Corequisite Mathematics – Systemwide Data Analysis

Corequisite Mathematics Academy

April 4, 2018

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Presentation Outline

Learning Support Enrollment Trends

Corequisite Student Course Pass Rates

First-time Freshmen Corequisite Student Outcomes

Next Steps for Research

Learning Support Enrollment Trends

Report on trends in learning support enrollment and placement from the past five fall terms.

Identify the internal and external factors that have led to shifts in learning support placement and enrollment.

Learning Support (LS) Enrollment by Subject Area
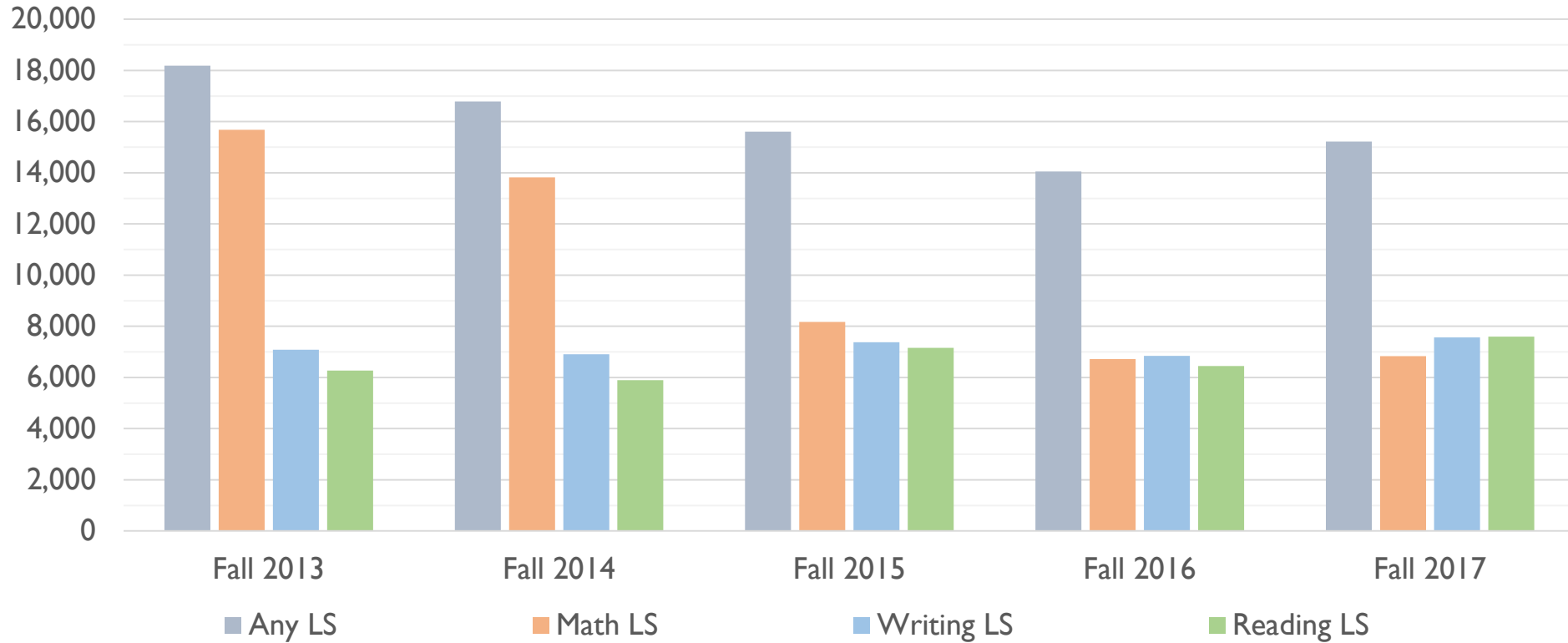
	Fall 2013	Fall 2014	Fall 2015	Fall 2016	Fall 2017
Any Learning Support	18,182	16,787	15,603	14,050	15,216
Math Learning Support	15,675	13,821	8,168	6,715	6,831
Writing Learning Support	7,087	6,912	7,375	6,841	7,567
Reading Learning Support	6,266	5,893	7,161	6,448	7,598

What impact did the Promise have on LS enrollment?

	Fall 2013	Fall 2014	Fall 2015	Fall 2016	Fall 2017
First-time Freshmen (FTF)	18,139	18,216	22,732	21,305	21,620

