AB-705 Analysis: Fall 2019

Modesto Junior College

Office of Institutional Effectiveness

August 2020

Contents

Background **2**

Highlights 3

Limitations 3

Overall Outcomes **4**

Access 4

Retention & Success 6

Throughput 9

Placement Validation **11**

English Placement 11

Math Placement 13

Placement Methods 14

Corequisite Math **17**

Retention & Success Rates by Course 18

Corequisite Impact by Placement 19

Findings and Recommendations **23**

Background

This report explores preliminary data related to the implementation of AB-705-inspired placement, curriculum, and enrollment management changes at Modesto Junior College (MJC). The report is focused on high level data points developed by the AB-705 Workgroup's research design. As more reliable term data become available, additional analysis will be reported.

The guiding question used to traverse the multitude of possible analyses and perspectives is "Are MJC AB-705 inspired implementation efforts helping students?". Because the student experience is more nuanced than any single metric, for the context of this report, "helping students" is defined as **increasing student access** to transfer level math/English, **increasing student throughput** along the math/English sequence, and **increasing course success and course retention**. Indicators are reviewed holistically and across demographic variables to help identify the impact on current equity gaps.

This report also provides preliminary insight into the tools used by the College to place students and the impact of corequisite courses on the completion of transfer level math.

Contextualized data and general trends are summarized in the following sections:

- **Overall Outcomes** compares access, success, retention, and throughput across demographics for fall 2018 and fall 2019 transfer level math and English courses.
- **Placements** explores summary data based on the particular tool(s) students used to place and their assigned score as a result of their placements.
- **Corequisite Math** compares student success in transfer level courses between those who attempt the course with a corequisite and those who attempt the course without a corequisite.

Highlights

- Given the increase in transfer level math and English course offerings, students have significantly more access to the courses they need to complete prerequisites, degrees, certificates, or transfer requirements. Transfer level math section offerings increased by 58%, while enrollments increased by 50%. Transfer level English section offerings increased by 20% with a comparable increase in enrollment.
- Success rates in transfer level Math courses decreased to 52.5% in fall 2019 from 57.1% in fall 2018.
- Math throughput increased from 21.8% in fall 2018 to 39.6% for the fall 2019 cohort of students. English throughput increased from 47.5% in fall 2018 to 54.2% in fall 2019.
- Math-101 and Math-111 success rates are higher for students who take the corequisite course, with 8 and 7 percentage point differences respectively. Math-134 (stats) success rates are lower for those with a corequisite, with a five percentage point difference. Socio-105 did not have an accompanied corequisite course. Overall success rates for Socio-105 were 69%.
- In fall 2019 math, 483 additional students succeeded in College-level math compared to fall 2018. In English, 411 additional students succeeded.

Limitations

In March, during the 2020 spring semester, MJC transitioned to remote instruction in response to the COVID-19 pandemic. Students were provided the option to receive a grade of 'EW' (excused withdrawal) in their courses, to reduce the impact of the transition to remote learning and the pandemic on individual academic grades. 'EWs' for the 2020 spring semester were many times higher than during a typical term. For the purposes of this study, students who received an 'EW' in spring of 2020 are not included in course enrollment and course success metrics. Additionally, 'EWs' do not count as attempts when calculating math/English transfer throughput metrics. This exclusion significantly skews the data for spring 2020.

This report provides early analysis of AB-705, based on a single semester of implementation (fall 2019). Additional analysis will be conducted following the completion of fall 2020 and spring 2021 terms to provide sufficient information for decision making. Other metrics are also available and may be analyzed in subsequent reports.

Overall Outcomes

Are MJC AB-705 inspired changes helping students?

This section compares fall 2018 and fall 2019 across demographics for the following metrics:

- **Access** - ability to register in a transfer level math / English course
- **Retention** - completion of a course in a particular term
- **Success** - completion of a course with a grade of 'C' or better
- **Throughput** - whether a student completes transfer level math or English within two primary semesters (fall / spring) after their first attempt of a course in the sequence.

While overall course success *rates* are lower in fall 2019 than in previous years, a higher *number* of students succeeded. Access and throughput increased generally, while retention remained relatively constant. The following sections further explore each of the metrics in detail.

Access

In fall 2019, MJC offered 58% more transfer level math credit sections than in fall 2018, which resulted in a 50% increase in enrollments. In fall 2019, MJC offered 20% more transfer level credit English sections which led to a 20% increase in enrollment.

Subject	2018 Fall	2019 Fall
English	Enrollment: 3841 (Sections: 135)	Enrollment: 4626 (Sections: 162)
Math	Enrollment: 2197 (Sections: 62)	Enrollment: 3308 (Sections: 98)

Equity Impact

Students from all ethnicities saw an increase in transfer level English enrollment, though the percentage of change varied by population. Examining the headcount distribution indicates a notable increase in access to transfer level English courses, highlighted below:

Transfer English - Unduplicated Headcount

Ethnicity	Total Fall 2019 Enrollment	2018 Fall	2019 Fall
African-American	3.2% (n = 604)	2.46% (n = 90)	3.01% (n = 133)
Am. Indian/Alaskan Native	0.6% (n = 109)	< 10	< 10
Asian	5.2% (n = 995)	4.76% (n = 174)	4.49% (n = 198)
Filipino	1.4% (n = 263)	1.23% (n = 45)	1.29% (n = 57)
Hispanic	54.8% (n = 10486)	55.29% (n = 2022)	57.02% (n = 2517)
Multiple	0.1% (n = 15)	< 10	< 10
Pacific Islander	1.1% (n = 214)	0.79% (n = 29)	1.11% (n = 49)
Unknown	2.1% (n = 404)	0.27% (n = 10)	1.72% (n = 76)
White	31.5% (n = 6030)	34.84% (n = 1274)	30.86% (n = 1362)
Total	100% (n = 19120)	100% (n = 3657)	100% (n = 4414)

*Data for **American Indian/Alaskan Native** and students with **multiple** ethnicities are masked to protect PII due to counts < 10.*

Overall, access in math courses increased for students of color by about 72% from fall 2018 to fall 2019, the majority of the increase coming from Hispanic students (from 835 students in fall 2018 to 1438 students in fall 2019).

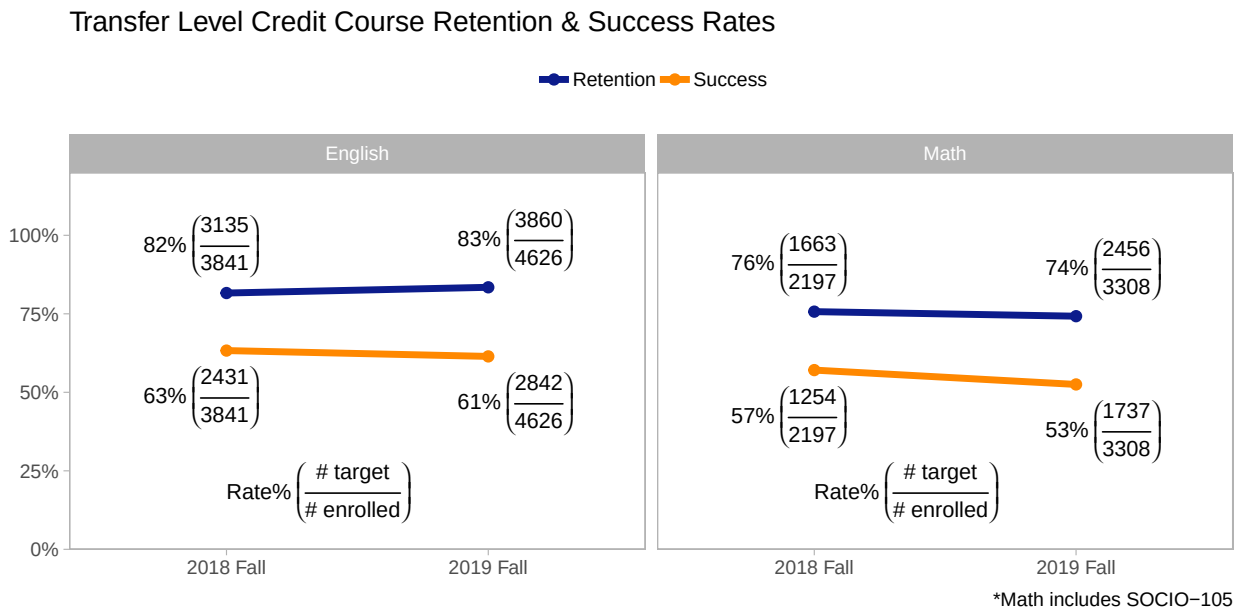
Transfer Math - Unduplicated Headcount

Ethnicity	Total Fall 2019 Enrollment	2018 Fall	2019 Fall
African-American	3.2% (n = 604)	2.19% (n = 35)	2.16% (n = 56)
Am. Indian/Alaskan Native	0.6% (n = 109)	< 10	< 10
Asian	5.2% (n = 995)	7.14% (n = 114)	7.14% (n = 185)
Filipino	1.4% (n = 263)	1.88% (n = 30)	1.78% (n = 46)
Hispanic	54.8% (n = 10486)	52.32% (n = 835)	55.5% (n = 1438)
Multiple	0.1% (n = 15)	< 10	< 10
Pacific Islander	1.1% (n = 214)	< 10	< 10
Unknown	2.1% (n = 404)	1% (n = 16)	1.31% (n = 34)
White	31.5% (n = 6030)	34.4% (n = 549)	30.1% (n = 780)
Total	100% (n = 19120)	100% (n = 1596)	100% (n = 2591)

*Data for **American Indian/Alaskan Native**, **Pacific Islander**, and students with **multiple** ethnicities are masked to protect Personally Identifiable Information (PII) due to counts <10.*

Retention & Success

In general, retention and success *rates* decreased somewhat; however, the *number* of students in both retention and success increased from 2018. In English, 411 additional students succeeded in 2019, compared to fall 2018. In math, 483 additional students succeeded compared to fall 2018.



