Math Update to President's Cabinet

April 27, 2020

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Changes

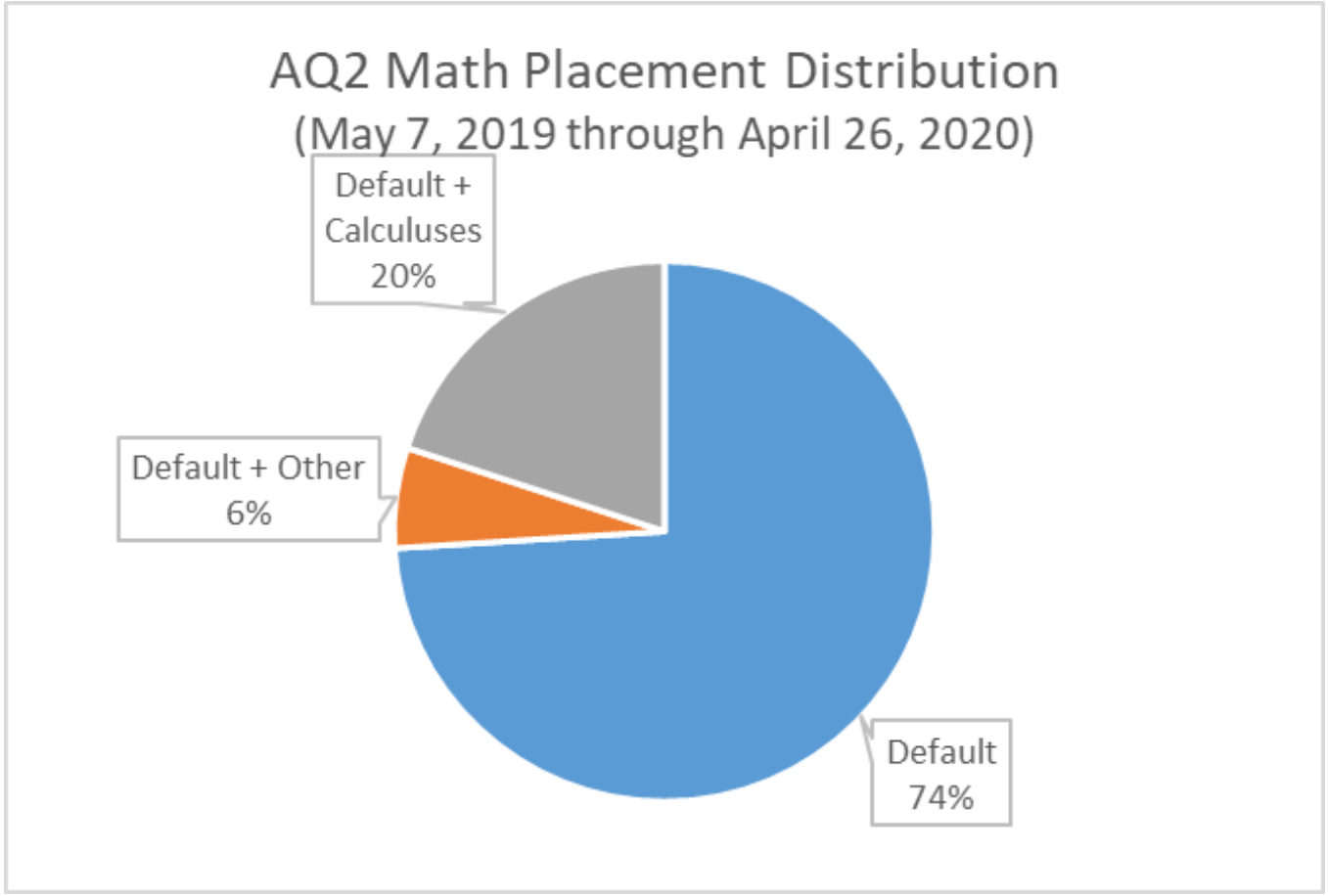
Fall 2018

- Phase 1 Placement (MMAP model)
- Phase 1 Corequisites (Math 5, 7, 13, 18); Jumping or Support

