don't take advantage of the program. More than one third commented that they have great teachers and that it's good to have the program at the home school immediately after school ends; three principals also commented that the teachers are committed and motivated. One half of students reported that they liked their HS+ teacher, and over one half liked that it was free.

Formative Evaluation Question 4

What are the challenges to High School Plus implementation?

Data collected from principal and teacher surveys as well as coordinators' interviews are used to provide information for this evaluation question. In this section addressing Evaluation Question 4, survey or interview findings for each group of respondents are reported separately. Following the report of findings for each group, a summary of the data collected from all stakeholders is presented, allowing an examination across the respondent groups.

Principals' Responses. Several statements in the principal survey addressed potential challenges to implementation of HS+ (Table 4a1). Principals' average responses on those statements ranged from 2.6 to 3.4 on a 4-point scale (1 = not at all to 4 = often). Further analyses of principals' survey data revealed that the most cited potential challenges (those rated somewhat often or often) for implementing HS+ were meeting the requirement of having a minimum of 15 students to form a class (n = 16, 84%); students are not motivated to succeed in the HS+ course (n = 15, 79%); HS+ students do not attend the class regularly (n = 15, 83%); and transportation of HS+ students to or from other schools when a course is not offered in the home school (n = 13, 72%). Moreover, about two thirds of principals cited other potential challenges such as students are not motivated to enroll in HS+ (n = 13, 68%) or having to recruit teachers certified in the subjects for HS+ classes (n = 16, 63%). More than one half of principals (n = 10, 53%) cited lack of parental support for student participation and transportation to students' home after the HS+ class as potential challenges to HS+ classes.

Table 4a1. HS+ Potential Challenges Reported by Principals (*N* = 19)

How often do the following potential challenges occur in HS+ classes in your school?	Often		Somewhat Often		Not Very Often		Not at All		Mean (SD)**
	n	%	*n*	%	*n*	%	*n*	%	
HS+ students do not attend the class regularly.[a]	10	55.6	5	27.8	3	16.7	0	0.0	3.39 (0.78)
Meeting the requirement of having a minimum of 15 students to form a class.	11	57.9	5	26.3	2	10.5	1	5.3	3.37 (0.90)
Recruiting teachers certified in the subjects for HS+ classes.	11	57.9	1	5.3	7	36.8	0	0.0	3.21 (0.98)
Students are not motivated to succeed in the HS+ course.	6	31.6	9	47.4	4	21.1	0	0.0	3.11 (0.74)
Transportation of HS+ students to or from other schools when course is not offered in home school.[a]	8	44.4	5	27.8	3	16.7	2	11.1	3.06 (1.06)
Getting substitute teachers for HS+ classes.	7	36.8	6	31.6	5	26.3	1	5.3	3.00 (0.94)
Students are not motivated to enroll in HS+.	5	26.3	8	42.1	6	31.6	0	0.0	2.95 (0.78)
Transportation to students' home after the HS+ class.	5	26.3	5	26.3	5	26.3	4	21.1	2.58 (1.12)
Lack of parental support for student's participation.	3	15.8	7	36.8	7	36.8	2	10.5	2.58 (0.90)

*Mean on a 5-point Likert-type scale: 1 = Not at all, 2 = Not very often, 3 = Somewhat often, 4 = Often.
**SD = Standard Deviation.
[a]*N* = 18.

Teachers' Responses. The teacher survey also included several statements addressing potential challenges to implementation of HS+ (Table 4b1). The mean ratings for potential challenges identified by teachers ranged from 2.9 to 3.4 (on a 4-point scale, with 1 = not at all and 4 = often). The statement, "HS+ students do not attend the class regularly," had a mean score closer to often (mean = 3.4; SD = 0.73) than the other items. Teachers reported that the following potential challenges occur in HS+ classes often or somewhat often: "HS+ students do not attend the class regularly," "Lack of parental support for student's participation," "Students are not motivated to enroll in HS+" (cited by 88%, 76%, and 71% of respondents, respectively).

Table 4b1. Challenges of HS+ reported by Teachers (*N* = 68)

How often do the following potential challenges occur in HS+ class?	Often		Somewhat Often		Not Very Often		Not at All		Mean* (SD)**
	n	%	*n*	%	*n*	%	*n*	%	
HS+ students do not attend the class regularly.	34	50.0	26	38.2	7	10.3	1	1.5	3.37 (0.73)
Lack of parental support for student's participation.	23	33.8	29	42.6	14	20.6	2	2.9	3.07 (0.82)
Students are not motivated to enroll in HS+.	18	26.5	30	44.1	17	25.0	3	4.4	2.93 (0.83)

*Mean on a 5-point Likert-type scale: 1 = Not at all, 2 = Not very often, 3 = Somewhat often, 4 = Often.
**SD = Standard Deviation.

Coordinators' Responses. Coordinators were given a list of challenges associated with implementation of HS+ and were asked to rate how often they encounter those challenges in their schools. The challenge rated with the greatest frequency was "irregular student attendance," with 11 of 21 responding coordinators indicating that it was "very often" a challenge. The rest of the coordinators said that irregular student attendance is often (n = 1), sometimes (n = 8), or not at all (n = 1) a challenge to HS+ implementation. The "availability of teachers" was cited by 20 responding coordinators as very often (n = 7), often (n = 6), or sometimes (n = 7) a challenge to HS+ implementation. Another frequent challenge reported by coordinators was "insufficient number of students, less than 15, to form a HS+ class." This stated challenge to implementation of HS+ was rated by coordinators as very often (n = 4), often (n = 5), sometimes (n = 9), or not all (n = 3) as a problem in their schools. Transportation was reported by most coordinators (n = 17) as "not at all" a challenge, yet four coordinators indicated that transportation of HS+ students is sometimes a challenge. While 18 coordinators reported that scheduling HS+ courses and logistics are "not at all" a challenge in their schools, two coordinators said that scheduling and logistics "often" are a challenge.

Coordinators also were asked to name other issues that were a challenge in the implementation of HS+. Examples of issues reported by at least two coordinators are:

- Discipline/behavior issues
- Teacher related issues
- Buy-in from students, student interest
- Conflict with other after-school commitment

Among coordinators who cited teacher related challenges, a variety comments such as the following were offered:

- Certain subjects, such as math, English, or social studies, are difficult to recruit for.
- Teachers are reluctant to do the program because kids don't come.
- It is hard to recruit teachers because teachers don't want to add another period to their day. Handing them a class of 15 students with attendance problems, behavioral issues, etc. will not attract them.
- Hiring teachers is hard because teachers have worked with these kids to get them through the class the first time and not been successful.

When asked, "What have been the unanticipated outcomes associated with HS+ implementation," 18 of 22 coordinators provided a variety of unanticipated outcomes. The most frequently reported unanticipated outcomes (each cited by four coordinators) were the difficulty getting the teachers needed to teach the HS+ courses and students don't take advantage of HS+ or drop out. Two coordinators noted the difficulty or hours involved in making the HS+ program run effectively as an unanticipated outcome.

Summary for Formative Evaluation Question 4

Most potential challenges put forth to principals, teachers, and coordinators were found to be at least somewhat of a challenge by at least one half of those asked. However, the biggest challenges identified were student attendance, recruiting teachers, and meeting the minimum class requirement of 15 students.

Attendance. Over 80% of principals and teachers said that students often do not attend class regularly, and over one half of coordinators said irregular student attendance was often a challenge. This coincides with the finding in Evaluation Question 3 that a large majority of principals and teachers agreed that attendance is a problem for the majority of students.

Minimum Classroom Requirement. The requirement of having 15 students to form a class was cited by over 80% of principals as often being a challenge and by 9 of 21 responding coordinators as being a challenge. The same number of coordinators also said this problem was "sometimes" a challenge.

Teacher Availability. More than one half of coordinators and principals cited the availability of teachers for HS+ as often being a challenge. Four coordinators also named this as an unanticipated outcome and offered a variety of reasons why hiring teachers is hard.

Transportation. Seventeen coordinators stated that transportation was not a challenge, and yet four said it was sometimes a challenge. More than two thirds of principals rated transportation to other schools for HS+ as often or somewhat often a challenge, and one half said transportation home was often a challenge. As cited under Evaluation Question 3, the large majority of students agreed that transportation to HS+ and home is not a problem; about 10% disagreed.

Formative Evaluation Question 5

What recommendations for improvements are offered by stakeholders?

Data collected from principal and teacher surveys as well as coordinators' interviews are used to provide information for Evaluation Question 5. In this section, survey or interview findings for each group of respondents is reported separately. Following the report of findings for each group, a summary of the data collected from all stakeholders is presented, allowing an examination across the respondent groups.

Principals' Responses. The survey provided a list of options that might be considered for implementation in HS+; principals were asked to rate how much they would like to see each of the options implemented. Table 5a1 provides a summary of principals' responses. A vast majority of principals (n = 15, 83%) definitely or probably would like to see students charged a fee for HS+ (up to $50 but free for FARMS students). Furthermore, more than one half (n = 11, 61%) responded that they would definitely or probably like to see recycled allocation of unused teacher spots to schools that need the teacher allocations.

In some areas, principals expressed negative or neutral opinions. While about one half of principals (n = 8, 47%) definitely or probably would like to adjust substitute's pay to equal their regular teacher's pay, seven principals (41%) were neutral about applying the adjustment. Furthermore, about two thirds of principals indicated they would probably or definitely not like to see a change in teacher pay to a stipend system (n = 12, 67%) or see the HS+ courses offered only to 11th and 12th graders (n = 12, 67%).