With the exception of English retention *rates* (which increased slightly), success and retention percentages were slightly lower than the previous fall term. In both English and math, the *number* of students who were retained and who succeeded increased by at least 17%.

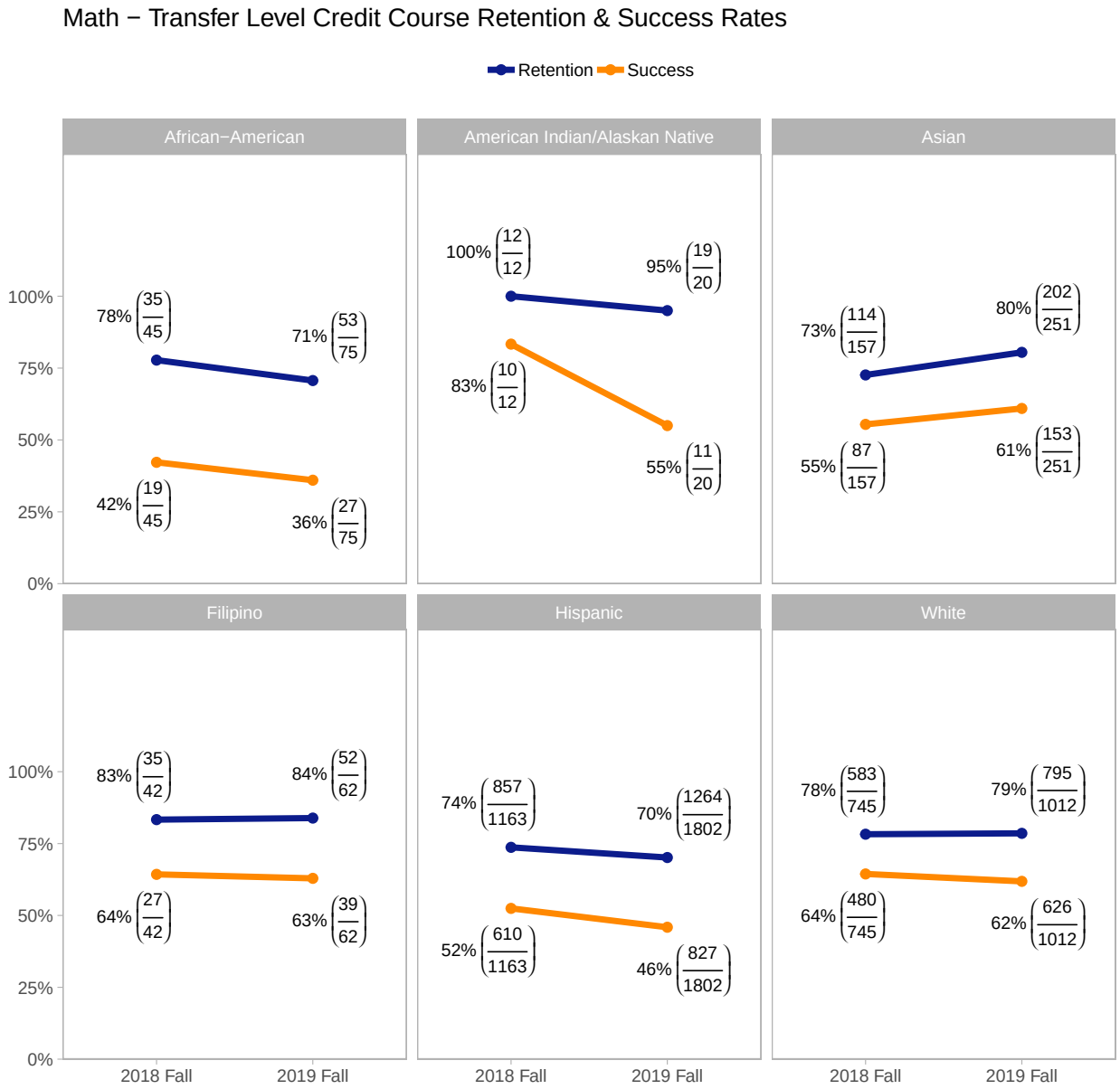
Equity Impact

African-American, Filipino, and Pacific Islander English success *rates* decrease between fall 2018 and fall 2019. Most other groups experience a less dramatic decrease in success *rates.* (Some groups did not have sufficient counts to securely publish outcomes and are not illustrated in the table below).

English − Transfer Level Credit Course Success & Retention Rates

Data for American Indian/Alaskan Native and students with multiple and unknown ethnicities are masked to protect PII due to counts < 10.

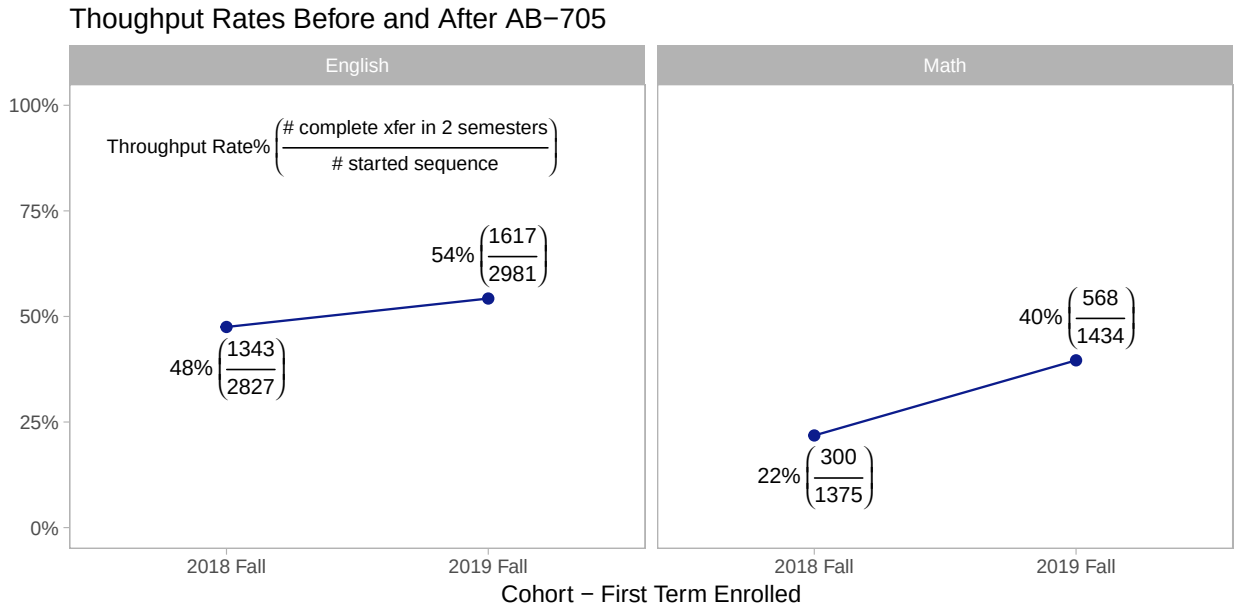
Math success *rates* for Hispanic and African-American students decreased from fall 2018 to fall 2019. Asian student math success *rates* increased during the same time.



Data for Pacific Islander, and students with multiple and unknown ethnicities are masked to protect PII due to counts < 10.

Throughput

Throughput measures whether a student completes transfer level math or English within two primary semesters (fall / spring) after the first attempt of a course in the sequence. Overall, throughput *rates* increased significantly, both in the *rates* and in the *number* of students between fall 2018 and fall 2019 for both math and English.