Fall 2019

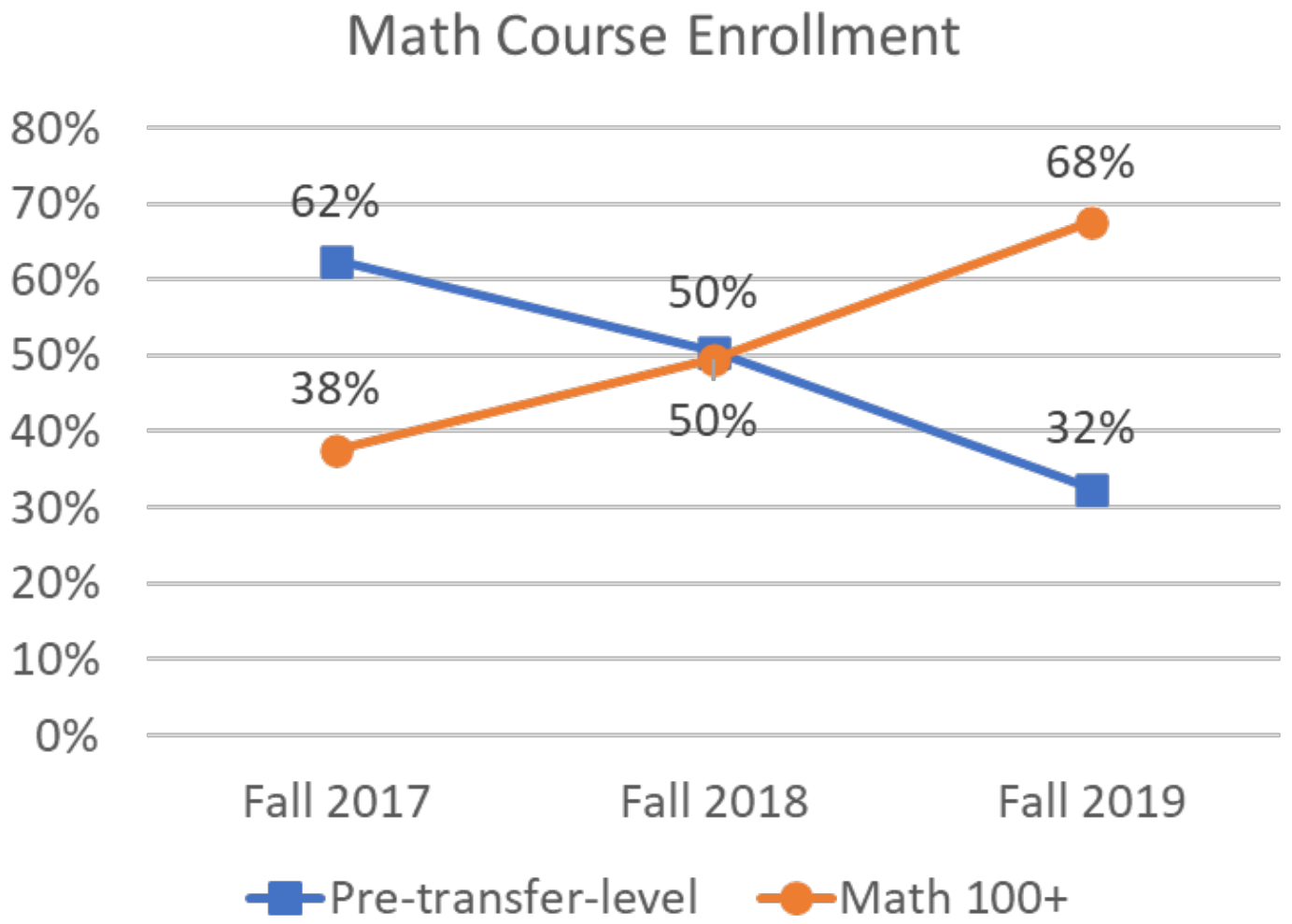
- Phase 2 Placement (Math 100, 110, 110S, 120, 130, 150 open access)
- Phase 2 Corequisites (Math 5, 7, 11, 13, 14, 15, 16, 18); Support Only
- Discontinued Math 51A, 51B, 61, 70S, 71X

Placement



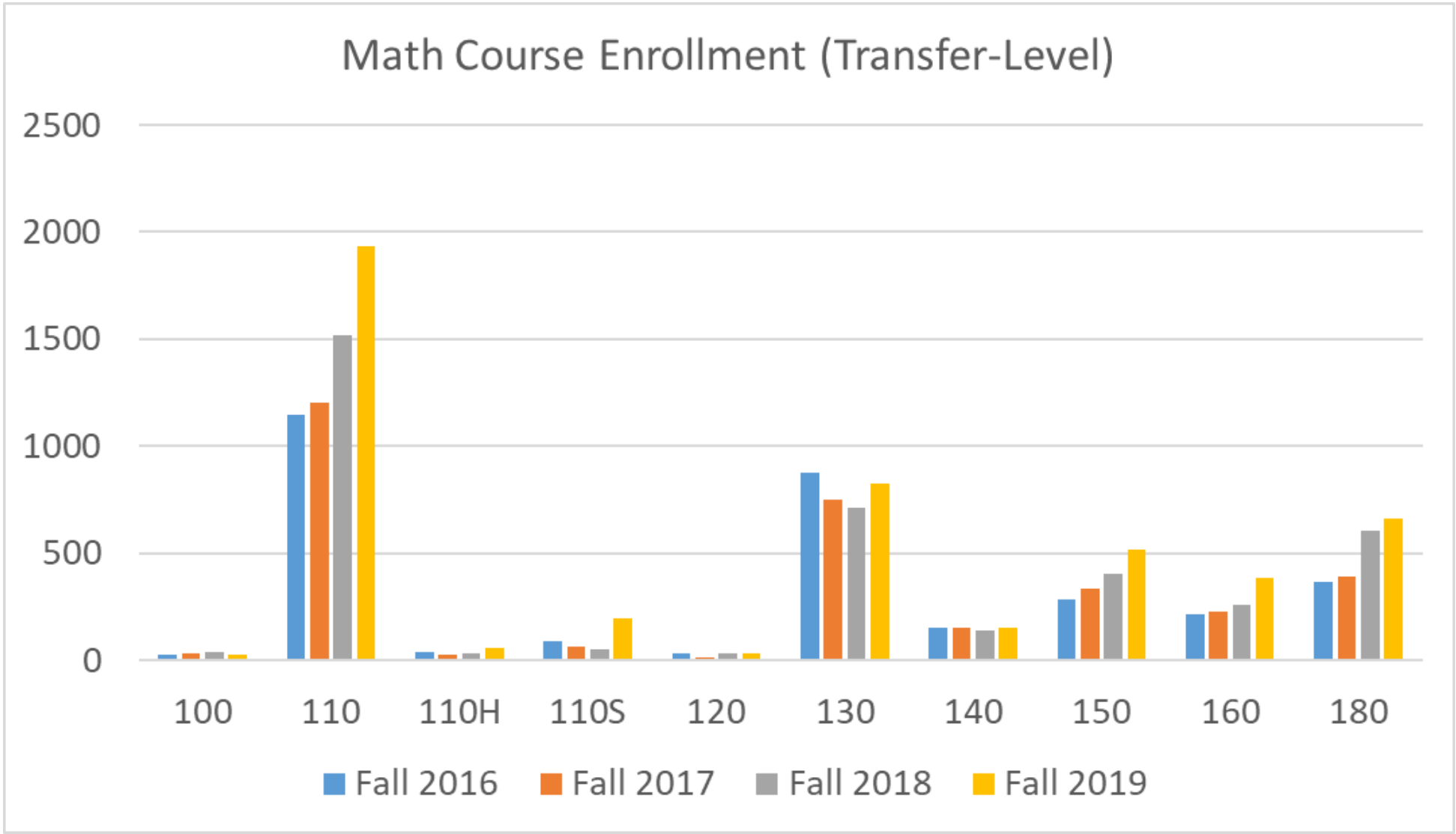
Default = Math 100, 110, 110S, 120, 130, 150
Other = Math 140 and/or Math 160
Calculuses = Math 140, 160, 180

Enrollment



* Pre-transfer-level here includes LERN 48, LERN 49, and Math 50-71.

