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National Alliance for Partnership in Equity (NAPE) Student Outcomes: 2014-2015





Executive Summary

The purpose of this report is to examine how students who were influenced by the National Alliance for Partnerships in Equity's (NAPE) Micromessaging to Reach and Teach Every Student™ professional development training program differed from similar students who were not influenced by this training.

The impact of NAPE was assessed using State of Texas Assessments of Academic Readiness (STAAR), course enrollment, and high school endorsement selection data. Because the intention of NAPE's training is to decrease gaps seen in the STEM (science, technology, engineering, and math) fields, only students who were enrolled in a science, math, or STEM-related career and technical education (CTE) course with a teacher trained by NAPE were considered students influenced by NAPE. Each outcome was examined by race, gender, limited English proficiency, special education, and economic disadvantaged status to assess performance by various underserved groups in the STEM field.

Overall, enrolling in a course with a NAPE-trained teacher appeared to show a positive relationship with STAAR achievement. The results indicated NAPE-influenced students tended to show expected or greater than expected progress on math, as assessed through the STAAR exam. Additionally, NAPE-influenced students showed greater math gains than did similar students who were not NAPE influenced, across the majority of subgroups. NAPE-influenced students performed similarly or better on the science STAAR than did similar students who were not enrolled in a course with a NAPE-trained teacher. An analysis of course enrollment indicated a decline in advanced core course enrollment and elective science course enrollment among the entire group of students. The majority of students in underserved groups in the STEM field showed increased enrollment in elective math courses. Mixed results were seen in the analysis of STEM-related CTE course enrollment. Finally, 2014–2015 8th-grade students showed similar rates of selecting the STEM endorsement overall and across the majority of subgroups.

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Introduction

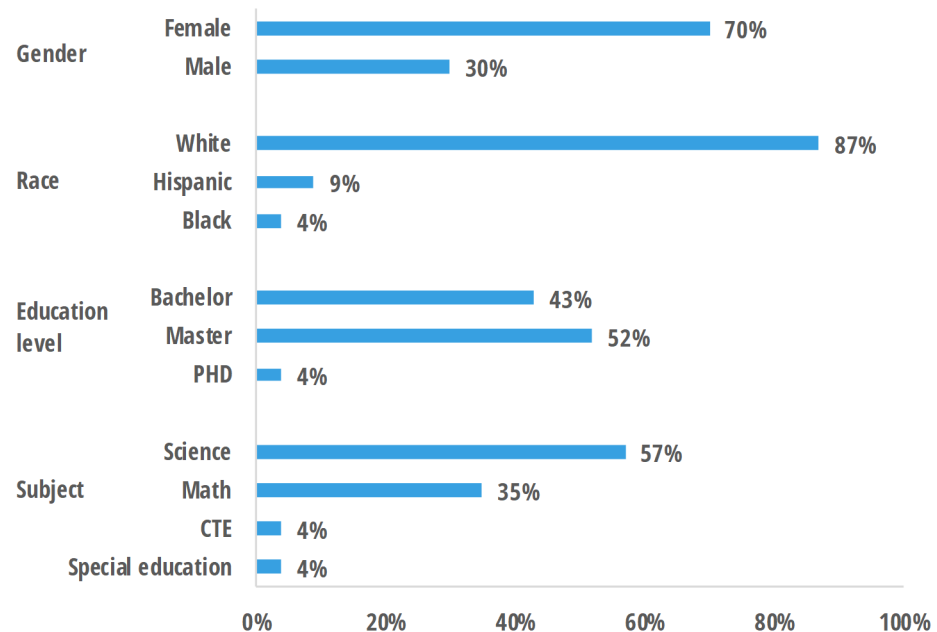
Austin Independent School District (AISD) and the American Institutes for Research (AIR) are collaborating with the National Alliance for Partnerships in Equity's (NAPE) to provide AISD staff with NAPE's professional development program, Micromessaging to Reach and Teach Every Student™. This program addresses the influence of small and often subconscious cues (e.g., tone of voice, word choice, and bodily gesture) individuals send and receive, due to implicit bias, with the intention of increasing micro-affirmation (positive micromessages) and decreasing micro-inequalities (negative micromessages) (NAPE, 2015). Within the classroom structure, decreased micro-inequalities may encourage students to pursue nontraditional career paths. The goal of the training at AISD is to increase enrollment and achievement and to decrease the gap between historically underserved groups (e.g., female, Hispanic, and economically disadvantaged students) in science, technology, engineering, and math (STEM) fields.

In the 2014–2015 school year, NAPE provided training to staff at four middle schools: Fulmore, Gorzycki, Kealing, and Small. **The current report provides an overview of the staff and students who were influenced by NAPE in the 2014–2015 school year, as compared with similar students who were not influenced by NAPE's training.**

Which teachers received NAPE training?

NAPE staff recruited principals, who then recruited teachers to participate in NAPE's professional development program. A total of 23 staff completed the NAPE training in 2014–2015. The majority of NAPE-trained staff were female and White (Figure 1). Additionally, the majority of staff taught science (57%) or math (35%). The average years of AISD employment among NAPE participants ranged from 1 year to a total of 25 years, with an average of 6.5 years of experience.

Figure 1.
The majority of NAPE-trained teachers were female and White in the science field.



Source. AISD staff records, 2014–2015

Note. Percentages may not total 100 due to rounding.

Because students were not randomly assigned into the treatment condition (i.e., enrollment in a course instructed by a NAPE-trained teacher), the treatment effect may be biased when analyzing all students in the control group (i.e., students not enrolled in a course instructed by a NAPE-trained teacher). However, by using propensity score matching, a quasi-experimental design approach can be achieved so the effect of enrollment in a course instructed by a NAPE-trained teacher can be more accurately estimated.

Propensity score matching is a method of matching students in a treatment group to students with a similar likelihood of being assigned to the treatment condition when accounting for covariates. Covariates for this sample included math NCE 2013–2014 scores, gender, race, grade, limited English proficiency, economic disadvantaged, and special education status. The caliper matching strategy was then applied to match treatment students to similar control students.

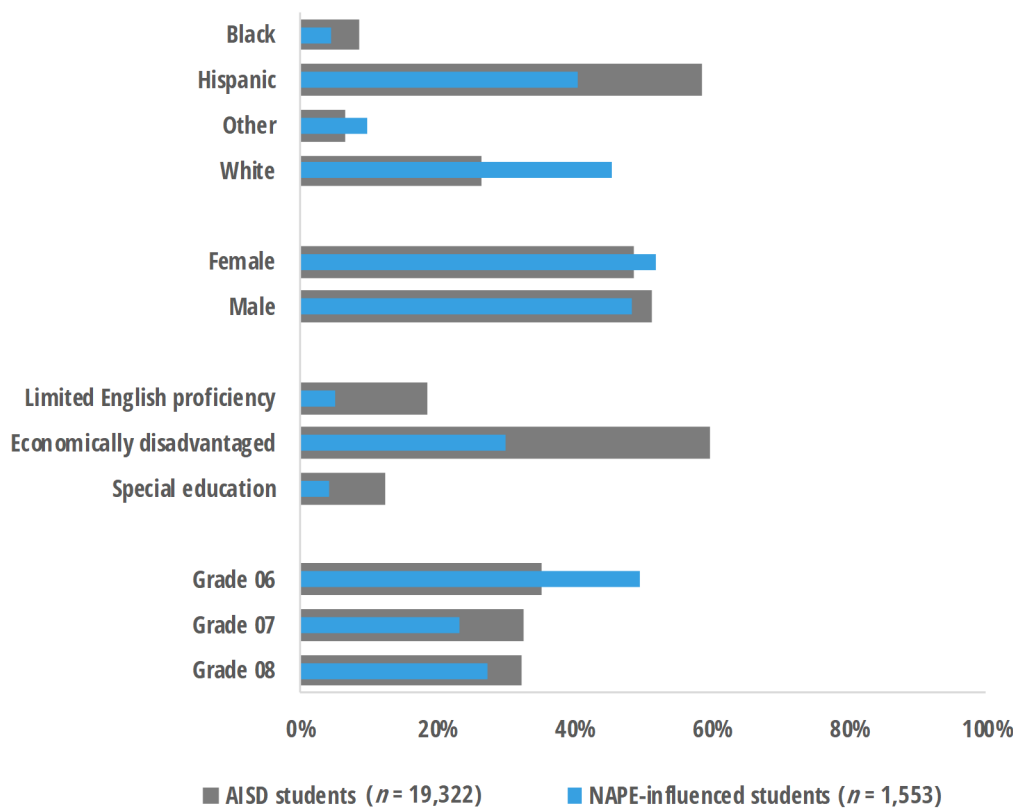
Who were the students included in the analysis?

Using propensity score matching (see sidebar), students who were enrolled in a course with a NAPE-trained teacher were each matched to similar students who were *not* enrolled in a class with a NAPE-trained teacher; only students with both 2013–2014 and 2014–2015 STAAR results were matched. A total of 3,106 students (1,553 NAPE-influenced and 1,553 not-NAPE-influenced students) were included in the analysis group. Chi-square tests indicated there was not a significant difference between the treatment group (NAPE-influenced students) and control group (not-NAPE-influenced students) for various demographic characteristics and the 2014 math normal curve equivalent (NCE) score.

What characterized the students who were influenced by NAPE?

Compared with the total AISD 6th- to 8th-grade student population in 2014–2015, students who were White or in grade 6 were overrepresented among the group of students enrolled in a course instructed by a NAPE-trained teacher (Figure 2). Additionally, much smaller percentages of NAPE-influenced students than of the overall AISD 6th- to 8th-grade student population were Hispanic and economically disadvantaged.

Figure 2. The majority of NAPE-influenced students were in 6th grade or White.



Source. AISD student records, 2014–2015
 Note. Percentages may not total 100 due to rounding.

