

MEMORANDUM

June 29, 2020

TO: August L. Hamilton
General Manager, Strategy and Innovation

FROM: Allison Matney, Ed.D.
Officer, Research and Accountability

SUBJECT: **THE IMPACT OF THE MILES AHEAD SCHOLARS' PROGRAM ON SCHOLARS' COLLEGE READINESS IN THREE HOUSTON ISD HIGH SCHOOLS, 2019–2020**

The Houston Independent School District (HISD) Miles Ahead Scholars (MAS) Program was launched in October 2019 with a \$22 million grant sponsored by Senator Boris Miles and funded through a Texas Education Agency Student Success Initiative (SSI) Community Engagement Grant.

Scholars were mentored by men of color in the community who shared their personal and professional experiences with these scholars. Scholars received one-to-one counseling and academic support from instructional specialists. The first program cohort involved 60 ninth- and tenth-grade students from Wheatley, Worthing, and Kashmere high schools.

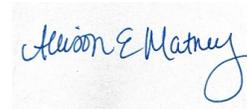
An objective-based evaluation was conducted to determine the program effect after one year of implementation, while considering the disruptions due to the Covid-19 pandemic, using quantitative data collection methods including a survey and quasi-experimental design methods.

Key findings include:

- Scholars in the MAS program were Black (69.9%) or Hispanic (32.1%) males. All were economically disadvantaged, 58.5 percent were at risk for school dropout, and 88.7 percent were identified as non-gifted and talented (G/T).
- Most Scholars had positive feedback about the Miles Ahead Scholars Program's contribution to their college-readiness (mean rating average of 3.11 of 4.0); college expectations and plans (3.23 of 4.0); academic preparation and support (3.41 of 4.0); and their support networks (3.45 of 4.0).
- Scholars believed that MAS program events and activities provided real world and character-building experiences, prepared them for college, taught them how to give back to their communities, and to build networks while developing social skills.
- Scholars had favorable ratings for the MAS program culture (3.61 of 4.0) based on their agreement and disagreement with key related statements.
- When compared to a matched group of students from comparable schools who did not participate in the MAS program, scholars had a higher mean weighted cumulative GPA (3.29 v 2.15). The difference was statistically significant ($p < .001$). The effect size was very large and substantively important ($g = 1.26$).
- Miles Ahead Scholars had a higher attendance rate (96.2 v. 91.4 %) than their matched group who did not participate in the MAS program for the 2019–2020 school year. The difference was statistically significant ($p < .05$) with an effect size that was moderate and substantively important ($g = 0.62$).

- When compared to a matched group of students who were not exposed to the MAS program, MAS had, on average, a lower mean incidence of in-school suspensions (0.09 v 0.34). The difference was statistically significant ($p < .05$). The effect size was moderate and substantively important ($g = -0.50$).
- Miles Ahead Scholars had a lower mean incidence of out-of-school suspensions (0.11 v. 0.40) than a matched group of their peers who were not exposed to the program. The difference was statistically significant ($p < .05$) with an effect size that was moderate and substantively important ($g = -0.45$).
- About 67.9 percent of scholars had a weighted cumulative GPA at or above 2.5 with 66.0 percent having a weighted cumulative GPA of at least 3.0.

Further distribution of this report is at your discretion. Should you have any further questions, please contact me at 713-556-6700.



AEM

Attachment

cc: Grenita Lathan
Rick Cruz
Yolanda Rodriguez
Derrick R. Emanuel
Haskel J. Harvey



RESEARCH

Educational Program Report

**THE IMPACT OF THE MILES AHEAD SCHOLARS'
PROGRAM ON SCHOLARS' COLLEGE
READINESS IN THREE HOUSTON ISD HIGH
SCHOOLS, 2019-2020**



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Houston Independent School District
Hattie Mae White Educational Support Center
4400 West 18th Street Houston, Texas 77092-8501

www.HoustonISD.org

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THE IMPACT OF THE MILES AHEAD SCHOLARS' PROGRAM ON SCHOLARS' COLLEGE READINESS IN THREE HOUSTON ISD HIGH SCHOOLS, 2019–2020

Executive Summary

The Houston Independent School District (HISD) Miles Ahead Scholars (MAS) Program was launched in October 2019 with a \$22 million grant sponsored by Senator Boris Miles and funded through a Texas Education Agency Student Success Initiative (SSI) Community Engagement Grant. The program is a new initiative designed to make college attendance a reality for young Black and brown male students (Boney, 2019). Using dedicated staff, community-based mentors, and internships, students were expected to achieve the goals and expectations of the program and to ensure that they maintain a competitive Grade Point Average (GPA) and were eligible and ready for university success (Boney, 2019). Scholars were mentored by men of color in the community who shared their personal and professional experiences with these scholars. Scholars received one-to-one counseling and academic support from instructional specialists. The first program cohort involved 60 ninth- and tenth-grade students from Wheatley, Worthing, and Kashmere high schools, whose students are underrepresented among top U.S. colleges and universities.

An objective-based evaluation was conducted to determine the program effect after one year of implementation, while taking into consideration the disruptions due to the Covid-19 pandemic, using quantitative data collection methods. An online survey, with a 67% response rate, was administered to the scholars using Microsoft Forms. Students' academic achievement based on their weighted cumulative GPAs, attendance, and disciplinary incidents were compared to a matched group of non-scholars from the same and comparable schools who were not exposed to the program.

Key findings:

- Scholars in the MAS program were Black (69.9%) or Hispanic (32.1%) males. All scholars were economically disadvantaged, 58.5 percent were at risk for school dropout, and 88.7 percent were identified as non-gifted and talented (G/T).
- Most Scholars had positive feedback about the Miles Ahead Scholars Program's contribution to their college-readiness (mean rating average of 3.11 of 4.0); college expectations and plans (3.23 of 4.0); academic preparation and support (3.41 of 4.0); and their support networks (3.45 of 4.0).
- Scholars believed that MAS program events and activities provided real world and character-building experiences, prepared them for college, taught them how to give back to their communities, and to build networks while developing social skills.
- Scholars had favorable ratings for the MAS program culture (3.61 of 4.0) based on their agreement and disagreement with key related statements.
- When compared to a matched group of students from comparable schools who did not participate in the MAS program, scholars had a higher mean weighted cumulative GPA (3.29 v 2.15). The difference was statistically significant ($p < .001$). The effect size was very large and substantively important ($g = 1.26$).

- Miles Ahead Scholars had a higher attendance rate (96.2% v. 91.4%) than their matched group who did not participate in the MAS program for the 2019–2020 school year¹. The difference was statistically significant ($p < .05$) with an effect size that was moderate and substantively important ($g = 0.62$).
- When compared to a matched group of students who were not exposed to the MAS program, MAS had, on average, a lower mean incidence of in-school suspensions (0.09 v 0.34). The difference was statistically significant ($p < .05$). The effect size was moderate and substantively important ($g = -0.50$).
- Miles Ahead Scholars had a lower mean incidence of out-of-school suspensions (0.11 v. 0.40) than a matched group of their peers who were not exposed to the program. The difference was statistically significant ($p < .05$) with an effect size that was moderate and substantively important ($g = -0.45$).
- About 67.9 percent of scholars had a weighted cumulative GPA at or above 2.5, with 66.0 percent having a weighted cumulative GPA of at least 3.0.

Recommendations

- Given the positive results from the evaluation, the MAS program should consider expanding to other students from similar demographic and educational backgrounds within HISD.
- Consistent with scholars' suggestions, considerations should be given to expanding support beyond math and reading into areas such as the sciences. A school-wide model may be considered for students who would benefit from such support.
- Program managers should consider additional support and interventions for the program scholars whose weighted cumulative GPA is still below 3.0 given the importance of GPA for college readiness and admission.
- Program managers should also pay attention to areas in the survey where the rating averages were lower than 3.0 since this indicated that at least one in five students did not agree with relevant scale items, like having a graduation plan or whether they participated in activities that connected them to their schools.

¹The last thirteen weeks (March 22 – May 29, 2020) of the school year was interrupted by Covid-19 pandemic. Sessions were moved online, and so attendance data were not available for that period. The fidelity with which the program was implemented during this disruption could have been affected.

Introduction

The solution to the college readiness problem among students of color and poverty in the United States is preparation (Bryant, 2015). The Houston Independent School District (HISD) has been implementing several programs and initiatives designed to boost the college readiness of students of color and to address and correct some of their difficulties associated with access to top colleges and universities in the United States. One of these programs is the Miles Ahead Scholars (MAS)² program.