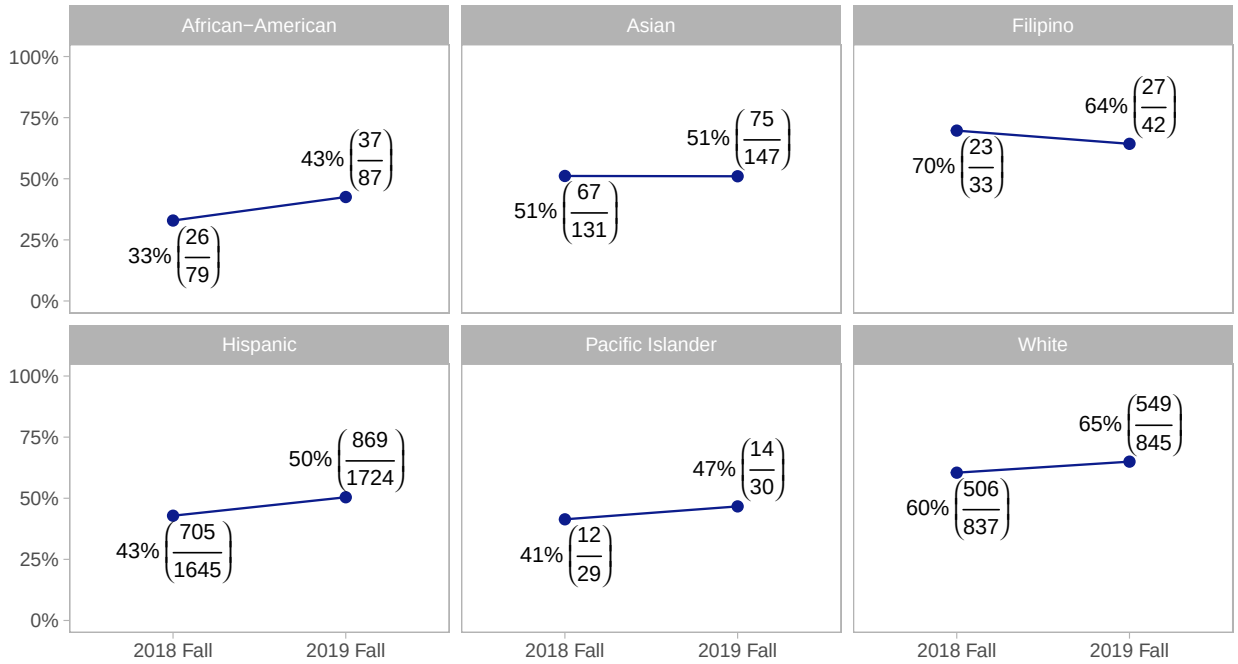


In the fall 2019 term, 274 additional students completed English within two semesters of the first attempt. 268 additional students completed math in fall 2019 within two semesters of the first attempt.

Equity Impact

African-American students throughput increased by almost 10 percentage points in English. Filipino students saw a decrease of 5.4 points between fall 2018 and fall 2019. Analysis of cumulative data from additional terms may provide more robust results with an increased *number* of students.

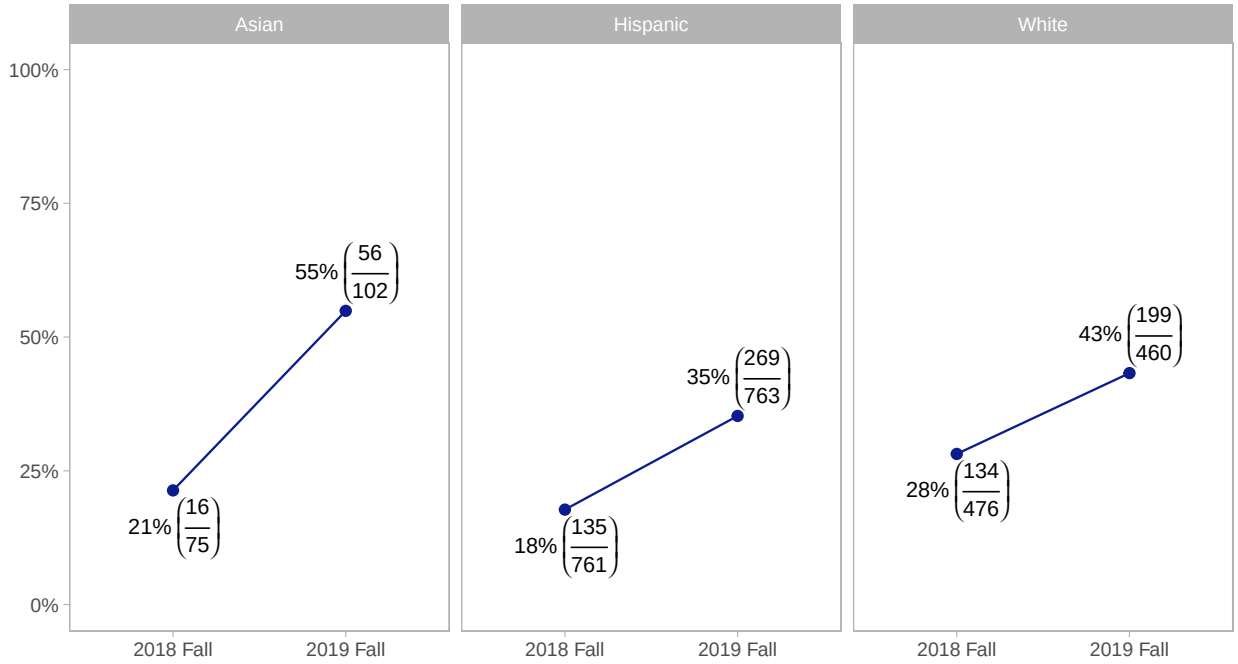
English Thoughput Rates Before and After AB−705 By Ethnicity



Data for American Indian/Alaskan Native and students with multiple and unknown ethnicities are masked to protect PII due to counts < 10.

The largest percentage point increases in math throughput are Hispanic students (17.6 point increase) and Asian students (33.6 point increase).

Math Thoughput Rates Before and After AB−705 By Ethnicity



Data for African−American, American Indian/Alaskan Native, Pacific Islander, Filipino, and students with multiple and unknown ethnicities are masked to protect PII due to counts < 10.

Placement Validation

Are the placement tools used at the college appropriately placing the students for maximized success?

MJC currently places students into math and English using three AB-705 tools:

- **CCCApply Information**: Self-reported highschool GPA and course work collected during the application process.
- **Highschool GPA Tool**: Self-reported information, including highschool grades, GPA, and course work to place students outside of the application process.
- **Guided Self-Placement**: A series of guiding questions designed by each discipline for students who have been out of highschool for at least 10 years.
- **No AB-705 Placement**: Students who do not yet have an AB-705 placement and enrolled using placements from before the implementation of AB-705 methods.

MJC can assign a placement to students as many times as the student applies or uses the tools. Given students can have multiple placements for math and English, a student's placement with the highest score (see: placement score interpretation) was used for the purpose of this report. In the event that a student received the same score using more than 1 placement tool, the most recent placement and its associated tool was used.

This section will compare success *rates* by:

- **Placement** - which score a student was given or into which course(s) they were placed.
- **Placement Method** - which method was used to place students.