Slightly more than half of responding principals (n = 10, 53%) checked the "neutral" response for the item, "Make the HS+ start time later." More than a third of the responding principals (n = 7, 39%) expressed a neutral opinion for the following items: recycle allocation of unused

teacher spots to schools that need the teacher allocations, equalize teacher's hourly pay for HS+, and rotate HS+ course availability each school year to a different school within the cluster. Furthermore, while 33% of principals (n = 6) would like to see the following option: "Once all students who need to retake the course to earn credit have enrolled, allow enrollment of students who want to take the course for the first time credit," a larger percentage (n = 8, 44%) would (probably or definitely) not like to see the option implemented, and about one fifth (n = 4, 22%) were neutral (Table 5a1).

Table 5a1. Level of Desirability of Suggested Options by Principals (N = 19)

Please rate how much you would like to see the following options implemented:	Definitely would like to see		Probably would like to see		Neutral		Probably would not like to see		Definitely would not like to see	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Charge a fee for HS+ (up to $50 but free for FARMS students).[a]	10	55.6	5	27.8	2	11.1	1	5.6	0	0.0
Recycle allocation of unused teacher spots to schools that need the teacher allocations.[a]	5	27.8	6	33.3	7	38.9	0	0.0	0	0.0
Adjust substitute's pay to equal their regular teacher pay.[b]	5	29.4	3	17.6	7	41.2	1	5.9	1	5.9
Once all students who need to retake the course to earn credit have enrolled, allow enrollment of students who want to take the course for the first time credit.[a]	2	11.1	4	22.2	4	22.2	6	33.3	2	11.1
Equalize teacher's hourly pay for HS+.[a]	5	27.8	0	0.0	7	38.9	1	5.6	5	27.8
Rotate HS+ course availability each school year to a different school within a cluster.[a]	1	5.6	3	16.7	7	38.9	3	16.7	4	22.2
Offer HS+ courses only to 11th and 12th graders.[a]	0	0.0	3	16.7	3	16.7	5	27.8	7	38.9
Make the HS+ start time later.	2	10.5	0	0.0	10	52.6	4	21.1	3	15.8
Change teacher pay to a stipend system.[a]	0	0.0	1	5.6	5	27.8	2	11.1	10	55.6

[a] N = 18.
[b] N = 17.

In the survey, principals were asked, "Would you recommend that HS+ be implemented next year?" Several closed-ended statements, as shown in Table 5a2, were provided to principals to capture their response to the stated question. The highest rated statement by principals was, "In addition to HS+, offer another program for students to earn credit (i.e., evening, regional, Saturday, online)" (n = 6, 35%) followed by, "Continue the current after-school program, but with changes" (n = 5, 29%). These were closely followed by the statement, "Replace HS+ with a different program (i.e., evening, regional, Saturday, online)" cited by four principals (24%), and continue the program as currently implemented (n = 2, 12%).

Table 5a2. Recommendation for HS+ Next Year Reported by Principals

Would you recommend that HS+ be implemented next year?	N = 17	
	n	%
Yes, continue the program as currently implemented.	2	11.8
Continue the current after-school program, but with changes.	5	29.4
Replace HS+ with a different program (i.e. evening, regional, Saturday, online)	4	23.5
In addition to HS+, offer another program for students to earn credit (i.e., evening, regional, Saturday, online).	6	35.3

In an open-ended question, principals were asked, "What are other options that you believe are effective or could be effective for students to earn credit or catch up with graduation requirements?" Nine principals provided comments. Seven comments were related to online learning (see the following verbatim comments).

- Online courses should be used in MCPS (comments from seven principals).
- Be very selective, but offer credit recovery on a case-by-case basis for seniors only. This would require extra staffing but it's during the school day when we have more control of the kids.
- Offer HS+ at Montgomery College—get kids on the college campus to remediate the courses and eventually take college courses. A discretionary fund that can be used for students' incentives and field trips. Lower the student/teacher ratio.

Teachers' Responses. Like principals, teachers were provided a list of options to be implemented in HS+ and were asked to indicate how much they would like to see each one implemented in their school (Table 5b1).

Table 5b1. Level of Desirability of Suggested Options by Teachers (*N* = 67)

Please rate how much you would like to see the following options implemented:	Definitely would like to see		Probably would like to see		Neutral		Probably would not like to see		Definitely would not like to see	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Charge a fee for HS+ (up to $50 but free for FARMS).	24	35.8	16	23.9	21	31.3	2	3.0	4	6.0
Offer HS+ courses only to 11th and 12th graders.	16	23.9	20	29.9	13	19.4	11	16.4	7	10.4
Once all students who need to retake the course to earn credit have enrolled, allow enrollment of students who want to take the course for the first time credit.	13	19.4	17	25.4	14	20.9	10	14.9	13	19.4
Equalize teacher's hourly pay for HS+.[a]	14	21.9	6	9.4	19	29.7	10	15.6	15	23.4
Change teacher pay to a stipend system.	3	4.5	6	9.0	18	26.9	13	19.4	27	40.3
Rotate HS+ course availability each school year to a different school within a cluster.[b]	2	3.0	3	4.5	14	21.2	12	18.2	35	53.0
Make the HS+ start time later.	3	4.5	1	1.5	10	14.9	12	17.9	41	61.2

[a] *N* = 64.
[b] *N* = 66.

A high percentage of teachers (*n* = 53, 79%) indicated they would probably or definitely *not* like to see HS+ start at a later time. More than two thirds of teachers (*n* = 47, 71%) would not want (probably or definitely) rotating HS+ course availability each school year to a different school within a cluster; one fifth of teachers (*n* = 14, 21%) expressed a neutral opinion. The majority of teachers (*n* = 40, 60%) indicated they probably or definitely would not like to change teacher's pay to a stipend system. Responding teachers were fairly evenly divided between definitely or probably would like (*n* = 20, 31%) and probably or definitely would not like (*n* = 25, 39%) the equalization of HS+ teachers' pay. In addition, less than a third of teachers (*n* = 19, 30%) were neutral in their rating of the equalized hourly pay statement.

The majority of teachers would like to see (definitely or probably) the HS+ courses offered only to 11th and 12th graders (*n* = 36, 54%). Teachers probably or definitely would like to see (*n* = 40, 60%) students charged a fee for HS+ (up to $50 but free for FARMS students).

While 45% of teachers (*n* = 30) would like to see the following option: "Once all students who need to retake the course to earn credit have enrolled, allow enrollment of students who want to take the course for first time credit," one third of teachers (*n* = 23, 34%) indicated they would not like (ranging from probably to definitely) the option implemented (Table 5b2).

In an open-ended question, teachers were asked, "Based on your experience, what do you think needs to be changed or improved in HS+?" Forty-eight teachers provided suggestions or improvements for HS+, as shown in Table 5b2. Teachers provided attendance related comments (*n* = 15, 31%), recommended charging a fee (*n* = 10, 21%), or indicated allowing only those students to sign up who are interested in HS+ and not automatically signing students up (*n* = 10, 21%).

Table 5b2. Suggestions for changes or improvements to HS+ Reported by Teachers (*N* = 48)

Open Ended Question: Based on your experience, what do you think needs to be changed or improved in HS+?	*N* = 48	
	n	%
Attendance needs to be enforced/looked into/drop after certain number missed classes	15	31.3
Charge a fee	10	20.8
Allow only those interested/must show attempt/have contract/don't automatically sign up	10	20.8
Limit class number/smaller class sizes	4	8.3
Hold more often + shorter classes	4	8.3
More communication to students/stronger orientation/earlier notification/more counselor involvement	4	8.3
Provide snack/food	3	6.3
More security (for those outside of HS+ class)	3	6.3
Adjust curriculum/curriculum resource to standardize	3	6.3
Other (contains comments with counts of less than 2)	13	27.1

Note. Total exceeds 100% because respondents could mark more than one response.

Teachers were then asked, "Would you recommend that HS+ be implemented next year?" Several closed-ended statements, as shown in Table 5b3, were provided to teachers to capture their response to the stated question. Half of the teachers who responded to the survey indicated "yes, continue the program as currently implemented" (*n* = 34, 50%), followed by "continue the current after-school program, but with changes" (*n* = 29, 43%). Only four teachers (6%) recommended that, "in addition to HS+, offer another program for students to earn credit (i.e., evening, regional, Saturday, online)." The statement, "replace HS+ with a different program (i.e., evening, regional, Saturday, online)," was cited by only one teacher (2%).

Table 5b3. Recommendation for HS+ Next Year Reported by Teachers

Would you recommend that HS+ be implemented next year?	*N* = 68	
	n	%
Yes, continue the program as currently implemented.	34	50.0
Continue the current after-school program, but with changes.	29	42.6
Replace HS+ with a different program (i.e. evening, regional, Saturday, online).	1	1.5
In addition to HS+, offer another program for students to earn credit (i.e. evening, regional, Saturday, online).	4	5.9

Coordinators' Responses. Coordinators were asked, "What types of additional supports would increase the HS+ program's effectiveness?" The support or change that most coordinators endorsed was to reduce the number of students required for schools to offer a HS+ course (15 of 22 coordinators). Nine coordinators indicated that recruiting more teachers to teach HS+ would increase the program's effectiveness. Among those other supports named, three suggested sharing allocations—if one school doesn't use all their allocated courses, let another school use it. Also, three suggested compiling a list (or pool) of teachers in the cluster that schools could draw from.

Of those who would like to see a reduction in the number of students required for offering a course, some comments were: "because of the less than 15 rule, schools that can't offer a course send students to them and those schools get turned into a dumping ground;" "reducing class size could help with two problems…these kids need more support in class with the material to be covered and teachers would be more willing to teach a class if it didn't have so many students;" "just use the formula – the allotment of classes to be offered by one school, and then we run it;" "no one is purposely not enrolling kids;" "allow a minimum of 12;" "allow a minimum of 10." For those who would like support with recruiting more HS+ teachers, some comments given were: "Provide a central list of available teachers;" "Offer financial incentive;" or "Offer some kind of incentive."