First-time Freshmen LS Placement Rates by Subject Area
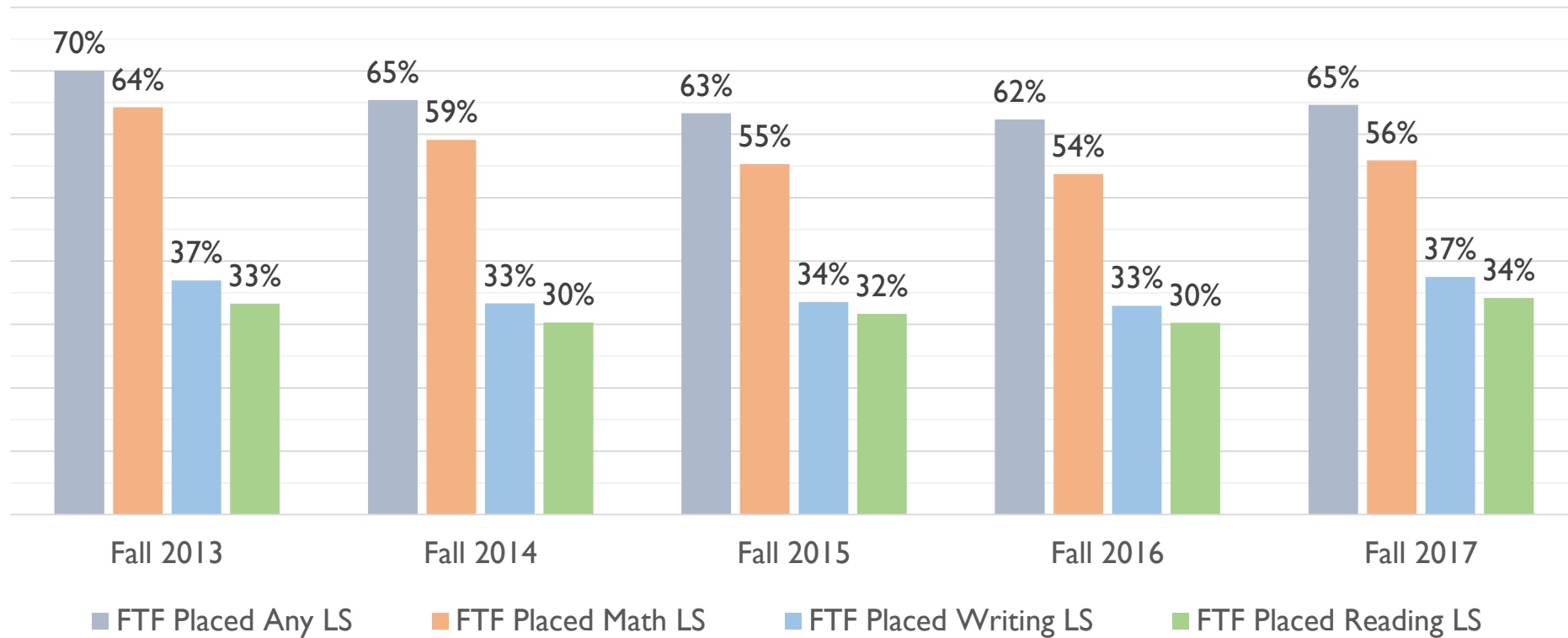
Legend: ■ FTF Placed Any LS ■ FTF Placed Math LS ■ FTF Placed Writing LS ■ FTF Placed Reading LS
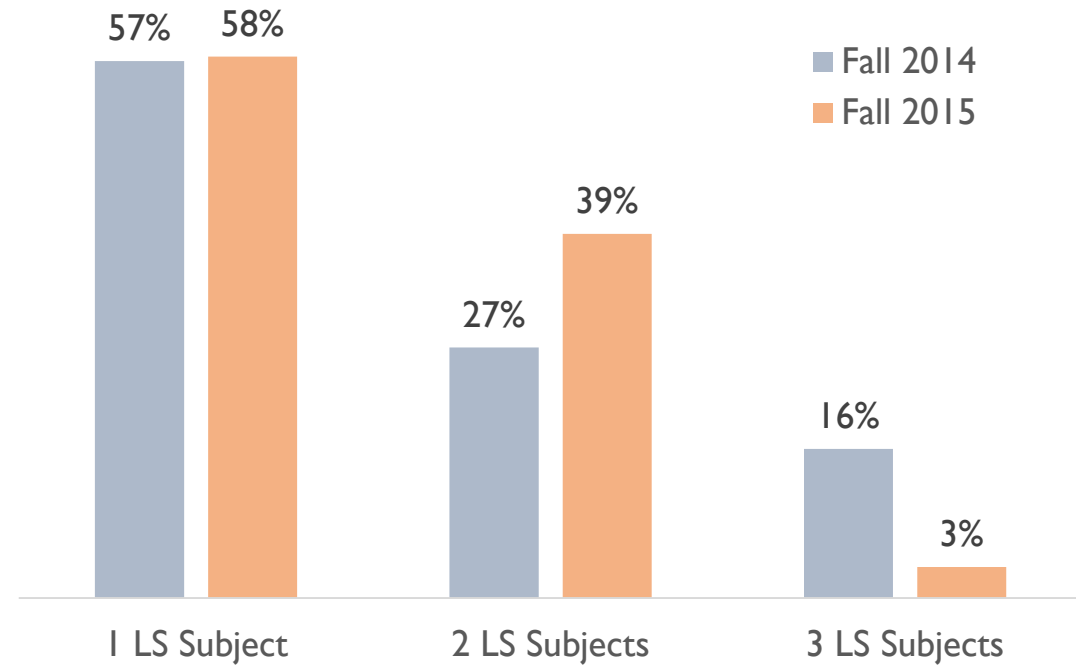
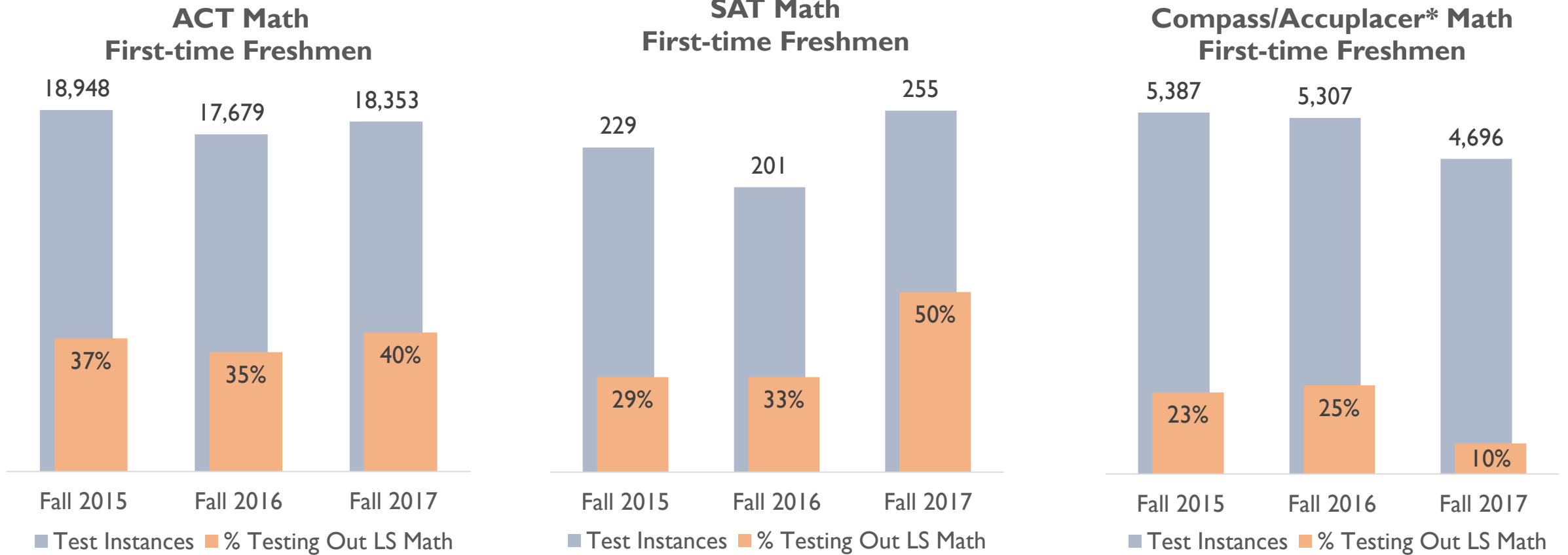*Note: First-time Freshmen (FTF) includes full-time and part-time as well as summer-returning-fall students.*