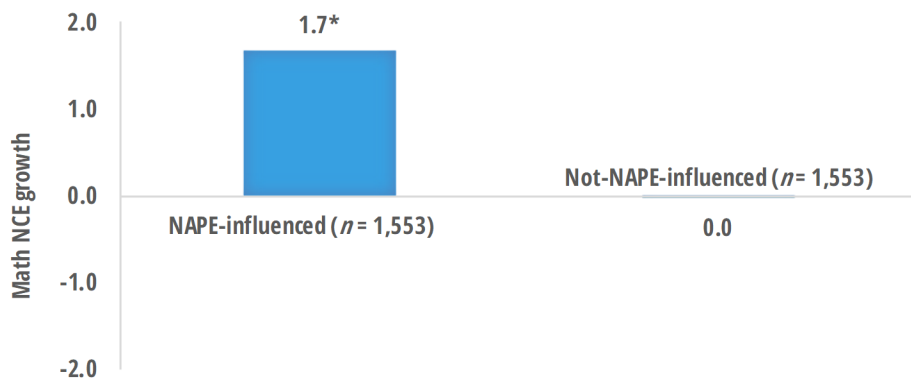
The normal curve equivalent (NCE) was generated for student STAAR scores. Similar to percentile ranks, numbers range from 0 to 100 on the NCE line, with a standard deviation of 21.06 (Central Rivers Area Education Agency 267, 2017). The advantages of NCE scores includes allowing scores to be averaged, compared across time, and tested for significance. For the purposes of this report, average STAAR NCE scores were used to assess gains/losses in math achievement by subgroups (e.g., race, gender). In regard to gains/losses, a 0 is interpreted as students making the expected amount of progress during an academic year. Students who make more than 1 year of progress will have positive scores, showing a net gain in NCE scores, while students who make less than a year of progress will have negative scores, showing a net loss in NCE scores.

STAAR Results

A total of 3,106 students (1,553 NAPE-influenced and 1,553 not-NAPE-influenced students) were included in analyses pertaining to math growth; 88% of students in the sample passed the math STAAR in the 2014–2015 academic year. Math growth was analyzed by examining differences between 2014–2015 and 2013–2014 STAAR NCE scores. Because the science STAAR is taken only by 5th- and 8th-grade students, a total of 802 students (418 NAPE-influenced students and 384 not-NAPE-influenced students) in the sample had records and were included in analyses examining science achievement; 89% of students passed the science STAAR.

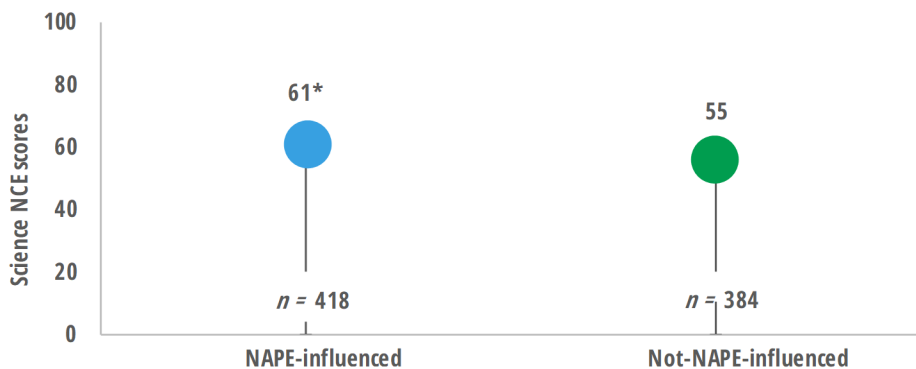
As seen in Figure 3, NAPE-influenced students showed significantly greater performance in math growth than did matched students who were not NAPE influenced. NAPE-influenced students had a 1.7 average growth in math, indicating students who were enrolled in a math, science, or STEM CTE course instructed by a NAPE-trained teacher showed more than a year of expected progress in math. Students who were not NAPE influenced showed a 0.0 growth in math, indicating these students showed a year of expected progress in math. NAPE-influenced students had significantly higher science STAAR NCE scores than did similar students who were not NAPE influenced (Figure 4).

Figure 3. **NAPE-influenced students** had significantly greater math gain than did **similar matched students who were not NAPE influenced**.



Source. AISD STAAR records, 2013–2014 and 2014–2015
 Note. STAAR scores were converted to NCE scores; growth was computed by subtracting 2014–2015 from 2013–2014 NCE scores. * statistically significant at $p < 0.05$.

Figure 4. **NAPE-influenced students** had significantly higher science NCE scores than did **similar matched students who were not NAPE influenced**.

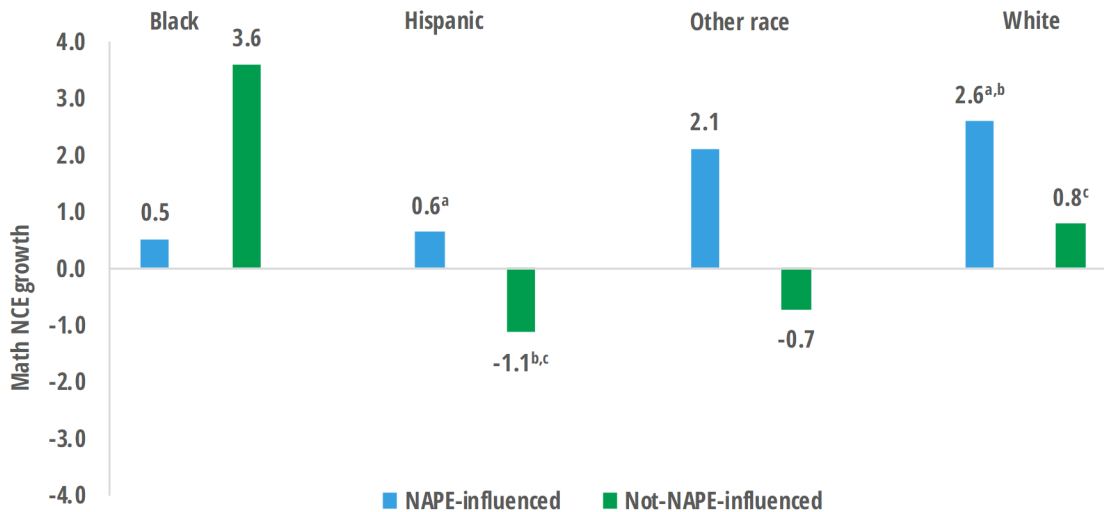


Source. AISD STAAR records, 2014–2015
 Note. * statistically significant at $p < 0.05$.

STAAR Results, by Race

Mixed results were seen in math growth when examined for each race. As seen in Figure 5, in general, significant differences in math growth occurred between White and Hispanic students. White NAPE-influenced students had significantly higher math growth than did Hispanic students. Although not significant, all NAPE-influenced groups showed greater than a year of expected progress in math. Figure 6 shows that White students had significantly higher science NCE scores than did Black and Hispanic students.

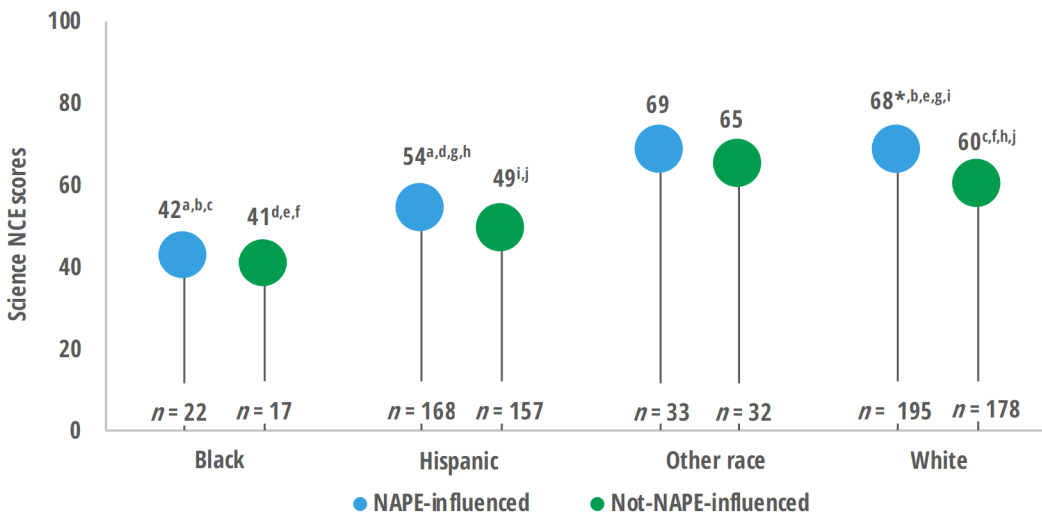
Figure 5. **NAPE-influenced students** showed more than a year of expected progress in math across all racial subgroups.



Source. AISD STAAR records, 2013–2014 and 2014–2015

Note. STAAR scores were converted to NCE scores; growth was computed by subtracting 2014–2015 from 2013–2014 NCE scores; other race includes American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, two or more races, and Asian students. * statistically significant at $p < 0.05$ within race; percentages sharing the same superscript letter were significantly different at $p < 0.05$ across race.

Figure 6. **White students** had significantly higher science NCE scores than did Black and Hispanic students.