Coordinators also were asked, "Do you think a student should pay for enrollment in a HS+ course?" Six coordinators responded "no" to this question, although one added "if it's the only way to save HS+ then yes," and another noted, "maybe a fee should be charged if it's the student's second or third time." Sixteen coordinators responded "yes," with many of them offering specific suggestion such as: "it should be less than summer school" (*n* = 6); "it should be a nominal fee" (*n* = 5); or "it should be $50" (*n* = 5). One even suggested that part of the fee be given back after they've attended and taken the final exam. Examples of comments in favor of charging a fee for HS+ are: "they would have more of a commitment;" "more incentive;" "for ownership and buy-in….students needed to feel it was not just being handed to them;" " when people get something for free they don't appreciate it…they got a free ride the first time." Examples of comments against charging a fee included: "we offer a free public education in this country so we should support students who need help without charging them;" "I think we would lose what kids we have;" and "not if it's an extension of day school."

Suggestions for Improvement of HS+ Program. Some of the suggestions provided by coordinators had been covered in previous questions (e.g., charge a fee for students, adjust start time or make time flexible, fewer students required for course). Other suggestions from coordinators included:

- Organize by clusters; locate HS+ courses at a central location; make HS+ like regional summer school; select a HS+ school in each cluster (some say at night/later time) (*n* = 6).
- Adjust when [registration] paperwork is due (*n* = 3).
- Offer teacher stipend/equalize teacher pay/substitutes same pay (*n*=3); provide stipend for coordinator.
- Offer online course(s) (*n* = 3).
- Offer HS courses/credit through existing Saturday school (*n* = 2).
- Schools need to share best practices and courses being offered (*n* = 1).
- Provide incentives for student attendance (*n* = 1).

Finally, coordinators were asked, "Would you recommend continuation of the HS+ program?" Fifteen coordinators interviewed said "yes," while five did not recommend continuation. The following are examples of the comments provided by those who recommended HS+:

- This population can't afford other options (and other references to free of charge).
- Easier for transportation because kids at home school.
- Students can graduate on schedule.
- Frees up summer schedule so students can work.
- Allows flexibility for scheduling classes during the day.
- Beneficial for students who have fallen behind/students benefit from it.
- I don't know what kids at our school would do without it.

The following are examples of the comments provided by those who did not recommended HS+:

- We are not able to offer the classes we need…. the program needs to be overhauled…. We need to find a way to serve these kids.
- Kids are not paying; they are not held accountable.
- Teachers are making adjustments—additional assignments or retake quizzes.
- Currently a misuse of resources—kids are not coming to class and passing.
- Spreads kids across the county; some schools can have classes and some can't.

Two coordinators were not sure in their responses and commented, "I would hate to see it eliminated for those who come and it works. But we need an alternative for the others. Maybe night school or a different schedule," and "charge a fee—parents paying for it might make them pay attention—give a refund if they come."

Summary for Formative Evaluation Question 5

To address Evaluation Question 5, the survey responses of principals and teachers, and interviews with HS+ coordinators were examined. Their responses are summarized here, organized by the key topics covered.

HS+ Fee. A majority of principals (83%) and teachers (60%) would like to see students (not FARMS students) charged up to a $50 fee for HS+. This was also one of the top suggestions submitted by teachers. Three fourths of the coordinators replied that a fee should be charged, but it should be less than summer school, nominal or under $50. Those coordinators went on to say that a fee would create more commitment and more incentive for students. One suggestion was

to refund part of the fee after the student attended the classes and took the final exam. There were six coordinators who would not like to charge a fee.

Eligibility for HS+. Less than one fifth of principals and over one half of teachers would like to see HS+ only offered to Grades 11 and 12. A couple of coordinators offered this suggestion as an unaided response to an open-ended question.

Principals and teachers had mixed opinions about allowing first-time course takers to enroll in classes not filled by HS+ students. One third of principals would like to see this change implemented, and 45% of the teachers responded favorably. A couple of coordinators offered this suggestion unaided, but suggested it be limited to five students being allowed in a class.

Availability of Courses and Teacher Positions. Principals were split on the issue of rotating HS+ courses to different schools each year, with slightly less (22%) wanting to see this option implemented and the remaining principals equally split between not wanting this option and being neutral. The majority of teachers (71%) did not want to see courses rotated to different schools within a cluster each year. Six HS+ coordinators made this suggestion or related suggestions such as organizing locations by cluster or at a central location.

Over one half (61%) of principals would like to see recycling of the allocation of unused HS+ teacher positions to schools that need the teacher allocations, with the rest being neutral on the issue. Three coordinators suggested sharing allocations—if one school doesn't use all their allocated courses (i.e., also teacher spots), then let another school use it.

HS+ Teacher Pay. Principals and teachers were evenly divided between wanting and not wanting to see teacher's hourly pay equalized for HS+, with about one third being neutral. Furthermore, two thirds of principals and just about two thirds of teachers would not like to change teacher pay to a stipend system. Nearly one half of HS+ principals would like to see substitute pay equal to their regular teacher's pay; 40% were neutral on the issue. A few coordinators had made these stipend and substitute pay suggestions unaided to help schools with the difficulty of finding substitutes for HS+ classes.

Continuation of HS+. Over one third of principals (35%) would like to see another program offered in addition to HS+ and almost one third (29%) would like to continue with the HS+ program, but with changes. Two principals (12%) would like to see HS+ continue as it is currently implemented. One half of the teachers would like to see HS+ continue as is, and 43% would like it continued but with changes. Fifteen coordinators said in interviews that they would recommend the continuation of the program with a couple saying that they were unsure because they would hate for it to be eliminated for those students who benefit. Five coordinators did not recommend it's continuation in its current state.

Other Suggestions. Addressing the attendance problem was the most frequently mentioned recommendation among the teachers suggesting improvements needed. Teachers suggested only allowing students who demonstrated interest or showed an attempt at success to be a requirement for enrolling in or continuing with the HS+ program.

About two thirds of the coordinators endorsed reducing the number of students required for schools to offer a HS+ course and elaborated with a variety of supporting reasons. This coincides

with the finding in Evaluation Question 4 where meeting a minimum requirement of 15 presents a challenge to many schools. Furthermore, coordinators also indicated that recruiting more teachers would increase the program's effectiveness.

Outcome Evaluation Results

Evaluation Question 1

What were the demographic characteristics of students enrolled in the HS+ program during the 2011–2012 school year?

Student Characteristics. During 2011–2012, 1,957 students took at least one HS+ course in semester 1, and 2,575 students took at least one HS+ course in semester 2. Most of the HS+ students were in Grades 9 and 10, and were Hispanic/Latino and Black or African American students. More than half received FARMS services, and one in five received special education services (Appendix, Table A1). About 95% of the HS+ students took only one HS+ course during each semester (Appendix, Table A2).

Evaluation Question 2

Who took HS+ Algebra 1, Biology, U.S. History, and English 10 in 2011–2012, and how did they perform in the courses?

In 2011–2012, 943 students across the county were enrolled in the four (Algebra 1, Biology, U.S. History, and English 10) HS+ courses in semester 1, and 1,098 were enrolled in semester 2 (Appendix, Table A4). In semester 1, 24% of the HS+ students taking the four courses were in Grade 9, 46% in Grade 10, 14% in Grade 11, and 15% in Grade 12. More Male (56%) students took HS+ courses than Female students (44%). The majority of HS+ students were Hispanic/Latino (46%) and Black or African American (41%). Among the HS+ students, 60% received FARMS, 20% received special education, and 7% received ESOL services in 2011–2012.

HS+ Course Passing Rate. The course-passing rates for the HS+ students varied by course and semester and are presented in the Appendix, Table A3. The analyses reflect all the courses taken in extended day HS+ during semester 1 and semester 2 of 2011–2012, as indicated by student records. Students who were enrolled in HS+ for credit recovery were excluded from the analyses since in credit recovery a student retakes a portion of a course, rather than the entire semester course.

Of 943 HS+ students who took Algebra 1, Biology, English 10, or U.S. History in semester 1, the highest course passing rate was for English 10A (71%) among the courses with 30 or more students, while the lowest passing rate was in Algebra 1B (50%). Of the 1,098 HS+ students who took Algebra 1, Biology, English 10, or U.S. History in semester 2, the highest course passing rate was in Biology A (59%) among the courses with 30 or more students, while the lowest passing rate was in Algebra 1A (43%). The evaluation focused on HS+ courses with 30 or more students across the county because the sample size was large enough to yield stable statistics.

Evaluation Question 3

What was the class attendance for students in HS+ Algebra 1, Biology, U.S. History, and English 10 in 2011–2012?

Most HS+ classes met 33 or 35 days per semester in 2011–2012. Among those enrolled in the four HS+ courses in semester 1, there was a wide range in the number of absences (Appendix, Table A7). Students who had 18 class absences missed more than half of the instruction time. In courses with 30 or more students, the percentages of students with 18 or more class absences ranged from 14% in Biology B and English 10A to 32% in English 10B.

The percentages of HS+ students who had 18 or more class absences in semester 2 ranged from 19% for U.S. History A to 34% in Algebra 1A in courses with 30 or more students (Appendix, Table A8).

Evaluation Question 4

How did the HS+ students perform on the HSAs by the end of 2011–2012?