SAILS Math Completers
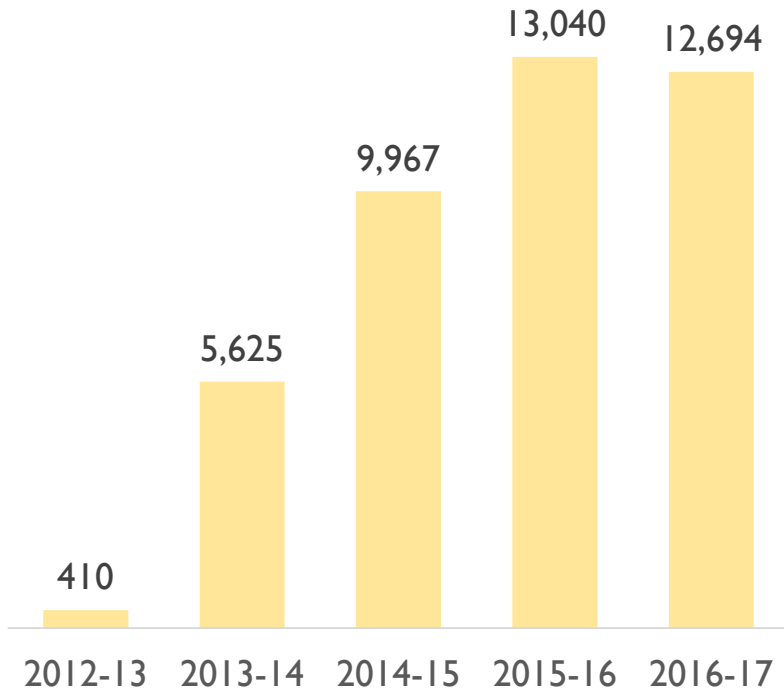
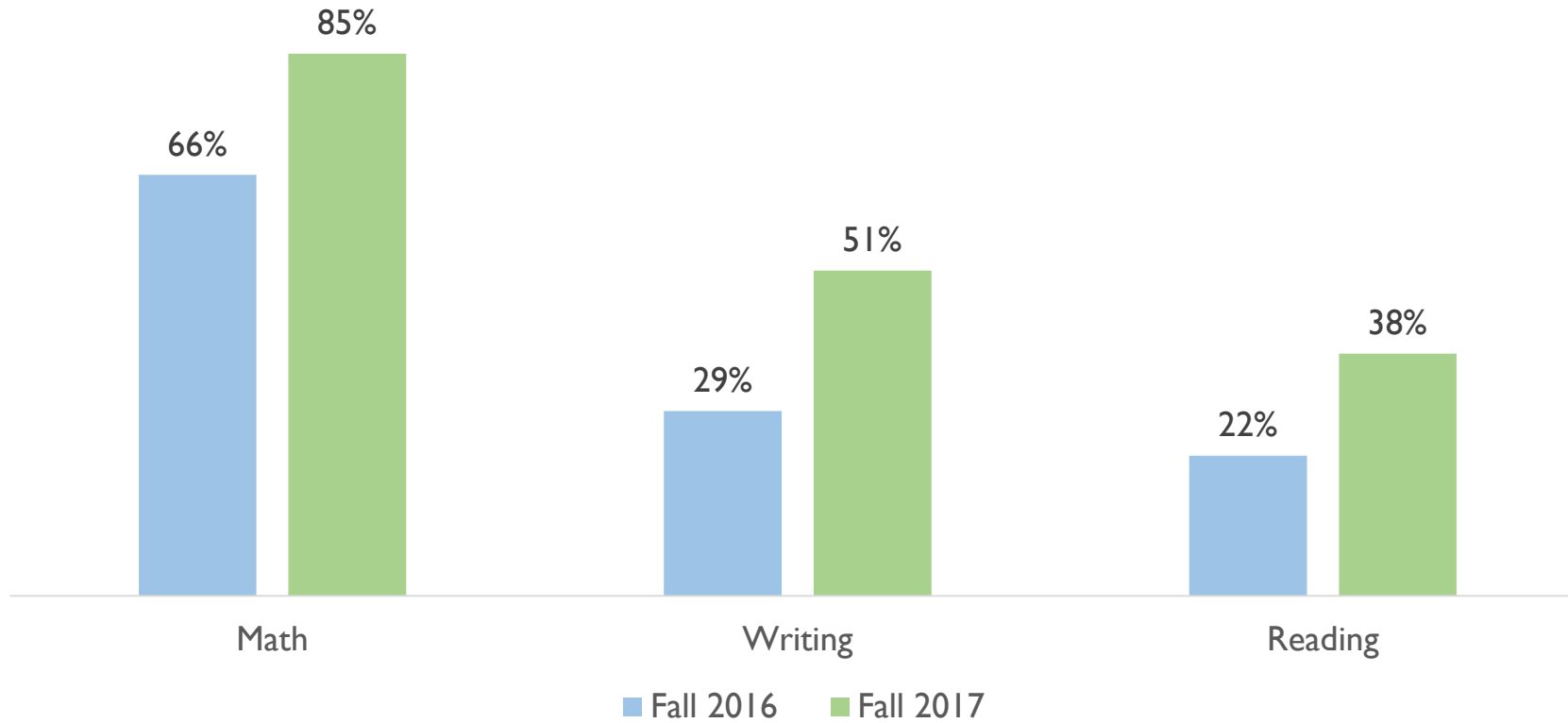**Fall LS Enrollment by Number of Subjects**

Adult First-time Freshmen Placed in Learning Support

Corequisite Student Course Pass Rates

Focus on all community college corequisite students enrolled in fall terms, without comparisons to prerequisite or university students.

Identify gaps in college course pass rates for corequisite students from various subpopulations.

Display gaps in college course pass rates for corequisite students as compared to students enrolled in only college level coursework.

Provide first-term outcomes of corequisite students disaggregated by course results.

Corequisite Student College Level (CL) Course Pass Rates

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	Math (MATH 1000+)	Writing (ENGL 1010)	Reading (Various)
Fall 2015	51%	59%	61%
Fall 2016	56%	62%	66%
Fall 2017	56%	61%	64%

■ Fall 2015   ■ Fall 2016   ■ Fall 2017
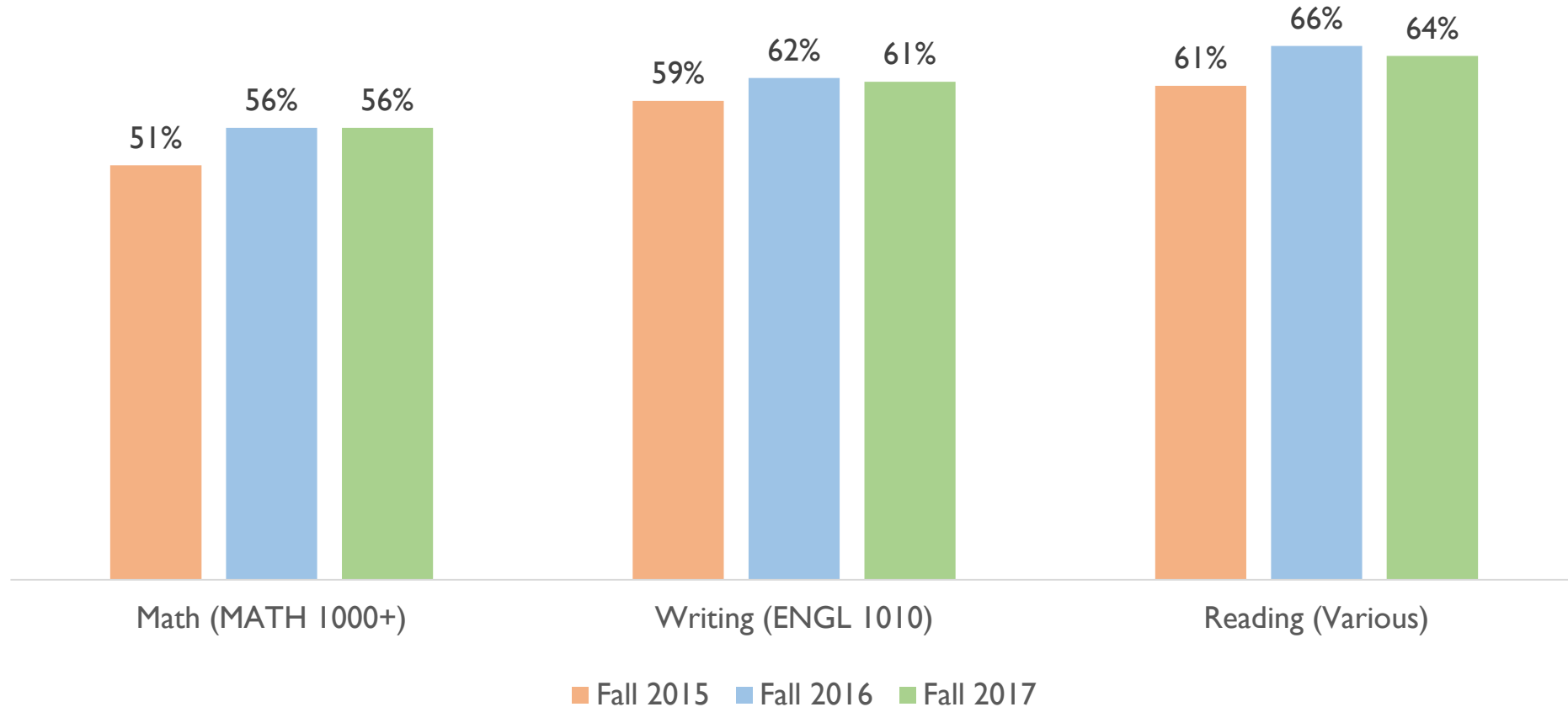
Note: Pass Rate = Percent of students receiving a grade of A, B, C, D, passing, or satisfactory.

