Transfer Level English and Math Outcomes

Fall 2018 - Fall 2019

PREPARED BY OFFICE OF PLANNING, RESEARCH AND INSTITUTIONAL EFFECTIVENESS

SPRING 2020

Context

- AB 705

- Transfer level English and Math classes and X-classes

1. English 101 and English 101X

2. Math 96 and Math 96X

3. Math 116 and Math 116X

4. Math 119 and Math 119X

Research Design

- Examine Outcomes
1. Success
2. Retention
3. Persistence
4. Repetition
- Compare X and non-X classes
- Identify Disproportionate Impact (DI)
- Benchmark

Operational Definitions

Academic standing: A student's academic status for the term.

- **Good standing:** Not on probation/not disqualified.

- **Probation:** Includes academic probation (students whose GPA falls below a 2.0 after completion of 12 units at SDCCD) and progress probation (students who attempt a total of 12 or more units and do not complete the class for over 40% of those units).

- **Disqualified:** Includes academic disqualification (students on academic probation whose non-cumulative GPA falls below 2.0 in subsequent semester) and progress disqualification (students on progress probation whose cumulative incomplete enrollments reaches or exceeds 40% in the subsequent semester).

Benchmark: Benchmarking is the process of comparing the performance of the group being studied against the performance of a similar group. For example, using the college-wide population as a benchmark can determine if an intervention has been effective to improve the performance of a target group.

For this report, the benchmark cohort consists of students who took only the same class(es) as the target cohort at Miramar College in fall and spring terms from 2014/15 – 2016/17.

Operational Definitions

Course Repetition: A student repeating a course they had previously enrolled in. Repetition in the next spring/fall term, or in the summer term following a spring enrollment, is considered *term repetition.* Repetition within the next three terms is considered *annual repetition*.

Enrollment: The number of seats enrolled, or duplicated headcount. Drops, never attends, cancelled, and tutoring classes are excluded.

Disproportionate Impact (DI): Disproportionate impact occurs when a subset of students based on student characteristic such as age, race, and gender are unjustifiably experiencing lower outcomes (e.g., retention and success rates) compared to a benchmark. It is determined by the percentage point gap method.

Percentage Point Gap (PPG): A method to measure disproportionate impact by calculating difference in success indicator between the whole student population and subgroups and by taking into account group sizes. As groups sizes get smaller, the margin of error increases. For more information about the percentage point gap and margins of error by group size see: https://www.cccco.edu/-/media/CCCCO-Website/About-Us/Divisions/Digital-Innovation-and-Infrastructure/Research/Files/PercentagePointGapMethod2017.ashx

Operational Definitions

Persistent Enrollment: The number of seats enrolled, or duplicated headcount, by students who have taken a class at Miramar College in a prior term. Enrollment in the next spring/fall term, or in the summer term following a spring enrollment, is considered *term persistence.* Enrollment within the next three terms is considered *annual persistence*.

Persistence Rate: The percentage of students, unduplicated by headcount, who enroll again at SDCCD after having taken a course at Miramar College in a prior term.

Retention Rate: The percentage of students who complete a course with a grade of A, B, C, D, F, P, NP, I or RD out of total official census enrollments. Cancelled and tutoring classes are excluded.

Student Type: Categorization of student by the modality of the course(s) they took that term (day, evening, online, or a combination).

Success Rate: The percentage of students who complete a course with a grade of A, B, C, or P out of total official census enrollments. Tutoring, non-credit, and cancelled classes are excluded.

English 101 and English 101X

English 101 and English 101X Trends

ENGL 101X cohorts had:

- Higher retention and success rates in cohort enrollments than non-X cohorts
- Higher retention and success rates in persistent enrollments than non-X and benchmark cohorts
- Higher term course repetition success rate than non-X and benchmark cohorts

ENGL 101 cohorts had:

- Course repetition rates equal to the benchmark cohort
- Lower course repetition success rates than the benchmark cohort
- Disproportionate impacts indicated for:
  - Spring 2019 cohort enrollment retention and success rates
  - Spring 2019 term persistence retention and success rates

Both ENGL 101 and ENGL 101X cohorts had:

- Persistence rates slightly lower than the benchmark cohort
- Higher annual persistent enrollment retention and success rates than the benchmark cohort
- Lower course repetition rates than the benchmark cohort
- Lower course repetition retention rates than the benchmark cohort

ENGL 101 & 101X Outcomes and Persistence

Table 1
Cohort Outcomes

Cohort Term	Enrollments		Cohort Retention Count		Cohort Retention Rate		Cohort Success Count		Cohort Success Rate	
	ENGL 101	ENGL 101X	ENGL 101	ENGL 101X	ENGL 101	ENGL 101X	ENGL 101	ENGL 101X	ENGL 101	ENGL 101X
Fall 2018	668	151	596	139	89%	92%	522	117	78%	77%
Spring 2019	511	219	417	194	82%	89%	319	167	62%	76%
Fall 2019	796	261	713	241	90%	92%	604	212	76%	81%
Grand Total/Avergae	1,975	631	1,726	574	87%	91%	1,445	496	73%	79%
Benchmark	3,770		3,256		86%		2,714		72%	

Note. The benchmark cohort consists of students who took ENGL 101 during fall and spring terms at Miramar College from 2014/15 – 2016/17.

Figure 1
Cohort outcomes
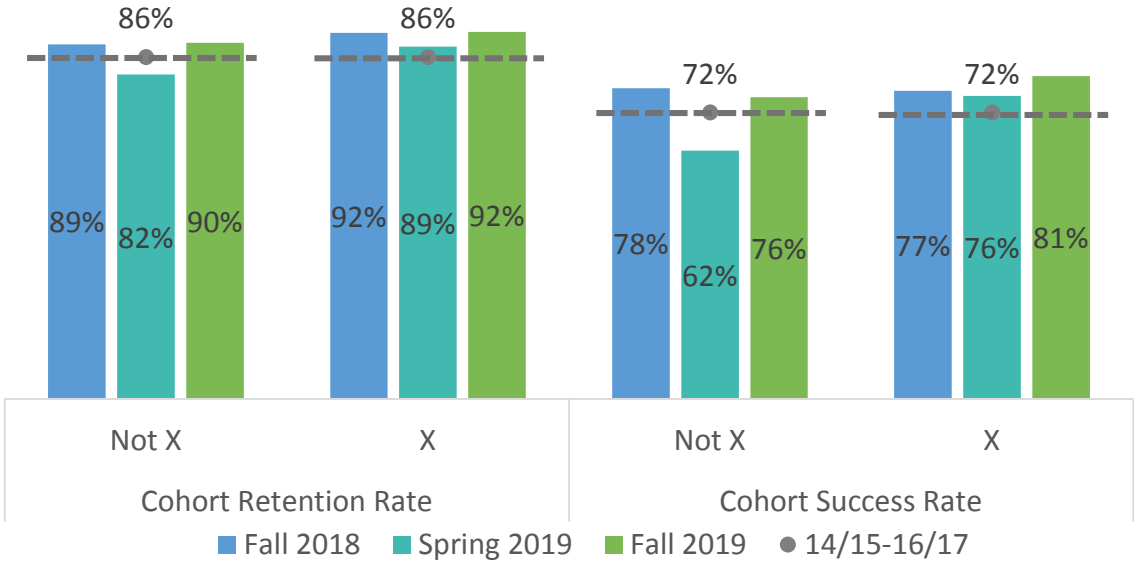
ENGL 101 & 101X Outcomes and Persistence

Table 2
Persistence Rates

Cohort Term	Cohort Outcome	Cohort Headcount		Term Persistence		Term Persistence Rate		Annual Persistence		Annual Persistence Rate	
		Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Fall 2018	Succeeded	522	117	250	69	48%	59%	300	81	57%	69%
	Failed	146	34	39	5	27%	15%	57	9	39%	26%
	Total	**668**	**151**	**289**	**74**	**43%**	**49%**	**357**	**90**	**53%**	**60%**
Spring 2019	Succeeded	319	167	111	60	35%	36%	138	70	43%	42%
	Failed	192	52	55	16	29%	31%	80	22	42%	42%
	Total	**511**	**219**	**166**	**76**	**32%**	**35%**	**218**	**92**	**43%**	**42%**
Fall 2019	Succeeded	604	212	244	74	40%	35%				
	Failed	192	49	48	15	25%	31%				
	Total	**796**	**261**	**292**	**89**	**37%**	**34%**				
Grand Total/Average		**1,975**	**631**	**747**	**239**	**38%**	**38%**	**575**	**182**	**49%**	**49%**
Benchmark	Succeeded	2,714		1,138		42%		1,422		52%	
	Failed	1,056		356		34%		528		50%	
Grand Total/Average		**3,770**		**1,494**		**40%**		**1,950**		**52%**	

Note. A student is considered persistent if they took any other English class at SDCCD in a term subsequent to their cohort term. For spring, enrollment in the following summer or fall is considered "next term." For fall, the next term is spring. Benchmarks are the average persistence rates for any English courses taken by students in ENGL 101 cohorts between 2014/15 – 2016/17 after their cohort term.

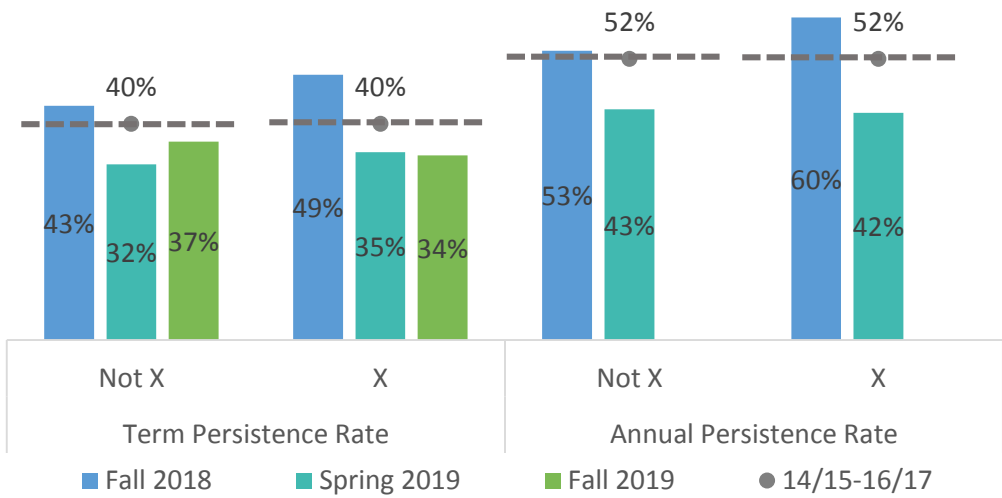# ENGL 101 & 101X Outcomes and Persistence

Figure 2
Persistence Rates: Total

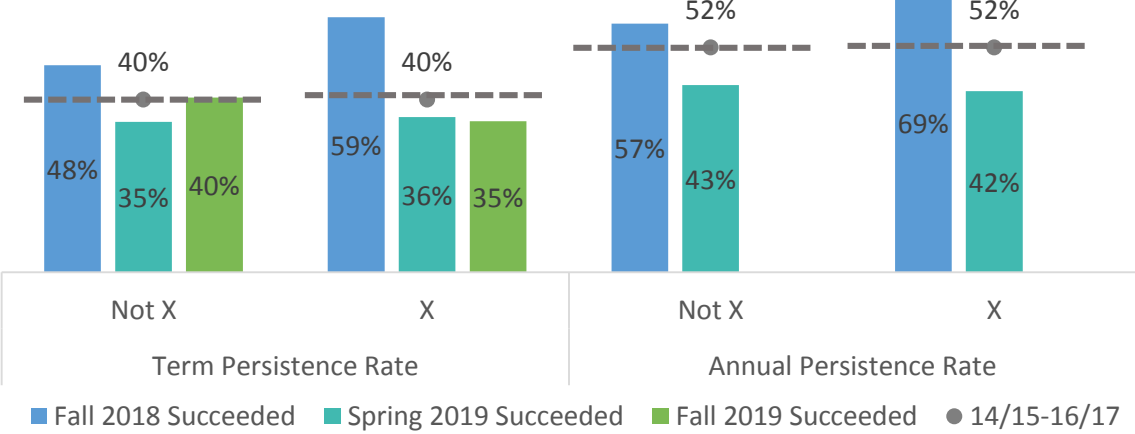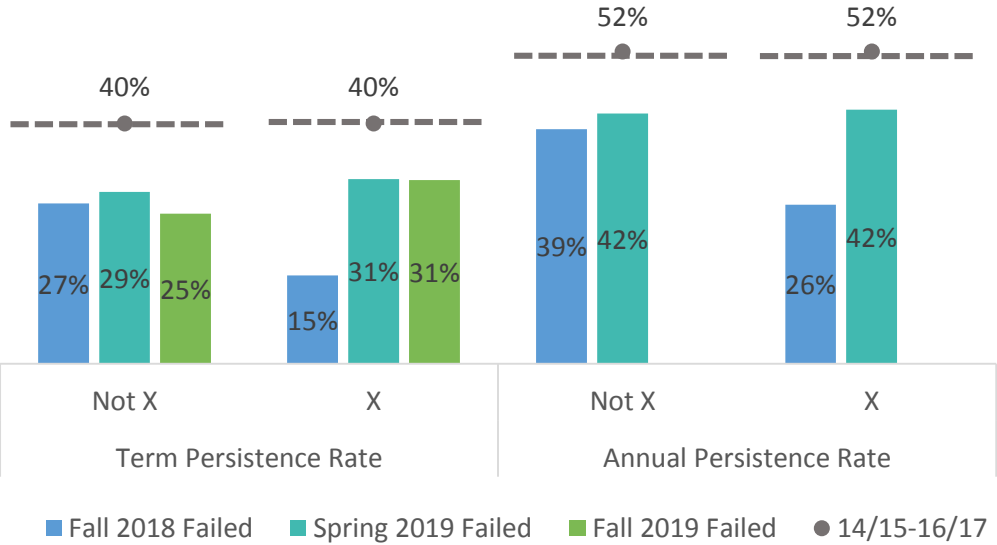Term Persistence Rate: Not X — Fall 2018 43%, Spring 2019 32%, Fall 2019 37%; X — Fall 2018 49%, Spring 2019 35%, Fall 2019 34%. Benchmark 40%.
Annual Persistence Rate: Not X — Fall 2018 53%, Spring 2019 43%; X — Fall 2018 60%, Spring 2019 42%. Benchmark 52%.