Enrollment

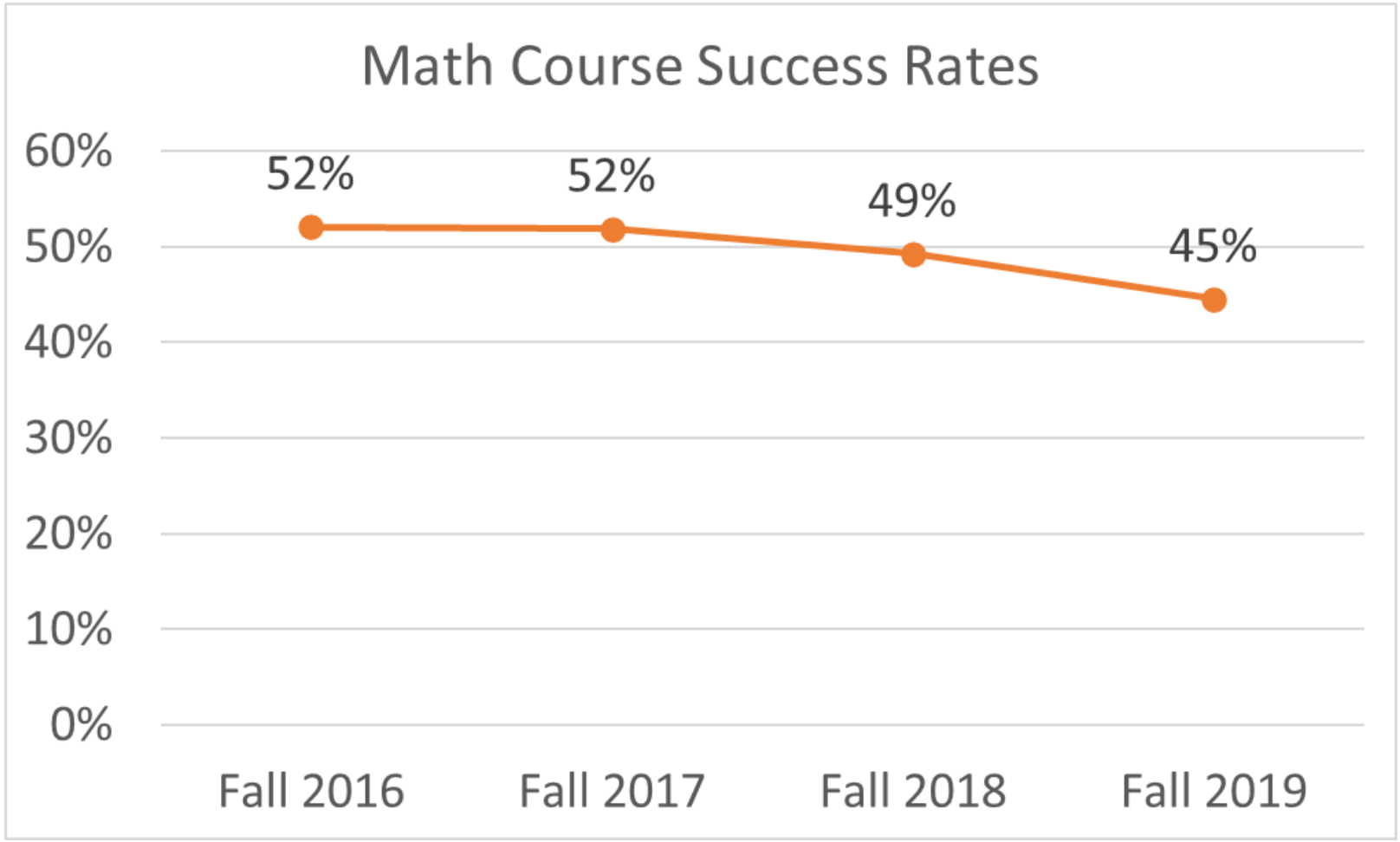

Math Course Enrollment (Transfer-Level)
2500
2000
1500
1000
500
0
100
110
110H
110S
120
130
140
150
160
180
Fall 2016
Fall 2017
Fall 2018
Fall 2019

Success

Fall 2017 → Fall 2019

Success rates are down, most notably in:

- Math 110 (60% → 47%)
- Math 130 (46% → 36%)
- Math 140 (52% → 33% *)
- Math 150 (45% → 36%)