English Placement

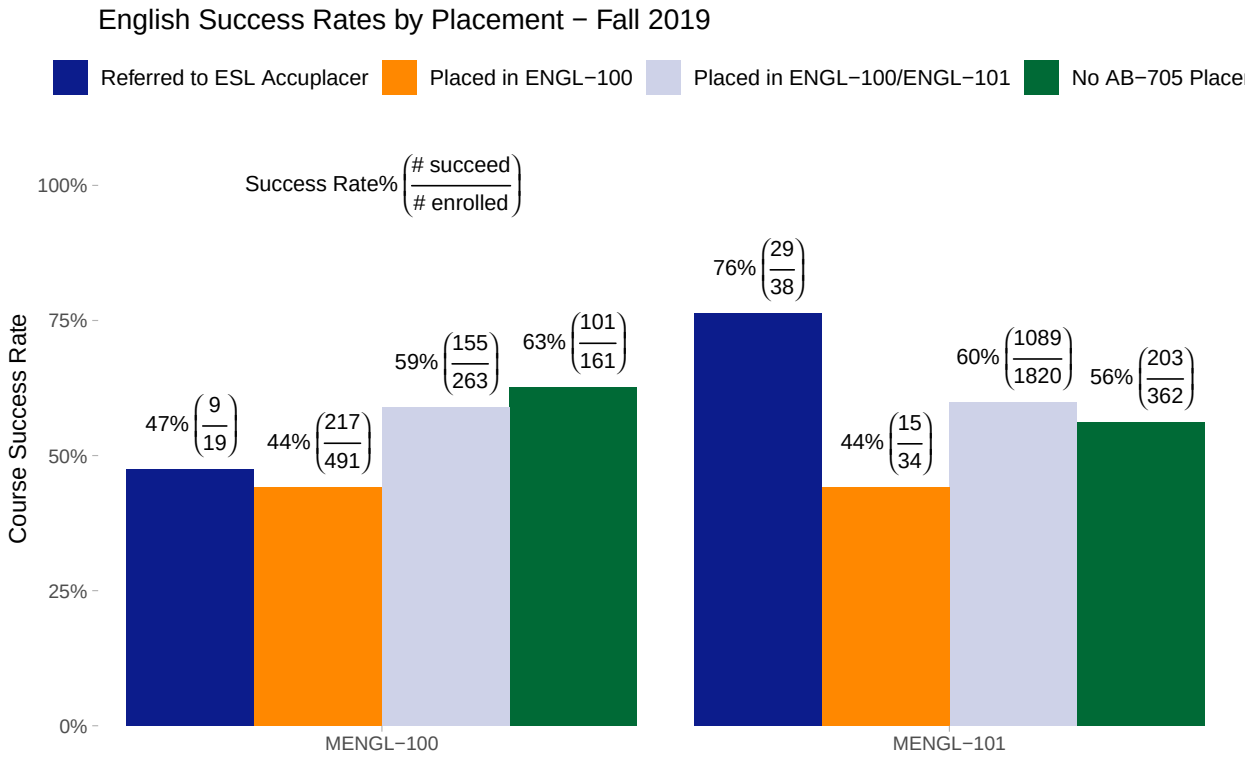
How do students who are given particular English placements perform in English-100 and English 101?

Students attempting MENGL-100 and MENGL-101 in fall of 2019 can have one of four placement categories:

- Recommended to take the ESL Accuplacer instead.
- Placed into MENGL-100
- Placed into MENGL-100 / MENGL-101
- No AB-705 Placement

The graph below depicts student success *rates* by the course they attempted. Students who placed into MENGL-100, but attempted MENGL-101 instead have a 44.1% success *rate* compared to the 56% success *rate* of students without an AB-705 placement who attempted MENGL-101.

Many students enrolled in different courses than those into which they were placed. Students without AB-705 placements had higher success *rates* in MENGL-100 than MENGL-101.



Equity Impact

Data for students of all ethnicities are masked to protect PII due to counts < 10.

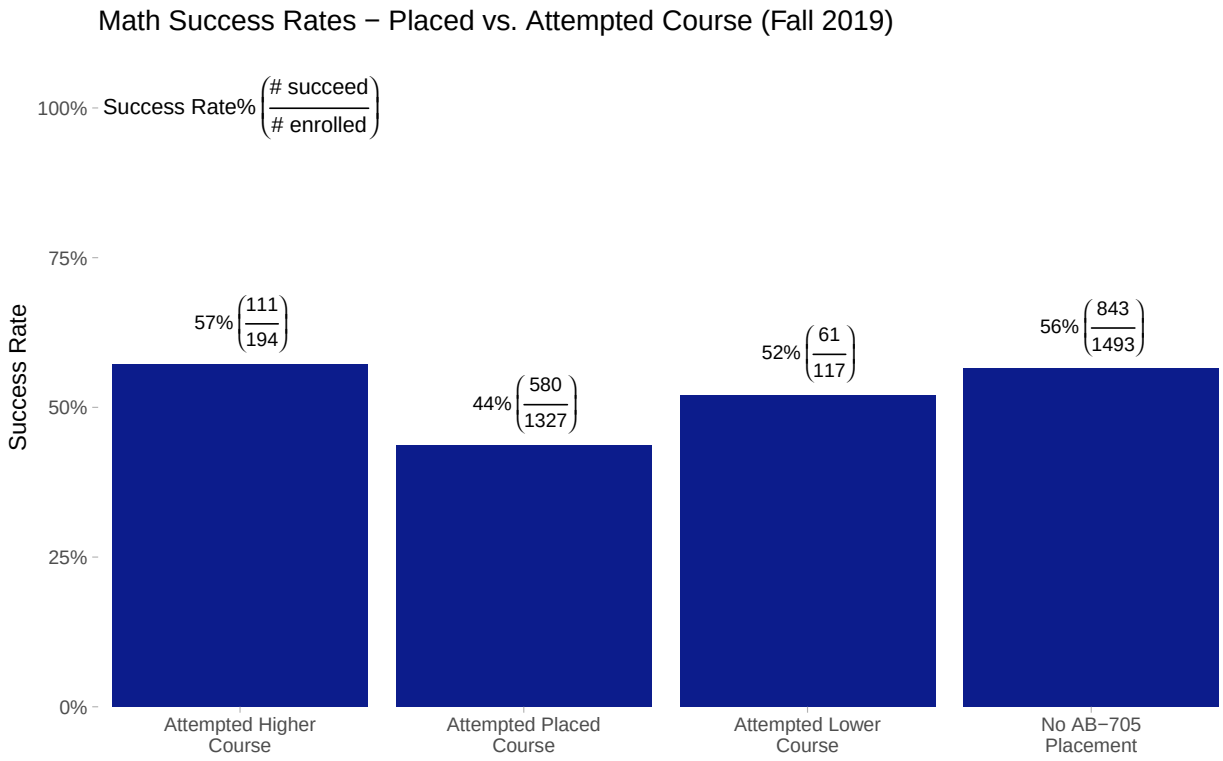
Math Placement

How do the students who are given a Math placement perform in the course they placed into?

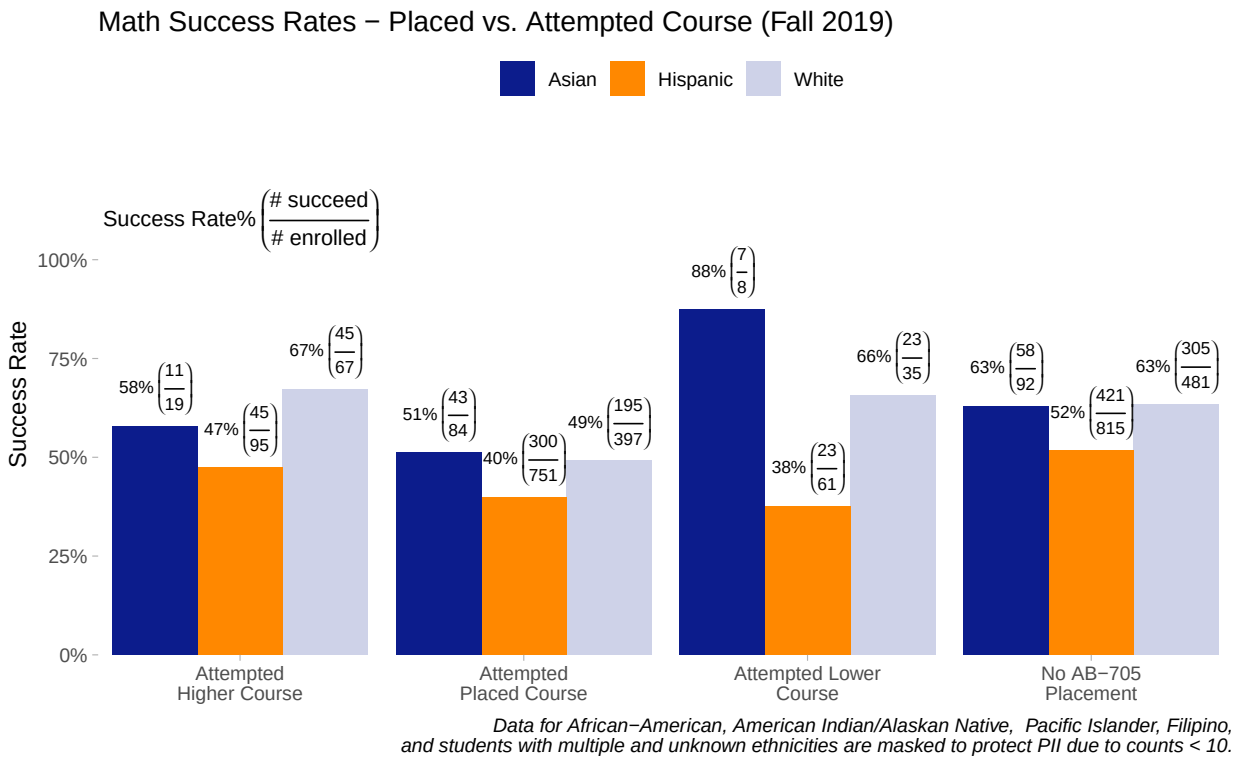
Students can be placed into 14 different categories (see: placement score interpretation) using MJC provided AB-705 placement tools. Because each category has more than one recommended course, students taking math courses in fall of 2019 can either:

- Attempt a math course different than one they were placed into (**Attempted Course Different than Placed**)
- Attempt a math course they were placed into (**Attempted Placed Course**)
- Attempt a math course without having an AB-705 placement or enrolled based on previous placements using methods before AB-705 (**No AB-705 Placement**)

To analyze math placements, the multiple courses available to students (determined by their highest placement) were compared against the actual course they enrolled in during fall 2019. The chart below presents the success *rates* of students, broken out by whether they attempted the course they placed into or not. Students who attempted a course into which they were placed into had lower success *rates* than those who attempted a different course, or who enrolled without an AB-705 placement.