Legend: Fall 2018, Spring 2019, Fall 2019, 14/15-16/17

Figure 3
Persistence Rates: Succeeded

Term Persistence Rate: Not X — Fall 2018 48%, Spring 2019 35%, Fall 2019 40%; X — Fall 2018 59%, Spring 2019 36%, Fall 2019 35%. Benchmark 40%.
Annual Persistence Rate: Not X — Fall 2018 57%, Spring 2019 43%; X — Fall 2018 69%, Spring 2019 42%. Benchmark 52%.

Legend: Fall 2018 Succeeded, Spring 2019 Succeeded, Fall 2019 Succeeded, 14/15-16/17

Figure 4
Persistence Rates: Failed

Term Persistence Rate: Not X — Fall 2018 27%, Spring 2019 29%, Fall 2019 25%; X — Fall 2018 15%, Spring 2019 31%, Fall 2019 31%. Benchmark 40%.
Annual Persistence Rate: Not X — Fall 2018 39%, Spring 2019 42%; X — Fall 2018 26%, Spring 2019 42%. Benchmark 52%.

Legend: Fall 2018 Failed, Spring 2019 Failed, Fall 2019 Failed, 14/15-16/17

ENGL 101 & 101X Outcomes and Persistence

Table 3
Term Persistent Enrollment Outcomes

Cohort Term	Cohort Outcome	Enrollments		Retention Counts		Retention Rate		Success Counts		Success Rate	
		Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Fall 2018	Succeeded	253	70	233	66	92%	94%	221	64	87%	91%
	Failed	41	7	31	4	76%	57%	18	2	44%	29%
	Total	**294**	**77**	**264**	**70**	**90%**	**91%**	**239**	**66**	**81%**	**86%**
Spring 2019	Succeeded	114	60	95	53	83%	88%	87	46	76%	77%
	Failed	58	28	43	25	74%	89%	30	20	52%	71%
	Total	**172**	**88**	**138**	**78**	**80%**	**89%**	**117**	**66**	**68%**	**75%**
Grand Total/Average		**466**	**165**	**402**	**148**	**86%**	**90%**	**356**	**132**	**76%**	**80%**
Benchmark	Succeeded	1,161		1,078		93%		1,001		86%	
	Failed	377		291		77%		200		53%	
Grand Total/Average		**1,538**		**1,369**		**89%**		**1,201**		**78%**	

Note. Benchmark rates are the average success and retention rates in any persisted English courses taken by students in ENGL 101 cohorts between 2014/15 – 2016/17.

Figure 5
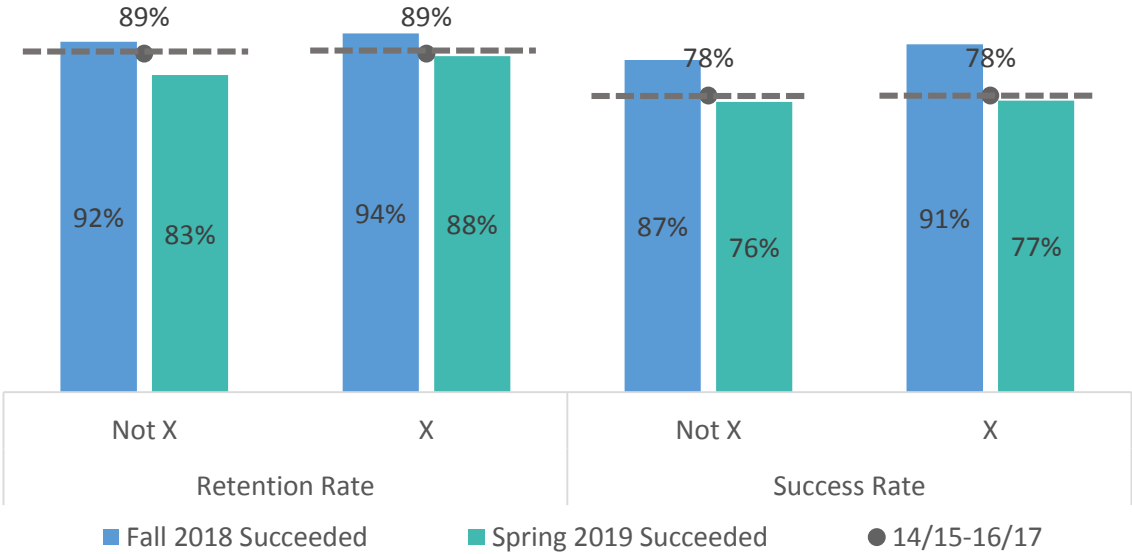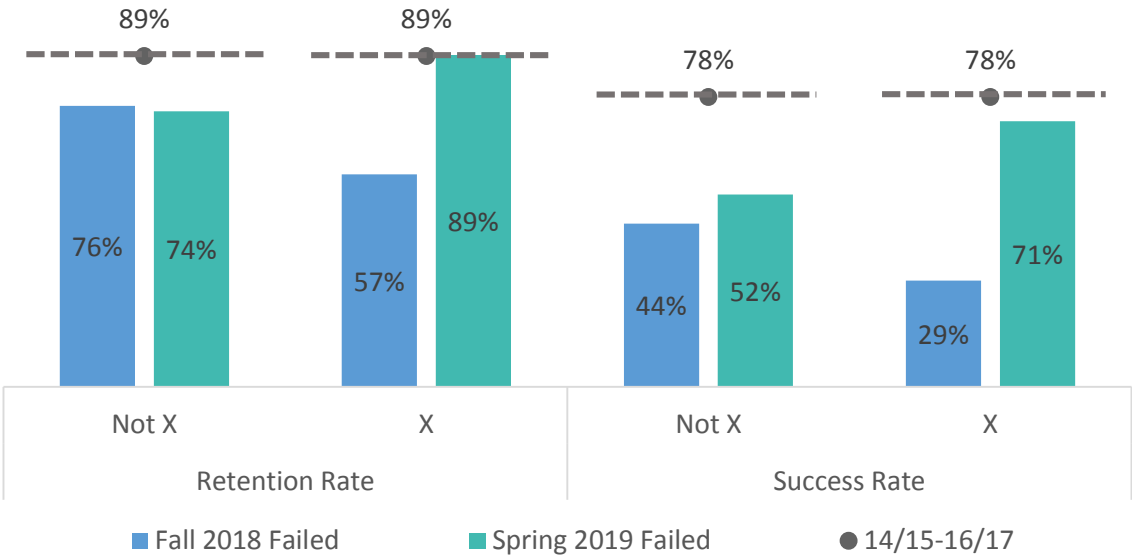### Term Persistent Enrollment Outcomes: Succeeded

■ Fall 2018 Succeeded   ■ Spring 2019 Succeeded   ● 14/15-16/17

Figure 6
Term Persistent Enrollment Outcomes: Failed

■ Fall 2018 Failed   ■ Spring 2019 Failed   ● 14/15-16/17

ENGL 101 & 101X Outcomes and Persistence

Table 4

Annual Persistent Enrollment Outcomes

Cohort Term	Cohort Outcomes	Enrollments		Retention Counts		Retention Rate		Success Counts		Success Rate	
		Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Fall 2018	Succeeded	325	87	295	82	91%	94%	277	79	85%	91%
	Failed	73	13	61	9	84%	69%	41	5	56%	38%
Grand Total/Average		**398**	**100**	**356**	**91**	**89%**	**91%**	**318**	**84**	**80%**	**84%**
Benchmark	Succeeded	1,595		1,477		93%		1,361		85%	
	Failed	684		552		76%		364		53%	
Grand Total/Average		**2,279**		**1,999**		**88%**		**1,725**		**76%**	

Figure 7
Annual Persistent Enrollment Outcomes

Fall 2018 Succeeded   Fall 2018 Failed   ● 14/15-16/17
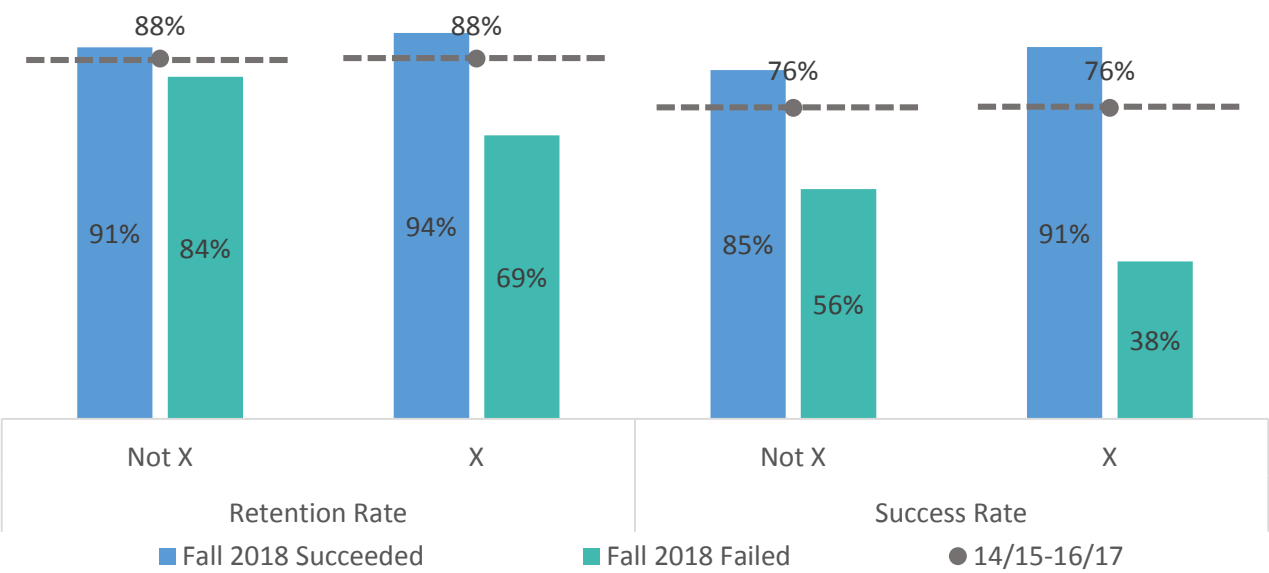
ENGL 101 & 101X Outcomes and Persistence

Table 5
Course Repetition Rates

Cohort Term	Headcount of Failed		Term Repetition Count		Term Repetition Rate		Annual Repetition Count		Annual Repetition Rate	
	Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Fall 2018	146	34	37	3	25%	9%	54	7	37%	21%
Spring 2019	192	52	52	14	27%	27%	76	20	40%	38%
Fall 2019	192	49	33	12	17%	24%				
Grand Total/Average	530	135	122	29	23%	21%	130	27	38%	31%
Benchmark	1,056		325		31%		495		47%	