The analyses for this question examined how the HS+ students performed on the HSAs from January through May 2012. For those who took Algebra 1, Biology, or English 10 in semester 1, their corresponding HSA passing rates were based on scores from three HSA administrations in January, April, and May of 2012. This is to capture HSAs taken after the HS+ courses through the end of the school year. For HS+ students who took semester 2 courses, their corresponding HSA passing rate was calculated based on May 2012 HSAs which reflect the HSA administration after their HS+ course. Among groups with 30 or more students, the HSA passing rates for semester 1 ranged from 29% for HS+ Algebra 1B students to 54% for HS+ Biology B students. Among semester 2 HS+ students, the HSA passing rates ranged from 21% for Algebra 1A to 51% for Biology A (Appendix, Table A9).

Evaluation Question 5

What was the dropout rate for Grades 9–12 HS+ students in 2011–2012?

Of the 1,868 Grades 9–12 students in HS+ Algebra 1, Biology, English 10, or U.S. History during 2011–2012, 49 (3%) dropped out of school by the end of the school year, compared to 2% of the MCPS Grades 9–12 students during the same time (Appendix, Table A10).

Evaluation Question 6

What was the graduation rate for Grade 12 HS+ students in 2011–2012?

This question examines graduation rates for the Grade 12 HS+ students enrolled in Algebra 1, Biology, English 10, or U.S. History courses in 2011–2012. Of the 195 Grade 12 HS+ students enrolled in 2011–2012, 79% of them graduated, compared to 91% of MCPS students who were in Grade 12 during the 2011–2012 school year and graduated (Appendix, Table A11).

Evaluation Question 7

How did HS+ students who took Algebra 1 or English 10 differ from their matched comparison group in course credits earned, HSA performance, and dropout and graduation rates?

Algebra 1. When the HS+ Algebra 1 students were compared to a matched comparison group in the same course, a significantly lower percentage of the HS+ students received a one course credit in Algebra 1 or passed the HSA Algebra test by the end of 2011–2012. Students receive one credit if they pass Algebra 1A and 1B. The analysis reveals that about 40% of the HS+ Algebra 1 group received one credit in Algebra 1 by the end of 2011–2012, compared to 55% of their matched peers (Appendix, Table A15). The difference is statistically significant (*p* value = .00) in favor of the matched comparison group. This means that a significantly lower percentage of HS+ Algebra 1 students received a one course credit in Algebra 1 by the end of 2011–2012, compared to the comparison group in the course. It is important to keep in mind that this finding does not directly reflect performance in the HS+ course, since to earn one credit a student must pass both Algebra 1A and 1B, and students may not have taken both courses by the end of 2012.

By the end of 2011–2012, 30% of the students who took HS+ Algebra 1 passed the state HSA Algebra test, compared with 40% in the comparison group (Appendix, Table A15). The difference is statistically significant (*p* value = .00) in favor of the comparison group. This means that a significantly lower percentage of HS+ Algebra 1 students passed the HSA algebra test by the end of 2011–2012, compared to their matched peers.

About 77% of the Grade 12 students who took HS+ Algebra 1 graduated from MCPS (Appendix, Table A15). There is no significant difference in the graduation rate between the HS+ Grade 12 students and their matched peers (*p* value = 1.00). This means that HS+ Grade 12 students and the comparison group were similar in graduation rate.

Among Grades 9–12 students, the dropout rate was 1.7% for the HS+ Algebra 1 group and 4.4% for the comparison group (Appendix, Table A15). The difference is statistically significant (*p* value = .01) in favor of the HS+ group. This means that significantly fewer Grades 9–12 HS+ Algebra 1 students dropped out of school in 2011–2012 than their comparison group.

English 10. Students receive one credit if they pass both English 10A and 10B. The analysis revealed that about 50% of the HS+ English 10 group received one credit for the course by the end of 2011–2012, compared to 69% of their matched peers. The difference is statistically significant (*p* value = .00) in favor of the matched comparison group (Appendix, Table A18). This means that a significantly lower percentage of HS+ English 10 students received a one course credit in English 10 by the end of 2011–2012, compared to the comparison group in the course. It is important to keep in mind that this finding does not directly reflect performance in the HS+ course, since to earn one credit a student must pass both English 10A and 10B and students may not have taken both courses by the end of 2012.

By the end of 2011–2012, 53% of the students who took English 10 passed the HSA English test, compared with 67% in the comparison group. The difference is statistically significant (*p* value = .00) in favor of the comparison group (Appendix, Table A18).

About 73% of the Grade 12 students who took HS+ English 10 graduated from MCPS compared to 83% of Grade 12 students in the comparison group (Appendix, Table A18). The difference was not statistically significant (*p* value = .26). Among Grades 9–12 students, the dropout rate was 2.8% for the HS+ English 10 group and 5.3% for the comparison group. The difference was not statistically significant (*p* value = .07). This means that the HS+ English 10 group and its

comparison group were similar in graduation rate for the Grade 12 students and dropout rate for Grades 9–12 students.

Section IV. Conclusion and Recommendations

Conclusion and Recommendations

This evaluation examined program outcome data from school year 2011–2012, as well as the opinions and perceptions of High School Plus (HS+) principals, coordinators, teachers and students during school year 2012–2013. Thus the findings of the study provide a comprehensive view of the academic outcomes of students enrolled in the program, as well as the implementation and perceived benefits of HS+.

The outcome data revealed that nearly 2,000 students took HS+ courses in the first semester of 2011–2012, and over 2,500 students took HS+ courses in semester 2 of that year. In most HS+ courses, more than half of the HS+ students passed the course, and the percentage of students who graduated or dropped out during the year taking HS+ was not different from that of a matched comparison group of students not taking HS+. Thus for many students, HS+ provided an opportunity to gain credit previously lost or meet graduation requirements.

The survey responses of principals, teachers, and students, and the interview responses of coordinators reinforced the outcome data to show that the afterschool program is benefitting many of the students who participate. Most survey respondents agreed that the HS+ program is a good way to recover credit for a course needed for graduation or a course failed, and a large percentage of students agreed that succeeding in their course is important for achieving their goals. The overall quality of the HS+ program was rated more positively by the teachers (77% rated it Excellent or Good), than by the coordinators (48%) or the principals (32%). Student attendance was the challenge reported most frequently by principal, teacher, and coordinator survey respondents.

Findings from multiple sources of evidence (e.g., interviews, surveys, documents, and student outcomes), and stakeholders (e.g., principals, HS+ teachers, HS+ students, HS+ coordinators) were combined to produce justifiable conclusions.

Prior to the release of this report, the MCPS HS+ program was discontinued as a standard districtwide program. Schools were given the option in 2013–2014 to do what best meets their students' needs; whether it is continuing the HS+ program format (with or without modifications) or eliminating the program format and offering an alternative process for students to recover credit.

In light of this development, specific recommendations for the HS+ program when it was evaluated are not included. However, schools should continue supporting students by providing options for earning credit. For those that decide to continue with an extended day program such as HS+:

- Establish a system for sharing best practices between schools with similar programs and continue exploring ways to improve the program.

- Continue exploring ways to increase attendance among HS+ students. Share best practices with schools with similar programs, such as a contract requirement or dropping students who do not attend. In addition, increasing attendance and student motivation may in turn help schools attract more teachers.

- Explore ways to recruit and sustain HS+ teachers including the idea of creating a central pool of "go to" teachers among schools with similar programs.

Caveats Associated With This Study

Dillman (1991) notes that to draw conclusions regarding a target population from a sample in survey designs, a researcher should contend with at least four potential sources of errors (sampling error, noncoverage error, nonresponse error, and measurement error). The current study used the following methods throughout the design and implementation of data collection strategies in this evaluation to reduce errors and bias. However, it must be noted that the generalizability of any study findings (external validity) is ultimately an empirical question that may be answered by replicating the study with different stakeholders and settings.

- Sampling error is due to the fact that certain members of the target population are deliberately excluded from the study. Noncoverage error occurs because some members of a population are not covered by the sampling frame and therefore have no chance of being selected into the sample. In this study, the census administration of the surveys guarded against the two stated errors by including all the HS+ stakeholders (principals, teachers, students, coordinators) in the sampling frame so that everyone had a chance to participate.
- Nonresponse error arises from the fact that some of the members of the sample population do not respond to the survey questions. Although the response rates for teachers and student surveys were adequate but not 100%, the results for surveys should be interpreted with caution. For example, the student survey may have produced skewed results since only those students attending HS+ had a chance to respond to the surveys.
- Measurement error may result due to respondents' inability to provide accurate information or due to the characteristics of the question (e.g., a question phrased so that it cannot be answered accurately). Before conducting the surveys, the instruments were pre-tested by HS+ students (student survey), teachers (HS+ teacher survey), and a few principals (HS+ principal survey) to reduce measurement errors associated with a survey design. As a result, the validity of survey method was strengthened by minimizing problems associated with question format or question wording in the instruments.

Although the outcome findings obtained from this study were based on sound design as well as appropriate analyses, causality cannot be inferred from these analyses because the data are from an uncontrolled study. However, it should be noted that the intent of this study was not to establish causality but rather to address specific evaluation questions.

Strengths Associated With This Study

The existing program documents, previous studies of HS+, and initial interviews (central level and school level) were used to guide development of survey items for HS+ principals, teachers, and students. This strategy improved the internal validity of study findings by developing a set of survey items (or questions) that were both relevant and valid.

This study has benefited from a multimethod approach. The study addressed the evaluation questions by means of cross-method comparisons. Although the interview and survey data were collected independently, they still focused on the primary objectives of the evaluation. Therefore, convergent findings between the interviews and survey data in some instances of this study increase the possibilities that the results are valid. As Brewer and Hunter suggest "the rationale for multiple testing and for attributing greater validity to hypotheses that pass multiple tests is twofold: 1) the elimination of rival hypotheses; and 2) the accumulation of more representative evidence" (1989, p. 168). The divergent findings in this study (the interview and survey results differed in some instances) may be attributed to the mode of the data collection. It is reasonable to expect that certain differences occur when topics are discussed in face-to-face interviews versus surveys. The physical presence of the interviewer and the interactive mode of data collection in the face-to-face situation allow respondents to provide different and/or additional information compared to self-administered surveys (Dillman, 1991; Biemer et al., 1991).