Equity Impact

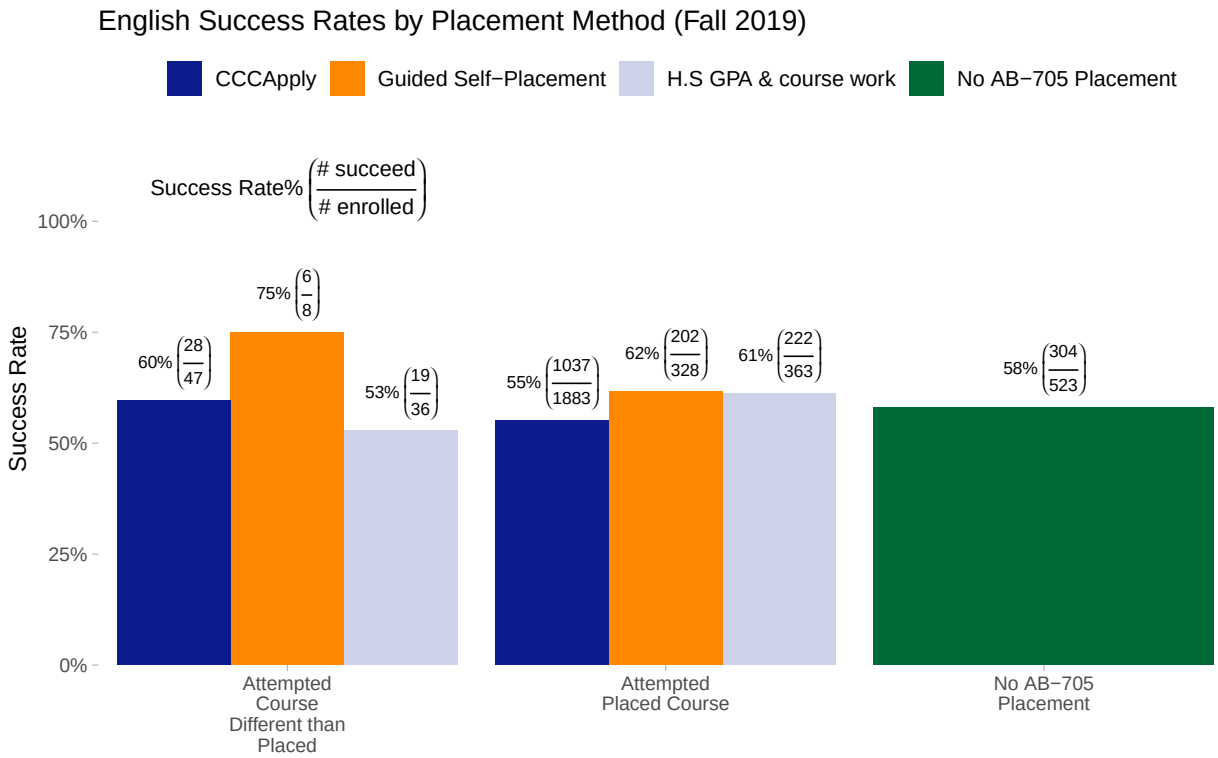


Placement Methods

Students taking math classes in fall of 2019 were placed by MJC using either **CCCApply information**, the **High School GPA Tool**, or the **Guided Self-Placement**. Additionally, some students did **not yet have AB-705 placements** or enrolled based on previous placement by Accuplacer. The following section compares the success *rates* of students, by placement method, who either enrolled in the recommended course or not.

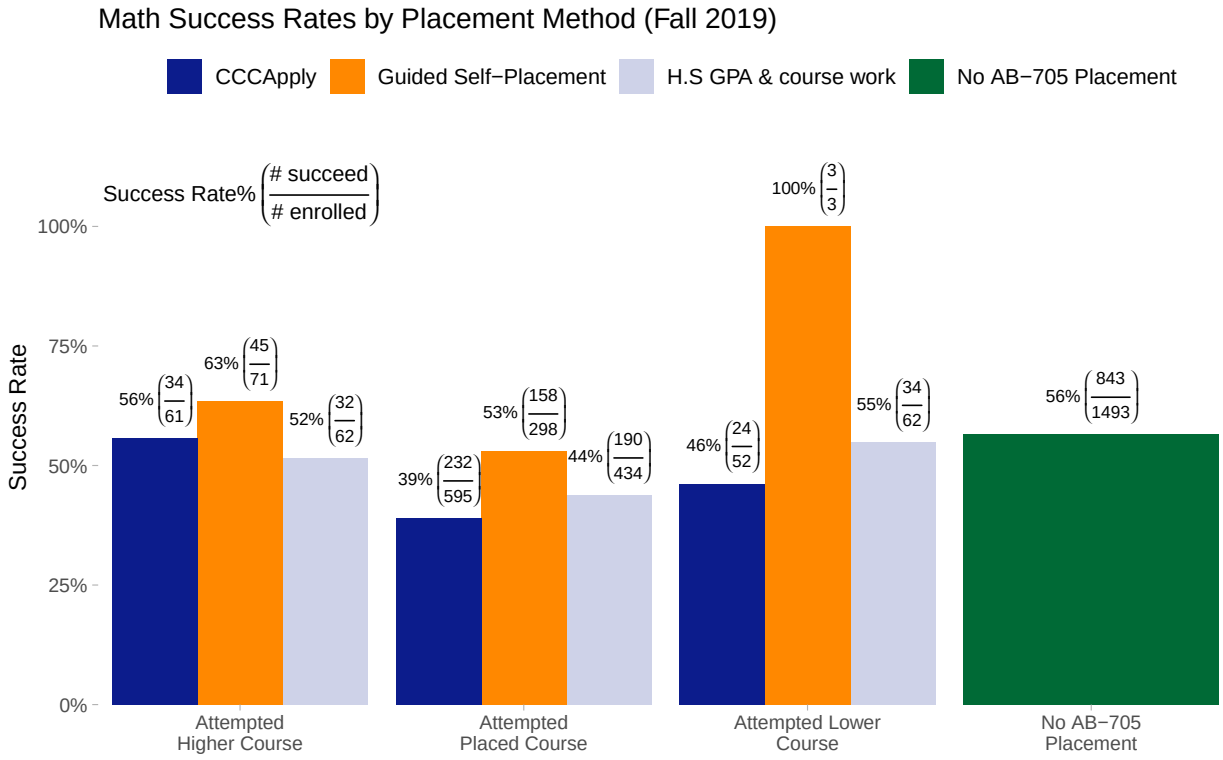
English

In English, students who attempted the recommended course had lower success rates if they were placed using CCCApply. ENGL-100 and ENGL-101 course success rates are broken out by placement method below:


English Success Rates by Placement Method (Fall 2019)
CCCApply
Guided Self−Placement
H.S GPA & course work
No AB−705 Placement
Success Rate% (# succeed / # enrolled)
Success Rate
100%
75%
50%
25%
0%
60% (28/47)
75% (6/8)
53% (19/36)
55% (1037/1883)
62% (202/328)
61% (222/363)
58% (304/523)
Attempted Course Different than Placed
Attempted Placed Course
No AB−705 Placement

Math

In general, students who attempted courses other than the recommended had higher success *rates* than those who didn't.



Corequisite Math

Are corequisite math courses helping students complete the intended transfer level math course?

This section looks at data for MATH-101, MATH-111, and MATH-134, each of which has an associated corequisite course. This report only analyzes fall 2019 due to the data limitations of 2020 spring.

SOCIO-105 is included in these comparisons, as it satisfies the Quantitative Reasoning requirements of CSU-GE / IGETC and is a course students can be placed into by MJC math placement tools.

Overall, students who complete MATH-101 or MATH-111 with the corequisite attached to the course have a higher success rate than those who only take the transfer level course without the corequisite. MATH-134 students tend to have higher success *rates* when they do not enroll in the corequisite course. SOCIO-105 students have a higher success rate than those completing MATH-101, MATH-111, or MATH-134.