Figure 8
Course Repetition Rates

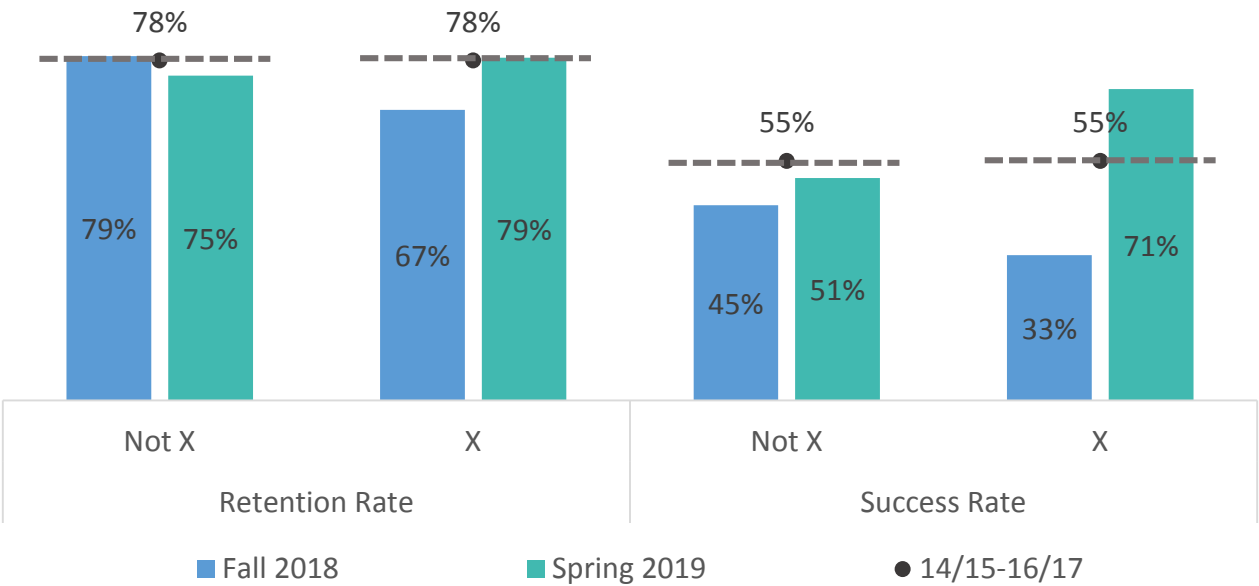Legend: ■ Fall 2018   ■ Spring 2019   ■ Fall 2019   ● 14/15-16/17
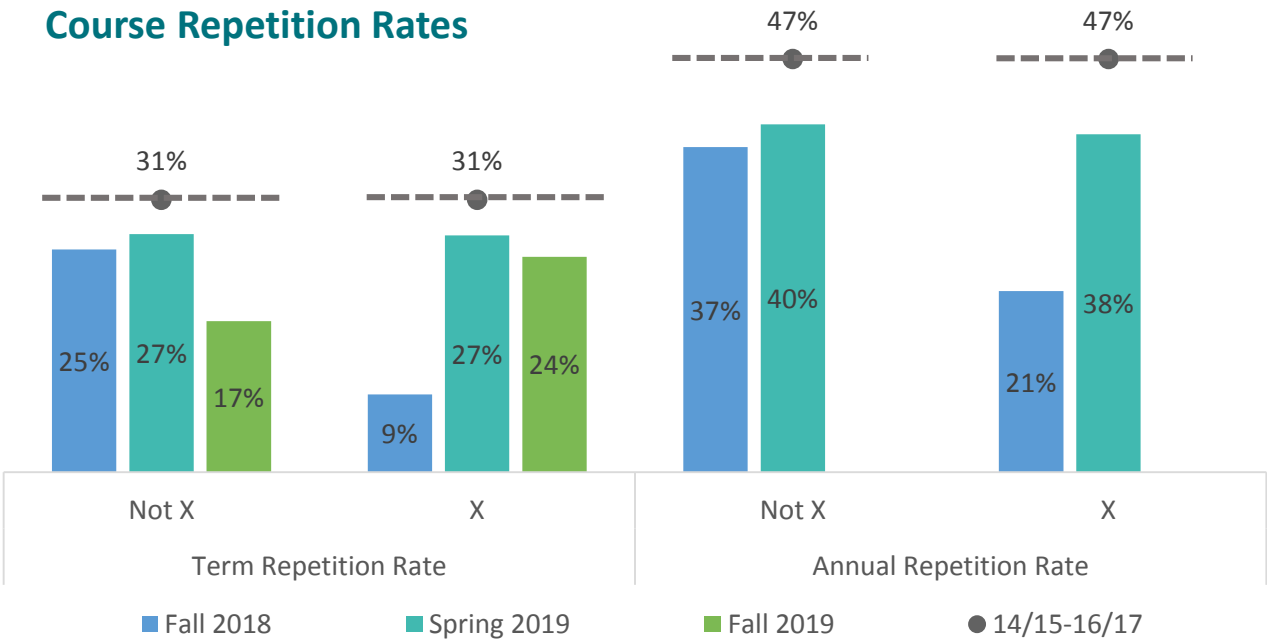
ENGL 101 & 101X Outcomes and Persistence

Table 6
Term Course Repetition Outcomes

Cohort Term	Enrollment		Retention Count		Retention Rate		Success Count		Success Rate	
	Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Fall 2018	38	3	30	2	79%	67%	17	1	45%	33%
Spring 2019	51	14	38	11	75%	79%	26	10	51%	71%
Grand Total/Average	**89**	**17**	**68**	**13**	**76%**	**76%**	**43**	**11**	**48%**	**65%**
Benchmark	**329**		**256**		**78%**		**180**		**55%**	

Figure 9
Term Course Repetition Outcomes

Retention Rate — Not X / X

Success Rate — Not X / X

Not X: Fall 2018 79%, Spring 2019 75%
X: Fall 2018 67%, Spring 2019 79%
Not X: Fall 2018 45%, Spring 2019 51%
X: Fall 2018 33%, Spring 2019 71%

78%   78%   55%   55%

Legend: ■ Fall 2018   ■ Spring 2019   ● 14/15-16/17

ENGL 101 & 101X Outcomes and Persistence

Table 7

Annual Course Repetition Outcomes

Cohort Term	Enrollment		Retention Count		Retention Rate		Success Count		Success Rate	
	Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Fall 2018	60	7	50	5	83%	71%	31	3	52%	43%
Grand Total/Average	**60**	**7**	**50**	**5**	**83%**	**71%**	**31**	**3**	**52%**	**43%**
Benchmark	**551**		**423**		**77%**		**291**		**53%**	

Figure 10
Annual Course Repetition Outcomes
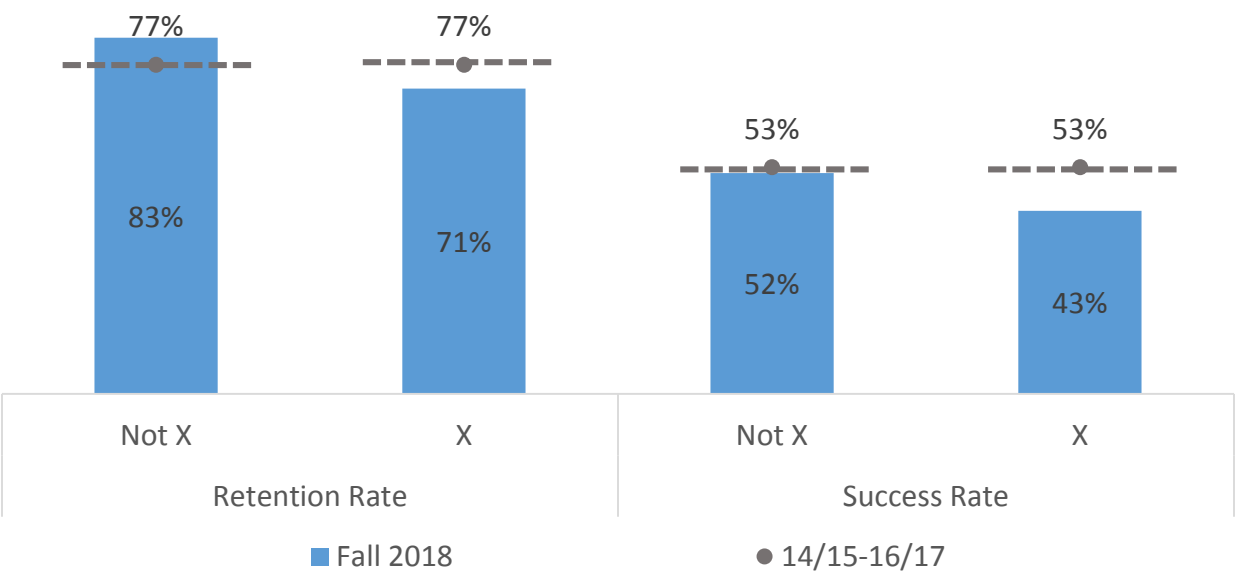
ENGL 101 Outcomes and Persistence

Table 8
Miramar Only Top 5 Subsequent Courses and Outcomes

Cohort	Course	Subsequent Enrollments	Enrollment Rate	Retention Rate	Success Rate
Fall 2018 ENGL 101	ENGL 205	244	47%	92%	88%
	ENGL 101	40	8%	85%	48%
	ENGL 105	7	1%	43%	29%
	ENGL 208	4	1%	75%	75%
	ENGL 249A	3	1%	67%	67%
Spring 2019 ENGL 101	ENGL 205	104	33%	84%	77%
	ENGL 101	56	18%	78%	56%
	ENGL 208	2	1%	0%	0%
	ENGL 105	2	1%	100%	50%
	ENGL 49	1	0%	0%	0%
Fall 2019 ENGL 101	ENGL 205	196	32%		
	ENGL 101	23	4%		
	ENGL 105	3	0%		
	ENGL 208	2	0%		
	ENGL 101 X	1	0%		

Table 9
SDCCD Top 5 Subsequent Courses and Outcomes

Cohort	Course	Subsequent Enrollments	Enrollment Rate	Retention Rate	Success Rate
Fall 2018 ENGL 101	ENGL 205	310	59%	92%	86%
	ENGL 101	60	11%	83%	52%
	ENGL 105	10	2%	60%	50%
	ENGL 208	6	1%	83%	83%
	ENGL 210	4	1%	100%	100%
Spring 2019 ENGL 101	ENGL 205	154	48%	62%	56%
	ENGL 101	80	25%	48%	33%
	ENGL 208	5	2%	0%	0%
	ENGL 105	3	1%	100%	67%
	ENGL 49	1	0%	0%	0%
Fall 2019 ENGL 101	ENGL 205	256	42%		
	ENGL 101	33	5%		
	ENGL 208	5	1%		
	ENGL 210	3	0%		
	ENGL 105	3	0%		

Note. Student subsequent enrollments were tracked for up to the next three consecutive terms.
The Miramar Only table separates X sections from non-X sections and excludes support courses for ENGL 101.
The SDCCD table does not separate X sections from non-X sections and includes support courses.

ENGL 101X Outcomes and Persistence

Table 10
Miramar Only Top 5 Subsequent Courses and Outcomes

Cohort	Course	Subsequent Enrollments	Enrollment Rate	Retention Rate	Success Rate
Fall 2018 ENGL 101 X	ENGL 205	71	61%	93%	90%
	ENGL 101	4	3%	50%	50%
	ENGL 49	2	2%	50%	0%
	ENGL 249A	2	2%	100%	100%
	ENGL 101 X	2	2%	100%	50%
Spring 2019 ENGL 101 X	ENGL 205	61	37%	85%	72%
	ENGL 101 X	11	7%	80%	70%
	ENGL 101	7	4%	67%	67%
	ENGL 49	2	1%	100%	100%
	ENGL 48	2	1%	100%	50%
Fall 2019 ENGL 101 X	ENGL 205	65	31%		
	ENGL 101 X	6	3%		
	ENGL 101	5	2%		
	ENGL 208	3	1%		
	ENGL 105	3	1%		

Table 11
SDCCD Top 5 Subsequent Courses and Outcomes

Cohort	Course	Subsequent Enrollments	Enrollment Rate	Retention Rate	Success Rate
Fall 2018 ENGL 101 X	ENGL 205	80	68%	94%	90%
	ENGL 101	7	6%	71%	43%
	ENGL 49	3	3%	33%	0%
	ENGL 249A	3	3%	100%	100%
	ENGL 31	2	2%	100%	50%
Spring 2019 ENGL 101 X	ENGL 205	80	48%	69%	59%
	ENGL 101	21	13%	52%	48%
	ENGL 31	10	6%	90%	70%
	ENGL 49	2	1%	50%	50%
	ENGL 48	2	1%	100%	50%
Fall 2019 ENGL 101 X	ENGL 205	69	33%		
	ENGL 101	12	6%		
	ENGL 31	6	3%		
	ENGL 105	5	2%		
	ENGL 208	3	1%		

Note. Student subsequent enrollments were tracked for up to the next three consecutive terms.
The Miramar Only table separates X sections from non-X sections and excludes support courses for ENGL 101.
The SDCCD table does not separate X sections from non-X sections and includes support courses.