According to the MAS program website, MAS was designed to empower young men of color to ignite positive changes in their lives, schools, and communities by preparing them to attend and graduate from the nation's top universities. MAS collaborates with communities, and schools to provide in-school programs that support participants' development as men and scholars and to prepare them for postsecondary success. Participation would create opportunities for social and economic mobility, improve the college-going identity, and establish a culture of achievement for schools while combating the school to prison pipeline by ensuring that participants become productive citizens.

The MAS program was launched in October 2019 at Worthing High School. Academically, MAS constituted the top 30 percent or sixty scholars in three HISD high schools: Kashmere, Wheatley, and Worthing, whose students are currently underrepresented among top U.S. colleges and universities. The program was designed to follow ninth to tenth-grade boys with promise as they become men and complete their twelfth-grade year. MAS scholars were exposed to one-on-one college counseling and academic electives facilitated by instructional specialists. MAS scholars also completed college tours, travel seminars, and were assigned mentors. The program was supported by a \$22 million state grant and local sponsorships.

This paper is an evaluation of the MAS program after its first year of implementation in three HISD high schools – Kashmere, Wheatley, and Worthing, while considering the Covid-19 disruption and the districtwide transition to online learning. The evaluation reviewed the college preparation perceptions and experiences of the program scholars and determined the extent to which scholars believed that they were being prepared for college. The effect of the program on students' academic achievement, attendance, and discipline was also determined in this evaluation.

The following questions guided the evaluation:

1. What were the demographic and educational characteristics of scholars in the MAS program during the 2019–2020 school year?
2. What were MAS scholars' perceptions of and experiences with the MAS program during the 2019–2020 school year?
3. What impact did the MAS programs have on the academic achievement, attendance, and discipline of scholars during the 2019–2020 school year?
4. To what extent were student participants college-ready at the end of the 2019–2020 academic year?

² Miles Ahead Scholars program bears the name of Texas Senator Borris L. Miles of Texas's 13th District and a long-time resident of Houston. Senator Miles was the sponsor of the \$22 million grant that established the MAS program.

Literature review

The college readiness research highlights inadequate student preparation for college success (Zinshteyn, 2015). This is particularly true for “certain racial and ethnic groups, low-income and first-generation college students” (Bryant, 2015, p.1). African Americans, and more so those in high-poverty schools, are far less college-ready (Bryant, 2015). Greater focus needs to be placed on the deficiencies and disparities in the school system, in particular those with large minority populations. Schools often provide inadequate courses, resources, and support to African-American students (Bryant, 2015). Bryant (2015) recommends access to rigorous college preparation courses, experienced teachers, and school counselors.

Conley (2007, p. 4) defines college and career ready as “the level of preparation a student needs to enroll and succeed³, without remediation, in a credit-bearing course at a postsecondary institution or certification program for career advancement.” Success is defined as the completion of entry-level courses or core certificate courses as a requisite for enrolling in the next level courses (Conley, 2010). In the State of Texas, college readiness is defined as “what students must know and be able to do to succeed in entry-level courses at postsecondary institutions in Texas” (Texas Education Agency as cited in Conforti, 2013, p. 3)

Wimberly and Noeth (2005) conducted surveys and focus groups of middle and early high school students in 15 schools and 6 school districts. Most students planned to pursue post-secondary education, but fewer believed their high school programs of study prepared them for college. Mothers (67%), school counselors (66%), and Teachers (86%) appear to provide the most help in students’ high school course selection. Teachers provided information on classes and their links to the postsecondary option according to focus group participants. Seventy percent of students who used information from standardized assessments like Explore® and Plan® for educational planning believed that the information helped them to select high school courses. Seventy-eight percent of middle and early high school students indicated that they had begun to “think about and explore their education and work options after high school but 22 percent had not begun to do so” (Wimberly & Noeth, 2005, p. ix).

One-third of U.S students do not enroll in college upon graduating high school due to work obligations, concerns about affordability, and inadequate academic preparation (Anderson & Fulton, 2015). Notwithstanding, most of these students aspire to college education (Anderson & Fulton, 2015). In response, states have begun to broaden matriculation requirements to include coursework, and rigor, high school grade point average (GPA), and competency-based assessments beyond the traditional SAT or ACT scores (Anderson & Fulton, 2015).

Based on conversations with parents, teachers, administrators, school counselors, and students on the most helpful college preparedness strategies, Corwin and Tierney (2007) concluded that high schools needed a college-going culture because “students are best served by schools that exhibit a strong college culture” (p. 1). This culture comprises beliefs and practices that cultivate aspirations and behavior conducive to preparing for, applying to, and attending college by offering challenging academic courses including dual credit and Advanced Placement (AP) taught by “teachers qualified to lead;” a clear college mission forged by all stakeholders; the provision of college guidance, preparation and information, and resources; and a system of coordinated support designed to engage scholars in the development and realization of their college goals (Corwin & Tierney, 2007). Schools must have a clear understanding of how a college plan is developed and must work to develop scholars’ aspirations and enrollment.

Despite projections that two-third of American jobs will require college experience, Carnevale, Smith & Strohl (as cited in Bryant, 2015, p. 1) asserts that more African American young people graduate high school unprepared for the rigors of college. Data from the United States Department of Education, Office of Civil Rights show that “only 57 percent of African American and 67 percent of Hispanic/Latino students have access to the full complement of courses necessary to be college-ready” (Bryant, 2015, p. 4), compared to 81 percent for Asian and 71 percent for White scholars. In addition to rigorous coursework,

³ That is, completing each successive level of college courses towards eventual certification (Conley, 2010).

Bryant (2015) noted that college-ready students must also understand college culture, have strong study habits, and know how to access supports. While 16% of high school students in 2014 were African American only 8 percent were enrolled in high school calculus classes, 12 of 21 percent Hispanic/Latino compared to 65 percent of White students who make up 54 percent of high school enrollment. Asians made up five percent of the students' high school enrollment, but 14 percent were enrolled in high school calculus classes (Bryant, 2015). Only 10 percent of African American and Latino students were enrolled in the 486 most selected colleges in the U.S. compared to 85 percent of White students in the freshman year between 1995-2009 (Carnevale & Strohl as cited in Zinshteyn, 2015).

A review of state and systemwide college admission requirements found that 47 states had minimum high school graduation requirements and 18 states had aligned these with state and system-wide higher education minimum admission requirements (Anderson & Fulton, 2015) These included demonstration, of course, content knowledge and subject mastery; successful completion of first-college courses as a measure of rigor; strong high school grade point average (GPA); class rank, which has been shown be a better predictor of college success than standardized assessments; multiple assessments including Advanced Placement (AP), International Baccalaureate (IB), SAT, ACT and other college entrance exams. States have also used a combination of several measures rolled into a single index score for college admission (Anderson & Fulton, 2015)

A recent addition to predictors of student performance and student preparedness for college has been student mindset, perseverance, and grit (Duckworth, et al, 2007). Studies have investigated grit and college science achievement in Canada (Bazelais, Lemay, & Doleck, 2016); grit among first-generation college scholars (Midkill, Langer, Demetriou, & Panter, 2016); the importance of grit in scholars' academic and personal success (Reed & Jeremiah, 2017), among others. In one study with 309 participants (168 female), Bazelais et al. (2018) administered a grit and mindset questionnaire to determine their implications for academic performance among pre-university scholars (average age 21years) in Canada. When controlled for student GPA, the results showed that neither grit nor mindset predicted academic performance (Bazelais, et al., 2018).

Methods

This is an objective-oriented evaluation using a quantitative design that sought to determine the extent to which MAS participants were college-ready based on their perceptions and experiences in the program and using their GPA as a measure of college readiness. Scholars graduating high school with a 2.5 GPA, and who were not convicted with a crime or were not a parent have a .71 likelihood of reaching the American Middle class (AASA, n.d.). High school GPA was a stronger predictor of performance in college-high English and math than were standardized exam scores among first-time scholars at the University of Alaska who enrolled directly in college-level courses (Michelle & Lewis, 2017). They were better predictors of college course grades than were SAT, ACT, or ACCUPLACER scores (Michelle & Lewis, 2017). As mentioned already, the evaluation also determined the effect of the MAS program on scholars' academic achievement, school attendance, and discipline.