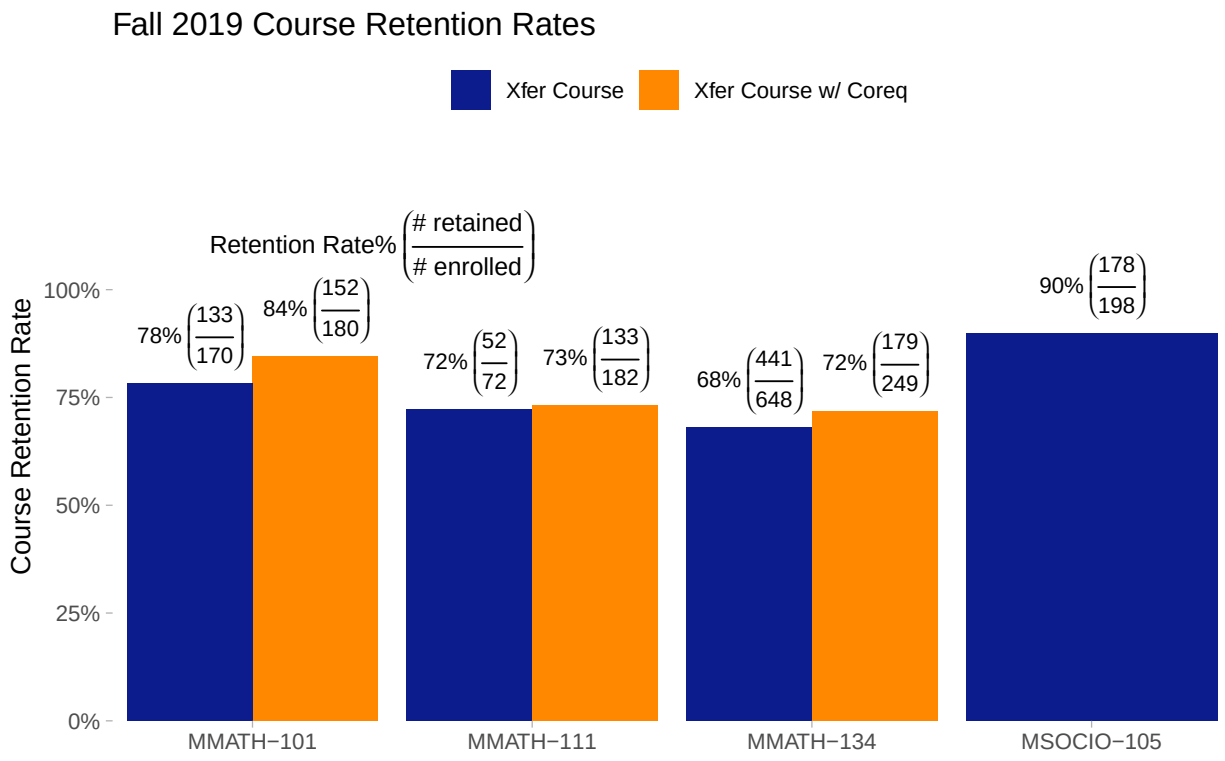
For reference, the table below shows the overall success and retentions *rates* of those courses for fall 2019. Success *rates* are higher in MATH-101 and MATH-111 for students enrolled in the corequisite, while success *rates* in MATH-134 are lower for students enrolled in the corequisite. SOCIO-105 success *rates* are higher than each of the three math courses.

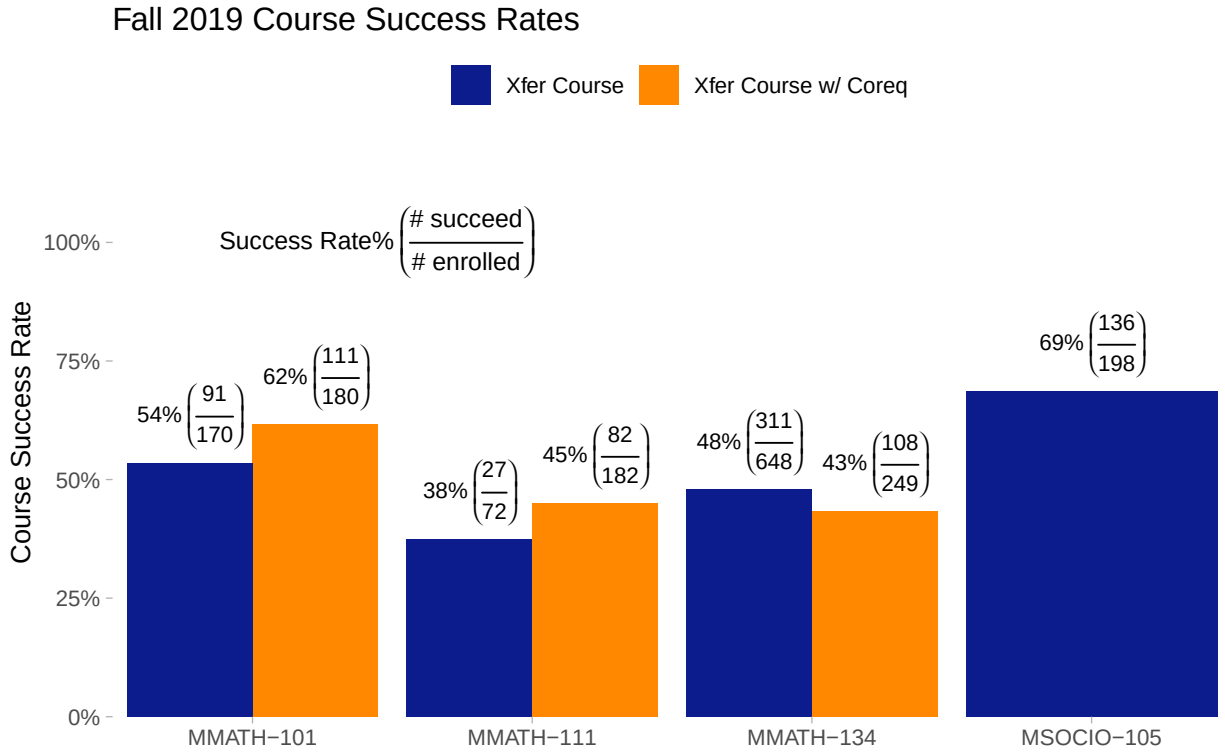
Fall 2019 Success and Retention Rates

Course	Attempted	Success	Retention
MMATH-101	350	58%	81%
MMATH-111	254	43%	73%
MMATH-134	897	47%	69%
MSOCIO-105	198	69%	90%

Retention & Success Rates by Course

Retention *rates* are higher across each of the three math courses when students take the corequisite. SOCIO-105 retention *rates* are higher than each of the three math courses.





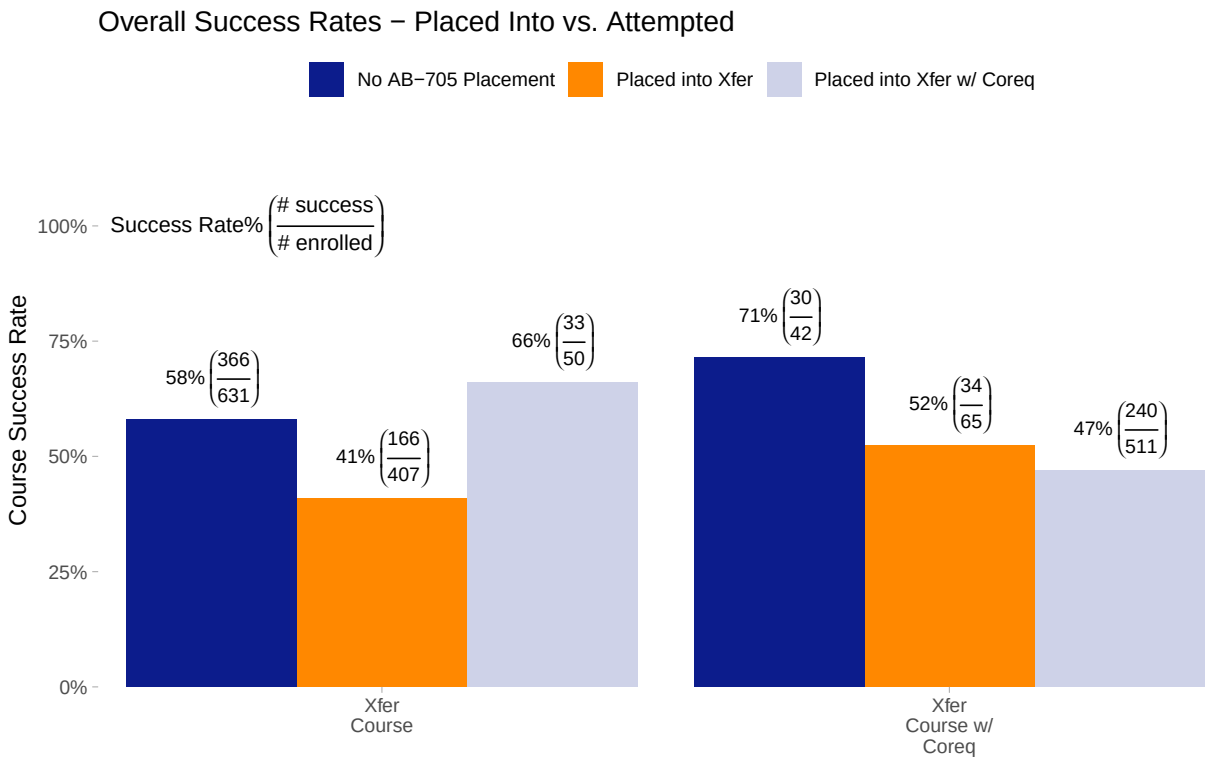
Data for students of all ethnicities are masked to protect PII due to counts < 10.