* There might be more variability for Math 140 due to low numbers of sections

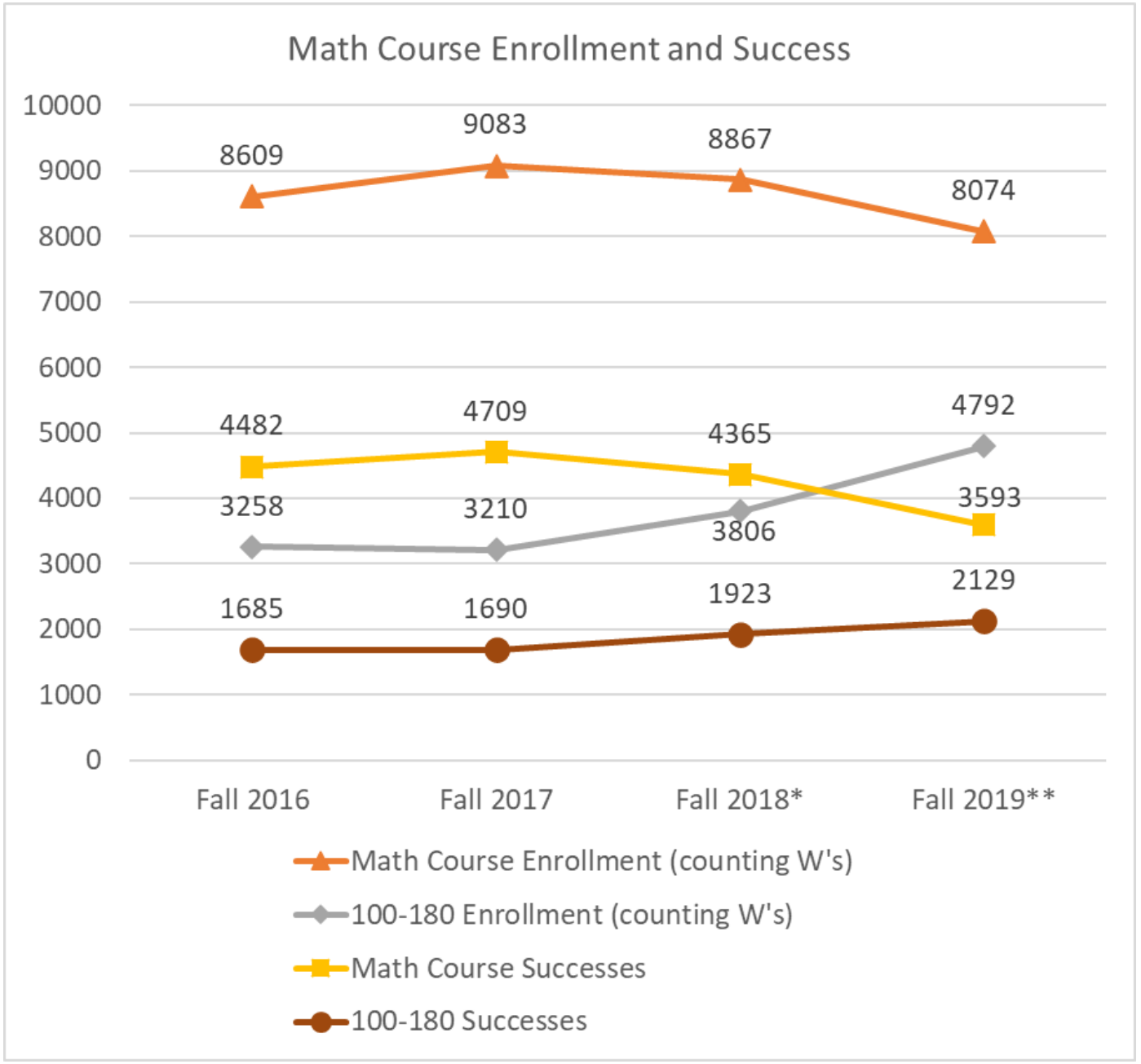
Success

Fall 2017 → Fall 2019

The number of students succeeding in Math 100-180 has risen about 26% (1690 → 2129).

This is despite overall math course enrollment dropping about 11% (9083 → 8074).

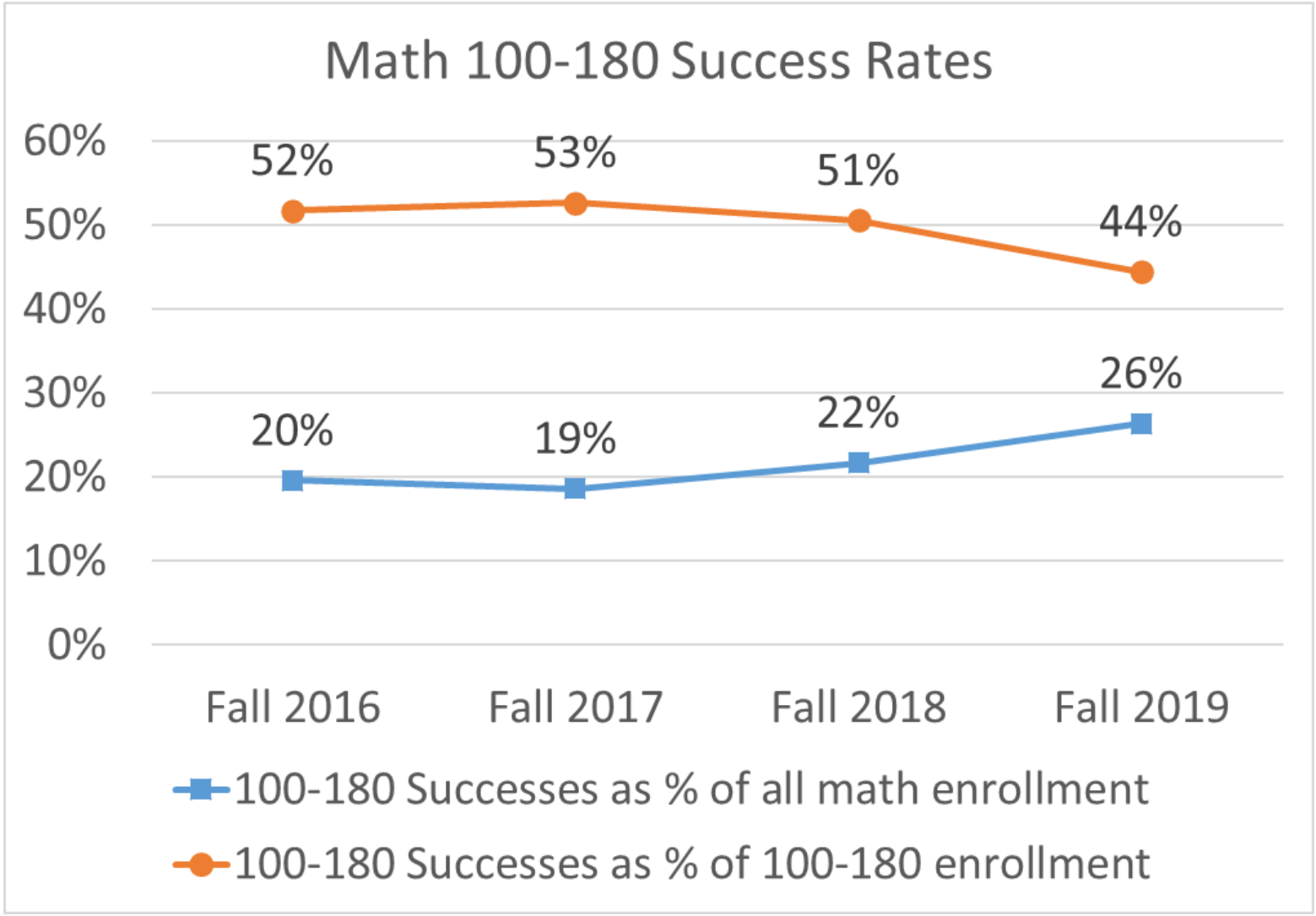
Note: This success data is total successes. To get an accurate picture of throughput, we'll need success data for first-time math students.