Disproportionate Impact (DI)
ENGL 101 & 101X

Disproportionate Impact (DI)
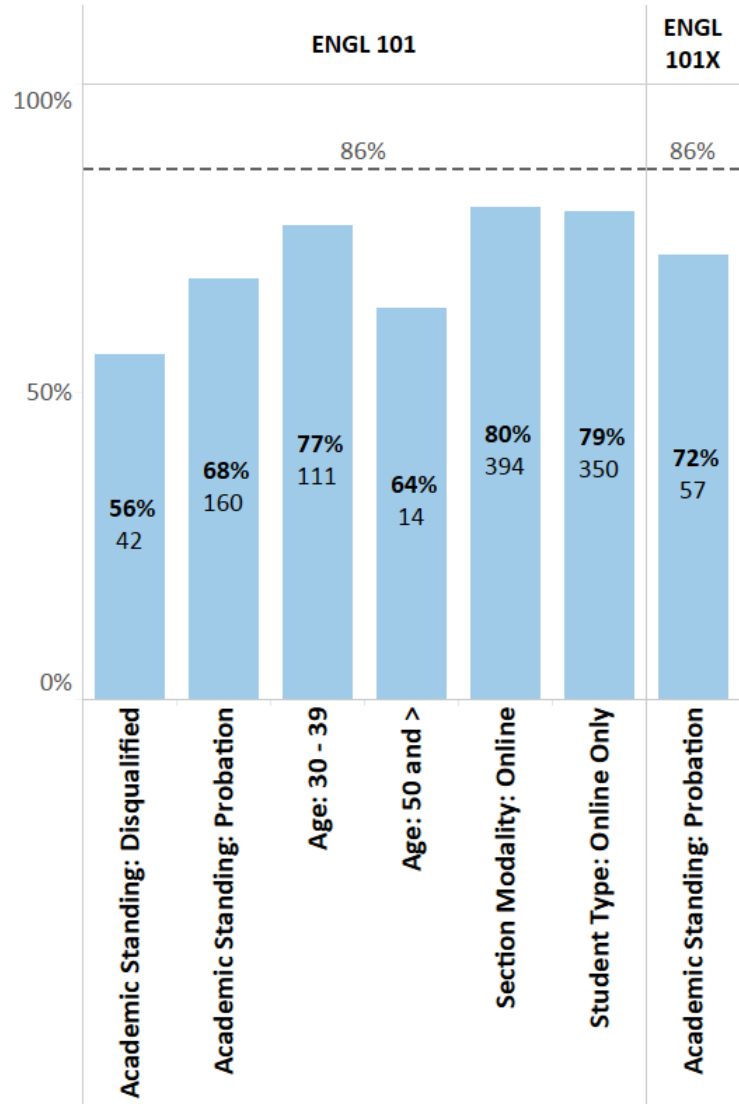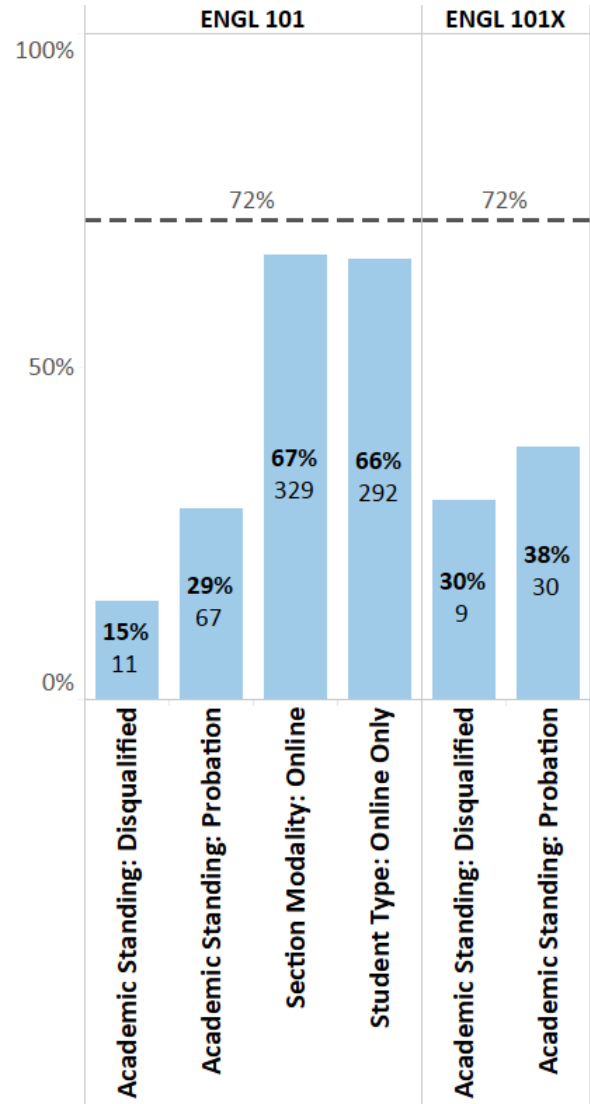# ENGL 101 & 101X

Figure 11
Cohort Retention DIs

ENGL 101

ENGL 101X

100%

86%

86%

50%

56%
42

68%
160

77%
111

64%
14

80%
394

79%
350

72%
57

0%

Academic Standing: Disqualified

Academic Standing: Probation

Age: 30 - 39

Age: 50 and >

Section Modality: Online

Student Type: Online Only

Academic Standing: Probation

Figure 12
Cohort Success DIs

ENGL 101

ENGL 101X

100%

72%

72%

50%

15%
11

29%
67

67%
329

66%
292

30%
9

38%
30

0%

Academic Standing: Disqualified

Academic Standing: Probation

Section Modality: Online

Student Type: Online Only

Academic Standing: Disqualified

Academic Standing: Probation

Note. Equity gap benchmarks are average success and retention rates for all students who took ENGL 101 in fall and spring terms from 2014/15 – 2016/17.

Disproportionate Impact (DI)
ENGL 101 & 101X
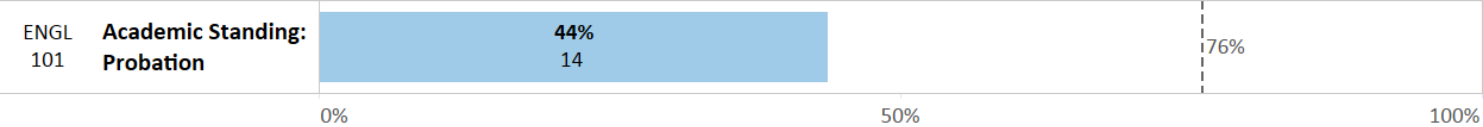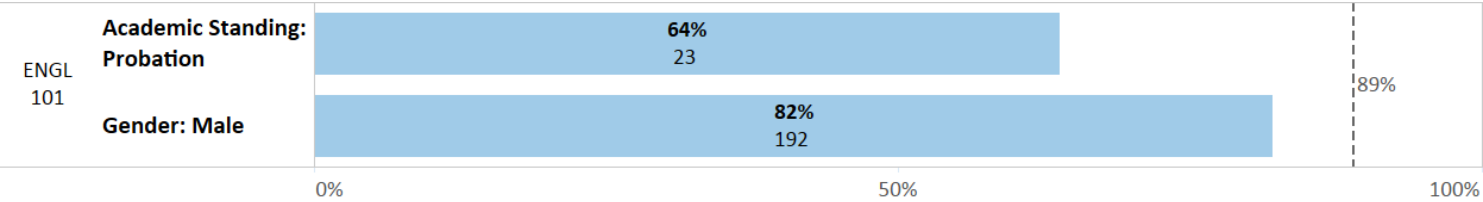

Figure 13

Annual Persistence Success DIs

ENGL 101 — Academic Standing: Probation — 44% / 14 — 76%

Figure 14

Term Persistence Retention DIs

ENGL 101 — Academic Standing: Probation — 64% / 23 — 89%

ENGL 101 — Gender: Male — 82% / 192

Disproportionate Impact (DI)
ENGL 101 & 101X

Figure 15
Term Persistence Success DIs

ENGL 101	Academic Standing: Probation	31% / 11
	Student Type: Online Only	67% / 64
ENGL 101X	Academic Standing: Probation	33% / 4

(Target line: 78%)
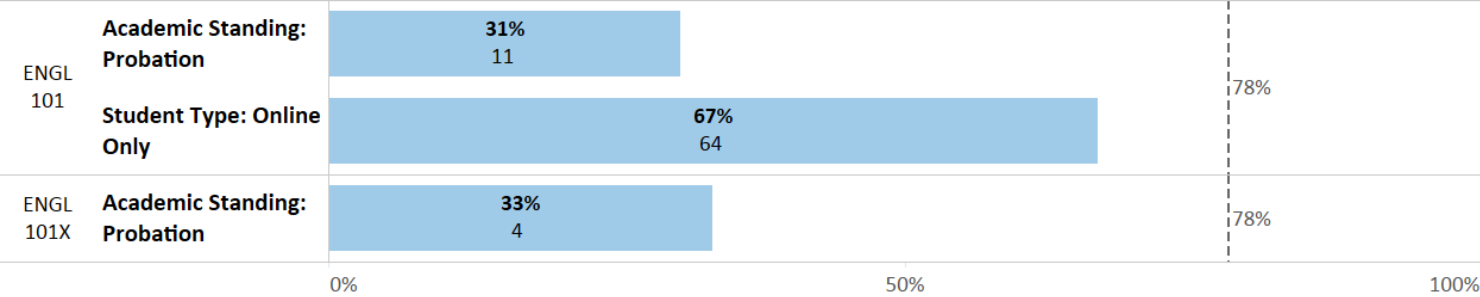
Figure 16
Term Repetition Success DIs

ENGL 101	Academic Standing: Probation	35% / 8
	Ethnicity: Other	25% / 3
	Ethnicity: White	36% / 10

(Target line: 55%)
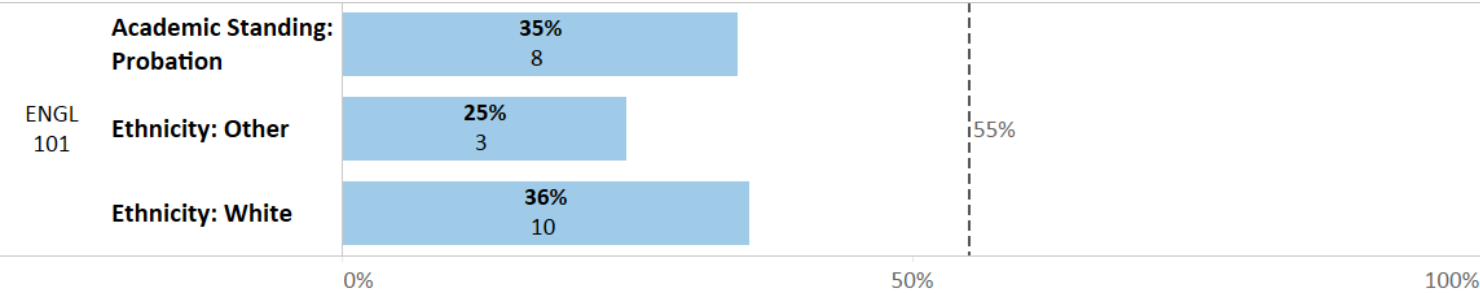
MATH 96/X, 116/X, and 119/X Overall Cohorts Trends

MATH Overall cohorts X sections had:

- Higher cohort success and retention rates than non-X cohorts
- Higher persistence rates than non-X cohorts
- Disproportionate impact indicated for:
  - Spring 2019 cohort success rate
  - Spring 2019 term persistent enrollment success rate

MATH Overall cohorts non-X sections had:

- Higher persistent enrollment success and retention rates
- Disproportionate impacts indicated for:
- Fall 2018 cohort success rate
  - Spring 2019 cohort term persistence success rates
  - Fall 2018 term course repetition retention and success rates

Both X and non-X cohorts had:

- Cohort retention rates similar to the benchmark cohort
- Cohort success rates lower than the benchmark cohort
- Persistent enrollment success and retention rates lower than the benchmark cohort
- Lower course repetition rates than the benchmark cohort
- Lower term course repetition retention and success rates than the benchmark cohort
- Disproportionate impacts indicated for:
  - Fall 2019 cohorts success rates
  - Fall 2018 cohorts term persistent enrollment success rates

Disproportionate Impact (DI)
MATH 96/X, 116/X, & 119/X Overall

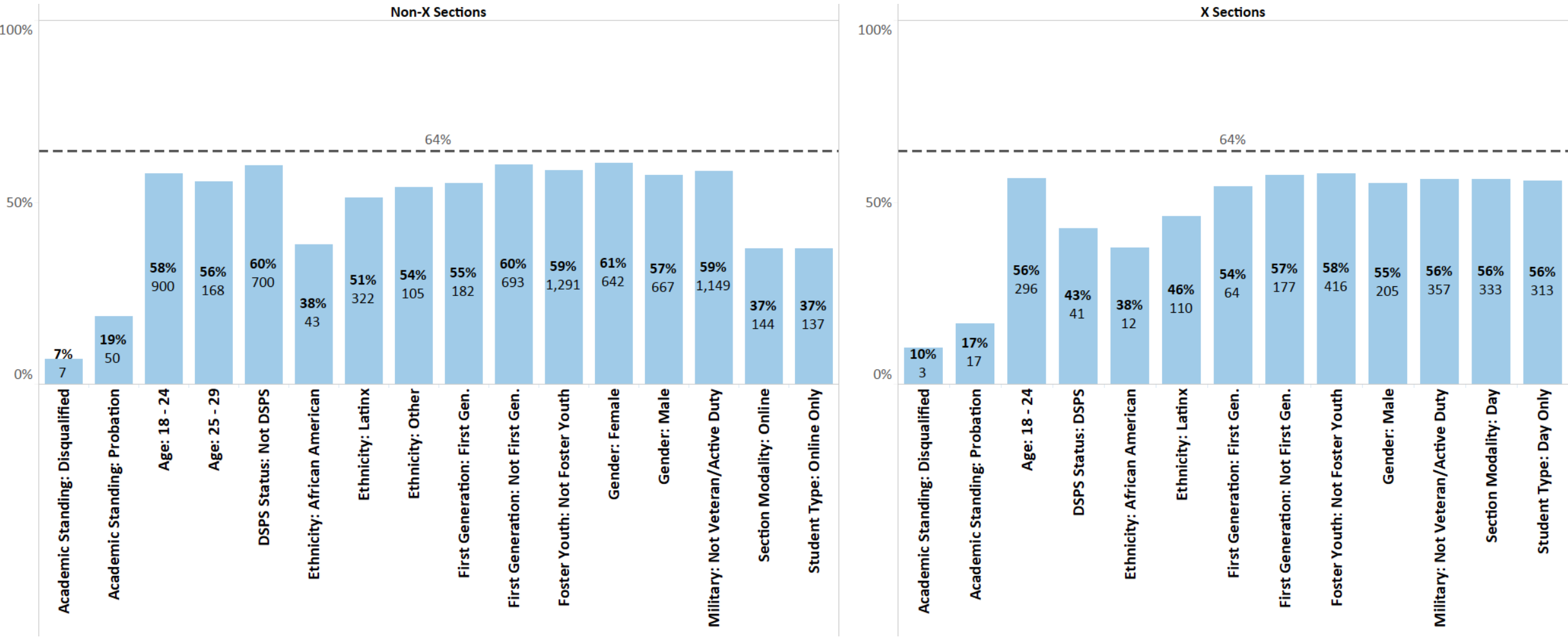# Disproportionate Impact (DI)
MATH Overall