Data Collection

An online survey was administered to the 57 scholars who were enrolled in the MAS program using Microsoft Forms. The survey was developed based on findings from the research literature on college preparation and readiness using Likert scale, Likert-type, and open-ended questions and feedback form program managers and supervisors. A link to the survey was emailed to program managers who in turn emailed it to Miles Ahead Scholars. Scholars were given an initial three weeks for responses and reminders were sent out twice. A total of 38 scholars or 67.9 percent responded to the survey. In a comparative review of eight studies on paper and online survey response rates, Nulty (2008) found average response rates of 56% and 33% for paper and online surveys, respectively. The response rate in this survey was twice that of the average response rate, which is essential given the small number of student participants in the MAS program.

The MAS program manager provided a list of scholars and their unique identification numbers. Ninth and tenth-grade scholars' academic achievement, attendance, discipline, and educational and demographic data in all three MAS and three comparative high schools were retrieved from SIS Ad Hoc database using Cognos. SIS Ad Hoc is a data repository in the HISD data warehouse. Cognos is an International Business Machine (IBM) platform linked to the HISD data warehouse for data queries.

A quasi-experimental design was also used in this evaluation. A matched group of scholars was selected to determine the impact of the MAS program. Since only male ninth and tenth-grade scholars of color made up the sample, three additional HISD schools (Washington BT High, North Forest High, and Scarborough High Schools), comparable⁴ to the MAS schools, were included to increase the population from which the matched group of scholars were selected.

Scholars were matched using propensity scores⁵ (PSM) in IBM Statistical Packages for Social Sciences (SPSS). The 53 MAS scholars for whom data were available were matched against 1,375 ninth- and tenth-grade scholars in six high schools using exact match with replacement and a match tolerance of 0.001. Key educational and demographic covariates – English language learners, ethnicity, grade, special education, economically-disadvantaged, gifted and talented, and at-risk for school dropout were the basis on which students were matched. Students were assigned to treatment and non-treatment groups. The exact match selected a control group of scholars with propensities for treatment similar to those of the Miles Ahead School based on the covariates. By creating similar groups, the propensity scores reduce the selection or sampling error and substantially increased the likelihood that the outcomes are comparable.

Data Analysis

Survey data from Microsoft Forms were downloaded into Microsoft Excel for analysis. Responses for each scale item were weighted and averaged and an overall average for the scale was also determined. Detailed data for each item and scales were presented in Tables in the Appendix and summarizes as figures in this report. Opened-ended questions were coded manually, given the small number of respondents, using open, axial, and selective coding to identify, rationalize, and select themes based on the reading and re-reading of the responses (Maguire & Delahunt, 2017). Four themes emerged and are presented with supporting details that reflected the authentic voices of the Miles Ahead Scholars. Direct quotes from students in support of these themes are designed to validate these themes and findings of this evaluation.

Once matched, an independent samples t-test using IBM SPSS was conducted with students' weighted cumulative GPAs⁶, attendance, and in- and out-of-school suspension as the outcomes. Independent samples t-test is used to measure the difference in the mean of two unrelated groups, in this case, MAS scholars versus non-scholars who were not MAS participants.

The outcome data met the assumptions for linearity, equality of variance, and collinearity using the Shapiro-Wilk test, Normal Q-Q plots, and Detrended Normal Q-Q plots.

Limitations

- Although the number of survey respondents appears to be small, the response rate was more than twice the average response rate identified in other studies that used online surveys.

⁴ Comparable schools were identified using The Texas Education Agency's 2019 School Comparison Group. Each campus in Texas is assigned to a unique comparison group comprised of schools that are most like it. They are grouped with 40 other campuses from anywhere in Texas that are most similar by grade level served, size, percentage of scholars who are economically disadvantaged, mobility rate, the percentage of English learners, percentage of student who serve by special education and the percentage of scholars enrolled in an early college high school program. Each campus had only one unique campus comparison group (Texas Education Agency, 2019).

⁵ The propensity score is the probability of treatment assignment conditional on observed baseline characteristics. The propensity score allows one to design and analyze an observational (nonrandomized) study so that it mimics some of the characteristics of a randomized controlled trial (Austin, 2011, p. 399).

⁶Weighted Cumulative GPA reflect the grades students received for high school course measured on a 4.0 scale and adjusted to reflect grades for advanced placement or honor courses, which are graded on a 5.0 scale.

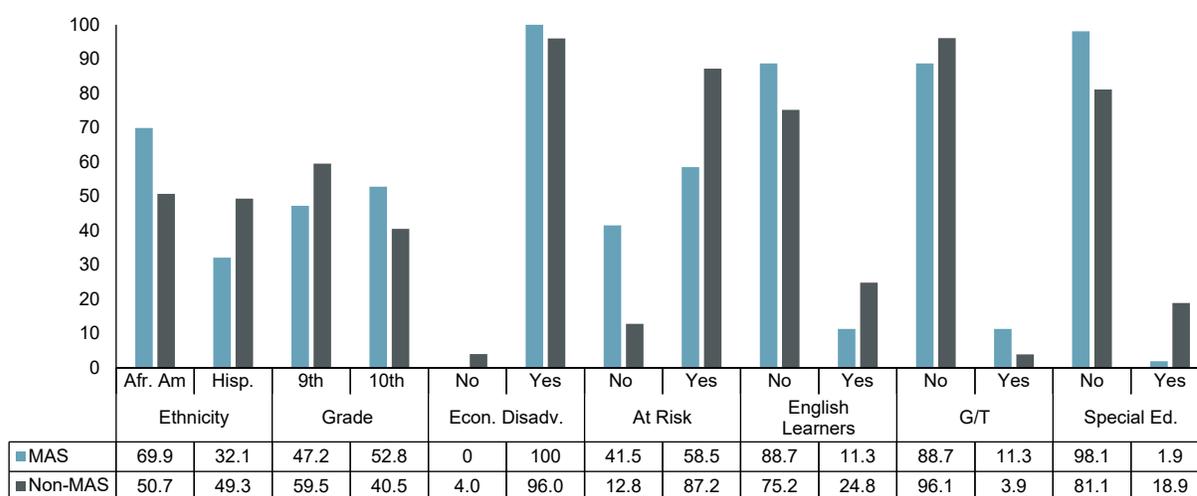
- Other supports and programs may have been provided for these scholars that could have contaminated the MAS program, such is the case with observational data where participants have not been randomly selected into treatment and non-treatment groups. These supports and programs have not been isolated, however, this evaluation includes a quasi-experimental design with PSM and includes a comparable group to determine program effect.

Results

1. What were the demographic and educational characteristics of scholars in the MAS program during the 2019–2020 school year?

Figure 1 displays the demographic and educational characteristics of the evaluation sample for the Miles Ahead Scholars, and the non-Miles Ahead Scholars from which the comparison group was selected using propensity score matching (PSM).

Figure 1. Demographic and Educational Composition of the MAS Evaluation Sample, 2019–2020



Source: HISD SIS Ad hoc downloaded using IBM Cognos on May 15, 2020.

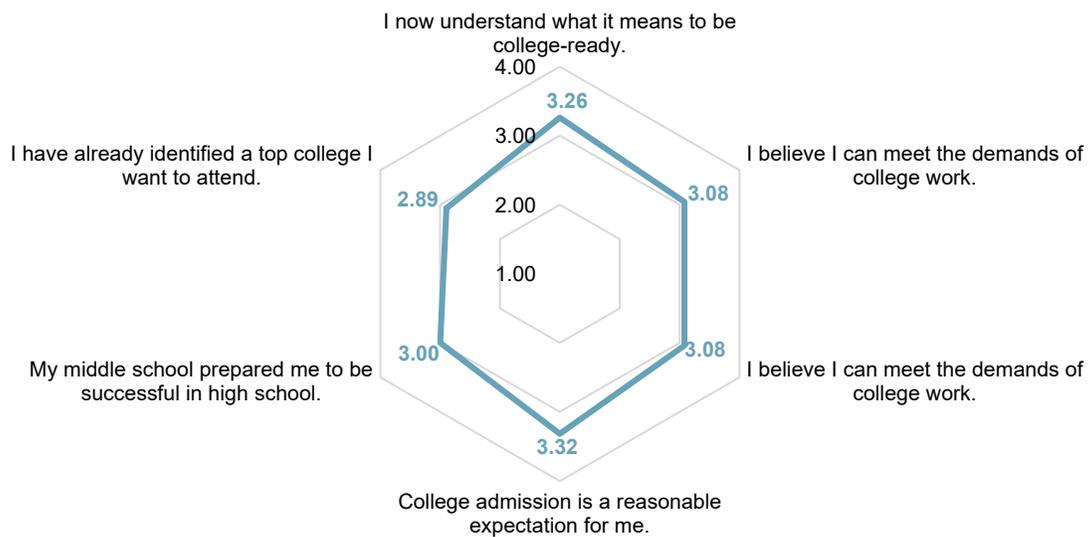
Note: Afr. Am. = African American = Hisp. = Hispanic; Econ. Disadv. = Economic Disadvantaged; G/T = Gifted and Talented; Special Ed. = Special Education

- Most scholars in the MAS sample were African American (69.9%). Most were tenth graders (52.8%) and all scholars were economically disadvantaged.
- Most scholars in the sample were at risk for school dropout (58.5%) and only 11.3 percent were identified as G/T or English Learners.
- Only 1.9 percent of scholars in the MAS sample were enrolled in special education.