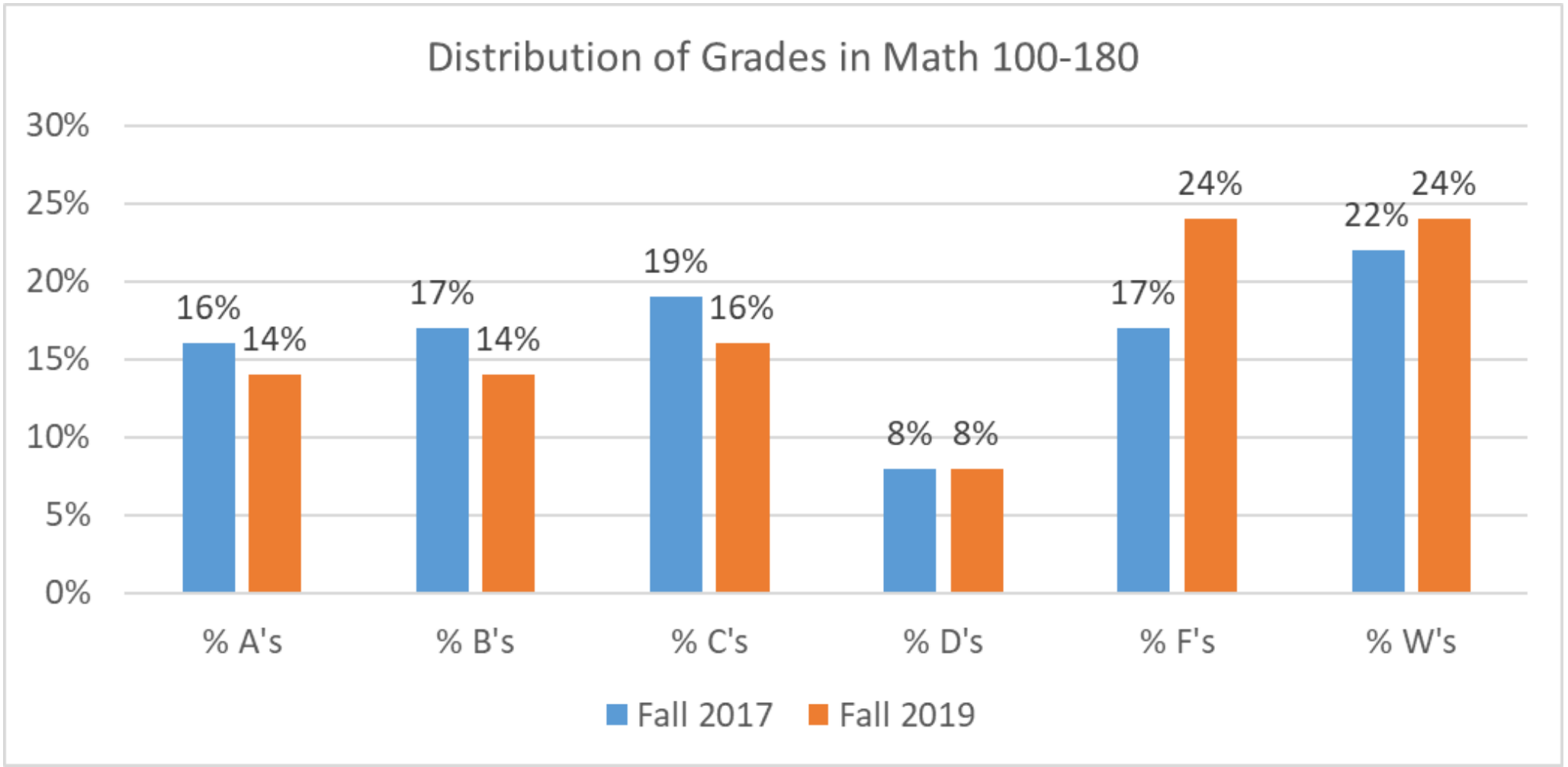
Success

Fall 2017 → Fall 2019

The % of all math students who pass a transfer-level math course has increased (19% → 26%).