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Appendix
High School Plus Program Outcome Evaluation

Huafang Zhao, Ph.D.; Natalie Wolanin;
Shahpar Modarresi, Ph.D.; and Julie Wade, M.S.

Background

The Office of Shared Accountability (OSA) was asked by the deputy superintendent of school support and improvement; the deputy superintendent of teaching, learning, and programs; and the chief operating officer to conduct a study of the High School Plus (HS+) program in Montgomery County Public Schools (MCPS). The overall goal for the HS+ program is to help students meet requirements for graduation by passing required courses. As one component of a comprehensive HS+ program evaluation, the analyses displayed in this appendix examine outcomes of the extended-day HS+ program in 2011–2012. Outcome measures for the analyses include course performance, passing High School Assessments (HSA), class attendance, and dropout and graduation rates. The following evaluation questions are addressed.

1. What were the demographic characteristics of students enrolled in the HS+ program during the 2011–2012 school year?
2. Who took HS+ Algebra 1, Biology, U.S. History, and English 10 in 2011–2012, and how did they perform in the courses?
3. What was the class attendance for students in HS+ Algebra 1, Biology, U.S. History, and English 10 in 2011–2012?
4. How did the HS+ students perform on the HSAs by the end of 2011–2012?
5. What was the dropout rate for Grades 9–12 HS+ students in 2011–2012?
6. What was the graduation rate for Grade 12 HS+ students in 2011–2012?
7. How did HS+ students who took Algebra 1 or English 10 differ from their matched comparison group in course credits earned, HSA performance, and dropout and graduation rates?

Methods

The outcome descriptive analyses were conducted first for all HS+ students in 2011–2012, followed by descriptive analyses for the HS+ students who took English 10, Algebra, Biology, or U.S. History semester courses in 2011–2012. The four courses were chosen because they are courses required for graduation. The analyses excluded students who were enrolled in HS+ for credit recovery, which is when students recover a credit by retaking a portion of a course rather than the entire semester course.

In addition, the HS+ students in Algebra 1 or English 10 were compared to a matched comparison group based on propensity scores. The two courses were selected because they had sufficient numbers of HS+ students. The two comparison groups were similar to the two HS+ groups in demographics, Grade 8 Maryland School Assessment (MSA) reading or mathematics scores, and prior experience in the relevant course (i.e., failed Algebra 1 or English 10 in the past).

Logistic regression models generated propensity scores for students who had data on factors including grade, gender, race/ethnicity, participation in English for Speakers of Other Languages (ESOL) and Free and Reduced-price Meals System (FARMS) services in 2011–2012, Grade 8 MSA scores, and whether they failed any portion of Algebra 1 or English 10 before 2011–2012. This was to ensure that the HS+ students were comparable to their peers with similar academic reading and mathematics skills before high school as well as similar course experience before 2011–2012. Based on proximity of propensity scores, the two HS+ groups were matched to two comparison groups respectively. The matching was done without replacement. After matching, t-test and chi-square tests were conducted to detect significant differences in course credits, HSA passing rates, and dropout and graduation rates between the HS+ students and their comparison group.

Findings

The findings are shown in the order of evaluation questions.

1. What were the demographic characteristics of students enrolled in the High School Plus program during the 2011–2012 school year?

In semester 1 of 2011–2012, 1,957 students took at least one HS+ course (Table A1). About 40% of the HS+ students were in Grade 10, 24% in Grade 9, 22% in Grade 11, and 13% in Grade 12. More Male (58%) students took HS+ courses than Female students (42%). The majority of HS+ students were Hispanic/Latino (47%) and Black or African American (39%). Among the HS+ students, 58% received FARMS, 19% received special education, and 6% received ESOL services in 2011–2012.

Table A1. Demographic Characteristics of 2011–2012 High School Plus Students

	Semester 1 *N* = 1,957		Semester 2 *N* = 2,575	
	n	%	*n*	%
Grade Level				
9	475	24.3	919	35.7
10	789	40.3	890	34.6
11	434	22.2	359	13.9
12	259	13.2	407	15.8
Gender				
Female	827	42.3	1,035	40.2
Male	1,130	57.7	1,540	59.8
Race/Ethnicity				
American Indian or Alaskan Native	4	0.2	1	0.0
Asian	84	4.3	112	4.3
Black or African American	754	38.5	917	35.6
Hispanic/Latino	924	47.2	1,254	48.7
White	147	7.5	237	9.2
Native Hawaiian or or Other Pacific Islander	1	.1	2	.1
Two or More Races	43	2.2	52	2.0
Services				
Current ESOL	121	6.2	196	7.6
Current Special Education	372	19.0	512	19.9
Current FARMS	1,142	58.4	1,476	57.3

In semester 2 of 2011–2012, 2,575 students took at least one HS+ course (Table A1). About 36% of the HS+ students were in Grade 9, 35% in Grade 10, 16% in Grade 12, and 14% in Grade 11. More Male (60%) students took HS+ courses than Female students (40%). The majority of HS+ students were Hispanic/Latino (49%) and Black or African American (36%). Among the HS+ students, 57% received FARMS, 20% received special education, and 8% received ESOL services in 2011–2012. In addition, 95% of the HS+ students took only one HS+ course in semester 1 or semester 2 (Table A2).

Table A2. Number of Courses High School Plus Students Took in 2011–2012

	Semester 1 *N* = 1,957		Semester 2 *N* = 2,575	
Number of Students Who	*n*	%	*n*	%
Took 1 course	1,854	94.7	2,442	94.8
Took 2 courses	102	5.2	132	5.1
Took 3 courses	1	.1	1	0.0

In summary, the HS+ students in 2011–2012 were concentrated in Grades 9 and 10. Most of them were Hispanic/Latino and Black or African American students, or students who were receiving FARMS services.

The course-passing rates for the HS+ students varied by course and semester and are presented in Table A3. The table reflects all the courses taken in extended day HS+ during semester 1 and semester 2 of 2011–2012, as indicated by student records. Students who were enrolled in HS+ for credit recovery were excluded from the analyses since in credit recovery a student retakes a portion of a course, rather than the entire semester course.

Table A3. Number and Percentage of Students Who Earned a D or Above (Passed) In High School Plus Courses

	Semester 1 *N* = 2,061					Semester 2 *N* = 2,709				
		Pass		Fail or Missing			Pass		Fail or Missing	
Course	*N*	*n*	%	*n*	%	*N*	*n*	%	*n*	%
Algebra 1A	50	26	52.0	24	48.0	332	142	42.8	190	57.2
Algebra 1B	286	142	49.7	144	50.3	21	16	76.2	5	23.8
Algebra 2A	0	0	-	0	-	83	48	57.8	35	42.2
Algebra 2B	33	16	48.5	17	51.5	0	0	-	0	-
Biology A	0	0	-	0	-	241	143	59.3	98	40.7
Biology B	154	103	66.9	51	33.1	0	0	-	0	-
Bridge to Algebra 2A	0	0	-	0	-	43	39	90.7	4	9.3
English 10A	44	31	70.5	13	29.5	300	175	58.3	125	41.7
English 10B	246	150	61.0	96	39.0	7	3	42.9	4	57.1
English 11A	0	0	-	0	-	159	96	60.4	63	39.6
English 11B	159	126	79.2	33	20.8	0	0	-	0	-
English 12A	0	0	-	0	-	132	103	78.0	29	22.0
English 9A	0	0	-	0	-	315	167	53.0	148	47.0
English 9B	255	131	51.4	124	48.6	0	0	-	0	-
Found. of Tech. A	2	1	50.0	1	50.0	0	0	-	0	-
Found. of Tech. B	16	11	68.8	5	31.3	0	0	-	0	-
French 1A	0	0	-	0	-	29	8	27.6	21	72.4
Geometry A	15	7	46.7	8	53.3	310	173	55.8	137	44.2
Geometry B	341	210	61.6	131	38.4	17	10	58.8	7	41.2
Health Education	0	0	-	0	-	28	22	78.6	6	21.4
Honors Health Education	0	0	-	0	-	33	29	87.9	4	12.1
Honors Matter/Energy A	0	0	-	0	-	27	21	77.8	6	22.2
Honors Matter/Energy B	25	14	56.0	11	44.0	0	0	-	0	-
Honors U.S. History B	1	1	100.0	0	-	0	0	-	0	-
Intro. Engin. Design A	31	29	93.5	2	6.5	0	0	-	0	-
Intro. Engin. Design B	0	0	-	0	-	31	31	100.0	0	-
Matter/Energy A	0	0	-	0	-	66	34	51.5	32	48.5
Matter/Energy B	67	39	58.2	28	41.8	20	13	65.0	7	35.0
Mod. World History A	0	0	-	0	-	77	37	48.1	40	51.9
Mod. World History B	27	20	74.1	7	25.9	0	0	-	0	-
NSL Government A	0	0	-	0	-	110	69	62.7	41	37.3
NSL Government B	79	44	55.7	35	44.3	0	0	0.0	0	-
Physical Science A	0	0	-	0	-	34	30	88.2	4	11.8
Physical Science B	24	18	75.0	6	25.0	0	0	-	0	-
Quant. Literature A	0	0	-	0	-	60	52	86.7	8	13.3
Quant. Literature B	2	2	100.0	0	-	4	4	100.0	0	-
Related Math A	0	0	-	0	-	7	5	71.4	2	28.6
Spanish A	16	9	56.3	7	43.8	0	0	-	0	-
Spanish B	9	6	66.7	3	33.3	0	0	-	0	-
Student Assistant	1	0	-	1	100.0	0	0	-	0	-
U.S. History A	14	10	71.4	4	28.6	211	122	57.8	89	42.2
U.S. History B	164	95	57.9	69	42.1	12	8	66.7	4	33.3

Note. Some students took more than one course in a semester. Passing a course means earning a final grade of D or higher.