Source. AISD STAAR records, 2014–2015

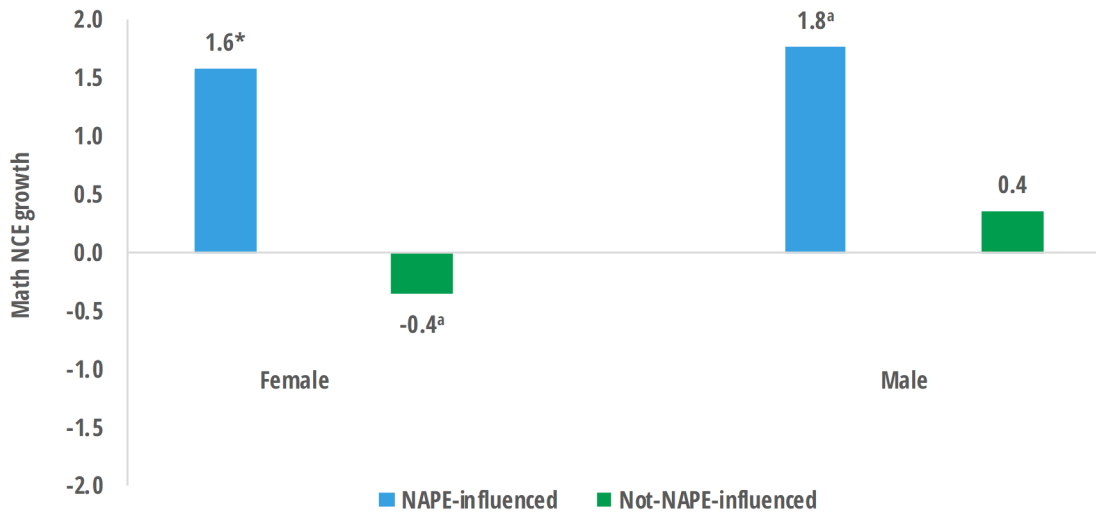
Note. Other race includes American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, two or more races, and Asian students.

* statistically significant at $p < 0.05$ within race; percentages sharing the same superscript letter were significantly different at $p < 0.05$ across race.

STAAR Results, by Gender

As seen in Figure 7, NAPE-influenced females showed significantly higher math gains than did similar matched female students who were not NAPE influenced. Significantly higher math gains were also seen for NAPE-influenced males, compared with matched females who were not NAPE influenced. In general, both NAPE-influenced male and female students showed more than a year of expected progress; however, male NAPE-influenced students showed the highest math gains. Figure 8 illustrates science NCE STAAR results for each gender. NAPE-influenced females had significantly higher science NCE scores than did matched females and males who were not NAPE influenced.

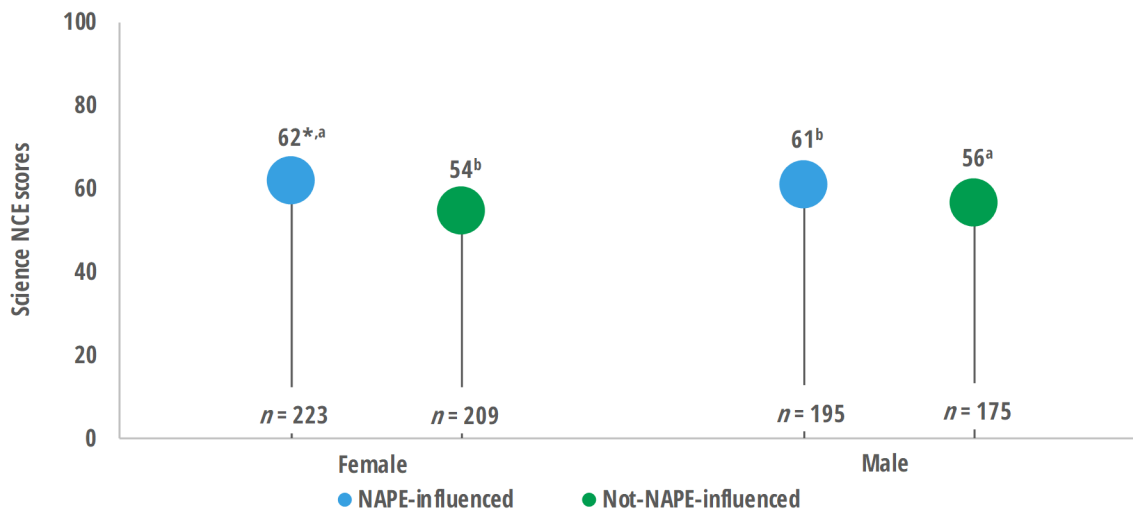
Figure 7.
NAPE-influenced females had significantly greater math gain than did **matched female students who were not NAPE influenced**.



Source. AISD STAAR records, 2013–2014 and 2014–2015

Note. STAAR scores were converted to NCE scores; growth was computed by subtracting 2014–2015 from 2013–2014 NCE scores. * statistically significant at $p < 0.05$ within gender; percentages sharing the same superscript letter were significantly different at $p < 0.05$ across gender.

Figure 8.
NAPE-influenced female students had significantly higher science scores than did **matched females and males who were not NAPE influenced**.



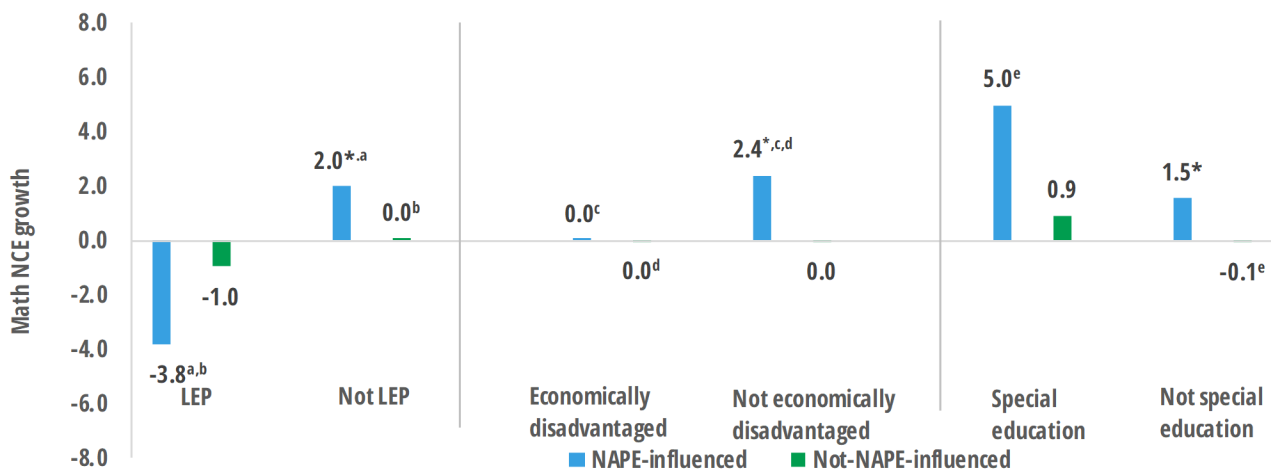
Source. AISD STAAR records, 2014–2015

Note. * statistically significant at $p < 0.05$ within gender; percentages sharing the same superscript letter were significantly different at $p < 0.05$ across gender.

STAAR Results, by Other STEM Group

As seen in Figure 9, aside from students categorized as limited English proficiency (LEP), students demonstrated expected or greater than a year of expected progress. NAPE-influenced students who were not LEP, not economically disadvantaged, and not identified as having special education status had significantly higher math gains than did similar matched students who were not enrolled in a course with a NAPE-trained teacher. NAPE-influenced students who were not LEP and not economically disadvantaged additionally showed significantly higher math gains than did NAPE-influenced LEP and economically disadvantaged students, respectively. Special education students in NAPE-influenced classrooms showed the greatest gains in math (average 5 NCE score growth) compared with other student groups. Figure 10 illustrates science NCE scores for various STEM groups. NAPE-influenced students who were not LEP, not economically disadvantaged, and not identified with special education status had significantly better performance on science STAAR than did similar matched students who were not enrolled in a course instructed by a NAPE-trained teacher. NAPE-influenced and not-NAPE-influenced students in underserved STEM groups performed similarly on the science STAAR. Students who were not LEP and not economically disadvantaged continued to perform significantly better than did students who were LEP and economically disadvantaged.

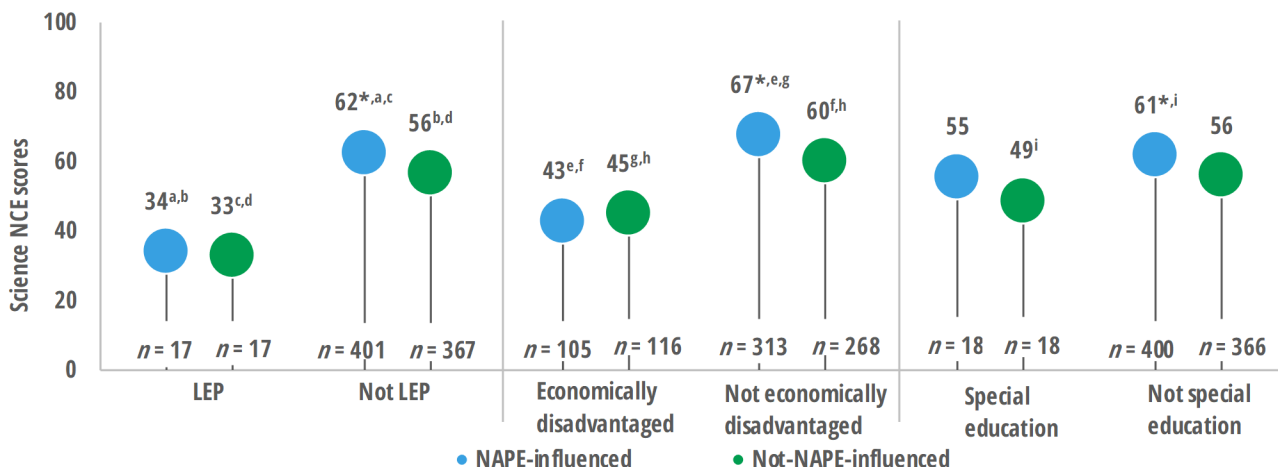
Figure 9.
NAPE-influenced special education students showed high math gains.



Source. AISD STAAR records, 2013–2014 and 2014–2015

Note. STAAR scores were converted to NCE scores; growth was computed by subtracting 2014–2015 from 2013–2014 NCE scores. * statistically significant at $p < 0.05$ within underserved factor; percentages sharing the same superscript letter were significantly different at $p < 0.05$ across underserved factor.

Figure 10.
Students who were not LEP and not economically disadvantaged had significantly higher science NCE scores than did similar matched students who were LEP and economically disadvantaged.