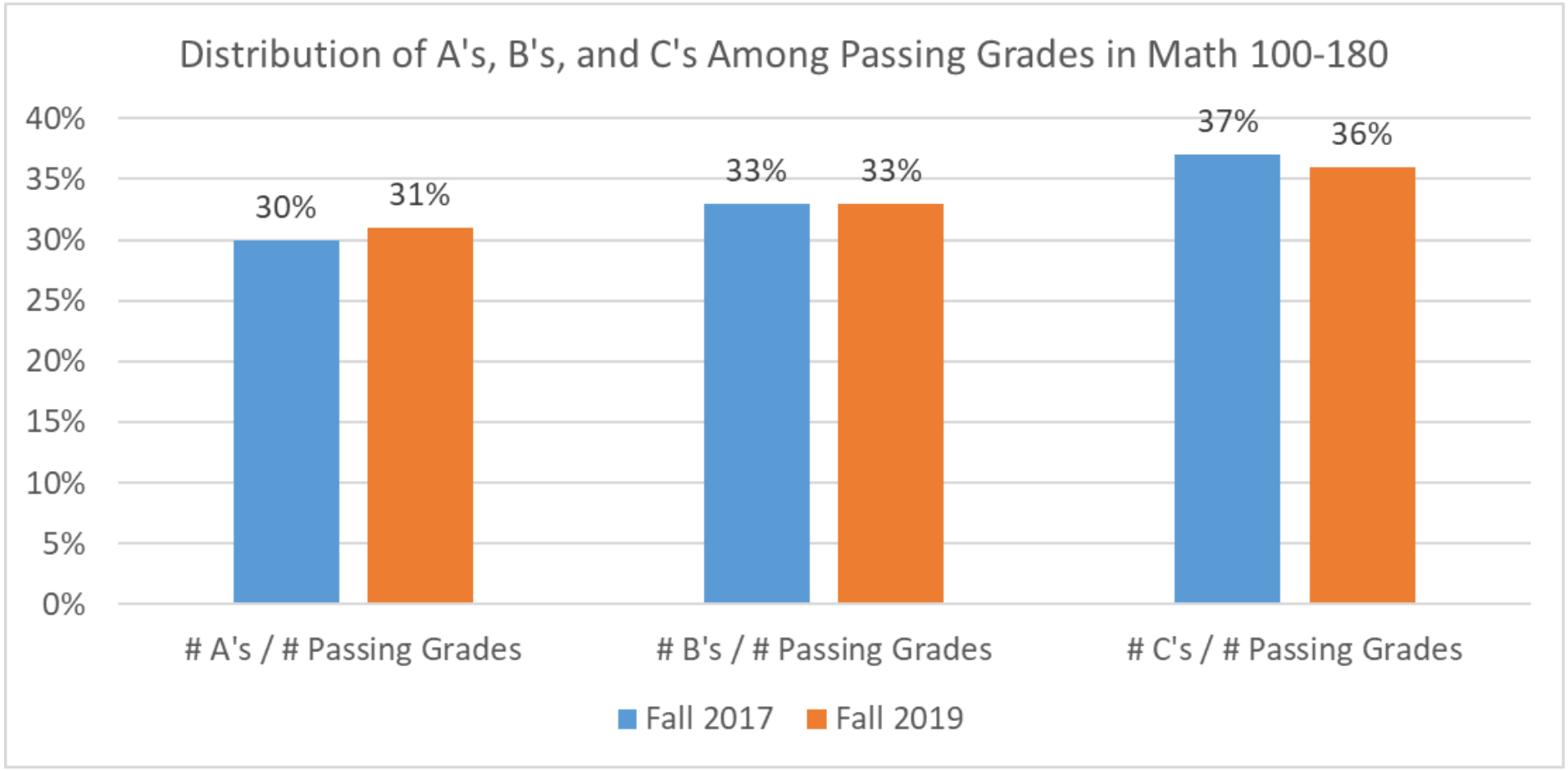


Grade Distributions

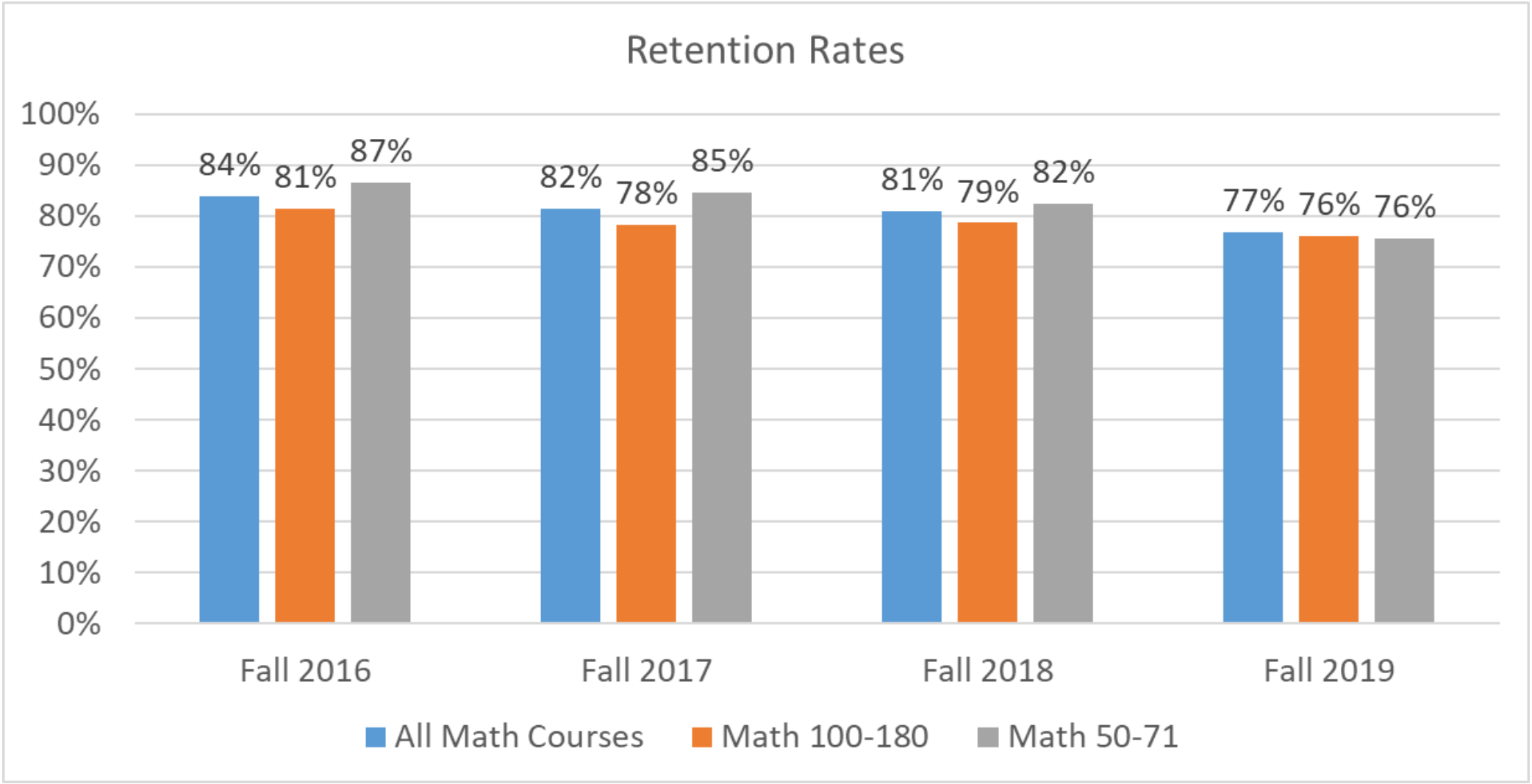


Grade Distributions