2. Who took HS+ Algebra 1, Biology, U.S. History, and English 10 in 2011–2012, and how did they perform in the courses?

In 2011–2012, 943 students across the county were enrolled in the four HS+ courses in semester 1, and 1,098 were enrolled in semester 2 (Table A4). In semester 1, 24% of the HS+ students taking the four courses were in Grade 9, 46% in Grade 10, 14% in Grade 11, and 15% in Grade 12. More Male (56%) students took HS+ courses than Female students (44%). The majority of HS+ students were Hispanic/Latino (46%) and Black or African American (41%). Among the HS+ students, 60% received FARMS, 20% received special education, and 7% received ESOL services in 2011–2012.

Table A4. Demographic Characteristics of Students Who Took Algebra 1, Biology, English 10 or U.S. History High School Plus Courses in 2011–2012

	High School Plus				MCPS[a]			
	Semester 1 *N* = 943		Semester 2 *N* = 1,098		Semester 1 *N* = 19,617		Semester 2 *N* = 19,174	
	n	%	*n*	%	*n*	%	*n*	%
Grade Level (end of school year)								
6	-		-		247	1.3	247	1.3
7	-		-		2,726	13.9	2,702	14.1
8	-		-		4,688	23.9	4,626	24.1
9	231	24.1	501	45.6	5,769	29.4	5,736	29.9
10	433	45.9	429	39.1	4,418	22.5	4,283	22.3
11	135	14.3	96	8.7	1,057	5.4	966	5.0
12	144	15.3	72	6.6	712	3.6	614	3.2
Gender								
Female	412	43.7	425	38.7	8,987	45.8	8,797	45.9
Male	531	56.3	673	61.3	10,630	54.2	10,377	54.1
Race/Ethnicity								
American Indian or Alaskan Native	2	0.0	1	0.0	39	.2	36	0.2
Asian	31	3.3	34	3.1	2,271	11.6	2,277	11.9
Black or African American	390	41.4	389	35.4	5,310	27.1	5,184	27.0
Hispanic/Latino	434	46.0	562	51.2	6,015	30.7	5,799	30.2
White	65	6.9	93	8.5	5,269	26.9	5,185	27.0
Native Hawaiian or Other Pacific Islander	1	0.0	1	0.1	6	0.0	6	0.0
Two or More Races	20	2.1	18	1.6	707	3.6	687	3.6
Services								
Current ESOL	61	6.5	106	9.7	1,718	8.8	1,724	9.0
Current Special Education	190	20.1	231	21.0	3,004	15.3	2,934	15.3
Current FARMS	564	59.8	653	59.5	7,591	38.7	7,358	38.4

Note. Students included were enrolled in any of the following HS+ courses: Algebra 1A, Algebra 1B, English 10A, English 10B, Biology A, Biology B, U.S. History A, and U.S. History B.
[a]MCPS totals include HS+ students.

In semester 2, 46% of the HS+ students taking the four courses were in Grade 9, 39% in Grade 10, 9% in Grade 11, and 7% in Grade 12. More Male (61%) students took HS+ courses than Female students (39%). The majority of HS+ students were Hispanic/Latino (51%) and Black or African American (35%). Among the HS+ students, 60% received FARMS, 21% received special education, and 10% received ESOL services in 2011–2012.

Of the HS+ students taking the four courses in semester 1 (Table A5), the highest course passing rate was for English 10 A (71%) among HS+ courses with 30 or more students, while the lowest

passing rate was in Algebra 1 B (50%). The passing rates for the county are provided only for reference, not for direct comparison. We focus on the HS+ courses with 30 or more students because statistics for a group of 30 or more are more stable. It is important to note that the majority of MCPS students who took a 'B' course in semester 1 were in HS+ classes.

Table A5. Number and Percentage of Students Who Earned a D or Above (Passed) by Course Among 2011–2012 Students Enrolled in Algebra 1, Biology, English 10, or U.S. History in Semester 1

	HS Plus Semester 1					MCPS[a] Semester 1				
		Pass		Fail or Missing			Pass		Fail or Missing	
Course	*N*	*n*	%	*n*	%	*N*	*n*	%	*n*	%
Algebra 1A	50	26	52.0	24	48.0	12,020	10,981	91.4	1,039	8.6
Algebra 1B	286	142	49.7	144	50.3	331	182	55.0	149	45.0
Biology A	0	0	0.0	0	0.0	4,508	3,690	81.9	818	18.1
Biology B	154	103	66.9	51	33.1	163	108	66.3	55	33.7
English 10A	44	31	70.5	13	29.5	3,841	3,159	82.2	682	17.8
English 10B	246	150	61.0	96	39.0	246	150	61.0	96	39.0
U.S. History A	14	10	71.4	4	28.6	4,501	3,821	84.9	680	15.1
U.S. History B	164	95	57.9	69	42.1	177	102	57.6	75	42.4

Note. Some students took more than one course in a semester; passing a course means earning a final grade of D or higher.
[a]MCPS totals include HS+ students. For the "B" courses in semester 1, the majority of the students were in the HS+ classes.

Of the HS+ students taking the four courses in semester 2 (Table A6), the highest course passing rate was in Biology A (59%) among HS+ courses with 30 or more students, while the lowest passing rate was in Algebra 1 A (43%). The passing rates for the county are provided for reference only. We focus on the HS+ courses with 30 or more students because statistics for a group with 30 or more are more stable. It is important to note that most of the MCPS students who took an 'A' course in semester 2 were in an HS+ class.

Table A6. Number and Percentage of Students Who Earned a D or Above (Passed), by Course Among 2011–2012 Students Enrolled in Algebra 1, Biology, English 10, or U.S. History in Semester 2

	HS Plus Semester 2					MCPS[a] Semester 2				
		Pass		Fail or Missing			Pass		Fail or Missing	
Course	*N*	*n*	%	*n*	%	*N*	*n*	%	*n*	%
Algebra 1A	332	142	42.8	190	57.2	610	330	54.1	280	45.9
Algebra 1B	21	16	76.2	5	23.8	11,978	10,881	90.8	1,097	9.2
Biology A	241	143	59.3	98	40.7	248	148	59.7	100	40.3
Biology B	0					4,296	3,555	82.8	741	17.2
English 10A	300	175	58.3	125	41.7	337	196	58.2	141	41.8
English 10B	7	3	42.9	4	57.1	3,685	2,950	80.1	735	19.9
U.S. History A	211	122	57.8	89	42.2	231	139	60.2	92	39.8
U.S. History B	12	8	66.7	4	33.3	4,419	3,709	83.9	710	16.1

Note. Some students took more than one course in a semester; passing a course means earning a final grade of D or higher.
[a]MCPS totals include HS+ students. For the "A" courses in semester 2, the majority of the students were in the HS+ classes.

3. What was the class attendance for the students in HS+ Algebra 1, Biology, U.S. History, and English 10 in 2011–2012?

The total school days in the HS+ classes varied by school schedule and semester. However, most HS+ classes met 33 or 35 days per semester in 2011–2012. It should be pointed out that 14 student records indicated a number of absences outside the range of 35 days (e.g., up to 50 absences were recorded). Among those enrolled in the four HS+ courses in semester 1, there was a wide range in the number of absences (Table A7). Students who had 18 class absences missed more than half of the instruction time. In courses with 30 or more students, the percentages of students with 18 or more class absences ranged from 14% in Biology B and English 10A to 32% in English 10B.

Table A7. Number and Percentage of Days Absent from the High School Plus Courses in Semester 1 of 2011–2012

		Up to 2 Absences		3–10 Absences		11–17 Absences		18+ Absences[a]	
	N	*n*	%	*n*	%	*n*	%	*n*	%
Algebra 1A	47	19	40.4	8	17.0	13	27.7	7	14.9
Algebra 1B	286	70	24.5	64	22.4	71	24.8	81	28.3
Biology A	0	-	-	-	-	-	-	-	-
Biology B	149	45	30.2	56	37.6	27	18.1	21	14.1
English 10A	44	6	13.6	21	47.7	11	25.0	6	13.6
English 10B	245	47	19.2	74	30.2	45	18.4	79	32.2
U.S. History A	14	0	0.0	4	28.6	5	35.7	5	35.7
U.S. History B	163	76	46.6	28	17.2	20	12.3	39	23.9

Note. *N* represents students who took a HS+ course and who had attendance data.
[a]Fourteen students' recorded days absent were outside the possible range: five in Algebra 1B ranged from 37–47; five in English 10B ranged from 36–44; two in Biology B ranged from 36–43; two in U.S. History B ranged from 46–50.

As shown in Table A8, the percentages of HS+ students who had 18 or more class absences in semester 2 ranged from 19% for U.S. History A to 34% in Algebra 1A in courses with 30 or more students.