Source. AISD STAAR records, 2014–2015

Note. * statistically significant at $p < 0.05$ within underserved factor; percentages sharing the same superscript letter were significantly different at $p < 0.05$ across underserved factor.

Course Enrollment

A total of 60 math, science, or STEM CTE classes were instructed by the 23 teachers who had completed the NAPE professional development sessions in the 2014–2015 academic year. Of these, 45% were advanced classes (i.e., honors, magnet, or international baccalaureate [IB] course). The following analysis examines differences in math, science, and STEM CTE course enrollment. The analysis differentiates between elective and core math and science courses as well as CTE courses. While most schools typically offer an advanced version of core classes (i.e., classes that students are required to complete), this is not the case for elective courses. Elective and CTE courses and enrollment in those courses are determined by availability, based on students' schedule after considering core classes, students' interest in the course, and students' academic performance.

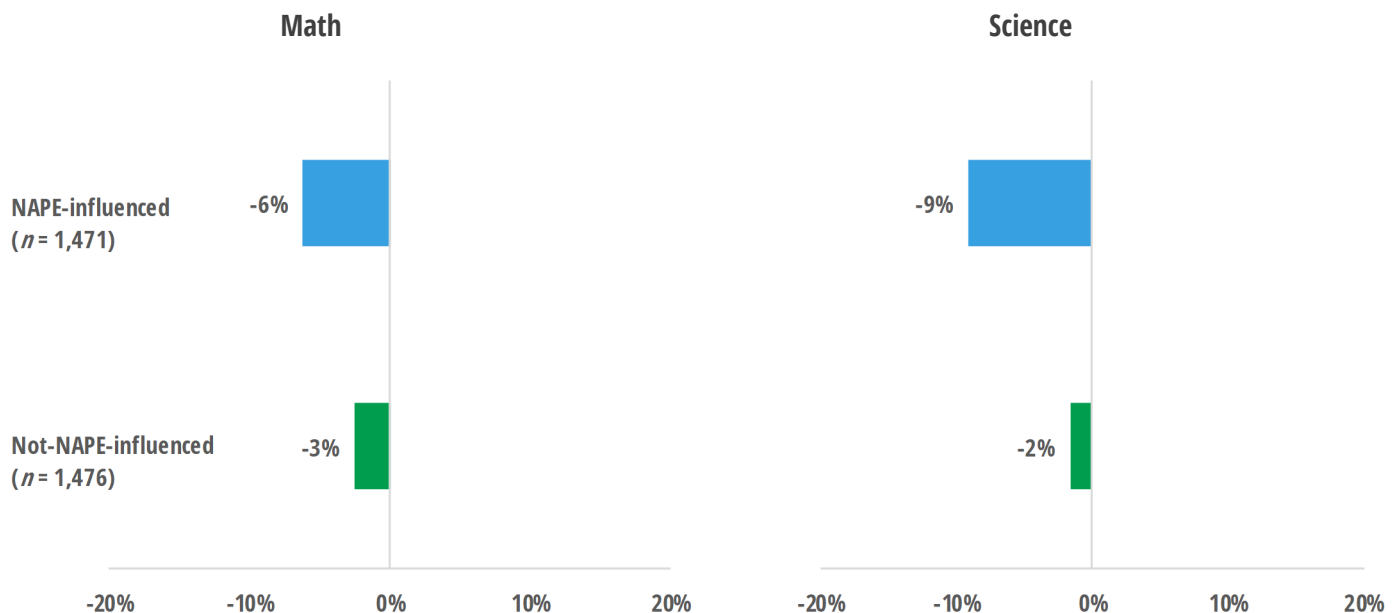
A total of 2,947 (95%) students from the sample remained in the school district and had course enrollment records from the 2014–2015 to the 2015–2016 academic year. Approximately an equivalent number of students were NAPE influenced ($n = 1,471$) and were not NAPE influenced ($n = 1,476$).

Advanced Math and Science Course Enrollment

The majority of AISD students are required to take a core math and science class each year in middle school. Because the majority of schools offer advanced versions of core classes, the following analysis examined if a difference could be seen in advanced core courses enrollment. See Appendix B for advanced core math and science class enrollment for various subgroups. Overall, a 6% decrease was seen in enrollment in advanced core math classes for NAPE-influenced students from the 2014–2015 to the 2015–2016 academic year, whereas a 3% decrease was seen for students who were not NAPE influenced (Figure 11). The majority of students showed decreased enrollment in advanced math across subgroups. Increased enrollment in advanced math courses was mainly only seen for not-NAPE-influenced students. Similar results occurred in science courses, in which a 9% decrease was seen for all NAPE-influenced students, and a 2% decrease was seen for matched students who were not NAPE influenced (Figure 11). Increased enrollment in advanced science courses was mainly seen for matched students who were not NAPE influenced, when examined by subgroups.

Figure 11.

Advanced core math and science course enrollment decreased from the 2014–2015 to the 2015–2016 academic year for students who were **NAPE influenced** and **not NAPE influenced**.



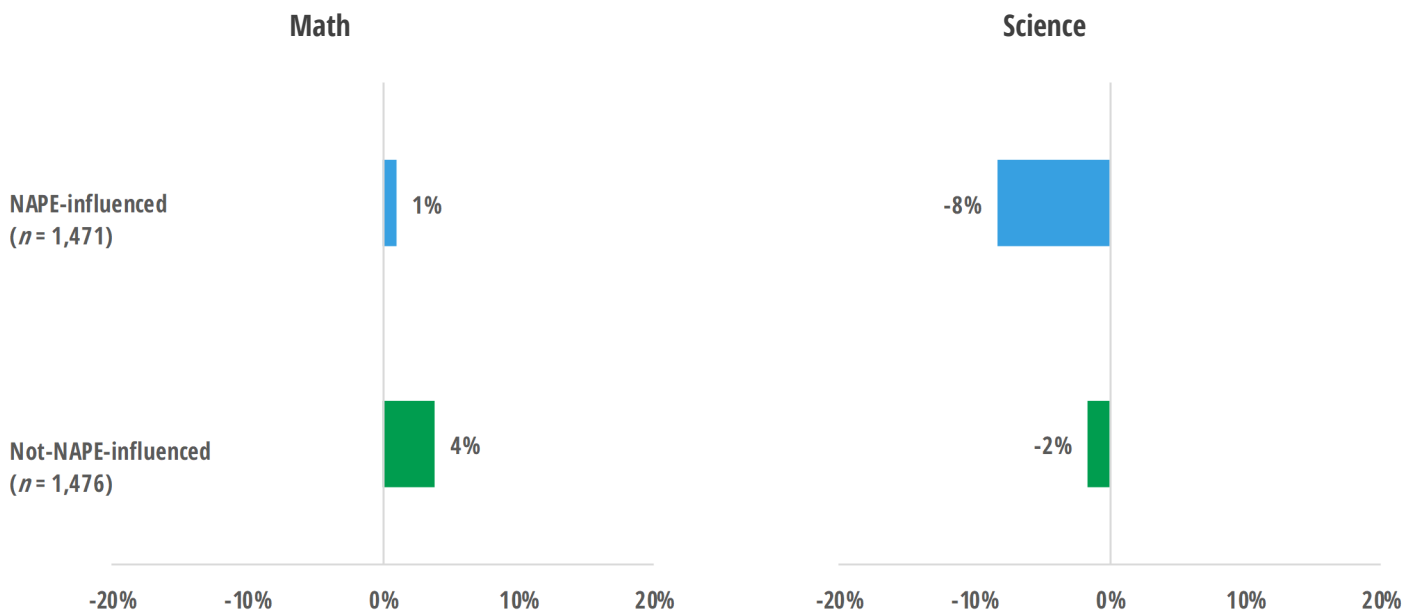
Source. AISD student records, 2014–2015 and 2015–2016

Note. Core courses are classes all students are required to complete.

Elective Math and Science Course Enrollment

In addition to core classes, AISD offers elective classes in math and science. Because elective courses differed by school, a summary of enrollment changes from the 2014–2015 to the 2015–2016 academic year in any elective math and science course was included. See Appendix C for elective math and science class enrollment by various subgroups. NAPE-influenced students showed a 1% increase in elective math enrollment, while matched students who were not NAPE influenced showed a 4% increase in enrollment (Figure 12). Examinations for each subgroup found that NAPE-influenced students in underrepresented groups (e.g., female, Black, economically disadvantaged) showed increased enrollment in math elective classes. However, this trend was not seen in elective science courses. NAPE-influenced students demonstrated an 8% decrease in elective science course enrollment, whereas not-NAPE-influenced matched students showed a 2% decrease (Figure 12). The majority of subgroups showed decreased enrollment in science courses, regardless of whether the student was enrolled in a course with a NAPE-trained teacher or not.

Figure 12.
Elective math course enrollment increased from the 2014–2015 to the 2015–2016 academic year.