Corequisite Math Student CL Pass Rates, by ACT Subscore

ACT Subscore	Fall 2015	Fall 2016	Fall 2017
12			45%
13			29%
14			34%
15			41%
16			51%
17			59%
18			67%
Other/No ACT			63%
Total			56%

Fall 2015 Fall 2016 Fall 2017
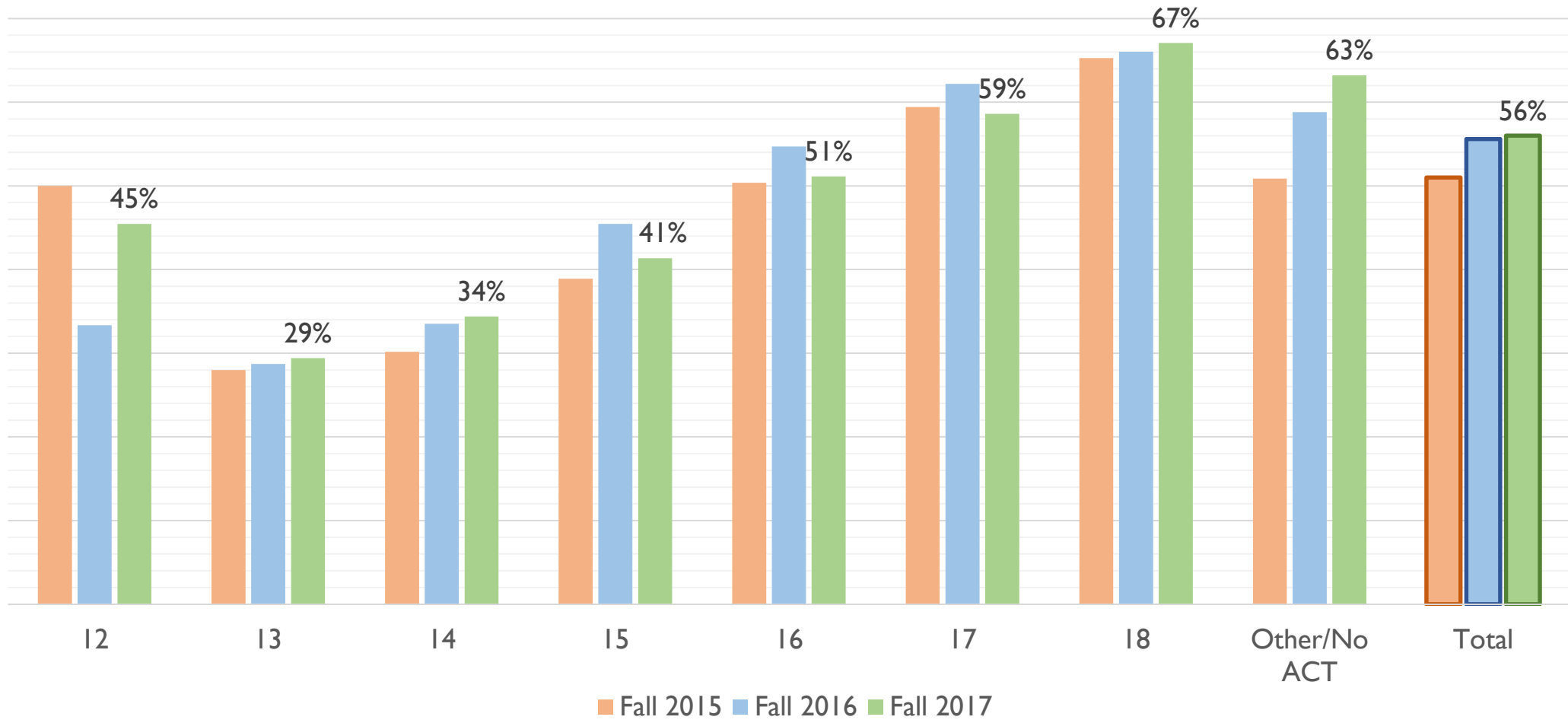
Coreq. Math Student CL Pass Rates, by Subpopulation (F17)
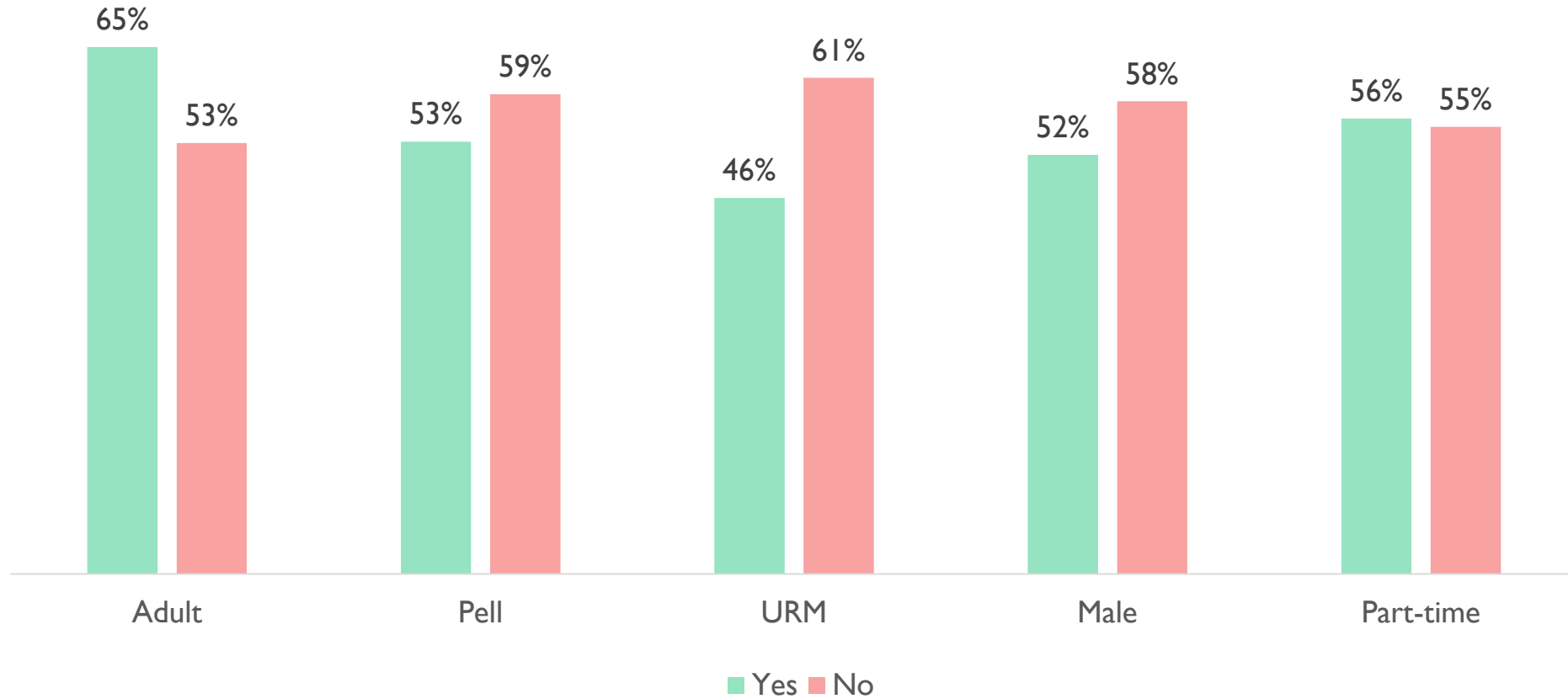
Note: Adult = Age 25 or Older. URM = Race/Ethnicities of Alaskan Native, Black, Hispanic, American Indian, Pacific Islander, and Multiracial.