Corequisite Impact by Placement

Many students attempting MATH-101, MATH-111, and MATH-134 in fall 2019 received an AB-705 placement prior to the start of the term, though some enrolled based on a previous Accuplacer placement. Following the placement score interpretation page, students are either placed into transfer level with a corequisite or without a corequisite.

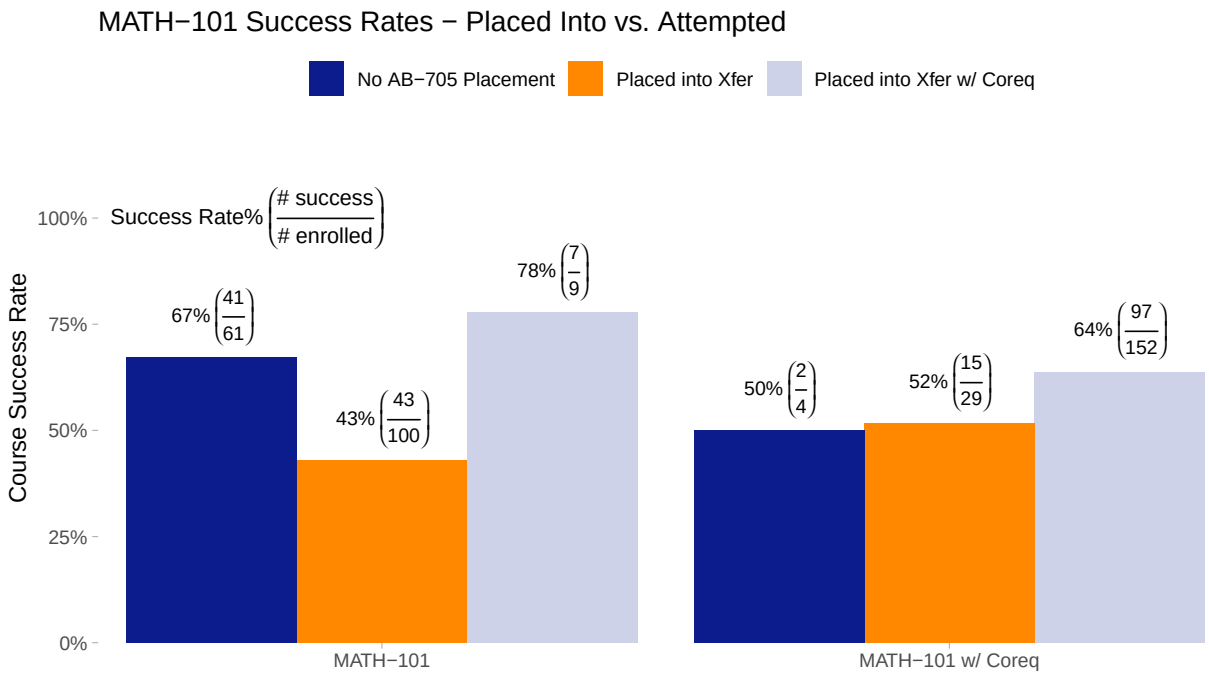
The small *number* of students who attempted a course different than the placement recommendation had higher success *rates* than those who followed the recommendation.

- **No AB-705 Placement**: Students without an AB-705 Placement as of the start of the term.
- **Placed into Xfer**: Students were placed into a category where a **corequisite course was not recommended**.
- **Placed into Xfer w/ Coreq**: Students were placed into a category where a **corequisite course was recommended**.

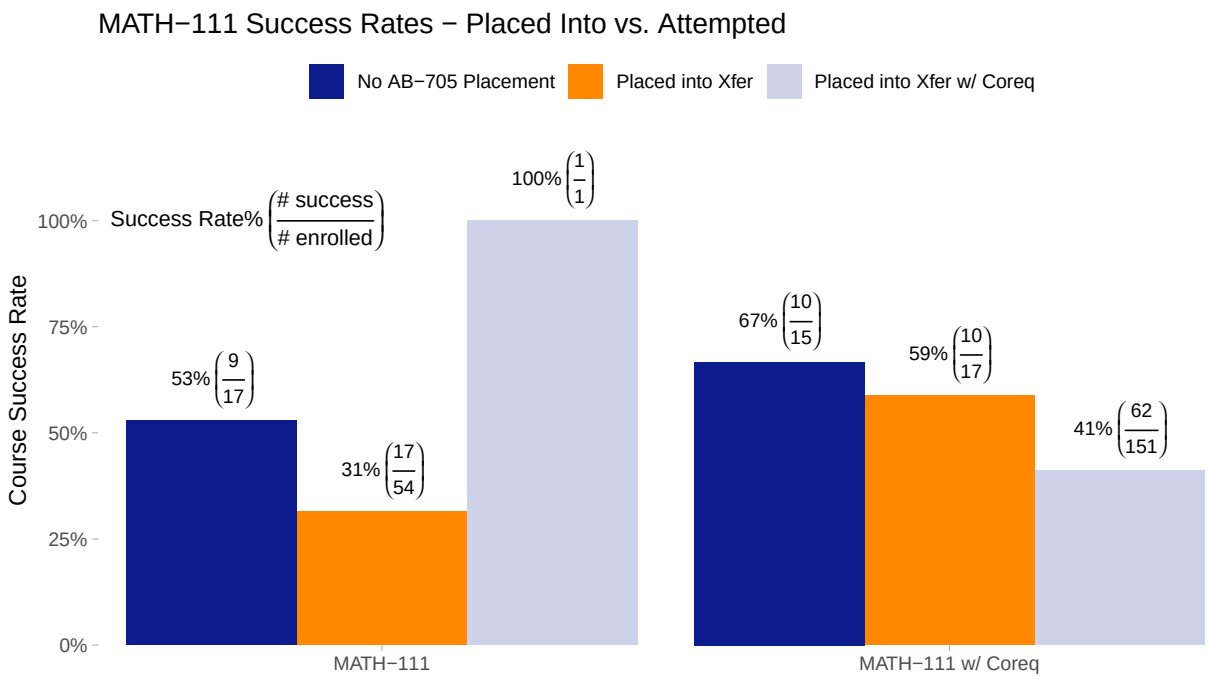


The following graphs display the success *rates* of MATH-101, MATH-111, MATH-134, and SOCIO-105 based on student placement and whether they attempted the corequisite in tandem. "No AB-705" placement refers to students who continued the math pathway based on previous Accuplacer placement.