Figure 57
Cohort Retention DIs
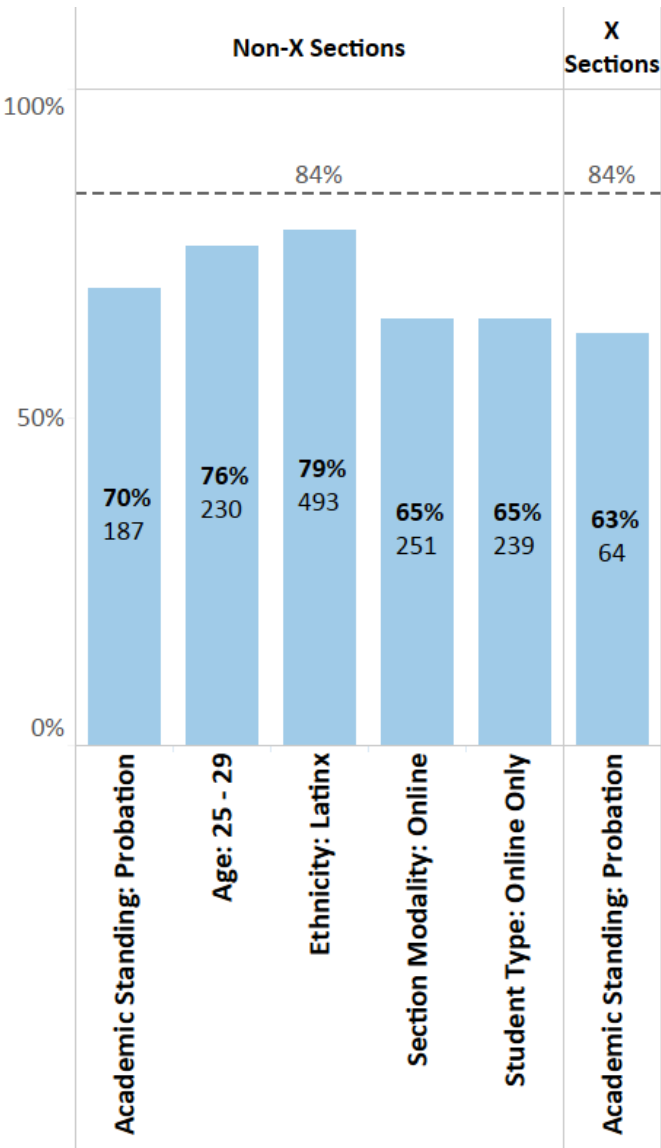
Note: Equity gap benchmarks are average success and retention rates for all students who took MATH 96, 116, and/or 119 in fall and spring terms from 2014/15 – 2016/17.

Disproportionate Impact (DI)
MATH Overall

Figure 58
Cohort Success DIs

Non-X Sections

Category	Value	Count
Academic Standing: Disqualified	7%	7
Academic Standing: Probation	19%	50
Age: 18 - 24	58%	900
Age: 25 - 29	56%	168
DSPS Status: Not DSPS	60%	700
Ethnicity: African American	38%	43
Ethnicity: Latinx	51%	322
Ethnicity: Other	54%	105
First Generation: First Gen.	55%	182
First Generation: Not First Gen.	60%	693
Foster Youth: Not Foster Youth	59%	1,291
Gender: Female	61%	642
Gender: Male	57%	667
Military: Not Veteran/Active Duty	59%	1,149
Section Modality: Online	37%	144
Student Type: Online Only	37%	137

X Sections

Category	Value	Count
Academic Standing: Disqualified	10%	3
Academic Standing: Probation	17%	17
Age: 18 - 24	56%	296
DSPS Status: DSPS	43%	41
Ethnicity: African American	38%	12
Ethnicity: Latinx	46%	110
First Generation: First Gen.	54%	64
First Generation: Not First Gen.	57%	177
Foster Youth: Not Foster Youth	58%	416
Gender: Male	55%	205
Military: Not Veteran/Active Duty	56%	357
Section Modality: Day	56%	333
Student Type: Day Only	56%	313

Disproportionate Impact (DI)
MATH Overall

Figure 59

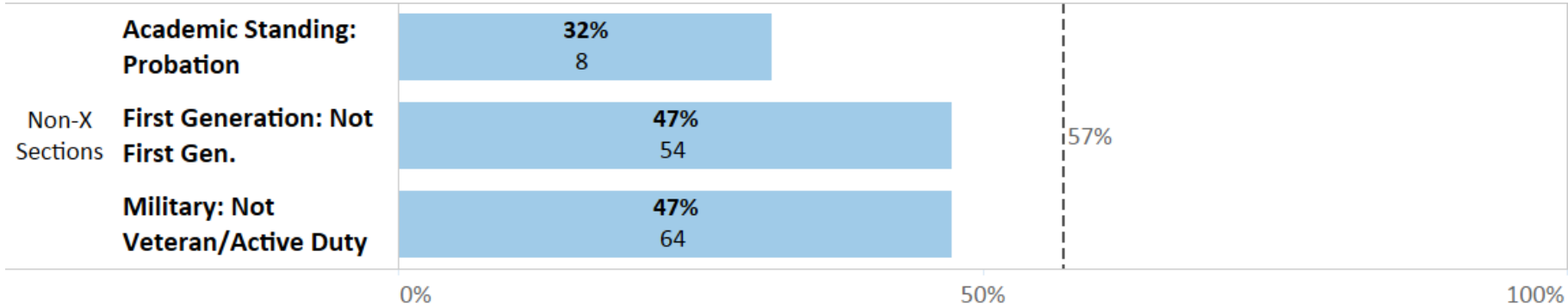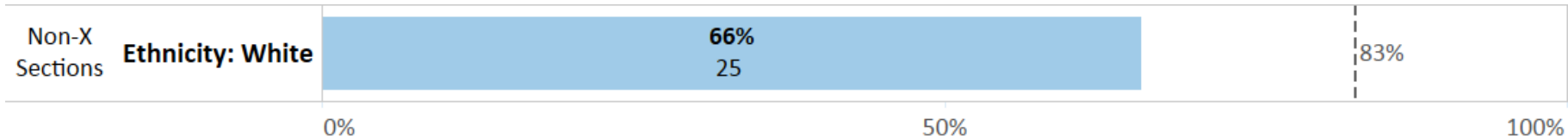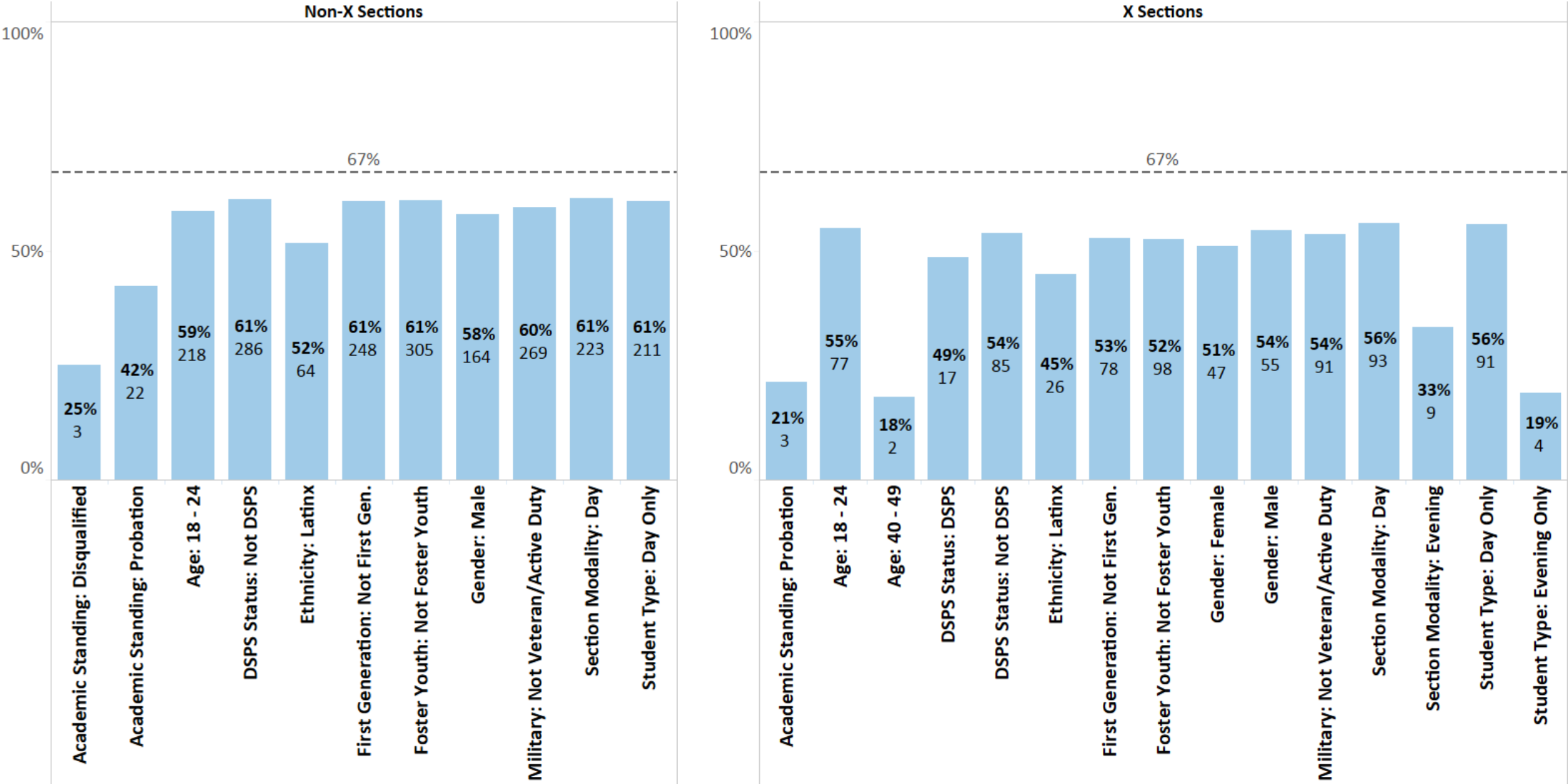**Term Repetition Success DIs**
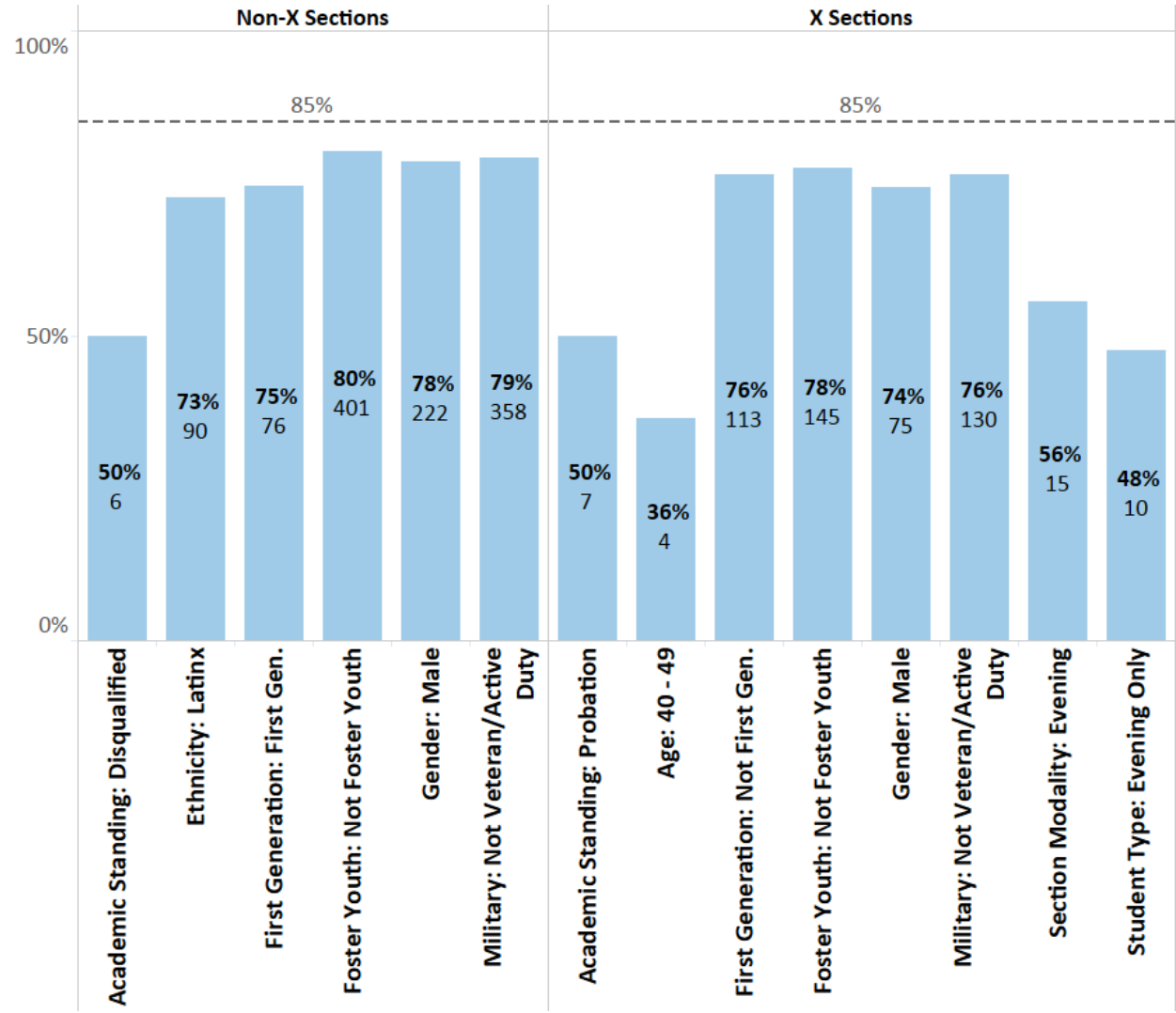