2. What were MAS scholars' perceptions of and experiences with the MAS program during the 2019–2020 school year?

Figure 2 to Figure 6 show the survey results of the experiences and perception of scholars who were enrolled in the MAS program during the 2019–2020 school year. Scholars were asked to rate their degree of agreement or disagreement on statements or items weighted from 1–4 on the Likert scale (strongly disagree = 1, disagree = 2, agree = 3, and strongly agree = 4). All 38 scholars responded to the questions and details of their responses are in Table A1 to Table A5, Appendix A, p. 20–21.

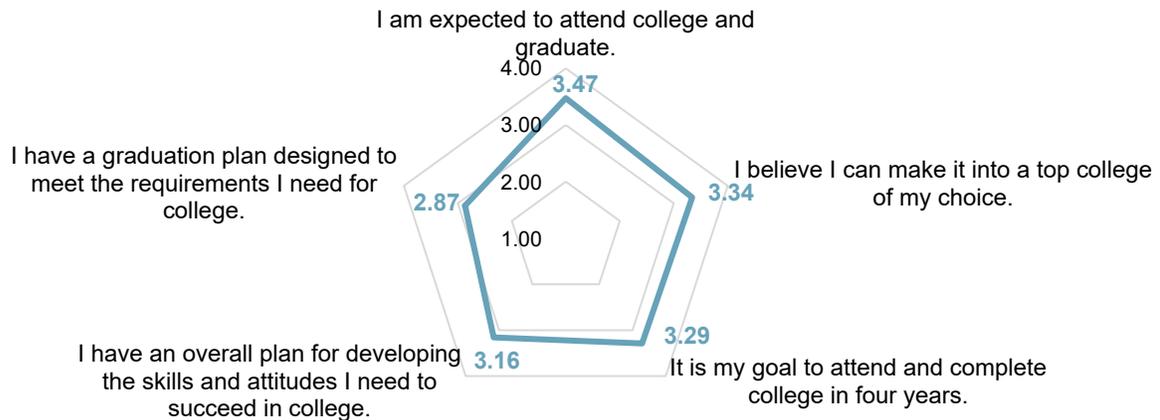
Figure 2. College Readiness Beliefs of Miles Ahead Scholars, HISD, 2019–2020



- College readiness beliefs had a mean rating average of 3.11 on a 4.0 scale (Table 1. Appendix A, p. 20). Four of the six items on the scale were below the mean rating average. On average, scholars agree with five of the six statements about their college readiness beliefs.
- According to Figure 2, the highest rating average was 3.32 of 4.0 for the item, “college admission is a reasonable expectation for me,” followed by 3.26 for the item, “I now understand what it means to be college-ready.”
- “I have already identified a top college I want to attend” had the lowest rating average of 2.89 on a scale of 4.0. followed by the item, “My middle school prepared me to be successful in high school” (3.0 of 4.0).

Figure 3 shows the college expectations of the Miles Ahead Scholars, and how scholars are following up on these expectations. Details are provided in Table A2, Appendix A, p. 20.

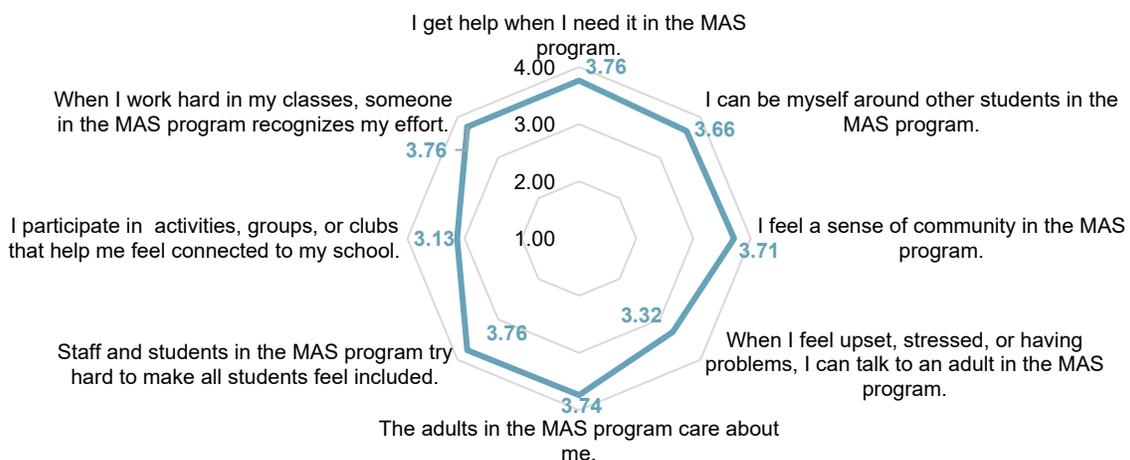
Figure 3. College Expectations of Miles Ahead Scholars, HISD, 2019–2020



- The mean rating average for the college expectations of scholars in the MAS program was 3.23 of 4.0 (Table A2, Appendix 1, p. 20). Three of the five items on the scale were above the mean rating average.
- On average, (rating average of 3.47 of 4.0), most scholars either agreed or strongly agreed that they expected to attend college and graduate followed by their belief that they could make it into a top college of their choice (rating average of 3.34 of 4.0).
- The lowest rating average (rating average of 2.87 of 4.0) was returned for the item “I have a graduation plan designed to meet the requirements I need for college” while “I have an overall plan for developing skills and attitudes I need to succeed in college had a rating average of 3.16 of 4.0.

Figure 4 shows Miles Ahead Scholars’ perceptions and experiences of the MAS program culture. On a scale of 1 to 4, scholars were asked to rate the degree of agreement or disagreement with eight items on the scale. Details are provided in **Table A3**, Appendix A, p. 20.

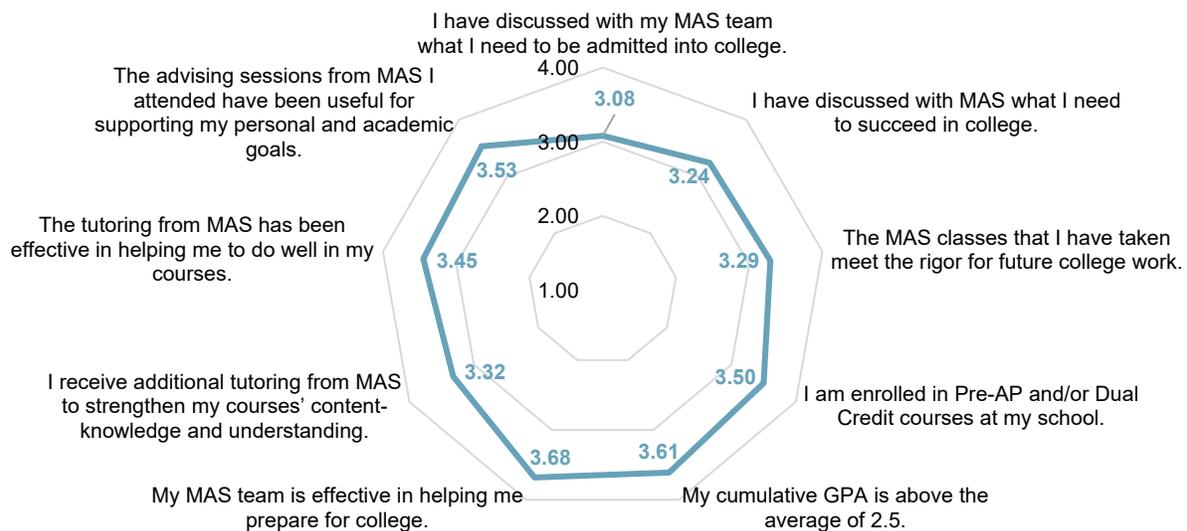
Figure 4. Scholars' Perceptions of and Experiences with the MAS Program Culture, HISD, 2019–2020



- The mean rating average for scholars' perceptions of and experiences with the MAS program culture was 3.61 of 4.0. Six of the eight scale items (rating average of 3.66 to 3.76 of 4.0) were above the mean ratings average indicating that most scholars strongly agreed with statements supporting the perception of and experience with the MAS program culture.
- With a rating average of 3.76 of 4.0, scholars appear to strongly agree that (1) I get help when I need it in the MAS program, (2) When I work hard in class, someone in the MAS program recognizes my efforts, and (3) Staff and students in the MAS program try to make all students feel included.
- On average, scholars strongly agreed (rating average of 3.74 of 4.0) that adults in the MAS program care about them and that they feel a sense of community in the MAS program (rating average of 3.71 of 4.0).
- Scholars recorded the lowest rating average (3.13 of 4.0) for the statement, "I participate in activities, group, or clubs that help me feel connected to my school."