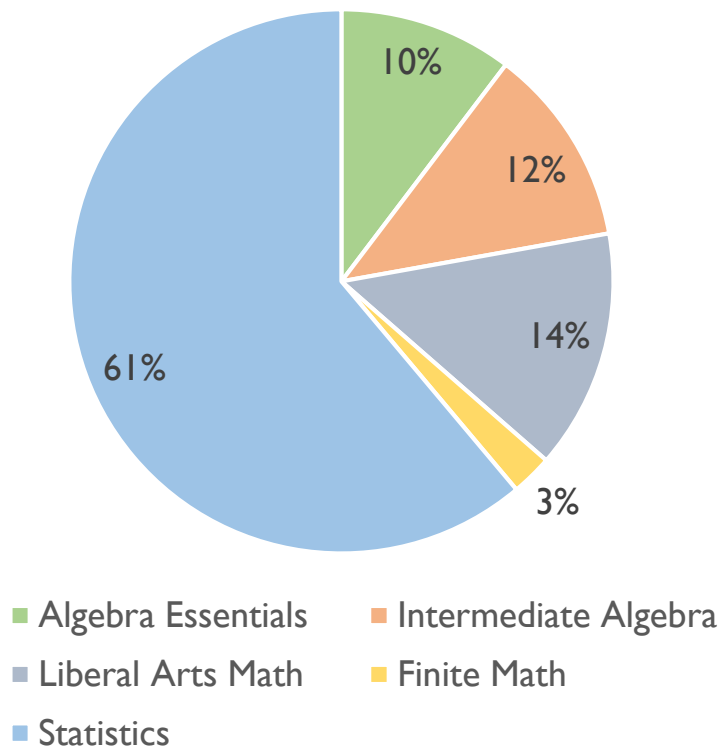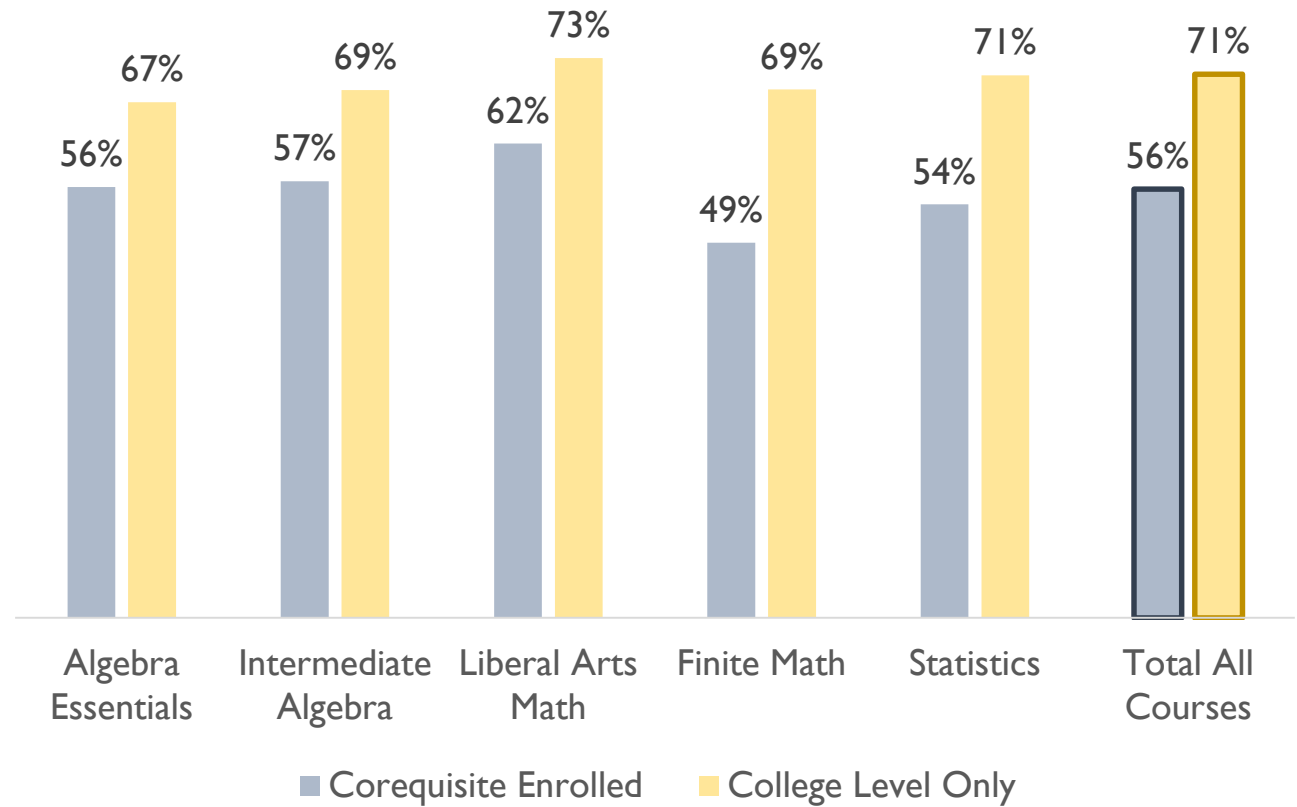**Math Student CL Pass Rates, by Placement and Subpop. (F17)**
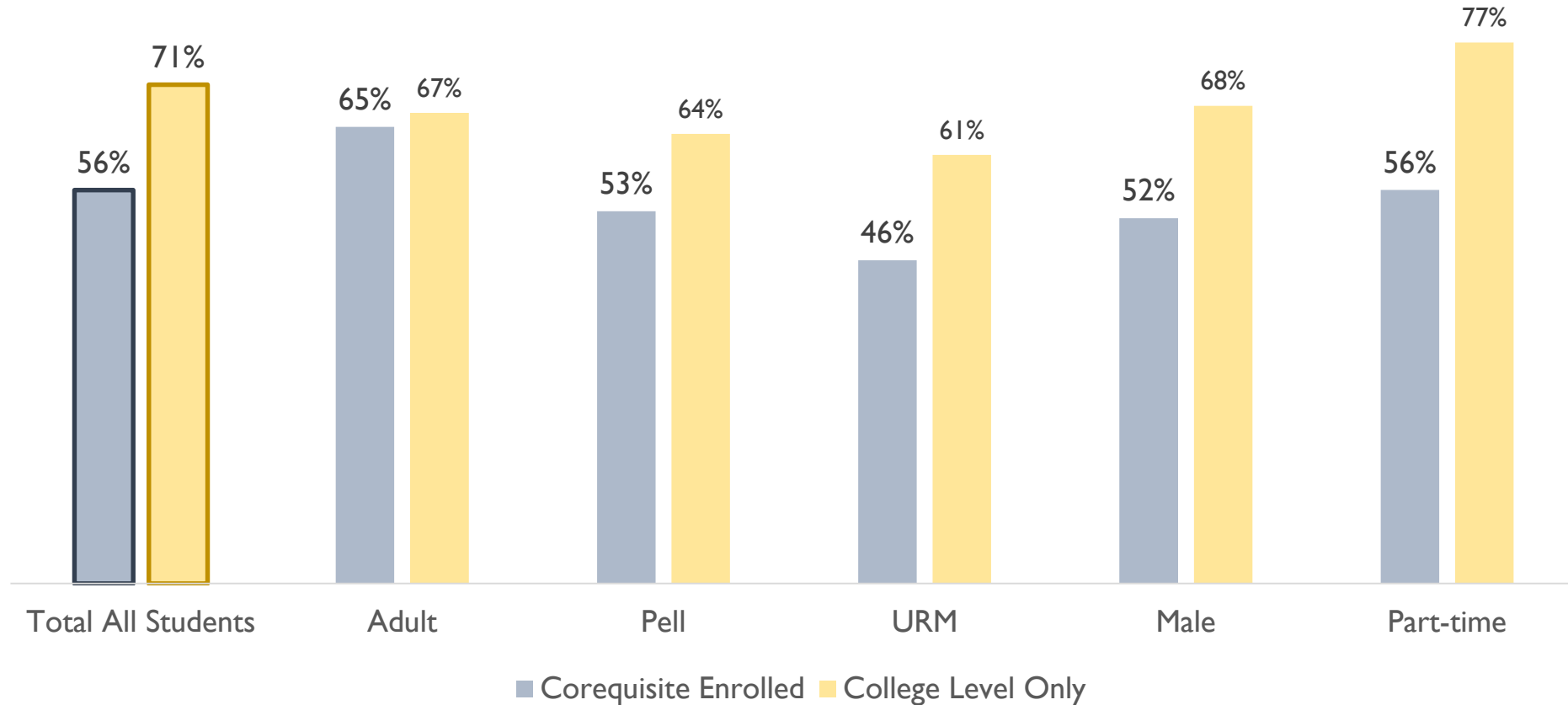
Note: Total all student pass rate for college level students includes only students enrolled in same college level courses as used for co-requisite math.