Table A8. Number and Percentage of Days Absent from the High School Plus Courses in Semester 2 of 2011–2012

		Up to 2 Absences		3–10 Absences		11–17 Absences		18+ Absences[a]	
	N	*n*	%	*n*	%	*n*	%	*n*	%
Algebra 1A	330	26	7.9	117	35.5	75	22.7	112	33.9
Algebra 1B	21	1	4.8	6	28.6	7	33.3	7	33.3
Biology A	239	22	9.2	108	45.2	54	22.6	55	23.0
Biology B	0								
English 10A	300	33	11.0	121	40.3	63	21.0	83	27.7
English 10B	7	1	14.1	0	0.0	1	14.3	5	71.4
U.S. History A	211	40	19.0	82	38.9	50	23.7	39	18.5
U.S. History B	12	0	0.0	4	33.3	3	25.0	5	41.7

Note. *N* represents students who took a HS+ course and who had attendance data.
[a]Fourteen students included in 18+ absences were outside the possible range: five in Algebra 1B ranged from 37–37; five in English 10B ranged from 36–44; two in Biology B ranged from 36–43; two in U.S. History B ranged from 46–50 absences.

4. How did the HS+ students perform on the HSAs by the end of 2011–2012?

Table A9 examines how the HS+ students performed on the HSAs from January through May 2012. For those who took Algebra 1, Biology, or English 10 in semester 1, their corresponding HSA passing rates were based on scores from three HSA administrations in January, April, and May of 2012. This is to capture HSAs taken after the HS+ courses through the end of the school year. For HS+ students who took semester 2 courses, their corresponding HSA passing rate was calculated based on May 2012 HSAs which reflect the HSA administration after their HS+ course.

As shown in Table A9, among groups with 30 or more students, the HSA passing rates for semester 1 ranged from 29% for HS+ Algebra 1B students to 54% for HS+ Biology B students. Among semester 2 HS+ students, the HSA passing rates ranged from 21% for Algebra 1A to 51% for Biology A.

Table A9. Number and Percentage of High School Plus Students Who Enrolled in Algebra 1, Biology, or English 10 in 2011–2012 and Took Corresponding HSA Tests

	Semester 1 HS+ Students and corresponding January, April, & May HSA					Semester 2 HS+ Students and corresponding May HSA				
	Took HSA	Passed HSA		Failed HSA		Took HSA	Passed HSA		Failed HSA	
Course	*N*	*n*	%	*n*	%	*N*	*n*	%	*n*	%
Algebra 1A[a]	25	7	28.0	18	72.0	215	45	20.9	170	79.1
Algebra 1B[b]	127	37	29.1	90	70.9	14	4	28.6	10	71.4
Biology A[c]	0					176	90	51.1	86	48.9
Biology B[d]	70	38	54.3	32	45.7	0				
English 10A[e]	23	7	30.4	16	69.6	197	91	46.2	106	53.8
English 10B[f]	95	37	38.9	58	61.1	0				

Note. Includes students who took a HS+ course and then took the corresponding HSA (i.e., Algebra 1A course takers took the Algebra HSA).

[a]Algebra 1A: Includes one student in semester 1 and four students in semester 2 who passed through bridge plan project.

[b]Algebra 1B: Includes 11 students in semester 1 and 3 students in semester 2 who passed through bridge plan project.

[c]Biology A: Includes nine students in semester 2 who passed through bridge plan project.

[d]Biology B: Includes 15 students who passed through bridge plan project and 1 from transferred credit in in semester 1.

[e]English 10A: Includes one students who passed from transfer credit in semester 1.

[f]English 10B: Includes four students who passed from bridge plan project and one from transfer credit in semester 1.

Table A10 provides the MCPS 2012 May HSA passing rates. The passing rates ranged from 73% in Algebra to 86% in Biology. It is important to note that the HS+ students had much lower HSA passing rates in May 2012 (Table 9) compared to the county averages (Table 10). The county averages are presented for reference only, not for direct comparison.

Table A10. 2012 May HSA Passing Rates in MCPS

	MCPS Students 2012 May HSA				
	Took HSA	Passed HSA		Failed HSA	
HSA	*N*	*n*	%	*n*	%
Algebra	12,934	9,399	72.7	3,535	27.3
Biology	11,257	9,730	86.4	1,527	13.6
English	11,705	9,193	78.5	2,512	21.5

Note. MCPS students include HS+ students.

5. What was the dropout rate for Grades 9–12 HS+ students in 2011–2012?

The dropout rate was calculated for Grades 9–12 HS+ students in 2011–2012 (Table A11). Of the 1,868 Grades 9–12 HS+ students in Algebra 1, Biology, English 10, or U.S. History in 2011–2012, 49 (2.6%) dropped out of school by the end of the school year, compared to the 2.3% dropout rate for all MCPS Grades 9–12 students in 2011–2012.

Table A11. Dropout Rate for Grades 9–12 Students Who Took High School Plus Algebra 1, Biology, English 10, or U.S. History Courses in 2011–2012

	HS+ [a]		MCPS[b]	
	N = 1,868		*N* = 49,938	
Dropouts	*n*	%	*n*	%
Grades 9–12 Dropouts				
(by the end of 2011–2012)	49	2.6	1,158	2.3

[a]Includes HS+ students enrolled in any of the following HS+ courses: Algebra 1A, Algebra 1B, English 10A, English 10B, Biology A, Biology B, U.S. History A, and U.S. History B. HS+ students included were enrolled in semester 1 and/or semester 2.
[b]MCPS students include HS+ students and also include any Grades 9–12 students enrolled anytime during 2011–2012.

6. What was the graduation rate for Grade 12 HS+ students in 2011–2012?

Table A12 presents graduation rates for the Grade 12 HS+ students enrolled in Algebra 1, Biology, English 10, or U.S. History courses in 2011–2012. Of the 195 Grade 12 HS+ students enrolled in 2011–2012, 79% of them graduated, compared to 91% of MCPS students who were in Grade 12 during the 2011–2012 school year and graduated.

Table A12. Graduation Rate for 12th Graders Who Took High School Plus Algebra 1, Biology, English 10 or U.S. History Courses in 2011–2012

	HS+ [a]		MCPS[b]	
Graduated	*N* = 195		*N* = 11,499	
Grade 12 (at end of 2011–2012)				
Graduated	153	78.5	10,184	90.9

[a]Includes HS+ students enrolled in any of the following HS+ courses: Algebra IA, Algebra 1B, English 10A, English 10B, Biology A, Biology B, U.S. History A, U.S. History B.
[b]MCPS students include HS+ students and other Grade 12 students who were enrolled anytime during 2011–2012.

7. How did HS+ students who took Algebra 1 or English 10 differ from their matched comparison group in course credits earned, HSA performance, and dropout and graduation rates?

This section presents outcome results for HS+ Algebra 1 and English 10 students as compared to their matched peers. The two comparison groups were formed based on propensity score matching.

HS+ Algebra 1

In addition to demographic characteristics and course experience in Algebra 1 before 2011–2012, Grade 8 MSA mathematics scores also were used to match HS+ students in Algebra 1 and its comparison group. This was to ensure that the two groups also were similar on mathematics skills as measured by Grade 8 MSA in mathematics before high school.

Table A13 shows the characteristics of the 545 HS+ Algebra 1 students. The majority were in Grade 9 (66%). Among them, 41% were Black or African American, 48% were Hispanic/Latino, 64% received FARMS services, and 29% received special education services in 2011–2012. The comparison group was similar to the HS+ Algebra 1 group on demographic characteristics and services they received during 2011–2012.

Table A13. Characteristics of Students Who Took a High School Plus Algebra 1 Course in 2011–2012 and Their Comparison Group

	HS+ Algebra 1 Group		Algebra 1 Comparison Group	
	n	*%*	*n*	*%*
Total	545		545	
Grade				
9	361	66.2	366	67.2
10	130	23.9	133	24.4
11	24	4.4	20	3.7
12	30	5.5	26	4.8
Gender				
Female	217	39.8	194	35.6
Male	328	60.2	351	64.4
Race				
American Indian or Alaskan Native	0		1	0.2
Asian	10	1.8	16	2.9
Black or African American	222	40.7	196	36.0
Hispanic/Latino	264	48.4	263	48.3
White	40	7.3	53	9.7
Two or More Races	9	1.7	16	2.9
Services Received				
ESOL	38	7.0	50	9.2
FARMS	351	64.4	368	67.5
Special Education	156	28.6	177	32.5

Note. Services received during 2011–2012. ESOL refers to participation in English for Speakers of Other Languages and FARMS refers to Free and Reduced-price Meals System.

As shown in Table A14, there was no significant difference between the Grade 8 MSA mathematics mean scale scores for the two groups (*p* value = .55). This indicates that the two groups had similar mathematics skills as measured by the Grade 8 MSA mathematics.

Table A14. Mean and Standard Deviation of Grade 8 MSA Mathematics Scale Scores for Students in a High School Plus Algebra 1 Course in 2011–2012 and Their Comparison Group

		Grade 8 MSA Mathematics Scale Score			
	n	Mean	*SD*	*t*	*p* value
HS+ Algebra 1 Group	545	346.6	106.8	.60	.55
Algebra 1 Comparison Group	545	342.6	114.9		

Note. SD = standard deviation; *Statistically significant *p* value ≤ .05; ** Statistically significant *p* value ≤ .01.

In Algebra 1, students receive one credit if they pass Algebra 1A and 1B. As illustrated in Table A15, about 40% of the HS+ Algebra 1 group received one credit in Algebra 1 by the end of 2011–2012, compared to 55% of their matched peers. The difference is statistically significant (*p* value = .00) in favor of the matched comparison group. This means that a significantly lower percentage of HS+ Algebra 1 students received a one course credit in Algebra 1 by the end of 2011–2012, compared to the comparison group in the course. It is important to keep in mind that this finding does not directly reflect performance in the HS+ course, since to earn one credit a student must pass both Algebra 1A and 1B, and students may not have taken both courses by the end of 2012.