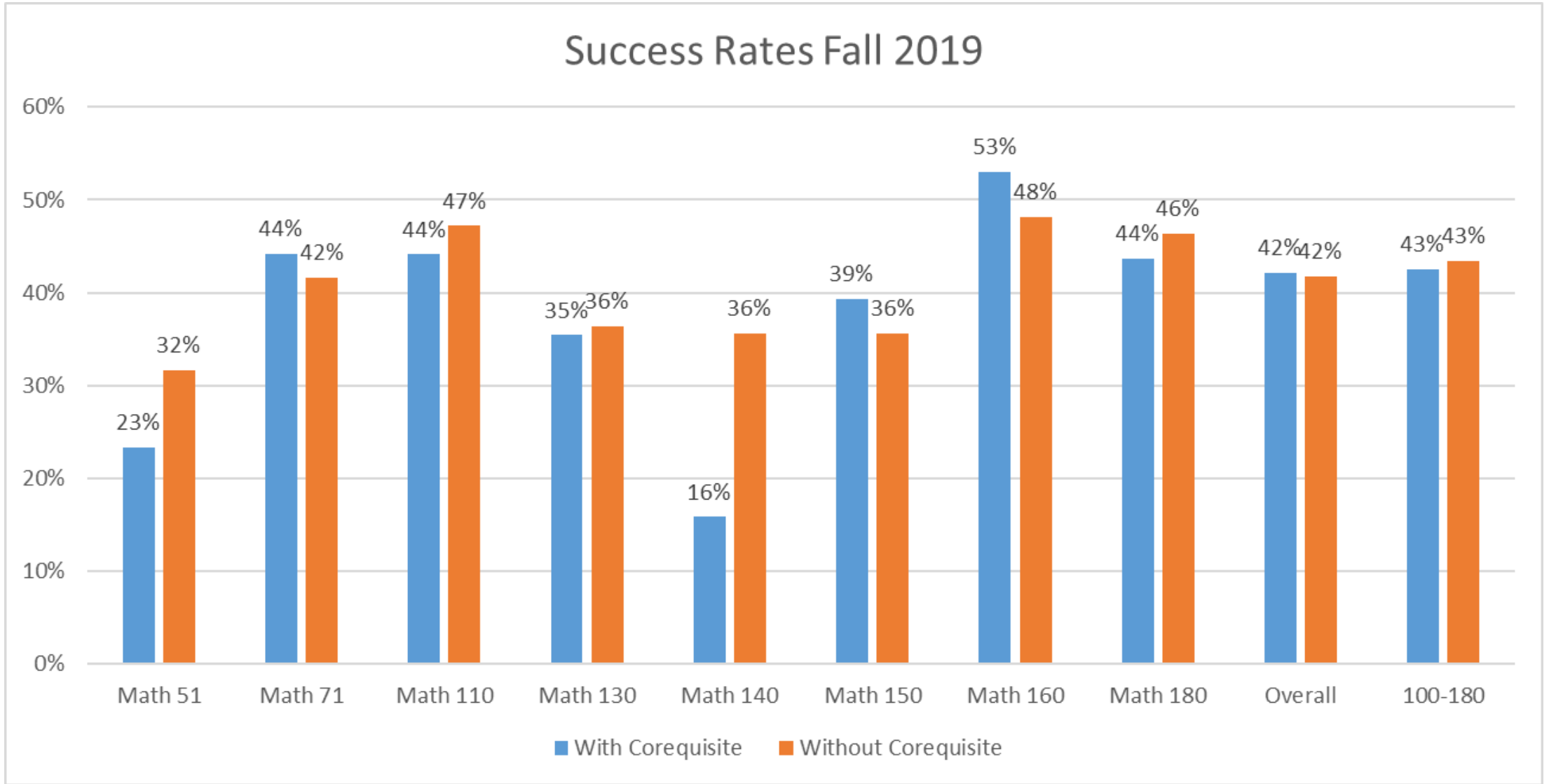
Among passing grades, the distribution of A's, B's, and C's hasn't changed (for Math 100-180).