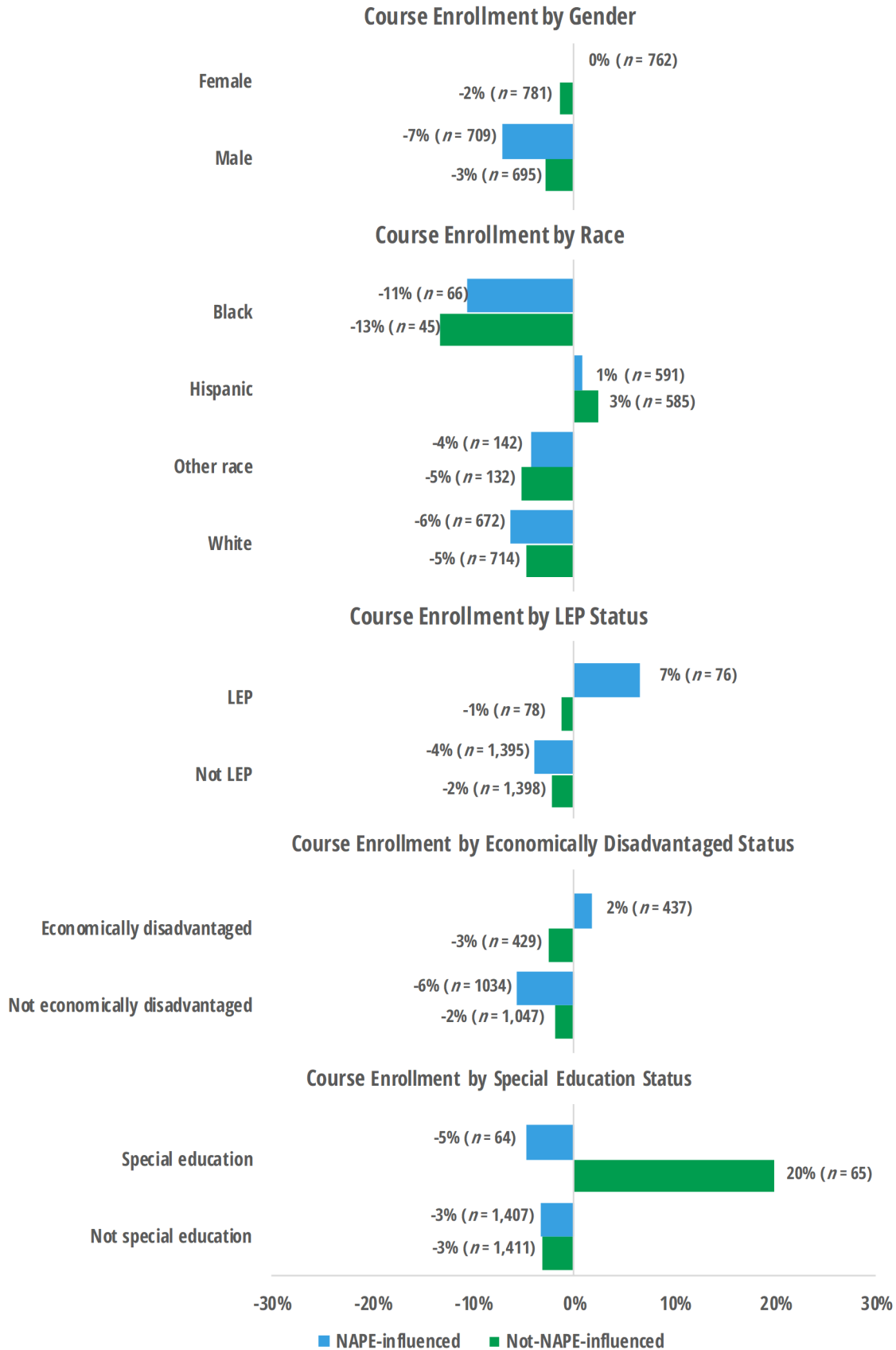


Source. AISD student records, 2014–2015 and 2015–2016

STEM-Related CTE Course Enrollment

AISD schools offer CTE courses in various STEM fields. These include classes such as Programming in Java Magnet and Principles of Health Science. NAPE-influenced students showed a 3% decrease in enrollment in STEM CTE courses from the 2014–2015 to the 2015–2016 academic year, while matched students who were not NAPE influenced showed a 2% decrease in STEM CTE enrollment. Figure 13 shows the student enrollment in STEM CTE courses. Across subgroups, the majority of students showed decreased enrollment in STEM CTE courses. Several STEM underserved groups who enrolled in a course with a NAPE-trained teacher showed equal or increased enrollment in STEM CTE courses from the 2014–2015 to the 2015–2016 academic year, including Hispanic, female, LEP, and economically disadvantaged students.

Figure 13.
STEM Career and Technical Education Course Enrollment, by Subgroup



Source. AISD student records, 2014–2015 and 2015–2016

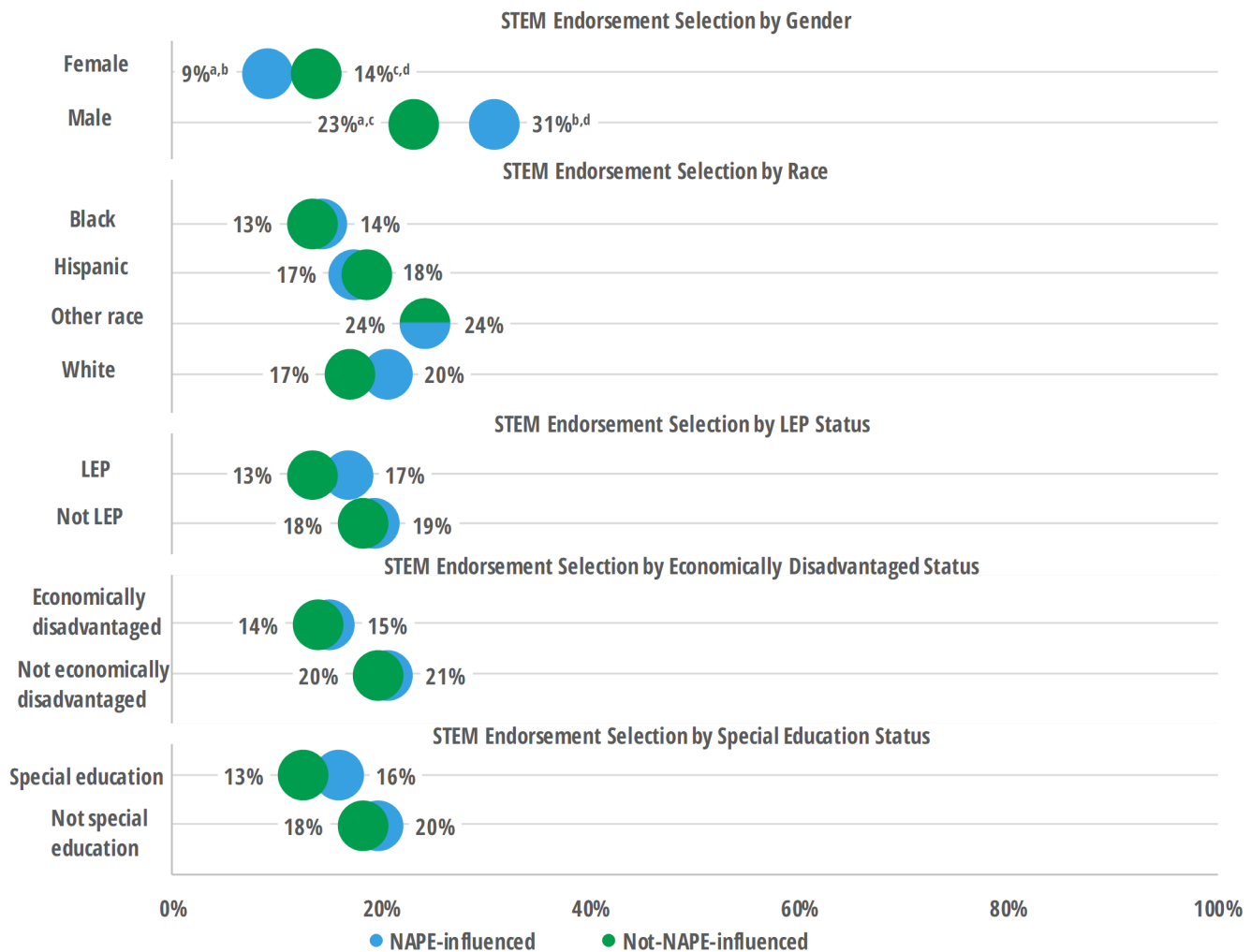
Note. Other race includes American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, two or more races, and Asian students.

Endorsement Selection

Rising 9th-grade AISD students must select a minimum of one of the five endorsement plans available. Because the goal of NAPE training is to increase STEM course enrollment by groups underserved in the STEM field, the focus of this analysis was on students' selection of the STEM endorsement. Additionally, only 8th graders were included in the analysis because this group chose an endorsement in the year immediately following the NAPE professional development sessions. A total of 754 students, 93% of the original sample of 8th graders (392 NAPE influenced; 362 not NAPE influenced) had records and were included in the analyses exploring endorsement selection. A significant difference was not seen between NAPE-influenced and matched not-NAPE-influenced students, 19% of NAPE-influenced and 18% of matched not-NAPE-influenced students chose the STEM endorsement.

Figure 14 shows differences in students' selection of the STEM endorsement for each student subgroup. See Appendix B for numbers of students included in each subgroup. A significant difference was only seen when examined by gender. NAPE-influenced and matched not-NAPE-influenced male students continued to choose STEM endorsements at higher rates than did both female subgroups. When analyzed by other groups in the STEM field, similar percentages of NAPE-influenced and matched not-NAPE-influenced students chose the STEM endorsement.

Figure 14.
Male students selected the STEM endorsement significantly more than did female students.



Source. AISD student records, 2014–2015 and 2015–2016

Note. Other race includes American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, two or more races, and Asian students.

* statistically significant at $p < 0.05$ within subgroups; percentages sharing the same superscript letter were significantly different at $p < 0.05$ across subgroups.



Conclusion

The goal of providing the NAPE professional development training at AISD is to decrease participation and performance gaps seen among various student groups in STEM fields. In general, mixed results were found when examining students enrolled in a course taught by a NAPE-trained teacher with similar matched students who were not enrolled in a course taught by a NAPE-trained teacher. NAPE-influenced students tended to show larger gains on the math STAAR than did similar students who were not NAPE influenced; this was observed across various subgroups. NAPE-influenced students also tended to have similar or higher average science NCE scores than did similar matched not-NAPE-influenced students across various subgroups. When examining course enrollment, only STEM CTE course enrollment demonstrated a positive relationship between underserved groups in the STEM field and enrollment in a course taught by a NAPE-trained teacher; the majority of the students showed a decline in advanced and elective math and science course enrollments in the following year. However, aside from teachers, guidance counselors also play a role in determining students' schedules which may have influenced STEM course enrollment changes. Additionally, few differences were seen when examining the selection of STEM endorsements by NAPE-influenced and not-NAPE-influenced students who were rising 9th graders in the year following teachers' NAPE professional development training. Although the endorsement analysis only examined whether a student selected the STEM endorsement, it should be noted that the business/industry endorsement offered at AISD included STEM topics such as information technology and technology applications.