Figure 60

Term Repetition Retention DIs

Disproportionate Impact (DI)
MATH Overall

Figure 61
Term Persistence Success DIs

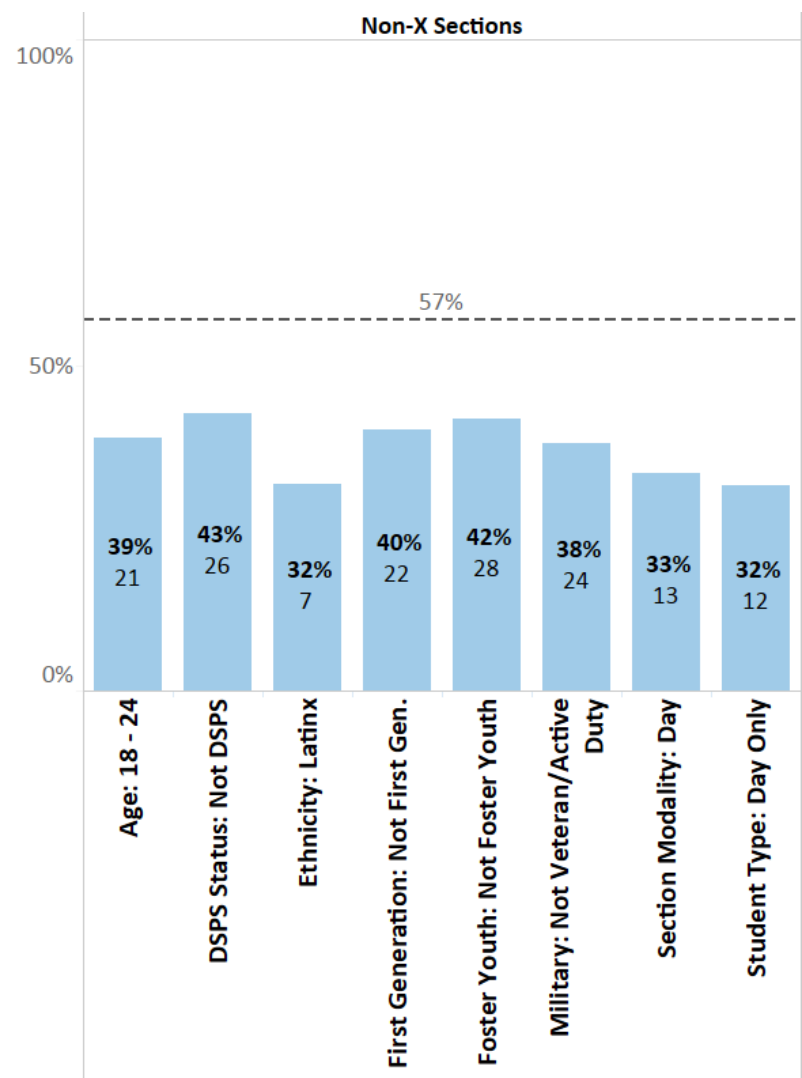# Disproportionate Impact (DI)
MATH Overall

Figure 62
Term Persistence Retention DIs

Disproportionate Impact (DI)
MATH Overall

Figure 63
Annual Repetition Success DIs

Disproportionate Impact (DI)
MATH Overall
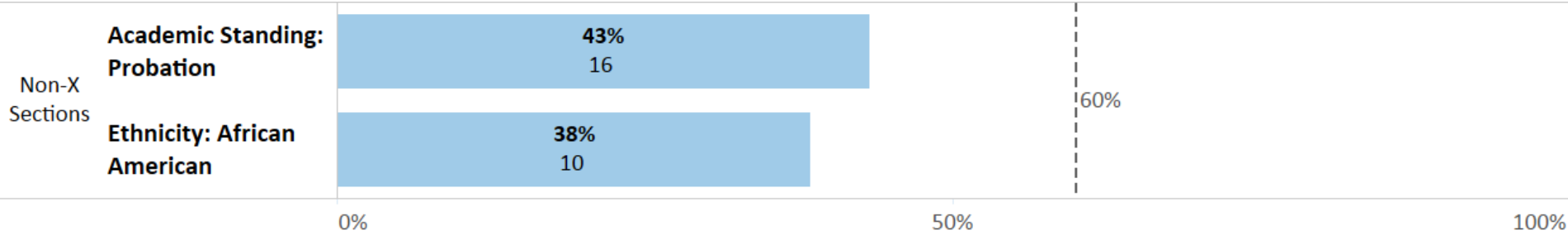

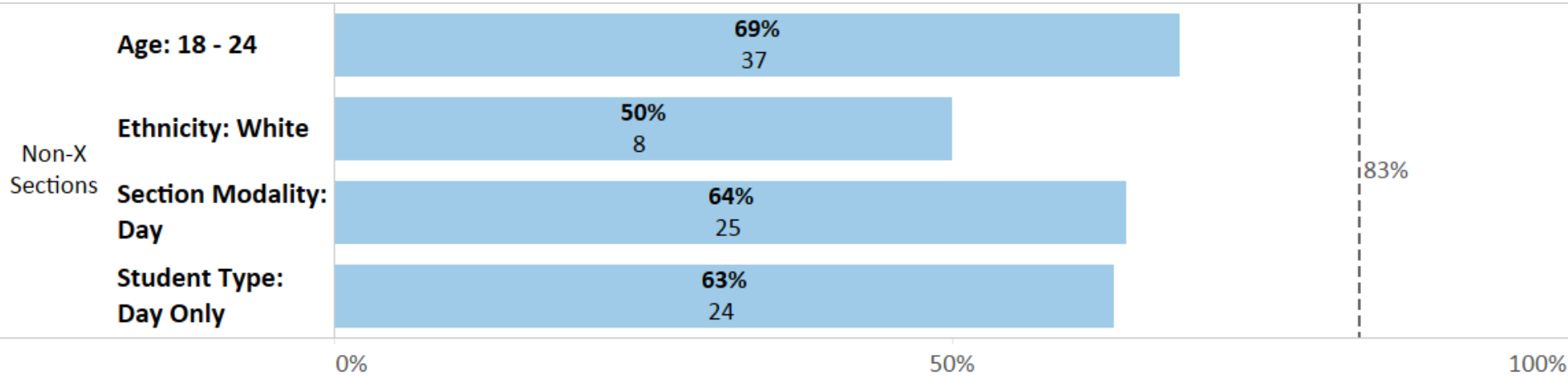*Figure 64*
Annual Persistence Success DIs

Figure 65
Annual Repetition Retention DIs

Math 96 and Math 96X

MATH 96 and 96X Trends

MATH 96X cohorts had:	**MATH 96 cohorts had:**

MATH 96X cohorts had:

- Higher retention and success rates in cohort enrollments than non-X and benchmark cohorts
- Higher persistence rates than non-X and benchmark cohorts
- Disproportionate impact indicated for Spring 2019 term persistent enrollment success rate

MATH 96 cohorts had:

- Persistence rates similar to the benchmark cohort
- Higher retention and success rates in persistent enrollments than X cohorts
- Disproportionate impact indicated for:
  - Fall 2019 cohort enrollment success rate
  - Fall 2018 cohort term course repetition retention rate

Both MATH 96 and MATH 96X cohorts had:

- Lower persistent enrollment retention and success rates than the benchmark cohort
- Lower course repetition enrollment rates than the benchmark cohort
- Lower course repetition retention and success than the benchmark cohort

MATH 96 & 96X Outcomes and Persistence

Table 12
Cohort Outcomes

Cohort Term	Enrollments		Cohort Retention Count		Cohort Retention Rate		Cohort Success Count		Cohort Success Rate	
	Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Fall 2018	430	86	359	72	83%	84%	241	58	56%	67%
Spring 2019	264	114	215	97	81%	85%	145	65	55%	57%
Fall 2019	341	138	282	119	83%	86%	158	78	46%	57%
Grand Total/Average	**1,035**	**338**	**856**	**288**	**83%**	**85%**	**544**	**201**	**53%**	**59%**
Benchmark	**3,180**		**2,619**		**82%**		**1,814**		**57%**	

Note. The benchmark cohort consists of students who took MATH 96 during fall and spring terms at Miramar College from 2014/15 – 2016/17.

Figure 17
Cohort Outcomes
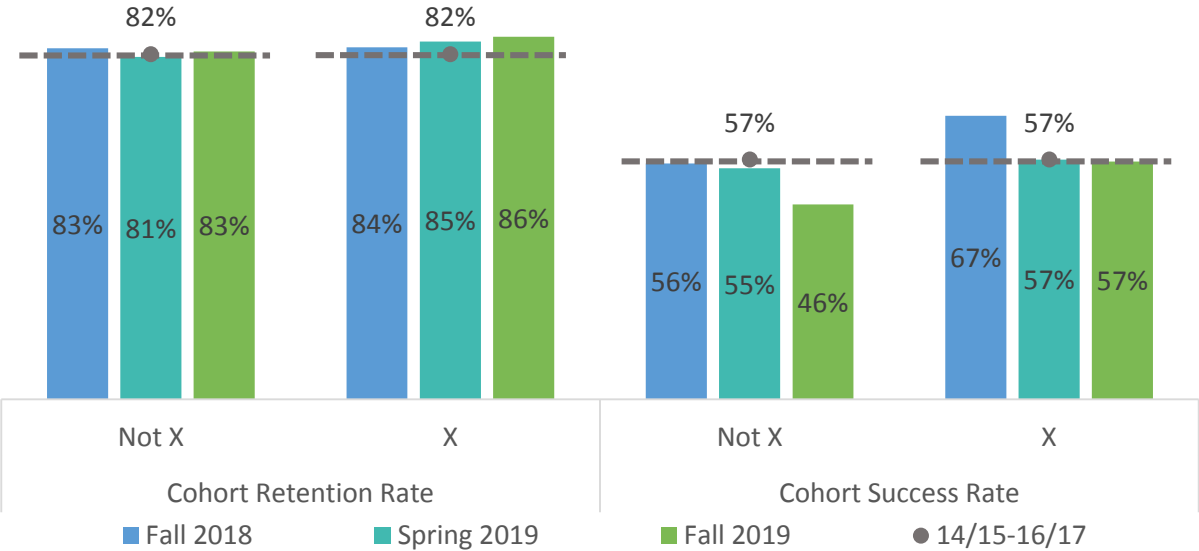
MATH 96 & 96X Outcomes and Persistence

Table 13
Persistence Rates

Cohort Term	Cohort Outcome	Cohort Headcount		Term Persistence		Term Persistence Rate		Annual Persistence		Annual Persistence Rate	
		Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Fall 2018	Succeeded	241	58	121	37	50%	64%	141	40	59%	69%
	Failed	189	28	78	10	41%	36%	90	12	48%	43%
	Total	**430**	**86**	**199**	**47**	**46%**	**55%**	**231**	**52**	**54%**	**60%**
Spring 2019	Succeeded	145	65	52	33	36%	51%	60	40	41%	62%
	Failed	119	49	41	15	34%	31%	53	20	45%	41%
	Total	**264**	**114**	**93**	**48**	**35%**	**42%**	**113**	**60**	**43%**	**53%**
Fall 2019	Succeeded	158	78	59	38	37%	49%				
	Failed	183	60	58	21	32%	35%				
	Total	**341**	**138**	**117**	**59**	**34%**	**43%**				
Grand Total/Average		**1,035**	**338**	**409**	**154**	**40%**	**46%**	**344**	**112**	**50%**	**56%**
Benchmark	Succeeded	1,814		863		48%		1,010		56%	
	Failed	1,366		415		30%		620		45%	
Grand Total/Average		**3,180**		**1,278**		**40%**		**1,630**		**51%**	

Note. A student is considered persistent if they took another math class at SDCCD in a term subsequent to their cohort term. For spring, enrollment in the following summer or fall is considered "next term." For fall, the next term is spring. Benchmarks are the average persistence rates for any math courses taken by students in MATH 96 cohorts between 2014/15 – 2016/17 after their cohort term.