Figure 5 displays the degree of Miles Ahead Scholars agreement and disagreement with the academic preparation and support they received from the MAS program. Details are provided in **Table A4**, Appendix A, p. 21.

Figure 5. MAS Scholars' Experiences with MAS Program Academic Preparation and Support, HISD, 2019–2020

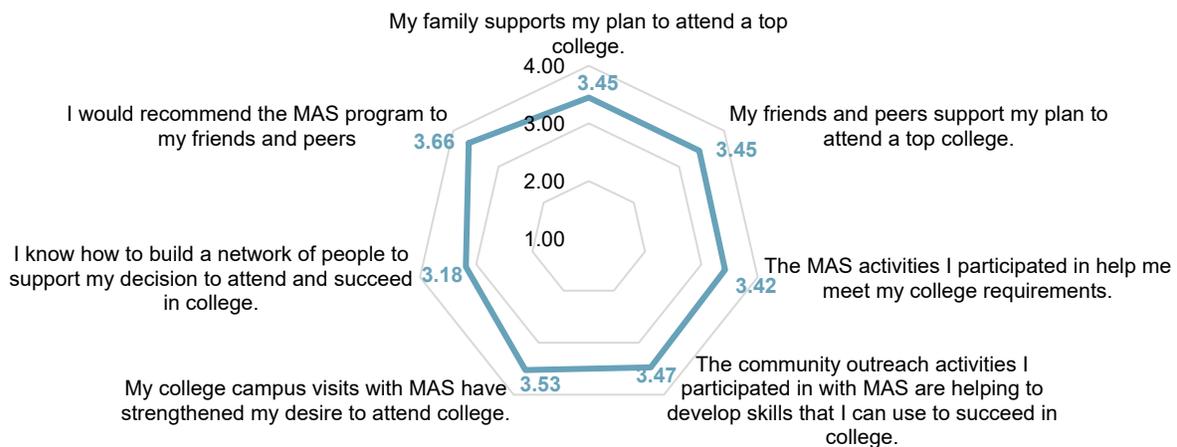


- The mean rating average for scholars' degree of agreement or disagreement with the MAS program academic preparation and support was 3.41 of 4.0. Five of the nine scale items had rating averages that were above the mean rating average (rating average of 3.45 to 3.68 of 4.0).
- The items "My MAS team is effective in helping me prepare for college" and "my cumulative GPA is above the average of 2.5." had the highest rating average at 3.68 and 3.61 of 4.0, respectively.

- The lowest rating average (3.08 of 4.0) was recorded for the statement “I have discussed with my team what I need to be admitted into college followed by “the MAS classes that I have taken meet the rigor for future college work” (rating average of 3.29 of 4.0).

Figure 6 displays MAS scholars’ degree of agreement or disagreements with statements regarding their perception of the networks associated with the MAS program. Details are provided in **Table A5**, Appendix A, p. 21.

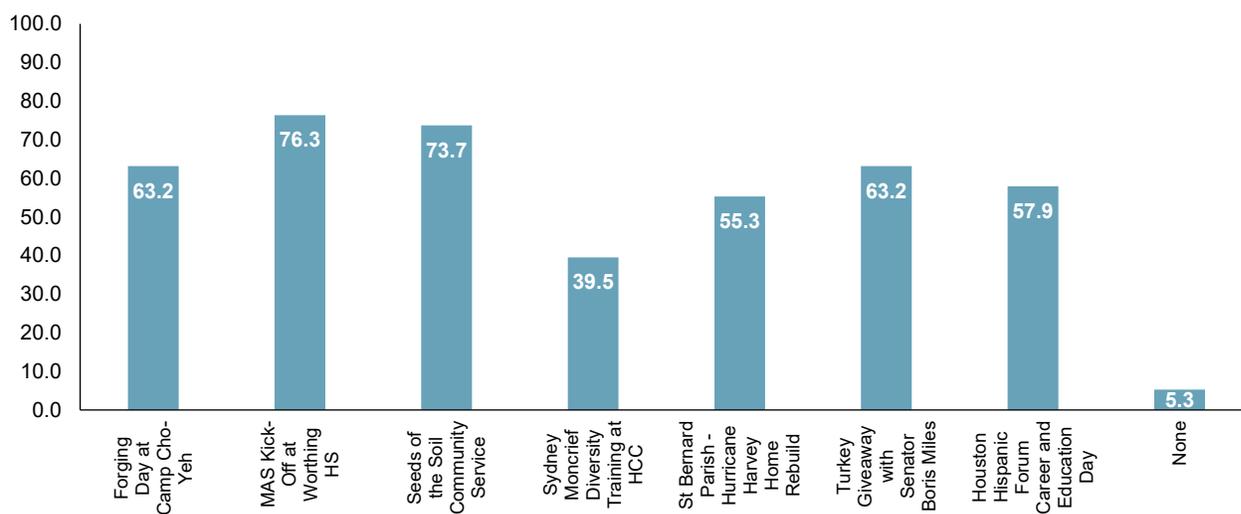
Figure 6. MAS Scholars’ Experiences Regarding Network Building and Support for College, HISD, 2019–2020



- Most scholars agreed or strongly agreed with survey statements regarding their network building and support for college (mean rating average of 3.45 of 4.0). Five of the seven scale items had ratings that were at or above the mean rating average (rating averages between 3.45 and 3.66 of 4).
- Most scholars agreed or strongly agreed to recommend the MAS program to their friends and peers (rating average of 3.66 of 4.0) and that their college campus visits with MAS had strengthened their desires to attend college (rating average of 3.53 of 4.0). Details are in Table 4, Appendix A, p. 21
- MAS scholars agreed or strongly agreed with the statement, although more agreed than strongly agreed, that (1) “My family supports my plan to attend a top college, and (2) “ MY friend and peers support my plan to attend a top college” with a rating average of 3.45 of 4.0 for both statements.
- With a rating average of 3.18 of 4.0, most scholars either disagreed or agreed that with the statement, “I know how to build a network of people to support my decision to attend and succeed in college.”

Figure 7 shows the frequency with which MAS scholars participated in activities organized by the MAS program. Scholars were asked to list all the activities in which they participated. Details are in **Table A6** Appendix A, p. 22.

Figure 6. Frequency of Student Participation in MAS-Organized Program Activities, HISD, 2019–2020



- Most scholars participated in the MAS Kick-Off at Worthing HS (76.3%) and the Seeds of the Soil Community Service activity (73.7%).
- About 63.2 percent of the scholars participated in Forging Day at Camp Cho-Yeh and in the Turkey Giveaway with Senator Boris Miles.
- About 5.3 percent of scholars did not participate in any of the seven activities listed in the survey and 39.5 percent participated in the Sydney Moncrief Diversity Training at HCC.

The survey also consisted of three open-ended questions: (1) Why do you think MAS events are important? (2) What suggestions would you give to improve the MAS program?, and (3) Are there any other things not mentioned in the survey that you would like to add?. All 38 scholars responded to the first open-ended question. Four themes emerged on why scholars thought MAS program events were important:

Importance of MAS Program Events

1. **Provide real-world and character-building experiences.** Fifteen scholars mentioned an aspect of this theme in their responses. Scholars noted *“The events, to me, are a great way to open up and experience new things that help me grow as a person”* (MAS05). *“It helps us get out of the same routines we have in school, and it expands our parallel views of the world and shows us the reality”* (MAS01).
2. **College preparation.** Five scholars spoke about the connection between the MAS program events and college preparation. They noted, *“because it helps give you hints of the life college is going to be”* (MAS03). *“MAS events are important because they prepare you for the future you might experience in college or as an adult”* (MAS17).