While this report examined the impact of the NAPE professional development training through students' STEM academic performance, course enrollment, and endorsement selection, other factors should be considered when evaluating the impact of NAPE's professional development training. For example, because the intent of the training is to address micromessages and decrease micro-inequalities in the classroom, an impact may also occur in non-STEM fields. Additionally, because the training addresses micromessages that may have negatively influenced students over the course of their school experience, the impact may take longer than a year to exhibit the expected results.

Future Analyses

Future analyses will examine the long-term impact on students' academic performance and interest in the STEM field in middle school and high school.

Appendix A

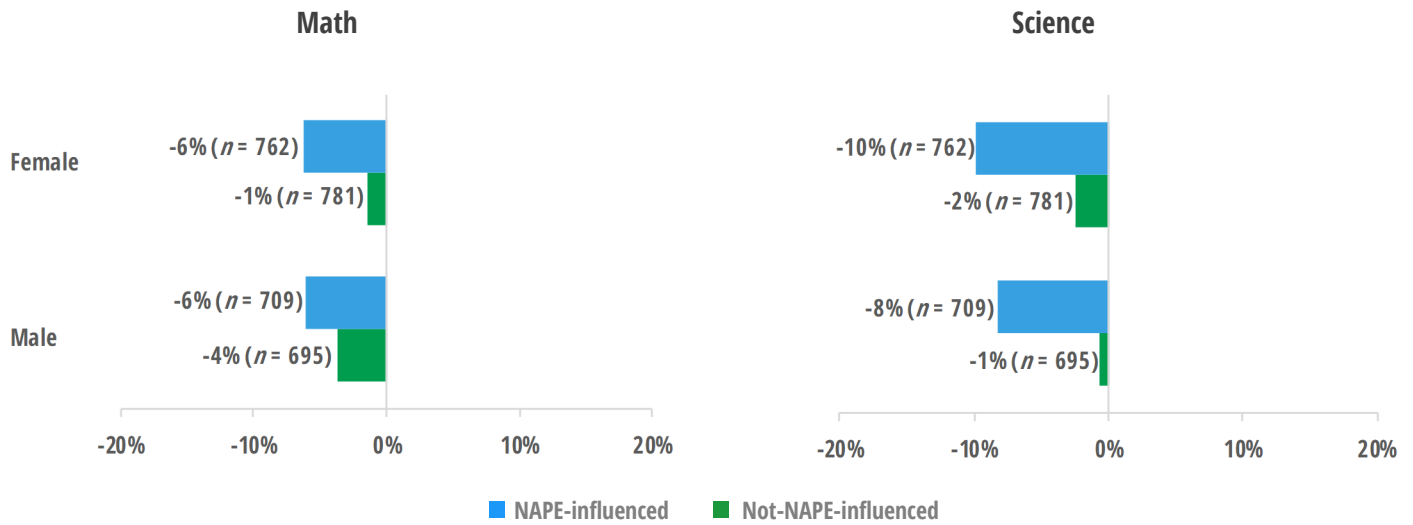
STAAR Math Student Sample

	NAPE-influenced	Not-NAPE-influenced
	<i>n</i> =	<i>n</i> =
Female	804	823
Male	749	730
Black	72	51
Hispanic	626	623
Other race	150	137
White	705	742
LEP	78	84
Not LEP	1475	1469
Economically disadvantaged	464	466
Not economically disadvantaged	1089	1087
Special education	68	71
Not special education	1485	1482
Total	1553	1553

Source. AISD STAAR records, 2013–2014 and 2014–2015

Appendix B

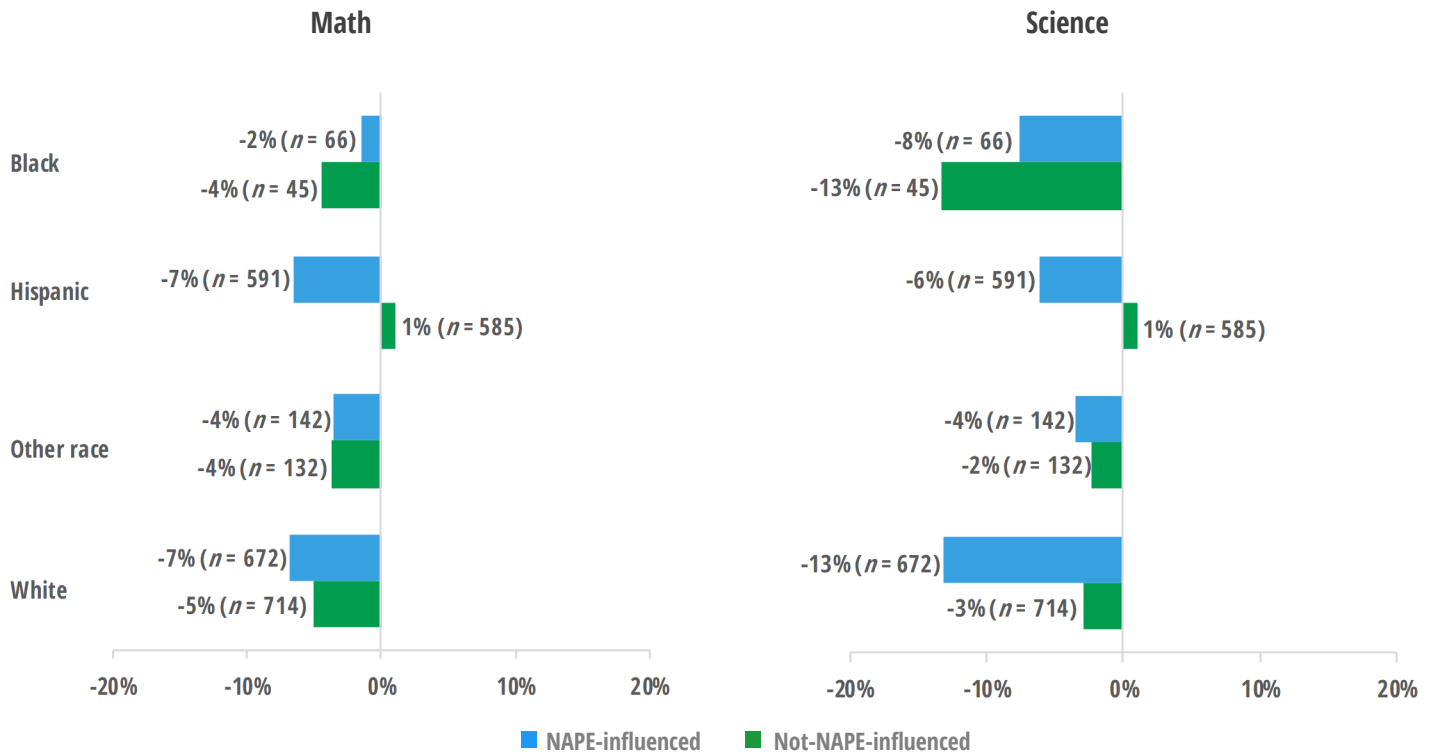
Advanced Course Enrollment, by Gender



Source. AISD student records, 2014–2015 and 2015–2016

Note. Core courses are classes all students are required to complete.