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College Level Course Enrolled Corequisite Students

- 10% Algebra Essentials
- 12% Intermediate Algebra
- 14% Liberal Arts Math
- 3% Finite Math
- 61% Statistics

Legend:
- Algebra Essentials
- Intermediate Algebra
- Liberal Arts Math
- Finite Math
- Statistics

Enrolled Student Pass Rate by Math Course

Course	Corequisite Enrolled	College Level Only
Algebra Essentials	56%	67%
Intermediate Algebra	57%	69%
Liberal Arts Math	62%	73%
Finite Math	49%	69%
Statistics	54%	71%
Total All Courses	56%	71%

Legend:
- Corequisite Enrolled
- College Level Only
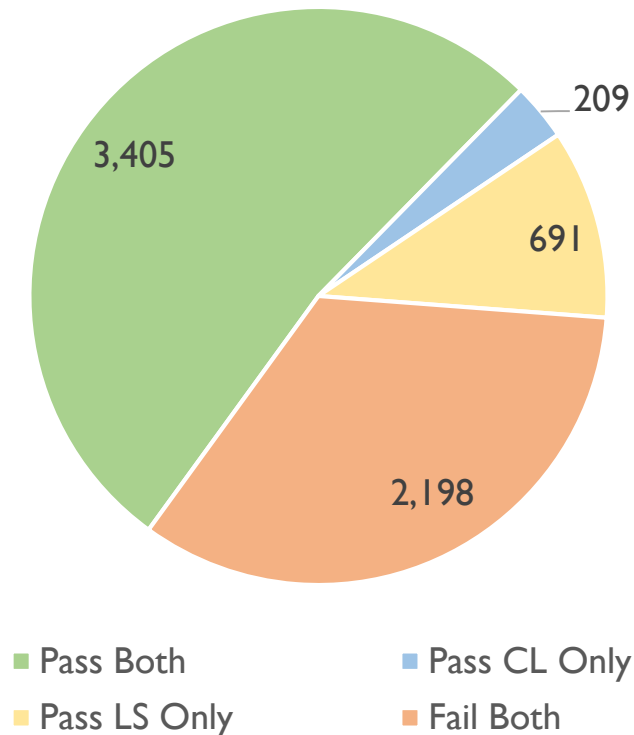
Note: Essentials = 1000, 1003, 1005. Intermediate = 1030, 1050, 1100, 1130. Liberal Arts = 1010, 1410. Finite = 1630. Statistics = 1530.

Corequisite Math Student Outcomes, by Results (F17)

Corequisite Math Student Distribution by Course Results

- ■ Pass Both
- ■ Pass CL Only
- ■ Pass LS Only
- ■ Fail Both

Pie chart values: 3,405; 209; 691; 2,198

Corequisite Math Student Outcomes by Course Results

	Pass Both	Pass CL Only	Pass LS Only	Fail Both
Percent Students	52%	3%	11%	34%
Avg. ACT Math	16.5	15.9	16.1	15.7
Avg. Hours Attempt	12.7	12.9	13	12.6
Avg. Hours Earn	12.2	8.4	7.7	2.3
Earn/Attempt Ratio	96%	65%	59%	18%
Avg. Term GPA	3.0	1.6	1.6	1.2
Fall/Spring Retention Rate*	91%	83%	70%	36%

College Level Only Outcomes

	Pass CL	Fail CL
	71%	29%
	20.5	18.7
	11.4	12.2
	10.7	4.1
	94%	34%
	3.0	1.6
	84%	47%

Note: Outcomes are based on combined hours and GPA (includes both college and learning support courses).
* Fall 2017-to-Spring 2018 retention rate is preliminary as it is based on spring 2018 census enrollment. Rate is defined in next section.

# First-time Freshmen Corequisite Student Outcomes

Report first-time freshmen corequisite student outcomes in comparison to students enrolled in only college level coursework, as well as how corequisite student outcomes vary by subpopulation.