3. **Building networks and developing social skills.** Fifteen scholars wrote on this theme. They opined, *“I think Mas events are important because they help us socialize with people we don’t see often and develop social skills”* (MAS06). *“It also helps me network and expands my ideas on education and college”* (MAS13), *“Because it helps us form better friendships and bond with each other”* (MAS22).
4. **To give back to my community.** Nine scholars were associated with this theme. They offered *“I think MAS events are important because they help us give back to the community and grow connections with other people as well as each other”* (MAS08). *These events will help us know how to help/be part of a community”* (MAS37). *“To show us what it means to out there and teach us to give back”* (MAS27).

Suggestions for Improving MAS Program

The second open-ended question asked scholars to make suggestions for improving the MAS program. All 38 scholars responded to this question. Table 5 is a summary of their responses. It shows the themes, the frequency of those themes in scholars responses, and the examples of the themes expressed in these responses.

Table 5. Thematic Summary of Scholars’ Suggestions for Improving the MAS Program, HISD, 2019–2020		
Themes	Frequency	Examples
None/I do not know/NA	16	<ul style="list-style-type: none"> • “N/A” (MAS16) • “I don’t know” (MAS07) • “None” (MAS33)
Good work/Keep it up	12	<ul style="list-style-type: none"> • <i>“I think the MAS program is doing a very good job supporting and advising scholars and their families”</i> (MAS06). • <i>“I have no suggestions because I think MAS is the best program I have been in”</i> (MAS23). • <i>“Nothing right now, We’re the pioneers of MAS and everything is going fine”</i> (MAS37).
More events, exposure, and college visits	13	<ul style="list-style-type: none"> • <i>“One suggestion I have is more college trips because the trip for PVAMu was the best college experience I have ever had and I would like to add more college experiences to the list of colleges I would want to go”</i> (MAS04). • <i>“More exposure and college life scenarios”</i> (MAS12). • <i>“A charity basketball game”</i> (MAS10).
Help with other courses	2	<ul style="list-style-type: none"> • <i>“The only thing I think is that they need more place where teachers can help us with other subjects like science than just reading and math”</i> (MAS11). • <i>“Help with our work (not giving us answers but help understand what we are doing) for other classes”</i> (MAS15).

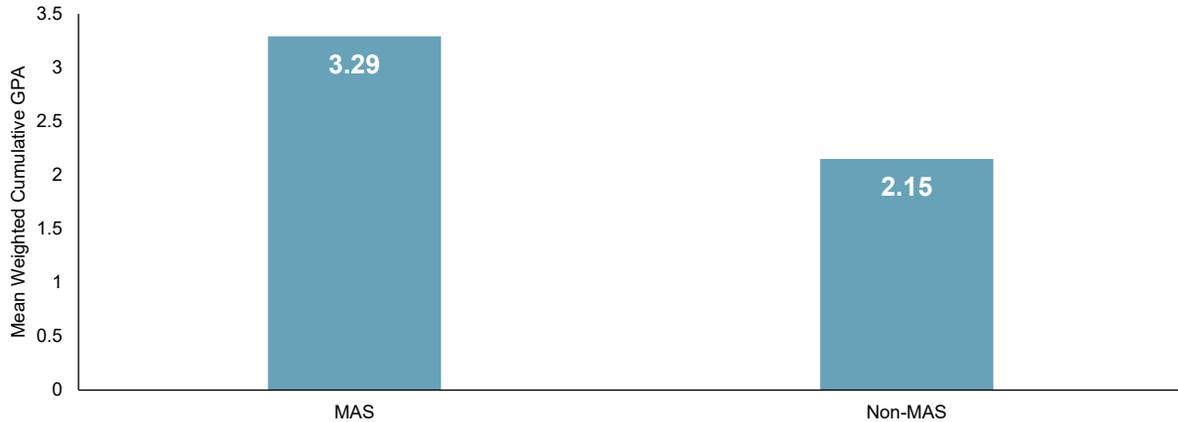
In response to the third open-end question, 20 students responded but none provided any additional information.

3. What impact did the MAS programs have on the academic achievement, attendance, and discipline of scholars during the 2019–2020 school year?

Weighted Cumulative GPA

The weighted cumulative GPA of a matched group of students in the evaluation sample were compared to determine the effect of the MAS program on the academic achievement of scholars. **Figure 7** shows the mean results of the independent t-test. Details are in **Table B1**, Appendix B, p. 23.

Figure 7. Comparative Mean GPA for MAS and Non-Mas student in the Sample, HISD, 2019–2020

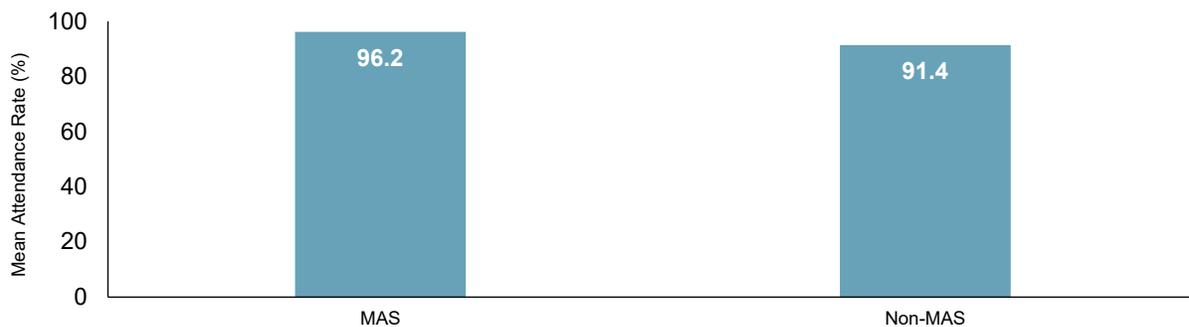


- The 41 MAS who participated in the MAS program (M = 3.29, SD = 0.58) compared to the 45 matched students who did not participate in the program (M = 2.15, SD = 1.12) demonstrated a significantly higher mean weighted cumulative GPA, $t(84) = 5.83$, $p < .001$ (two-tailed), $d = 1.26$. Details are in **Table B1**, Appendix B, p. 23.

Year-to-Date Attendance

The year to date attendance rate for a matched sample of MAS and non-MAS scholars were compared to determine the impact of the program on Miles Ahead Scholars. The mean results are shown in **Figure 8**. Details are in **Table B2**, Appendix B, p. 23.

Figure 8. Comparative Mean Year-to-Date Attendance Rate for MAS and Non-MAS Students, HISD, 2019–2020

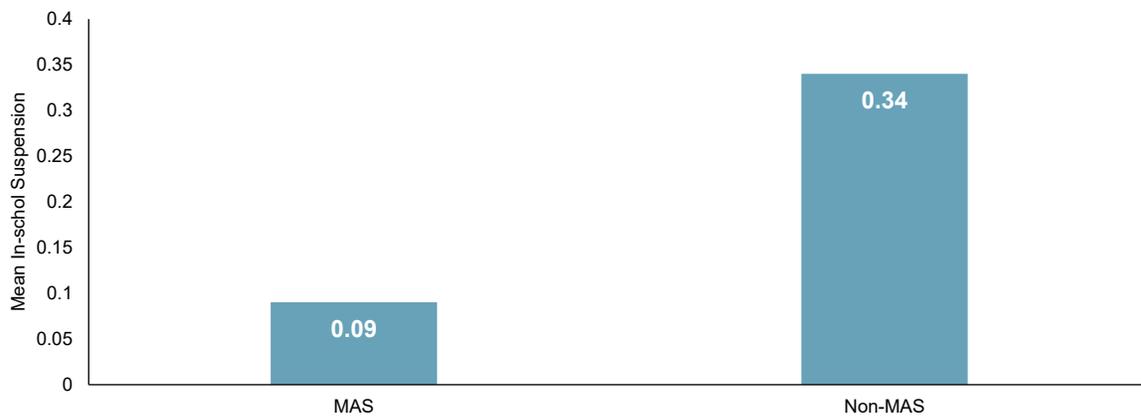


- There was a statistically significant difference in mean year-to-date attendance $t(104) = 3.17, p < .05$ (two-tailed), $d = 0.62$, between Miles Ahead Scholars ($M = 96.2, SD = 2.89$) and non-Miles Ahead Scholars ($M = 91.4, SD = 10.58$) in the matched sample. Details are in **Table B2**, Appendix B, p. 23.