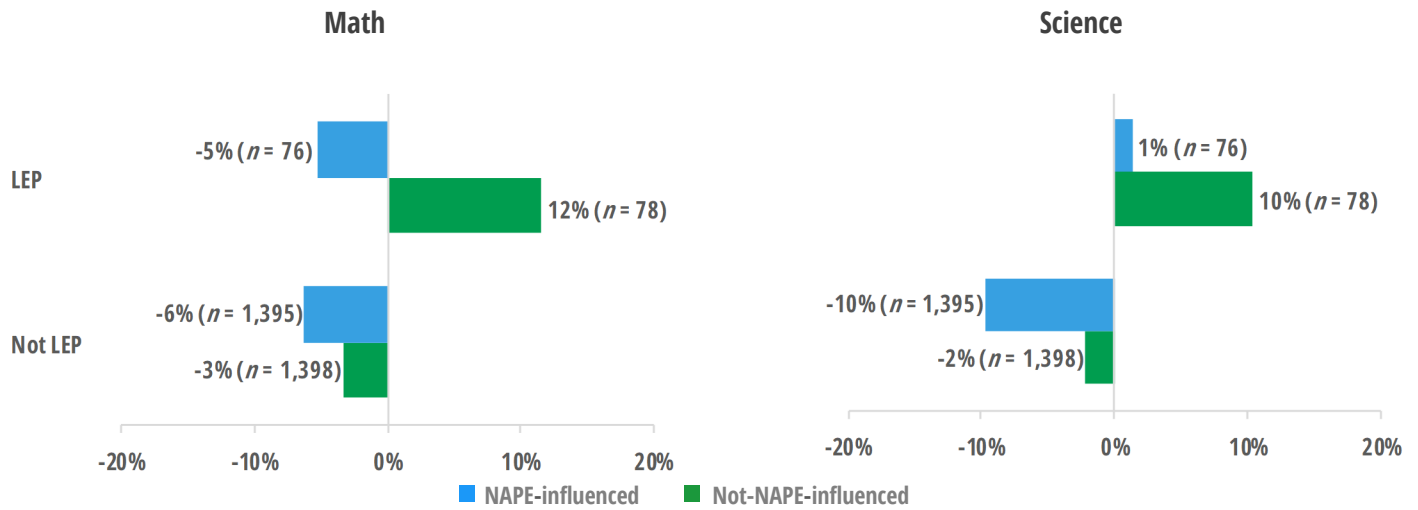
Advanced Course Enrollment, by Race



Source. AISD student records, 2014–2015 and 2015–2016

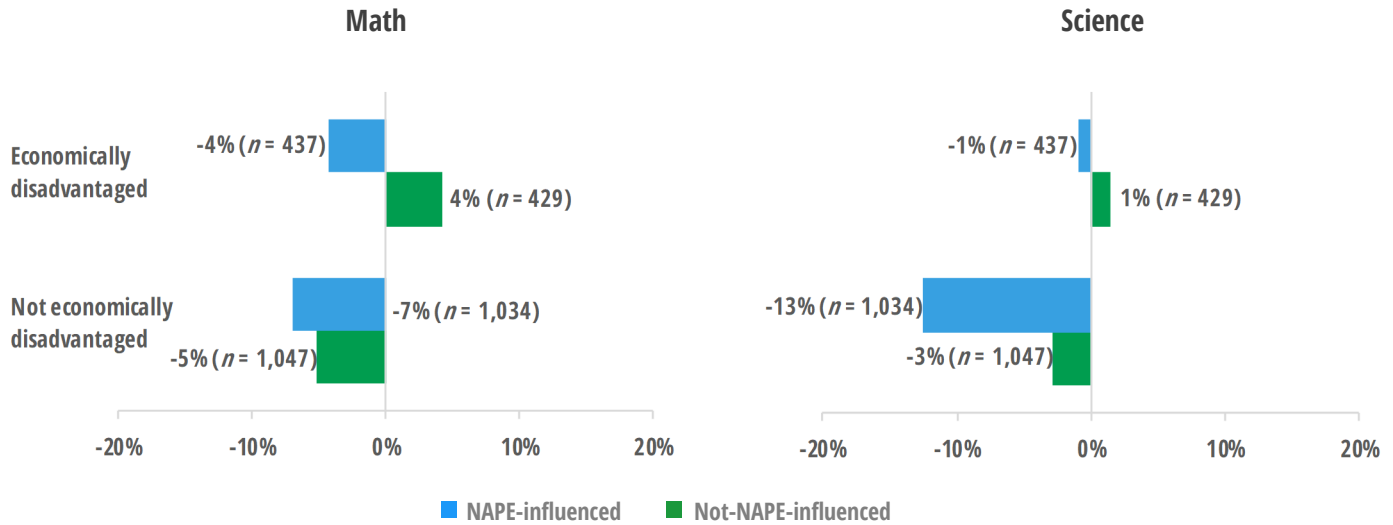
Note. Core courses are classes all students are required to complete; other race includes American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, two or more races, and Asian students.

Advanced Course Enrollment, by LEP Status



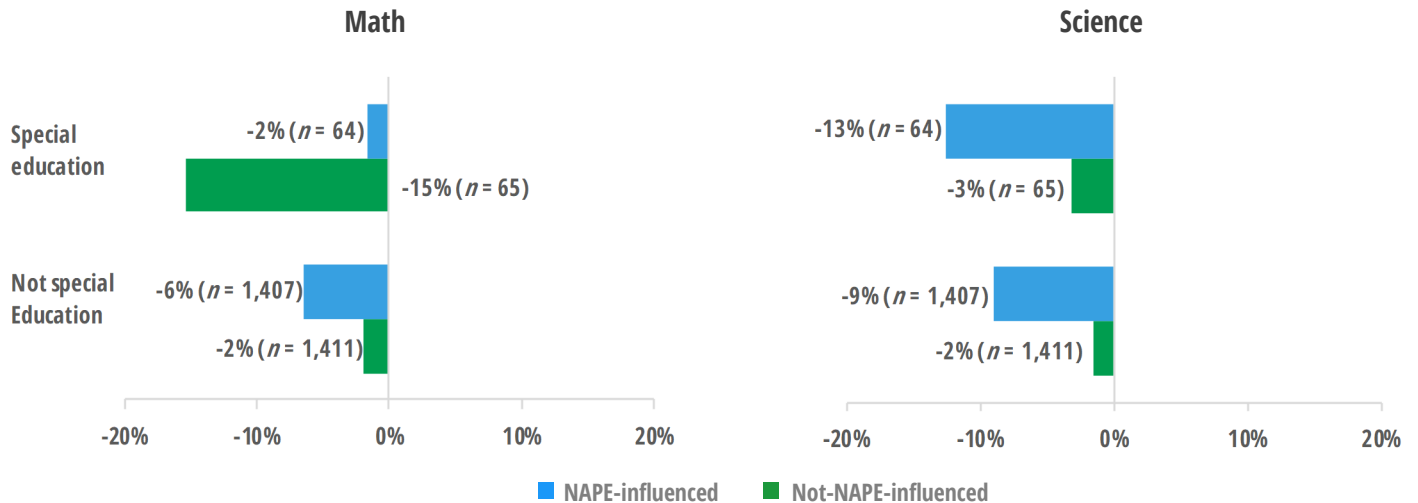
Source. AISD student records, 2014–2015 and 2015–2016
 Note. Core courses are classes all students are require to complete.

Advanced Course Enrollment, by Economically Disadvantaged Status



Source. AISD student records, 2014–2015 and 2015–2016
 Note. Core courses are classes all students are require to complete.

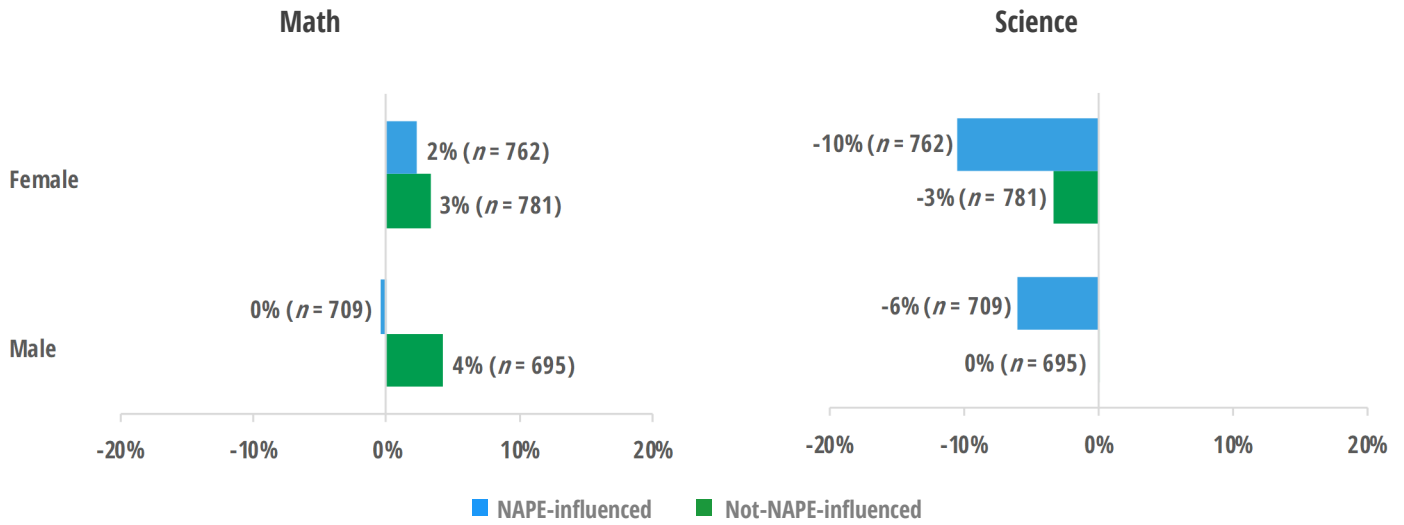
Advanced Course Enrollment, by Special Education Status



Source. AISD student records, 2014–2015 and 2015–2016
 Note. Core courses are classes all students are require to complete.