By the end of 2011–2012, 30% of the students who took HS+ Algebra 1 passed the state HSA Algebra test, compared with 40% in the comparison group (Table A15). The difference is statistically significant (*p* value = .00) in favor of the comparison group. This means that a significantly lower percentage of HS+ Algebra 1 students passed the HSA algebra test by the end of 2011–2012, compared to their matched peers.

Table A15. Outcome Results at the End of 2011–2012 for Students Enrolled in High School Plus Algebra 1 Course in 2011–2012 and Their Comparison Group

	HS+ Algebra 1 Group		Algebra 1 Comparison Group			
	n	%	*n*	%	x^2	*p* value
Received 1 Credit in Algebra 1	*N* = 545		*N* = 545			
Yes	216	39.6	301	55.2	26.6	.00**
No	329	60.4	244	44.8		
Passed HSA Algebra	*N* = 469		*N* = 458			
Yes	141	30.1	181	39.5	9.1	.00**
No	328	69.9	277	60.5		
Graduation for Grade 12	*N* = 30		*N* = 26			
Yes	23	76.7	20	76.9	.0	1.00
No	7	23.3	6	23.1	.0	
Dropout for Grades 9–12	*N* = 545		*N* = 545			
Yes	9	1.7	24	4.4	7.0	.01**
No	536	98.3	521	95.6		

Note. Graduation rate is based on Grade 12 students only and dropout rate is calculated for Grades 9–12 students as of June 30, 2012. Transfer to another school, district, or state is not counted as dropout.
*Statistically significant *p* value ≤ .05. ** Statistically significant *p* value ≤ .01.

About 77% of the Grade 12 students who took HS+ Algebra 1 graduated from MCPS (Table A15). There is no significant difference in the graduation rate between the HS+ Grade 12 students and their matched peers (*p* value = 1.00). This means that HS+ Grade 12 students and the comparison group were similar in graduation rate.

Among Grades 9–12 students, the dropout rate was 1.7% for the HS+ Algebra 1 group and 4.4% for the comparison group (Table A15). The difference is statistically significant (*p* value = .01) in favor of the HS+ group. This means that significantly fewer Grades 9–12 HS+ Algebra 1 students dropped out of school in 2011–2012 than their comparison group.

HS+ English 10

In addition to demographic characteristics and past course experience in English 10 before 2011–2012, Grade 8 MSA reading scores were used to match the HS+ students in English 10 and their comparison group. This was to ensure that HS+ students and their comparison group were similar on reading skills as measured by Grade 8 MSA reading before high school.

Table A16 shows the characteristics of the 471 HS+ English 10 students in 2011–2012. The majority of them were in Grade 10 (65%). Among them, 34% were Black or African American, 51% were were Hispanic/Latino, 55% received FARMS services, and 20% received special education services in 2011–2012. The English 10 comparison group was close to the HS+ English 10 group on demographic characteristics and services received in 2011–2012. However, it is worth noting that a higher percentage of students in the comparison group were taking English 10 in Grade 11 (24%).

Table A16. Characteristics of Students Who Took a High School Plus English 10 Course in 2011–2012 and Their Comparison Group

	HS+ English 10 Group		English 10 Comparison Group	
	n	*%*	*n*	*%*
Total	471		471	
Grade				
9	77	16.3	93	19.7
10	306	65.0	206	43.7
11	33	7.0	114	24.2
12	55	11.7	58	12.3
Gender				
Female	190	40.3	190	40.3
Male	281	59.7	281	59.7
Race				
American Indian or Alaskan Native	0	0.0	1	0.2
Asian	17	3.6	22	4.7
Black or African American	162	34.4	119	25.3
Hispanic/Latino	240	51.0	250	53.1
White	39	8.3	61	13.0
Two or More Races	13	2.8	18	3.8
Services Received				
ESOL	4	0.8	11	2.3
FARMS	261	55.4	261	55.4
Special Education	94	20.0	107	22.7

Note. Services received during 2011–2012. ESOL refers to participation in English for Speakers of Other Languages and FARMS refers to Free and Reduced-price Meals System.

There was no significant difference between the Grade 8 reading mean scale scores for the two groups as shown in Table A17 (*p* value = .96). This means that the two groups had similar reading skills as measured by Grade 8 MSA before they entered high school.

Table A17. Mean and Standard Deviation of Grade 8 MSA Reading Scale Scores for Students in a High School + English 10 Course in 2011–2012 and Their Comparison Group

		Grade 8 MSA Reading Scale Score			
	n	Mean	*SD*	*t*	*p* value
HS+ English 10	471	374.4	92.0	-.05	.96
Matched English 10 Group	471	374.8	99.2		

Note. SD = standard deviation; *Statistically significant *p* value ≤ .05; ** Statistically significant *p* value ≤ .01.

In English 10, students receive one credit if they pass both English 10A and 10B. As shown in Table A18, about 50% of the HS+ English 10 group received one credit for the course by the end of 2011–2012, compared to 69% of their matched peers. The difference is statistically significant (*p* value = .00) in favor of the matched comparison group. This means that a significantly lower percentage of HS+ English 10 students received a one course credit in English 10 by the end of 2011–2012, compared to the comparison group in the course. It is important to keep in mind that this finding does not directly reflect performance in the HS+ course, since to earn one credit a student must pass both English 10A and 10B and students may not have taken both courses by the end of 2012.

By the end of 2011–2012, 53% of the students who took English 10 passed the HSA English test, compared with 67% in the comparison group. The difference is statistically significant (*p* value = .00) in favor of the comparison group.

Table A18. Outcome Results at the End of 2011–2012 for Students Enrolled in High School Plus English 10 Course in 2011–2012 and their Comparison Group Peers

	HS+ English 10 Group		English 10 Comparison Group			
	n	%	*n*	%	x^2	*p* value
Received 1 Credit in English 10	*N* = 471		*N* = 471			
Yes	236	50.1	327	69.4	36.6	.00**
No	235	49.9	144	30.6		
Passed HSA English	*N* = 428		*N* = 403			
Yes	225	52.6	268	66.5	16.7	.00**
No	203	47.4	135	33.5		
Graduation for Grade 12 Students	*N* = 55		*N* = 58			
Graduated	40	72.7	48	82.8	1.6	.26
No	15	27.3	10	17.2		
Dropout for Grades 9–12 Students	*N* = 471		*N* = 471			
Yes	13	2.8	25	5.3	3.9	.07
No	458	97.2	446	94.7		

Note. Graduation rate is based on Grade 12 students only and dropout rate is based on Grades 9–12 students by June 30, 2012. Transfer to another school, district, or state is not counted as dropout.
*Statistically significant *p* value ≤ .05. ** Statistically significant *p* value ≤ .01.

About 73% of the Grade 12 students who took HS+ English 10 graduated from MCPS compared to 83% of Grade 12 students in the comparison group (Table A18). The difference was not statistically significant (*p* value = .26). Among Grades 9–12 students, the dropout rate was 2.8%

for the HS+ English 10 group and 5.3% for the comparison group. The difference was not statistically significant (*p* value = .07). This means that the HS+ English 10 group and its comparison group were similar in graduation rate for the Grade 12 students and dropout rate for Grades 9–12 students.

In summary, a significantly lower percentage of students in the HS+ Algebra 1 course received one course credit or passed HSA Algebra by the end of 2011–2012, when compared to their comparison group. There was no significant difference between the two groups' graduation rates for Grade 12. The dropout rate was significantly lower for the HS+ Algebra 1 students in Grades 9–12, compared to their matched peers.

A significantly lower percentage of students in HS+ English 10 received one course credit or passed the HSA English test by the end of 2011–2012, compared to their comparison group. There were no significant differences between the HS+ English 10 group and its comparison group in graduation rate for the Grades 12 students or the dropout rate for Grades 9–12 students.

Limitation

It should be noted that even though HS+ students and the comparison groups were controlled on their high school course experience (failed or not) before 2011–2012 through propensity score matching, they may not have had the same course-taking experience during the 2011–2012 school year. Many HS+ students failed a portion of a course in the first semester of 2011–2012 and retook the course during the second semester of 2011–2012, while few students in the comparison group could have had the same course experience (failed in first semester and retook in the second semester) because the first semester of the course (A section) is not typically offered in the second semester during a school day. This means that the HS+ students and their comparison groups may still have had other pre-existing differences not included in the matching criteria.

Conclusion

The outcome analyses results presented in this document are only one component of a comprehensive evaluation study. The results reflect student participation and performance in HS+ during the 2011–2012 school year. Currently, OSA is collecting data through interviews and surveys of administrators, teachers, and students. The interview and survey findings will provide detailed context for understanding the outcome analyses.

Of all 2011–2012 HS+ students, most of them were in Grades 9 and 10, and were Hispanic/Latino and Black or African American students. More than half of them received FARMS services, and one in five received special education services. The HS+ semester course passing rate, HSA passing rate, and class attendance varied across content areas.

When the HS+ Algebra 1 students were compared to their comparison group, a significantly lower percentage of the HS+ students received one course credit or passed the HSA Algebra test by the end of 2011–2012. However, a student must pass both Algebra 1A and Algebra 1B to receive one credit and HS+ students may not have taken both courses by the end of 2012. There was no significant difference between the HS+ Algebra 1 group and its comparison on

graduation rates for Grade 12 students. The dropout rate was significantly lower for the HS+ Algebra 1 students in Grades 9–12, compared to their matched peers in the same grades.

When the HS+ English 10 students were compared to their comparison group, a significantly lower percentage of students in HS+ English 10 received one course credit or passed the HSA English test by the end of 2011–2012. However, a student must pass both English 10A and English 10B to receive one credit and HS+ students may not have taken both courses by the end of 2012. There were no significant differences between the HS+ English 10 group and its comparison group in their graduation rate for Grade 12 students or the dropout rate for students in Grades 9–12.