Student Discipline

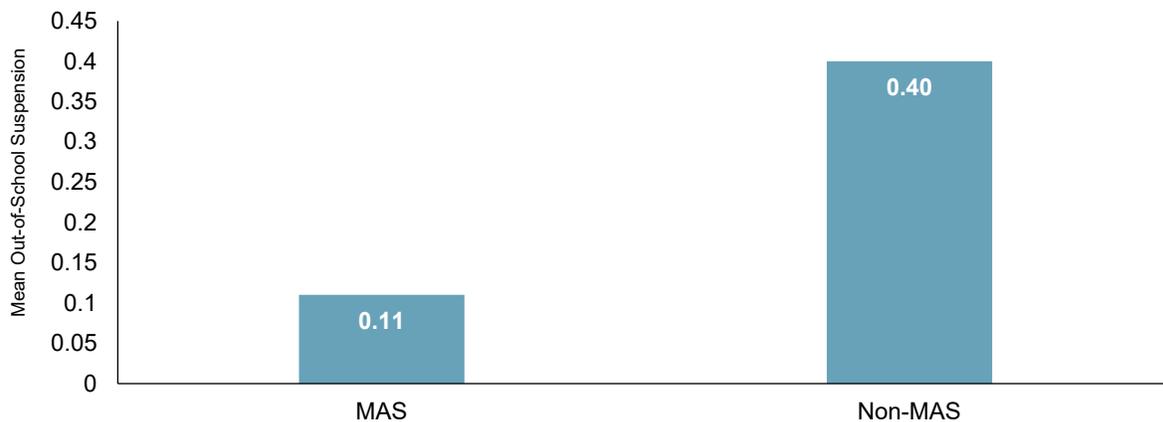
Figure 9 and **Figure 10**, respectively, show the in- and out-of-school suspensions for a matched group of scholars who were exposed to the MAS program during the 2019–2020 school year. In and out of school suspensions were treated as proxies for student discipline. They are interventions for infractions students committed. Suspensions are Level II and III offenses, which include cutting class, failure to abide by rules, use of cellphones and similar devices during school hours, verbal abuse, harassment, threats, and intimidation (Houston ISD, 2019)

Figure 9. Comparative Mean In-School Suspensions for Matched Miles Ahead Scholars, HISD, 2019–2020



- There was a statistically significant difference in the mean number of in-school suspensions $t(104) = -2.24, p < .05$ (two-tailed), $d = -0.50$, between MAS ($M = 0.11, SD = 0.32$) and non-MAS ($M = 0.40, SD = 0.86$). Details are in **Table B3**, Appendix B, p. 23.

Figure 10. Comparative Mean number of Out-of-School Suspensions for Matched Miles Ahead Scholars, HISD, 2019–2020



- The 53 MAS who participated in the MAS program ($M = 0.11$, $SD = 0.32$) compared to the 45 matched students who did not participate in the program ($M = 0.40$, $SD = 0.86$) demonstrated a significantly lower mean number of out-of-school suspensions, $t(104) = -2.24$, $p < .05$ (two-tailed), $d = -0.45$. Details are in **Table B4**, Appendix B, p. 23.

4. To what extent were MAS college-ready at the end of the 2019–2020 academic year?

Based on the research literature, student cumulative GPA is considered a strong predictor of college readiness. Students' weighted cumulative GPA has been used to determine the extent to which students are college-ready.

- Figure 7 indicates that on average, MAS had a higher mean weighted cumulative GPA (3.69 v. 2.15) compared to their peers who did not participate in the MAS program.
- About 67.9 percent of MAS had a weighted cumulative GPA of at least 2.5. About 67.9 percent of these MAS had a weighted cumulative GPA of at least 2.9, and 66.0 percent had a weighted cumulative GPA of at least 3.0.
- About 32.1 percent of MAS students had a weighted cumulative GPA below 2.5 for the 2019–2020 school year.

Discussion

The purpose of the is evaluation was to determine the effect of the Miles Ahead Scholars Program on the student participants using a quantitative approach. A survey of closed and open-ended question polled scholars on their college readiness and expectations, their academic preparation and support, networking building and support, and the participation in related activities after one-year participation in the Miles Ahead Scholars Program. The research literature on college readiness proposed more targeted programs designed to adequately prepare students for college particularly for students of color (Bryant, 2015, Corwin & Tierney, 2015). MAS students were also matched using PSM on academic achievement, attendance, and discipline to determine the program effect.

Overall, Miles Ahead Scholars demonstrated positive college readiness beliefs. This was particularly so for their understanding of what it meant to be college-ready and their belief that college admission was a reasonable expectation for them although there appeared that more than a third (39.5%) who had not yet identified the colleges they intended to attend. Although one-third of U.S. scholars do not enroll in college upon graduation from high schools, most aspire to a college education (Anderson & Fulton, 2015).

Less than one in four scholars strongly disagreed that middle school prepared them to be successful in high school but most (52.6%) agreed that middle school adequately prepared them for high school. Students also confirmed, in the opened-ended questions, that MAS activities and events assisted in college preparation by exposing them to college, real-world, and character-building experiences.

Concerning college expectations, students expected to attend college and graduate, believed that they could make it into the top college of their choice, and most agreed that they would do so in four years. However, there may be concerns that more than one in four (28.9%) did not have graduation plans that were designed to meet college requirements although most claimed that they had overall plans to develop college-success skills and attitudes. Corwin and Tierney (2015) believe that schools should have a college-going culture that comprises beliefs and practices that cultivate aspirations and behavior conducive to preparing for, applying to, and attending college. Miles Ahead Scholars appeared to have strong network support from their families, friends, and peers for their desire to attend college and they believed that their participation in MAS activities helped strengthen their college-ready skills and requirements. Most MAS

agreed or strongly agreed that they knew how to build a network of people in support of their college attendance and success. Most agreed or strongly agreed (rating average of 3.66 of 4.0) that they would recommend the MAS program to their friends and peers. MAS activities and events were also singled out for building networks and developing social skills.

Miles Ahead Scholars' perception and experiences with the MAS program culture appeared to be positive with rating averages ranging from 3.66 to 3.76 for six of the scale items. The rating average was substantially lower for students' participation in activities that connected them to their schools (about 1 in 5 students). Students appeared to be more connected to the program than they are to the school. It may be due to the program culture, activities, and content but also to the small size of the program that reduced in-group alienation and created a close-knit group. Students confirmed that the activities and events in which they participated resulted in bonding, getting to know each other, and fostered social skills development. With so few students exposed to the program, Corwin and Tierney's (2015) call for a schoolwide college-going culture becomes more urgent.

Students appeared to hold the program in high regard. When asked for suggestions to improve the program, 28 of the 38 students who completed the survey, either did not offer suggestions or praised the work being done in the program. Students wanted more events, exposure to real-life experiences, and college visits. Two students suggested a program extension into other academic areas besides math and reading. This demonstrated students' confidence in the abilities of these teachers. Corwin and Tierney (2007) highlighted the importance of a teacher who would lead...and engage students in the development and realization of their college goals and schools that exhibit a strong college-going culture. Part of the challenge is how to incorporate the college-preparedness culture of MAS into the general school culture. Wimberly and Noeth (2005) found that mothers, school counselors, and teachers guided students' high school course selections based on their survey of 15 schools in six school districts. Linking the home to schools appears to be critical in the college-preparedness of high school students, given the importance of course rigor in college readiness (Bryant, 2015).

The program had a large to a very large positive effect on student academic achievement and college-readiness, attendance, and discipline. When compared to a matched group of their peers who were not enrolled in the program, MAS had a higher weighted cumulative GPA (3.29 v. 2.15) at the end of the school year. They also had higher attendance rates (95.2 v. 91.4%), lower in-school suspensions (0.09 v. 0.34), and lower out-of-school suspensions (0.11 v. 0.40). The program effect ranged from $d = -0.45$ to 1.26. The U.S. Department of Education, Institute for Education Science, What Works Clearinghouse (WWC) proposed that an effect size of at least 0.25 is substantively important in education. The difference in means must be at least 0.2 standard deviations to be meaningful. The 0.25 is more stringent than Cohen's d , which is pegged at 0.2 standard deviations (Institute for Education Sciences, What Works Clearinghouse, 2017).