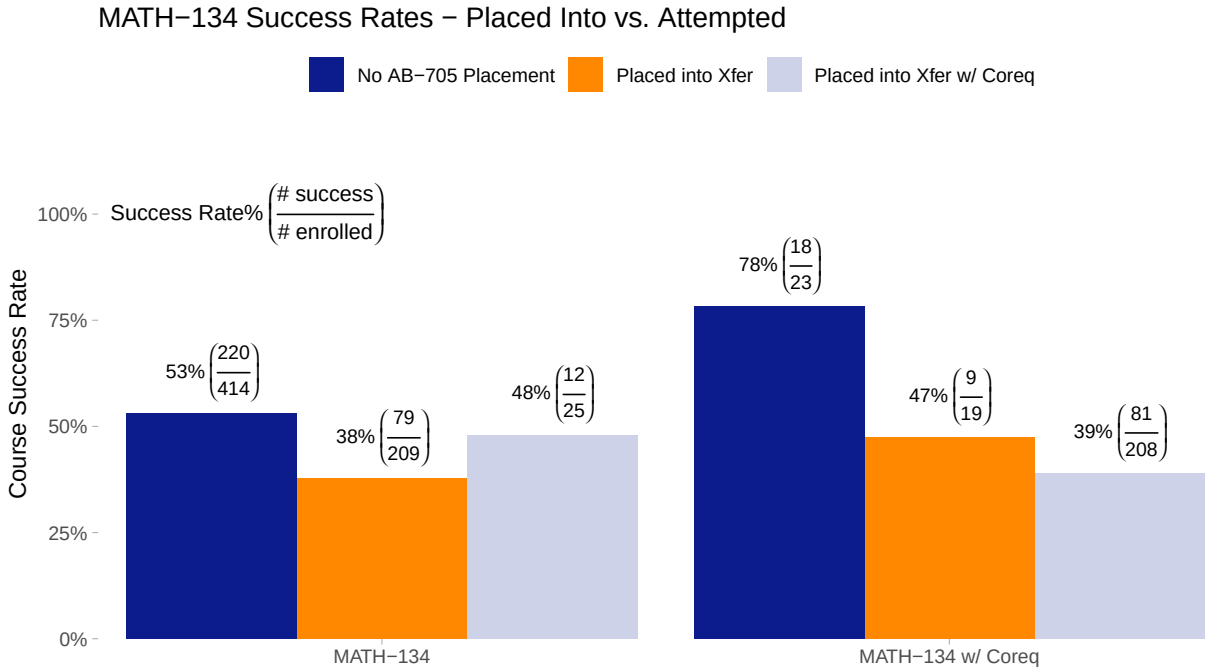
MATH-101



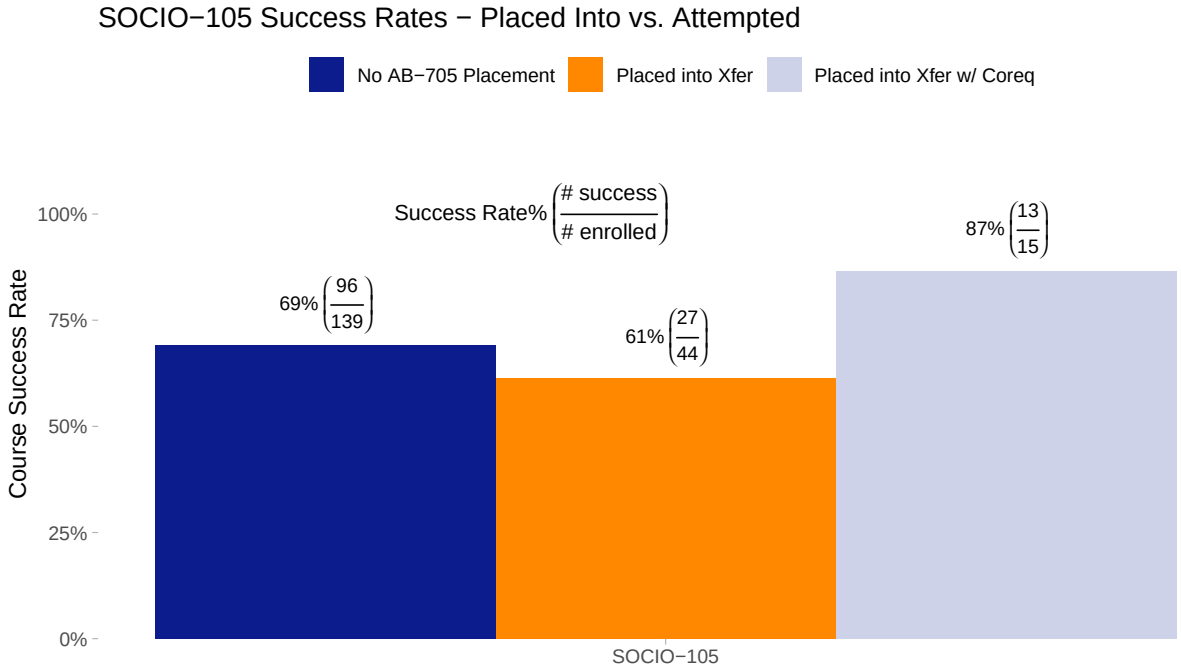
MATH-111



MATH-134

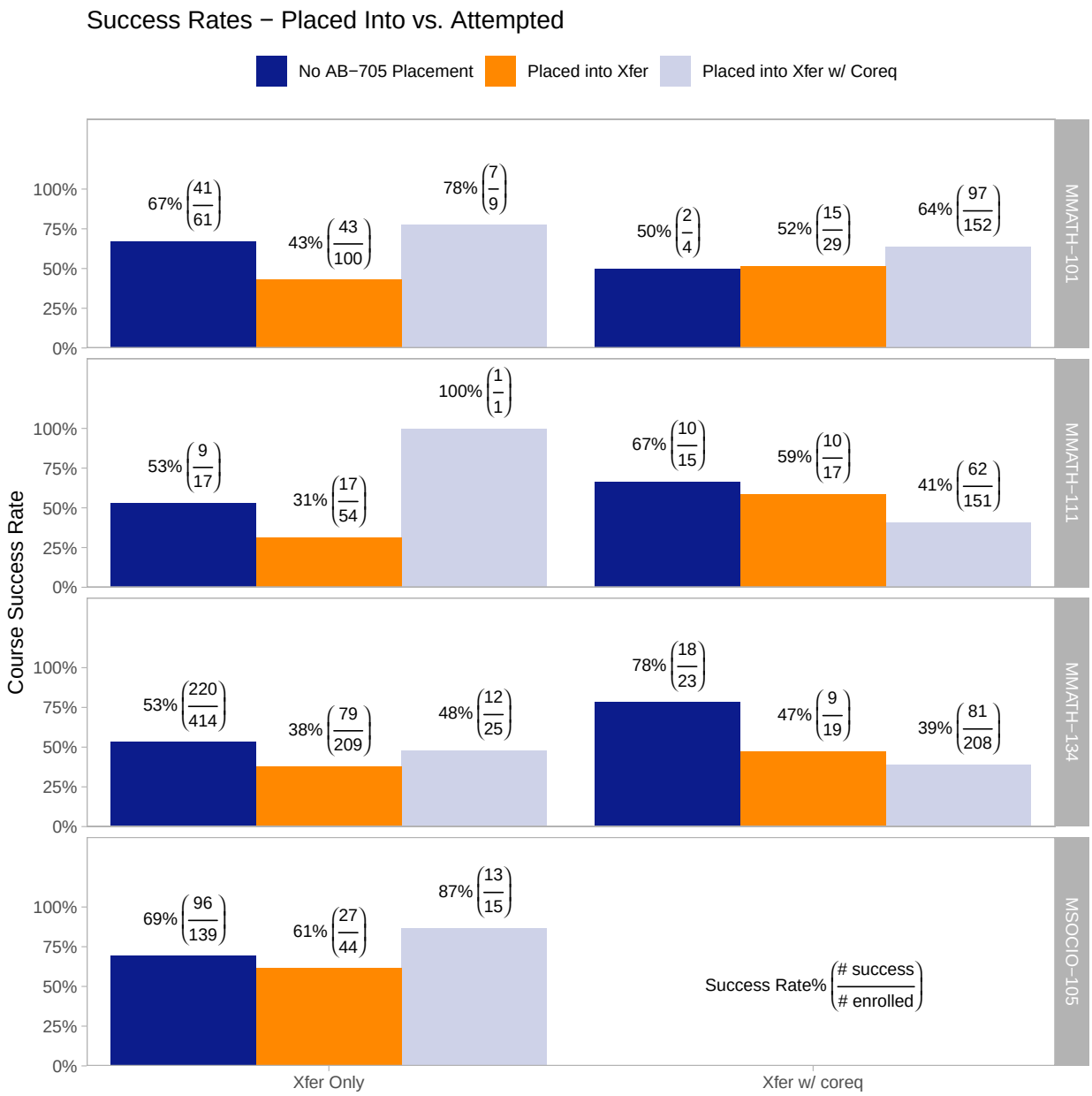


SOCIO-105



Combined

The chart combines the previous graphs for comparison across the courses.



Findings and Recommendations

Broadly, reevaluation of MJC placement practices has improved student access and throughput while increasing the volume of students successfully completing transfer level math and English courses.

Initial data show that while math success *rates* were lower in fall 2019, the *number* of students who succeeded increased. Students who attempted a course different than the one recommended by their placement have higher success *rates* than those who attempted the recommended course.

Success *rates* for MATH-101 and MATH-111 were higher for students who were also enrolled in a corequisite. Success *rates* for MATH-134 are lower for students who were also enrolled in a corequisite. SOCIO-105 had a higher success *rate* than MATH-134 and satisfies many of the same requirements.

Further analysis is recommended after more placement and course success data becomes available in fall 2020 and spring 2021. Specifically, once enough data are available to comfortably disaggregate students by ethnicity a disproportionate impact analysis is reccomended to identify whether these changes have any adverse consequences to vulnerable populations.