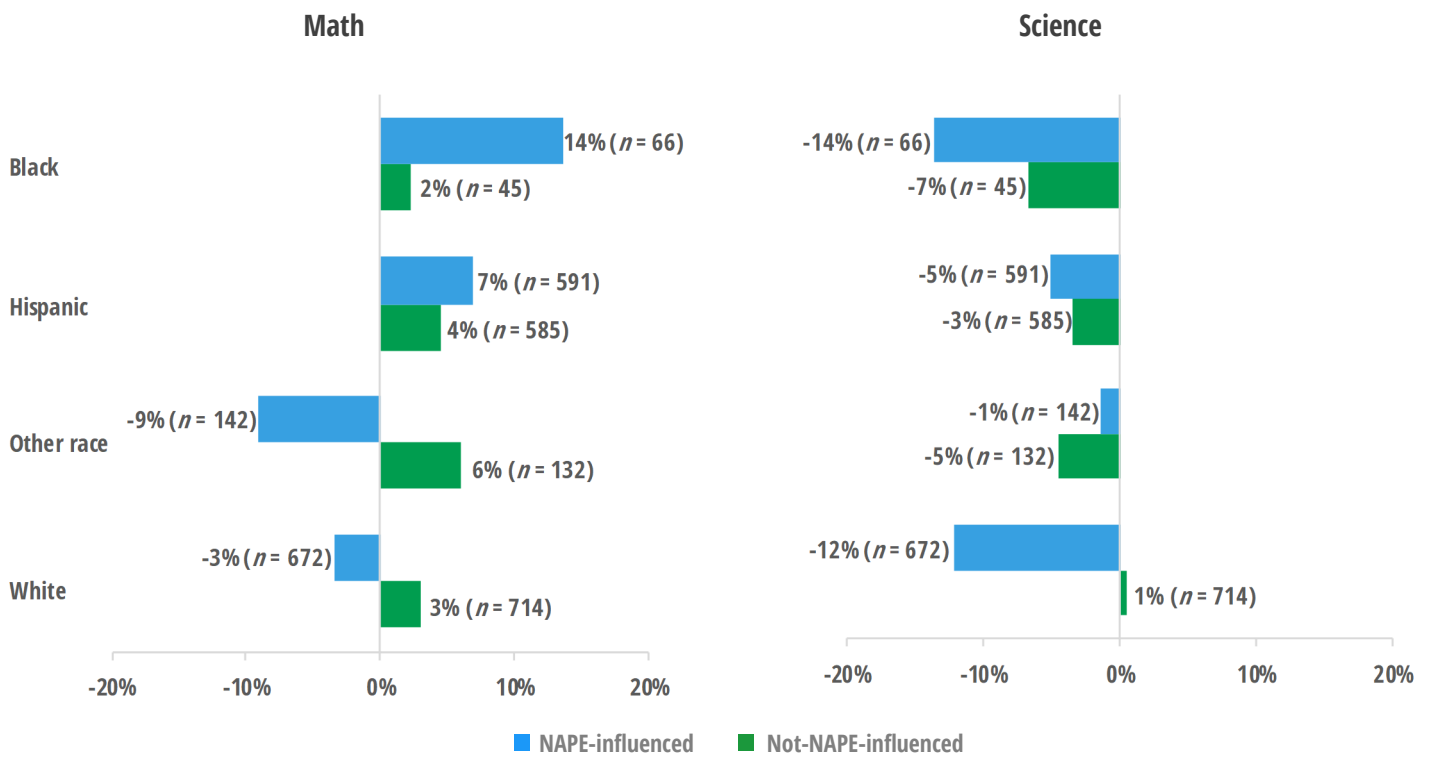
Appendix C

Elective Course Enrollment, by Gender



Source. AISD student records, 2014–2015 and 2015–2016

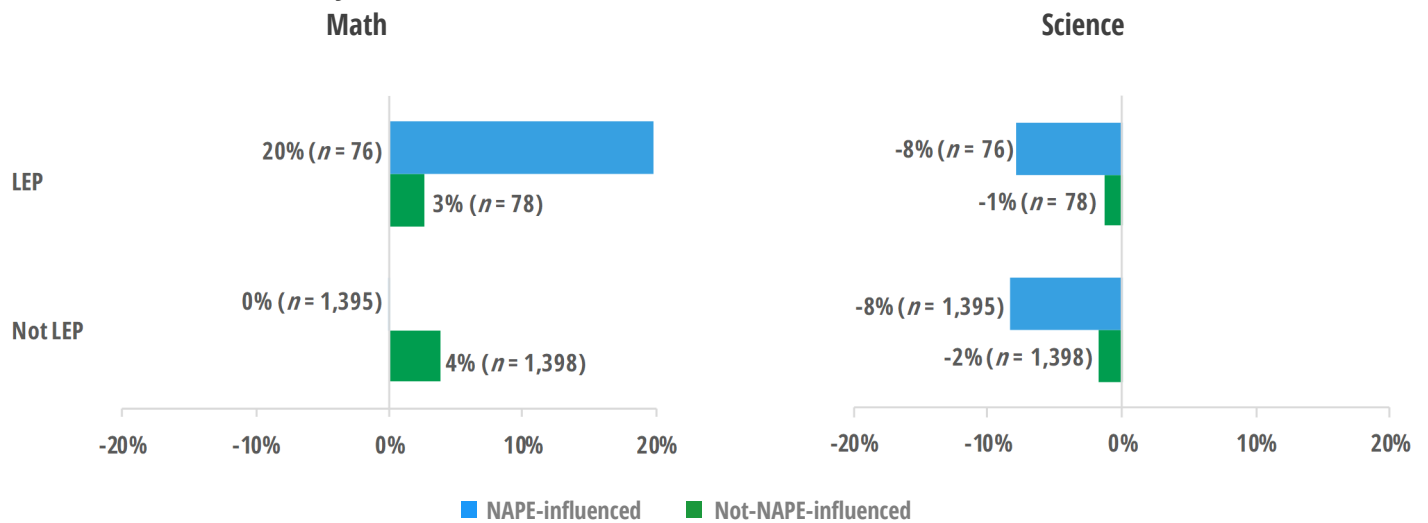
Elective Course Enrollment, by Race



Source. AISD student records, 2014–2015 and 2015–2016

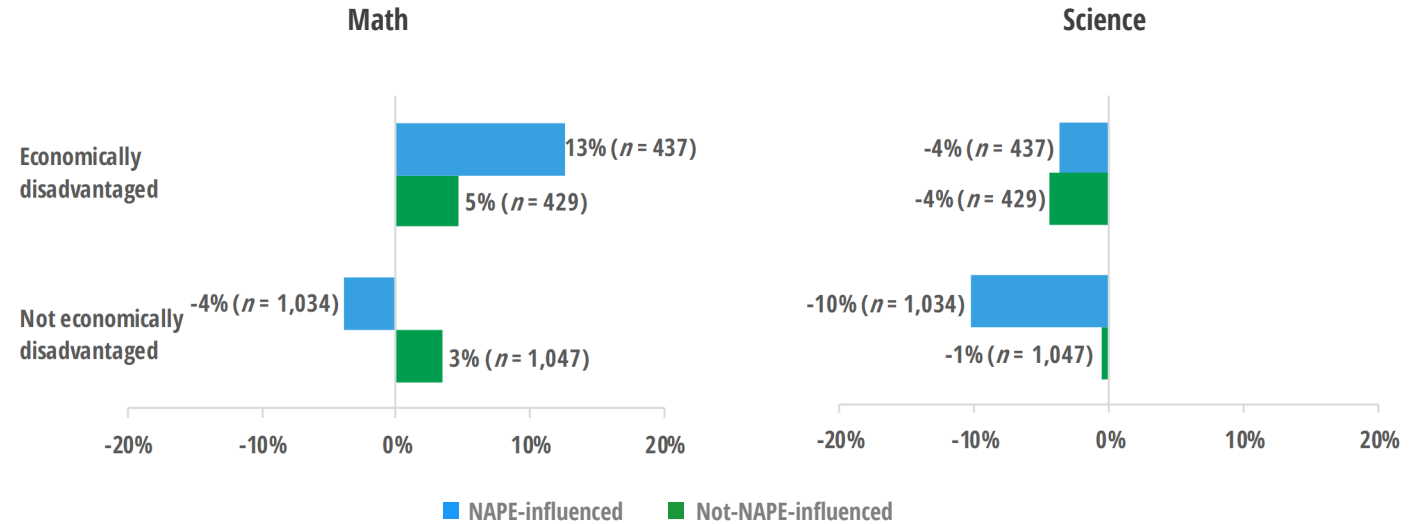
Note. Other race includes American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, two or more races, and Asian students.

Elective Course Enrollment, by LEP Status



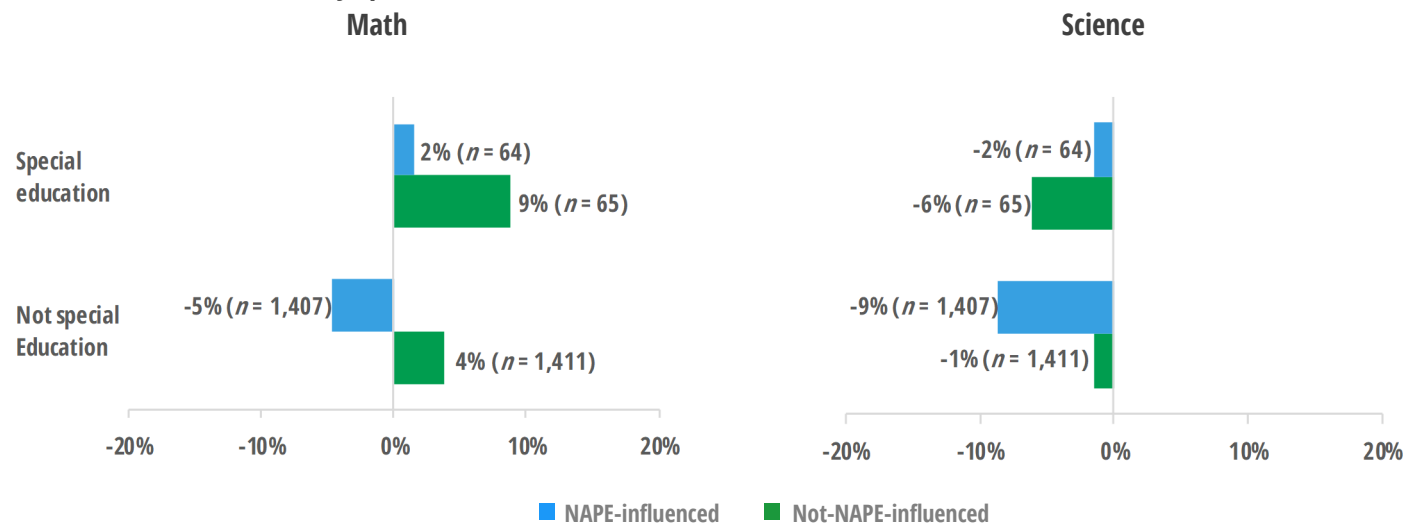
Source: AISD student records, 2014–2015 and 2015–2016

Elective Course Enrollment, by Economically Disadvantaged Status



Source: AISD student records, 2014–2015 and 2015–2016

Elective Course Enrollment, by Special Education Status



Source: AISD student records, 2014–2015 and 2015–2016

Appendix D

Endorsement Student Sample

	NAPE-influenced	Not-NAPE-influenced
	<i>n</i> =	<i>n</i> =
Female	210	197
Male	182	165
Black	21	15
Hispanic	157	146
Other race	33	29
White	181	172
LEP	18	15
Not LEP	374	347
Economically disadvantaged	100	108
Not economically disadvantaged	292	254
Special education	19	16
Not special education	373	346
Total	392	362

Source. AISD student records, 2015–2016

References

- Central Rivers Area Education Agency 267. (2017). *What is a normal curve equivalent score?* Retrieved from https://www.centralriversaea.org/wp-content/uploads/2017/03/C4_Normal-Curve-Equivalent-NCE-Revised-5.22.17.pdf
- National Alliance for Partnerships in Equity. (2015). *MICROMESSAGING to Reach and Teach Every Student™*. Retrieved from http://www.napequity.org/nape-content/uploads/NAPE-MM-Information-Sheet-Final_-10-16-15.pdf

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