Metric 1: Fall-to-Spring Retention

Metric 2: Fall-to-Fall Retention

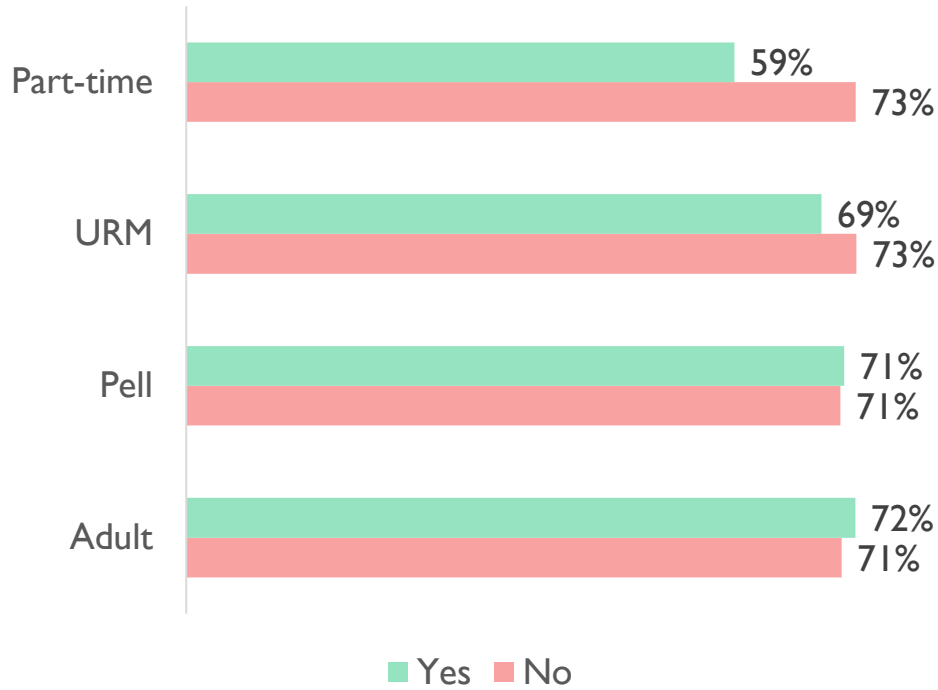Subpopulations: Adult, Pell, Underrepresented Minority, and Part-time
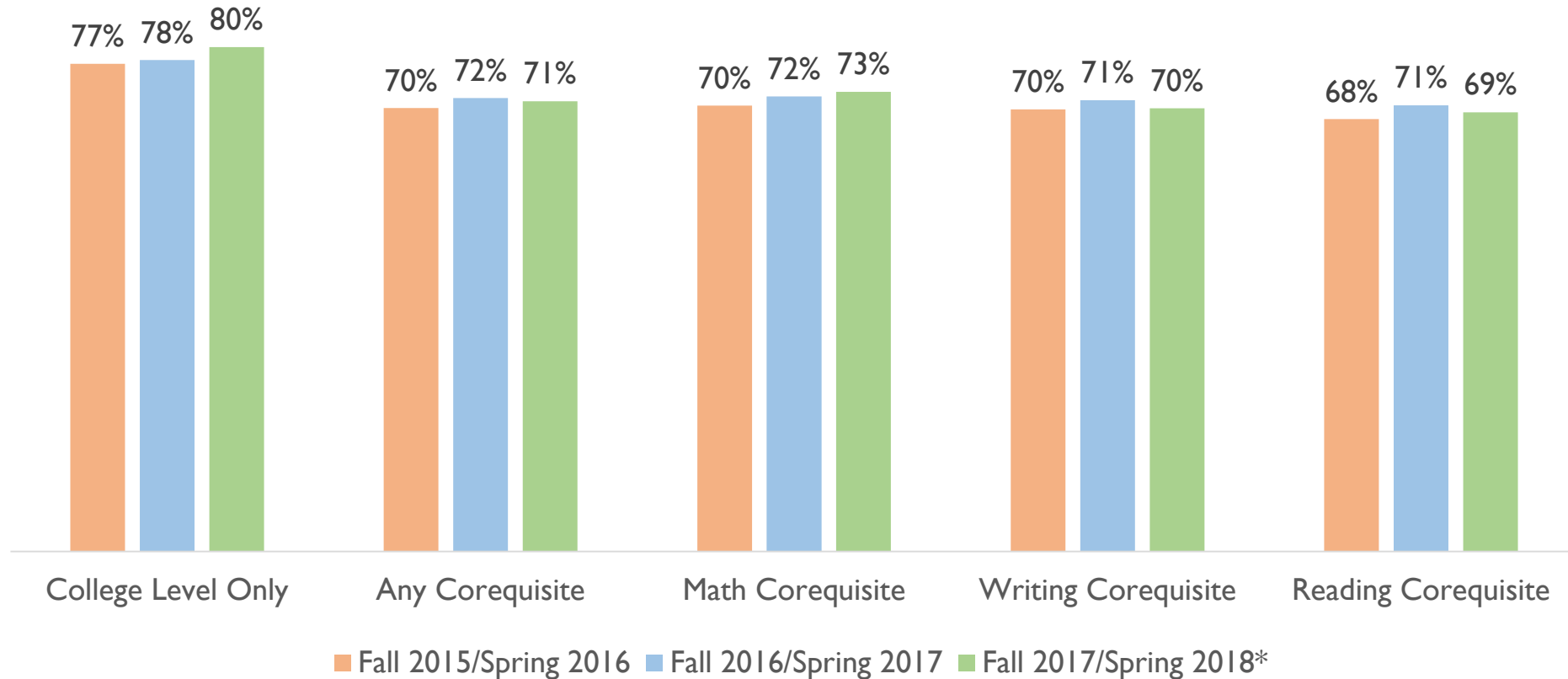
Note: Fall-to-Spring Retention = Student graduated at the end of the fall term or was enrolled the next spring. Both outcomes are inclusive of any community college.

Note: First-time Freshmen (FTF) includes full-time and part-time as well as summer-returning-fall students.

* Fall 2017-to-Spring 2018 retention rate is preliminary as it is based on spring 2018 census enrollment.
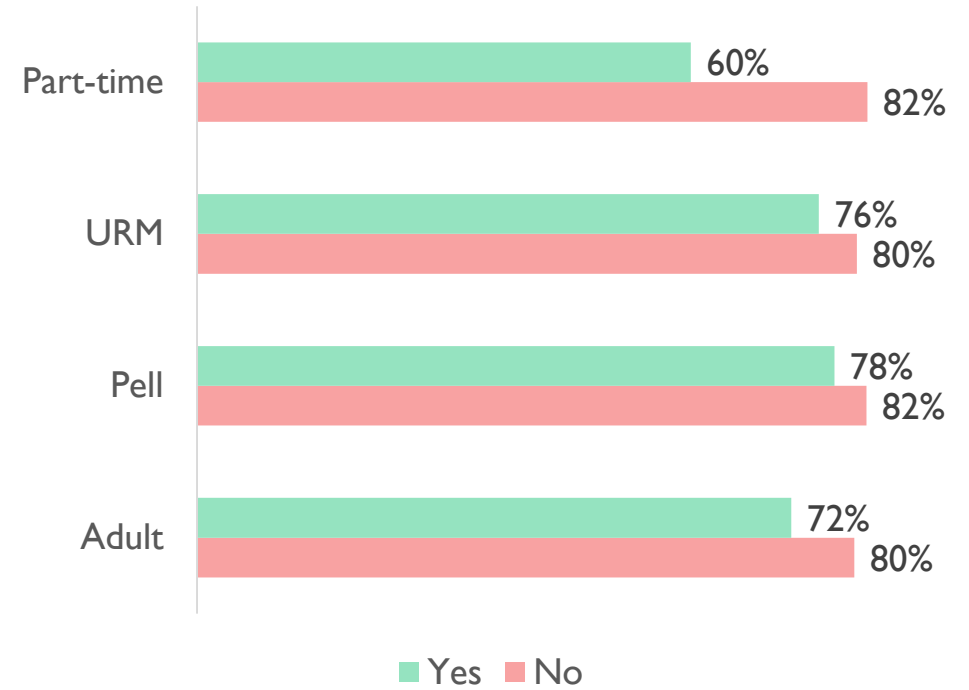
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Fall-to-Spring Retention
Any Corequisite