Retention Rates



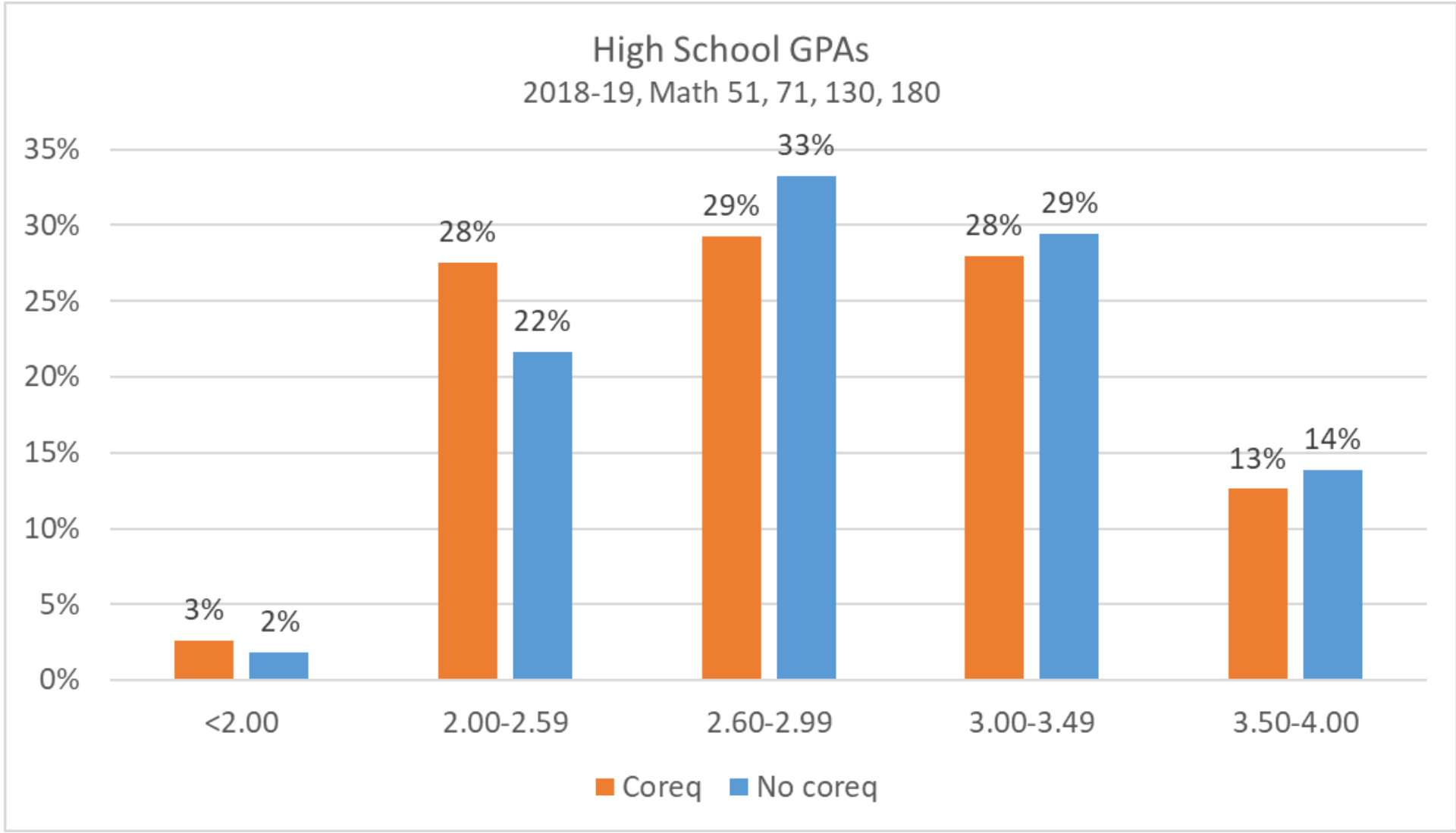
Corequisites



Corequisites (AQ1 Only – 2018-19)

Students who chose a corequisite pair tended to have lower high school GPAs than students who elected to take a target course alone.

Future research could consider HS math coursework, too.



Success Equity

	Overall	Female	Male	Asian	Af.Am.	Latinx	White	Mult.R
Math 110: Success %	47%	48%	46%	68%	22%	40%	57%	60%
Math 110: 80% Index		100%	97%	100%	**32%**	**59%**	84%	88%

	Overall	Female	Male	Asian	Af.Am.	Latinx	White	Mult.R
Math 50-180: Success %	43%	44%	43%	62%	25%	38%	50%	48%
Math 50-180: 80% Index		100%	97%	100%	**40%**	**61%**	81%	**78%**

Notes:

- Most math courses had too few students in some categories to be able to computer an 80% Index.
- Longitudinal equity research could help determine if equity gaps are being closed or not.

Fall 2019 AQ Impact Surveys

- Students who took Math 71 either took it to help them prepare for a transfer-level math class or took it for their program. Very few were unaware that they could take a transfer-level math class.
- 9.2% of students taking math classes were not at all sure that they had chosen the correct math course for their academic goals.
- In the eighth week of classes, 75% of students felt they were taking a course at the correct level of difficulty. However, this is difficult to reconcile with only 42% of students selecting that they are passing their exams. At the time of registration, students were generally confident that they could pass the class. But at the eighth week in, only about 60% were confident that they were going to pass the class. 32% did not know if it would pass or not.

Future Research

- Throughput analysis compared with state AB 705 benchmarks.
- Are students following the support recommendations provided by the AQ?
- What is happening with students who drop a math class?

Ongoing Needs

- Research and cross-campus collaboration
- Community of Practice Funding
- LHE for Faculty Coordinators

* Note: This slide may or may not be guilty of some plagiarism from Michelle's slide. ☺ But the needs are still real.