MATH 96 & 96X Outcomes and Persistence
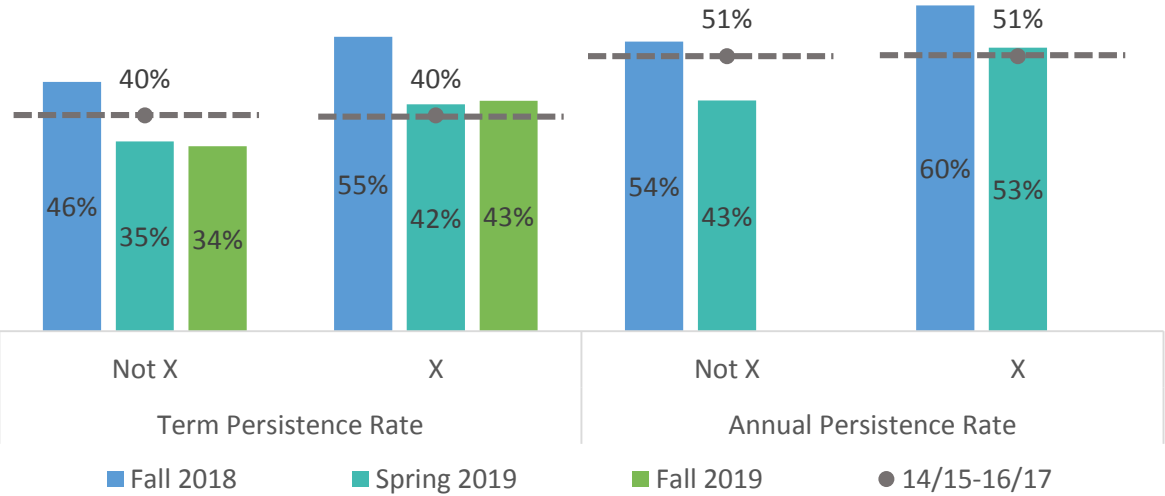

Figure 18
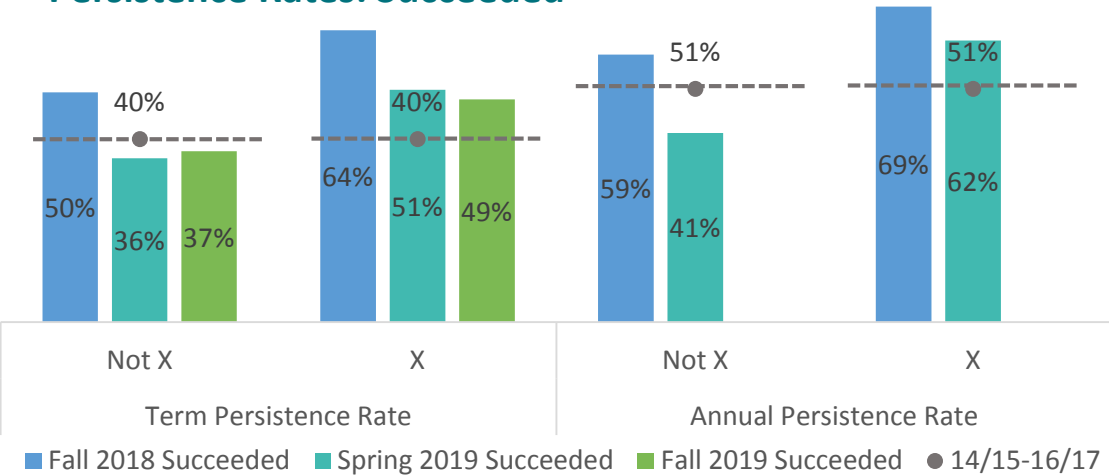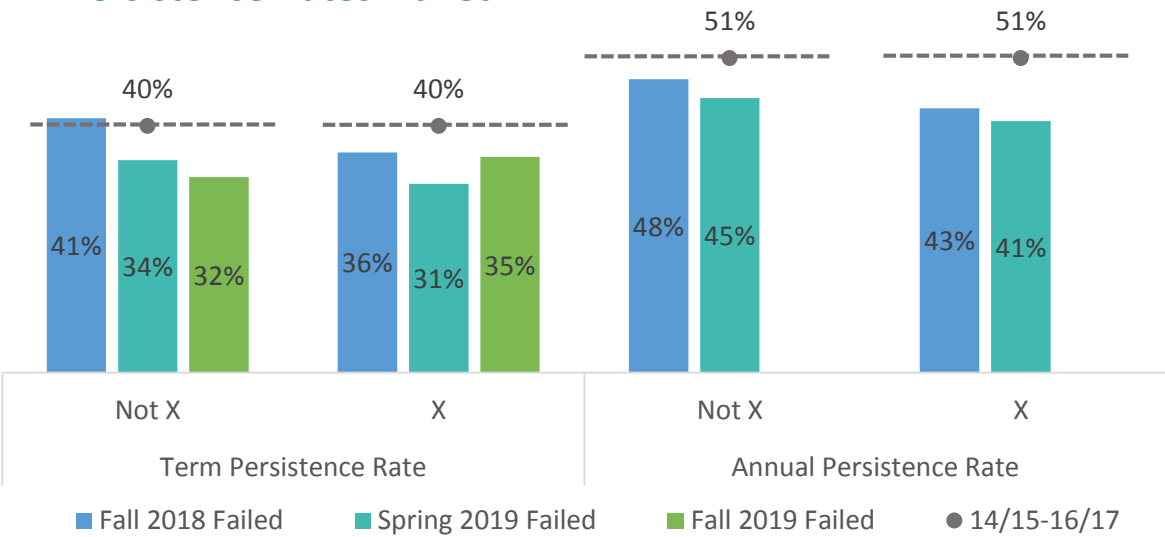**Persistence Rates: Total**

Term Persistence Rate — Not X: Fall 2018 46%, Spring 2019 35%, Fall 2019 34%, 14/15-16/17 40%; X: Fall 2018 55%, Spring 2019 42%, Fall 2019 43%, 14/15-16/17 40%
Annual Persistence Rate — Not X: Fall 2018 54%, Spring 2019 43%, 14/15-16/17 51%; X: Fall 2018 60%, Spring 2019 53%, 14/15-16/17 51%

Legend: Fall 2018 | Spring 2019 | Fall 2019 | 14/15-16/17

Figure 19
Persistence Rates: Succeeded

Term Persistence Rate — Not X: Fall 2018 50%, Spring 2019 36%, Fall 2019 37%, 14/15-16/17 40%; X: Fall 2018 64%, Spring 2019 51%, Fall 2019 49%, 14/15-16/17 40%
Annual Persistence Rate — Not X: Fall 2018 59%, Spring 2019 41%, 14/15-16/17 51%; X: Fall 2018 69%, Spring 2019 62%, 14/15-16/17 51%

Legend: Fall 2018 Succeeded | Spring 2019 Succeeded | Fall 2019 Succeeded | 14/15-16/17

Figure 20
Persistence Rates: Failed

Term Persistence Rate — Not X: Fall 2018 41%, Spring 2019 34%, Fall 2019 32%, 14/15-16/17 40%; X: Fall 2018 36%, Spring 2019 31%, Fall 2019 35%, 14/15-16/17 40%
Annual Persistence Rate — Not X: Fall 2018 48%, Spring 2019 45%, 14/15-16/17 51%; X: Fall 2018 43%, Spring 2019 41%, 14/15-16/17 51%

Legend: Fall 2018 Failed | Spring 2019 Failed | Fall 2019 Failed | 14/15-16/17

MATH 96 & 96X Outcomes and Persistence

Table 14
Term Persistent Enrollment Outcomes

Cohort Term	Cohort Outcome	Enrollments		Retention Counts		Retention Rate		Success Counts		Success Rate	
		Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Fall 2018	Succeeded	128	48	109	40	85%	83%	85	27	66%	56%
	Failed	93	17	66	8	71%	47%	38	6	41%	35%
	Total	**221**	**65**	**175**	**48**	**79%**	**74%**	**123**	**33**	**56%**	**51%**
Spring 2019	Succeeded	65	47	51	37	78%	79%	45	26	69%	55%
	Failed	51	20	39	14	76%	70%	27	4	53%	20%
	Total	**116**	**67**	**90**	**51**	**78%**	**76%**	**72**	**30**	**62%**	**45%**
Grand Total/Average		**337**	**132**	**265**	**99**	**79%**	**75%**	**195**	**63**	**58%**	**48%**
Benchmark	Succeeded	944		786		83%		622		66%	
	Failed	454		374		82%		227		50%	
Grand Total/Average		**1,398**		**1,160**		**83%**		**849**		**61%**	

Note. Benchmark rates are the average success and retention rates in any persisted math courses taken by students in MATH 96 cohorts between 2014/15 – 2016/17.

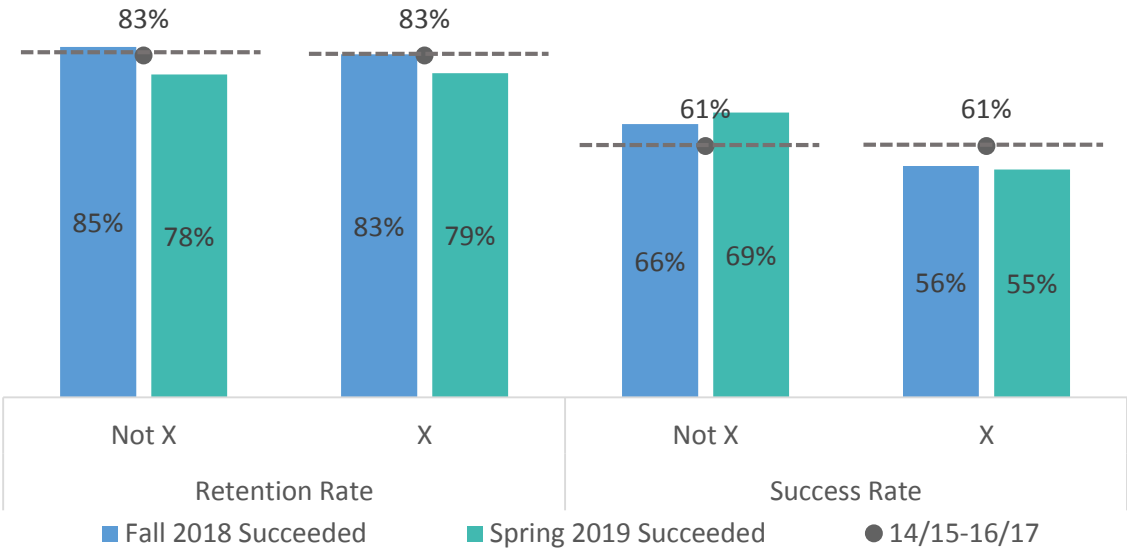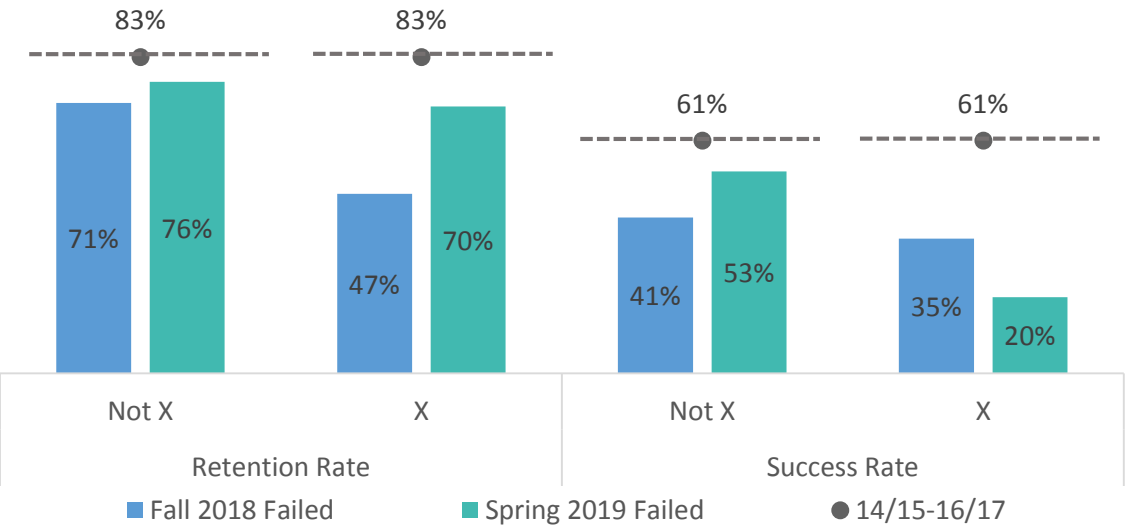*Figure 21*
Term Persistent Enrollment Outcomes: Succeeded