The MAS program was designed to prepare students of color for enrollment in top U.S. colleges. The data showed that 67.9% of scholars had a weighted cumulative GPA of at least 2.5 and that 66 percent had a weighted cumulative GPA of at least 3.0. High school GPA was found to be a stronger predictor of college performance in college English and Math and has been included in the minimum college admission requirements in 47 states (Anderson & Fulton, 2015; Michelle & Lewis, 2017).

The results of the study suggest the need for the expansion and deepening of the program particularly at schools with similar demographic and educational characteristics. Students whose GPAs are below 2.5 may require more intense intervention, one-to-one support, and close monitoring of their performance to ensure they do not fall behind and that they achieve their college aspirations.

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Appendix A

Table A1. College Readiness Beliefs and Experiences of MAS, HISD, 2019–2020									
Answer Options	Strongly Disagree		Disagree		Agree		Strongly Agree		Rating Average
	n	%	n	%	n	%	n	%	
I now understand what it means to be college-ready.	0	0	0	0	28	73.7	10	26.3	3.26
I believe I can meet the demands of college work.	0	0	3	7.9	29	76.3	6	15.8	3.08
I believe I can meet the demands of college work.	0	0	3	7.9	29	76.3	6	15.8	3.08
College admission is a reasonable expectation for me.	0	0	0	0	26	68.4	12	31.6	3.32
My middle school prepared me to be successful in high school.	0	0	9	23.7	20	52.6	9	23.7	3.00
I have already identified a top college I want to attend.	0	0	15	39.5	12	31.6	11	28.9	2.89
Overall Average									3.11

Table A2. College Expectations and Plans of MAS, HISD, 2019–2020									
Answer Options	Strongly Disagree		Disagree		Agree		Strongly Agree		Rating Average
	n	%	n	%	n	%	n	%	
I am expected to attend college and graduate.	0	0	1	2.6	18	47.4	19	50.0	3.47
I believe I can make it into a top college of my choice.	0	0	2	5.3	21	55.3	15	39.5	3.34
It is my goal to attend and complete college in four years.	0	0	6	15.8	15	39.5	17	44.7	3.29
I have an overall plan for developing the skills and attitudes I need to succeed in college.	1	2.6	5	13.2	19	50.0	13	34.2	3.16
I have a graduation plan designed to meet the requirements I need for college.	1	2.6	11	28.9	18	47.4	8	21.1	2.87
Overall average									3.23

Table A3. MAS Perceptions and Experiences on MAS Program Culture, HISD, 2019–2020									
Answer Options	Strongly Disagree		Disagree		Agree		Strongly Agree		Rating Average
	n	%	n	%	n	%	n	%	
I get help when I need it in the MAS program.	0	0	0	0	9	23.7	29	76.3	3.76
I can be myself around other scholars in the MAS program.	0	0	0	0	13	34.2	25	65.8	3.66
I feel a sense of community in the MAS program.	0	0	0	0	11	28.9	27	71.1	3.71
When I feel upset, stressed, or having problems, I can talk to an adult in the MAS program.	0	0	3	7.9	20	52.6	15	39.5	3.32
The adults in the MAS program care about me.	0	0	0	0	10	26.3	28	73.7	3.74
Staff and scholars in the MAS program try hard to make all scholars feel included.	0	0	0	0	9	23.7	29	76.3	3.76
I participate in activities, groups, or clubs that help me feel connected to my school.	2	5.3	6	15.8	15	39.5	15	39.5	3.13
When I work hard in my classes, someone in the MAS program recognizes my effort.	0	0	0	0	9	23.7	29	76.3	3.76
Overall Average									3.61

Table A4. MAS Experiences with the MAS Program College Academic Preparation and Support, HISD, 2019–2020									
Answer Options	Strongly Disagree		Disagree		Agree		Strongly Agree		Rating Average
	n	%	n	%	n	%	n	%	
I have discussed with my MAS team what I need to be admitted into college.	0	0	8	21.1	19	50.0	11	28.9	3.08
I have discussed with the MAS team what I need to succeed in college.	0	0	5	13.2	19	50.0	14	36.8	3.24
The MAS classes that I have taken meet the rigor for future college work.	0	0	3	7.9	21	55.3	14	36.8	3.29
I am enrolled in Pre-AP and/or Dual Credit courses at my school.	0	0	2	5.3	15	39.5	21	55.3	3.50
My cumulative GPA is above the average of 2.5.	0	0	2	5.3	11	28.9	25	65.8	3.61
My MAS team is effective in helping me prepare for college.	0	0	0	0	12	31.6	26	68.4	3.68
I receive additional tutoring from MAS to strengthen my courses' content-knowledge and understanding.	0	0	4	10.5	18	47.4	16	42.1	3.32
The tutoring from MAS has been effective in helping me to do well in my courses.	0	0	3	7.9	15	39.5	20	52.6	3.45
The advising sessions from MAS I attended have been useful for supporting my personal and academic goals.	0	0	2	5.3	14	36.8	22	57.9	3.53
Overall Average									3.41

Table A5. MAS Responses to Statement Regarding their Support Networks, HISD, 2019–2020									
Answer Options	Strongly Disagree		Disagree		Agree		Strongly Agree		Rating Average
	n	%	n	%	n	%	n	%	
My family supports my plan to attend a top college.	0	0	2	5.3	17	44.7	19	50.0	3.45
My friends and peers support my plan to attend a top college.	0	0	0	0	21	55.3	17	44.7	3.45
The MAS activities I participated in helped me meet my college requirements.	0	0	0	0	22	57.9	16	42.1	3.42
The community outreach activities I participated in with MAS are helping to develop skills that I can use to succeed in college.	0	0	1	2.6	18	47.4	19	50.0	3.47
My college campus visits with MAS have strengthened my desire to attend college.	0	0	2	5.3	14	36.8	22	57.9	3.53
I know how to build a network of people to support my decision to attend and succeed in college.	0	0	6	15.8	19	50.0	13	34.2	3.18
I would recommend the MAS program to my friends and peers	0	0	0	0	13	34.2	25	65.8	3.66
Overall Average									3.45

Table A6. MAS Frequency of Participation in MAS Activities and Events, HIS, 2019–2020

MAS Program Activities and Events	N	%
Forging Day at Camp Cho-Yeh	24	63.2
MAS Kick-Off at Worthing High School	29	76.3
Seeds of the Soil Community Service	28	73.7
Sydney Moncrief Diversity Training at HCC	15	39.5
St Bernard Parish - Hurricane Harvey Home Rebuild	21	55.3
Turkey Giveaway with Senator Boris Miles	24	63.2
Houston Hispanic Forum Career and Education Day	22	57.9
None	2	5.3

APPENDIX B

Table B1. Comparative Achievement of MAS and Non-MAS, HISD, 2019–2020												
Weighted Cumulative GPA	N	Mean	Std. Deviation	Std. Error Mean	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)	Effect Size
							Lower	Upper				
MAS	41	3.29	0.58	0.09	1.14	0.20	0.75	1.53	5.83	84	.000	1.26
Non-MAS	45	2.15	1.12	0.17								

Table B2. Comparative Attendance Rate for MAS and Non-MAS, HISD, 2019–2020												
Attendance Rate	N	Mean	Std. Deviation	Std. Error Mean	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)	Effect Size
							Lower	Upper				
MAS	53	96.15	2.89	0.40	4.78	1.51	1.79	7.76	3.17	104	.002	0.62
Non-MAS	53	91.37	10.58	1.45								

Table B3. Comparative In-School Suspension for MAS and Non-MAS, HISD, 2019–2020												
In-School Suspension	N	Mean	Std. Deviation	Std. Error Mean	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)	Effect Size
							Lower	Upper				
MAS	53	.09	.35	.05	-.25	.10	-.44	-.05	-2.51	104	.014	-0.50
Non-MAS	53	.34	.62	.08								

Table B4. Comparative Out-of-School Suspension for MAS and Non-MAS, HISD, 2019–2020												
Out of School Suspension	N	Mean	Std. Deviation	Std. Error Mean	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)	Effect size
							Lower	Upper				
MAS	53	.11	.32	.04	-.28	.13	-.53	-.03	-2.24	104	.027	-0.45
Non-MAS	53	.40	.86	.12								