Part-time
- Yes: 59%
- No: 73%

URM
- Yes: 69%
- No: 73%

Pell
- Yes: 71%
- No: 71%

Adult
- Yes: 72%
- No: 71%

■ Yes ■ No

Corequisite FS Rate: F17-S18
71%

Fall-to-Spring Retention
College Level Only

Part-time
- Yes: 60%
- No: 82%

URM
- Yes: 76%
- No: 80%

Pell
- Yes: 78%
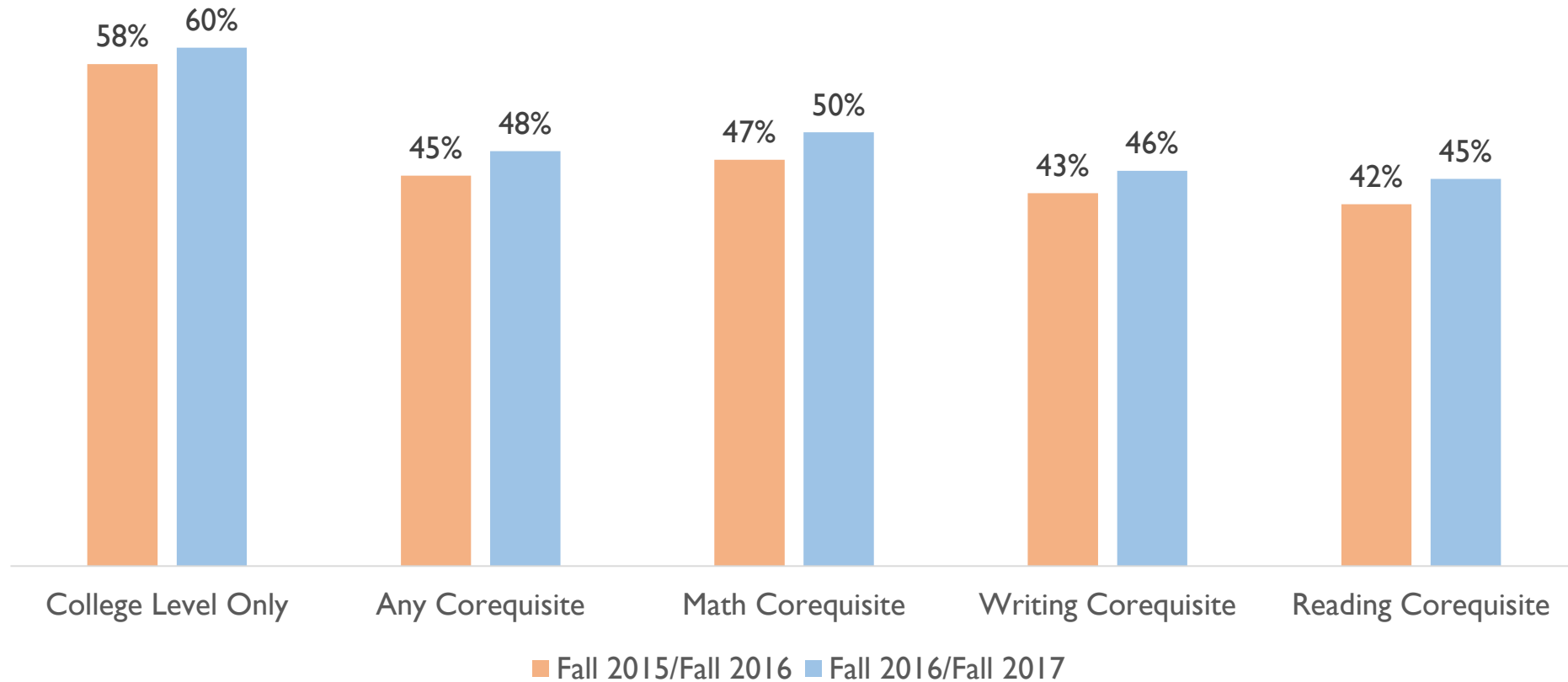- No: 82%

Adult
- Yes: 72%
- No: 80%

■ Yes ■ No

College Level FS Rate: F17-S18
80%

Note: Adult = Age 25 or Older. URM = Race/Ethnicities of Alaskan Native, Black, Hispanic, American Indian, Pacific Islander, and Multiracial.
* Fall 2017-to-Spring 2018 retention rate is preliminary as it is based on spring 2018 census enrollment.
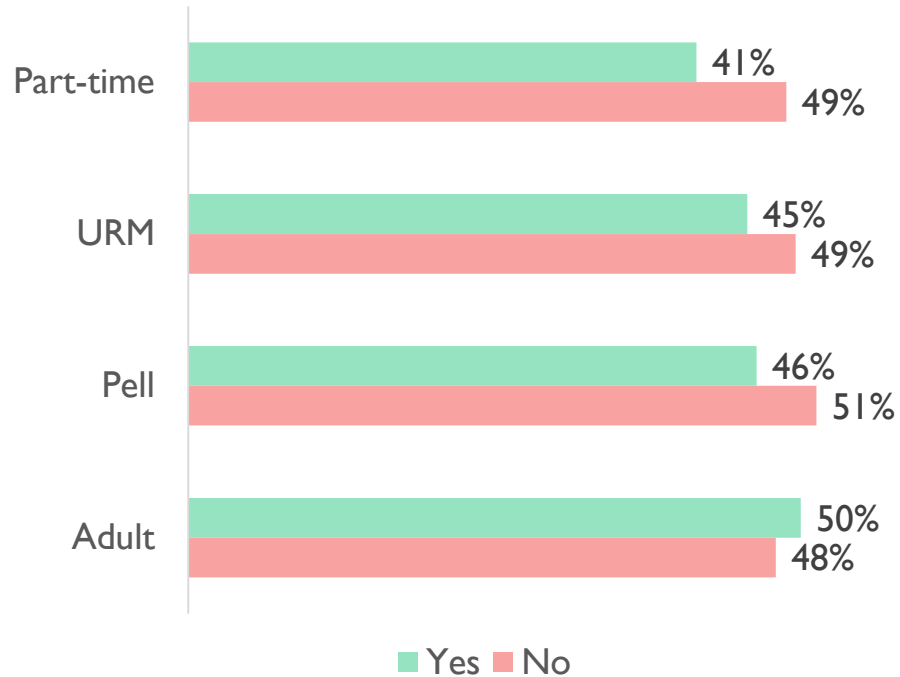
FTF Fall-to-Fall (FF) Retention, by Placement

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College Level Only	Any Corequisite	Math Corequisite	Writing Corequisite	Reading Corequisite
58% / 60%	45% / 48%	47% / 50%	43% / 46%	42% / 45%

■ Fall 2015/Fall 2016 ■ Fall 2016/Fall 2017

Note: Fall-to-Fall Retention = Student graduated prior to the next fall or was enrolled the next fall. Both outcomes are inclusive of any community college.
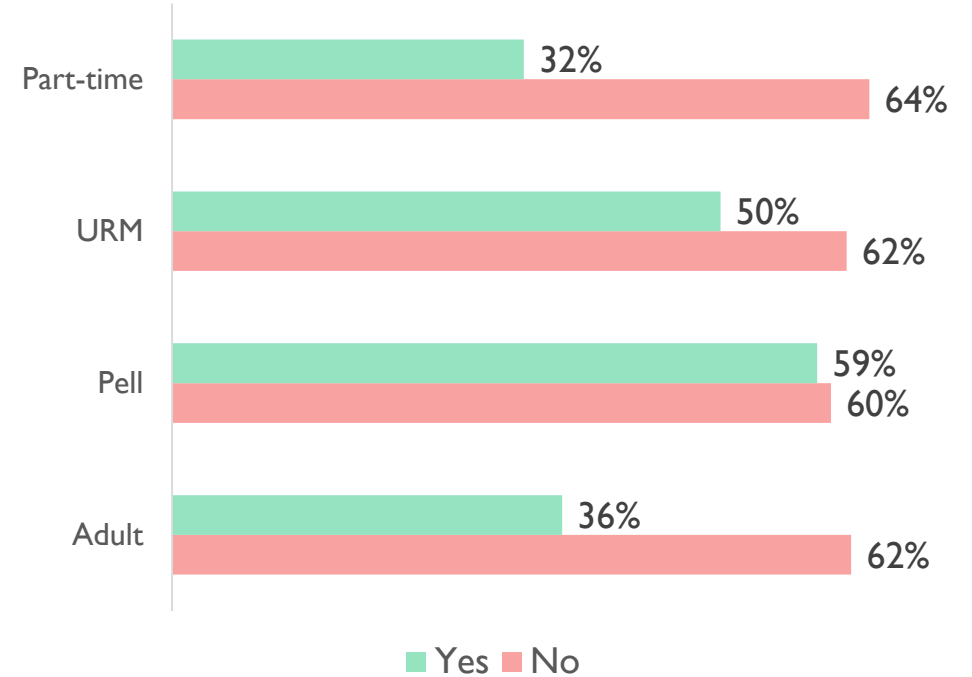
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Fall-to-Fall Retention
Any Corequisite

Subpopulation	Yes	No
Part-time	41%	49%
URM	45%	49%
Pell	46%	51%
Adult	50%	48%

■ Yes ■ No

Corequisite FF Rate: F16-F17
48%

Fall-to-Fall Retention
College Level Only

Subpopulation	Yes	No
Part-time	32%	64%
URM	50%	62%
Pell	59%	60%
Adult	36%	62%

■ Yes ■ No

College Level FF Rate: F16-F17
60%

Next Steps for Research

Expand outcomes analysis:
- Refine retained with good progress metric.
- Explore second course enrollment/completion patterns.
- Prepare 3-year graduation rate analysis for fall 2015.

Perform analysis of spring math cohorts.

Further explore and disaggregate Adult and Accuplacer findings.

Determine feasibility and validity of multivariate placement methodology.

Questions and Discussion

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