Figure 22
Term Persistent Enrollment Outcomes: Failed

MATH 96 & 96X Outcomes and Persistence

Table 15

Annual Persistent Enrollment Outcomes

Cohort Term	Cohort Outcomes	Enrollments		Retention Counts		Retention Rate		Success Counts		Success Rate	
		Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Fall 2018	**Succeeded**	213	78	179	65	84%	83%	143	49	67%	63%
	Failed	144	27	109	15	76%	56%	68	10	47%	37%
Grand Total/Average		**357**	**105**	**288**	**80**	**81%**	**76%**	**211**	**59**	**59%**	**56%**
Benchmark	**Succeeded**	1,543		1,273		83%		1,004		65%	
	Failed	851		695		82%		434		51%	
Grand Total/Average		**2,394**		**1,968**		**82%**		**1,438**		**60%**	

Figure 23
Annual Persistent Enrollment Outcomes

Fall 2018 Succeeded   Fall 2018 Failed   ● 14/15-16/17
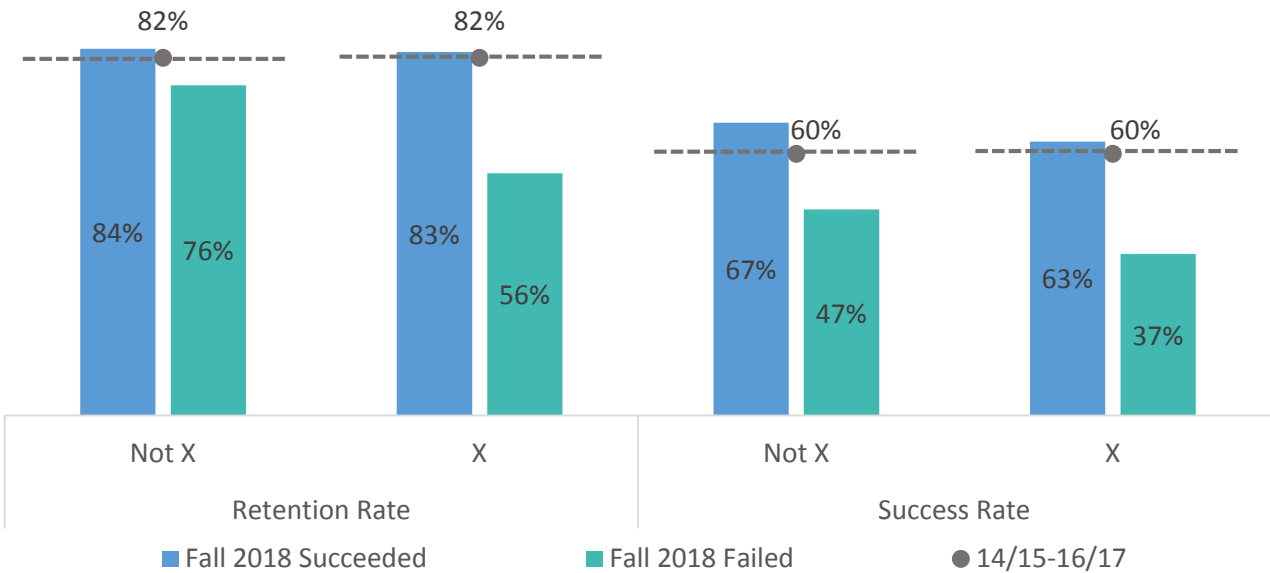
MATH 96 & 96X Outcomes and Persistence

Table 16
Course Repetition Rates

Cohort Term	Headcount of Failed		Term Repetition Count		Term Repetition Rate		Annual Repetition Count		Annual Repetition Rate	
	Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Fall 2018	189	28	57	3	30%	11%	65	3	34%	11%
Spring 2019	119	49	30	8	25%	16%	42	10	35%	20%
Fall 2019	183	60	35	10	19%	17%				
Grand Total/Average	**491**	**137**	**122**	**21**	**25%**	**15%**	**107**	**13**	**35%**	**17%**
Benchmark	**1366**		**378**		**28%**		**567**		**42%**	

Figure 24
Course Repetition Rates

- Fall 2018
- Spring 2019
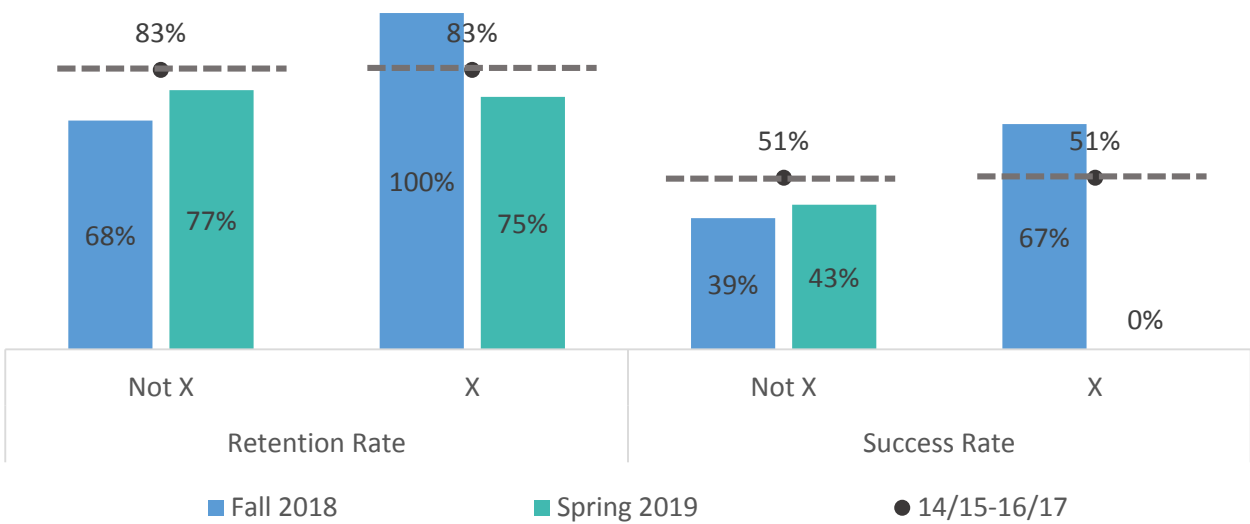- Fall 2019
- 14/15-16/17
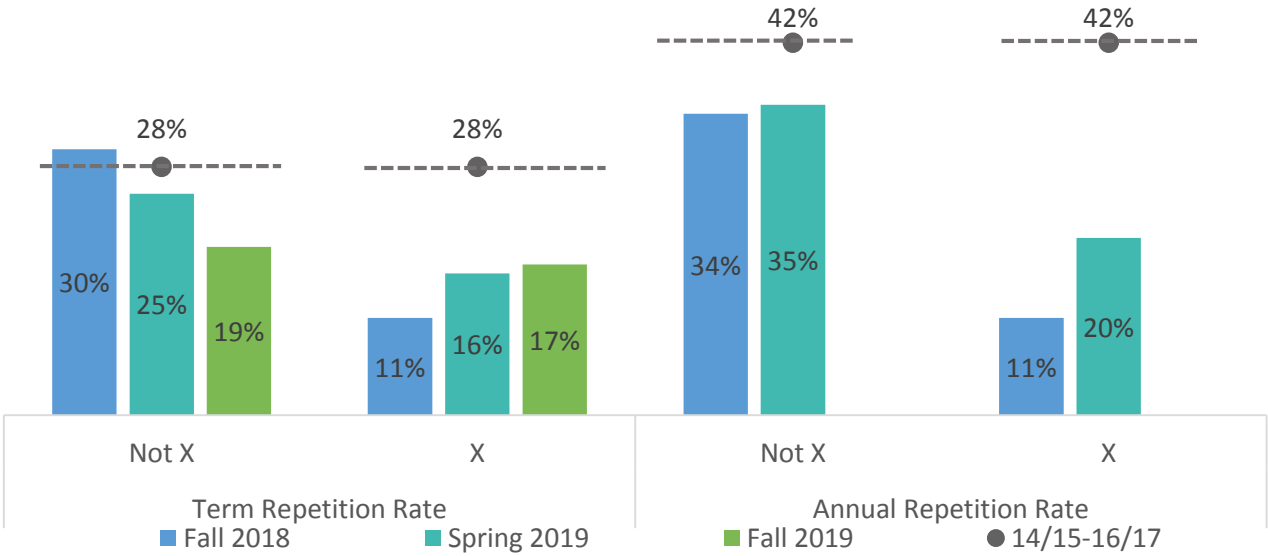
MATH 96 & 96X Outcomes and Persistence

Table 17
Term Course Repetition Outcomes

Cohort Term	Enrollment		Retention Count		Retention Rate		Success Count		Success Rate	
	Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Fall 2018	57	3	39	3	68%	100%	22	2	39%	67%
Spring 2019	30	8	23	6	77%	75%	13	0	43%	0%
Grand Total/Average	**87**	**11**	**62**	**9**	**71%**	**82%**	**35**	**2**	**40%**	**18%**
Benchmark	**385**		**321**		**83%**		**196**		**51%**	

Figure 25
Term Course Repetition Outcomes

Retention Rate: Not X — 68% (Fall 2018), 77% (Spring 2019); X — 100% (Fall 2018), 75% (Spring 2019); benchmark 83%

Success Rate: Not X — 39% (Fall 2018), 43% (Spring 2019); X — 67% (Fall 2018), 0% (Spring 2019); benchmark 51%

Legend: ■ Fall 2018 ■ Spring 2019 ● 14/15-16/17

MATH 96 & 96X Outcomes and Persistence

Table 18
Annual Course Repetition Outcomes

Cohort Term	Enrollment		Retention Count		Retention Rate		Success Count		Success Rate	
	Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Fall 2018	69	3	49	3	71%	100%	28	2	41%	67%
Grand Total /Average	**69**	**3**	**49**	**3**	**71%**	**100%**	**28**	**2**	**41%**	**67%**
Benchmark	**616**		**514**		**83%**		**322**		**52%**	

Figure 26
Annual Course Repetition Outcomes
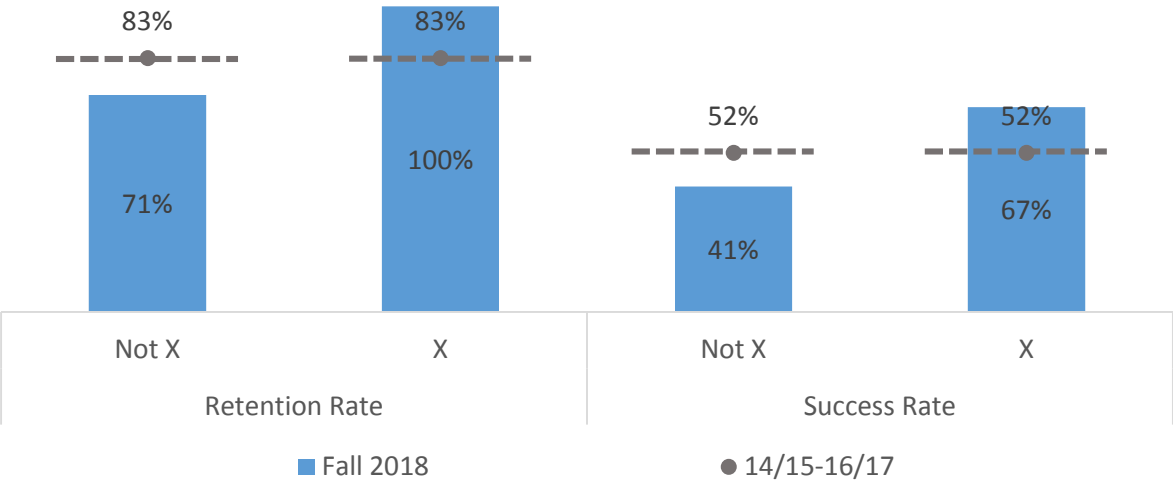
MATH 96 Outcomes and Persistence

Table 19
Miramar Only Top 5 Subsequent Courses and Outcomes

Cohort	Course	Subsequent Enrollments	Enrollment Rate	Retention Rate	Success Rate
Fall 2018 MATH 96	MATH 119	64	27%	88%	70%
	MATH 104	50	21%	78%	48%
	MATH 96	42	17%	71%	43%
	MATH 116	42	17%	83%	74%
	MATH 119 X	17	7%	88%	59%
Spring 2019 MATH 96	MATH 119	28	19%	76%	65%
	MATH 96	26	18%	78%	33%
	MATH 104	23	16%	69%	63%
	MATH 116	16	11%	75%	58%
	MATH 141	8	6%	100%	100%
Fall 2019 MATH 96	MATH 96	29	18%		
	MATH 104	22	14%		
	MATH 119	21	13%		
	MATH 116	13	8%		
	MATH 119 X	5	3%		

Table 20
SDCCD Top 5 Subsequent Courses and Outcomes

Cohort	Course	Subsequent Enrollments	Enrollment Rate	Retention Rate	Success Rate
Fall 2018 MATH 96	MATH 119	95	39%	86%	68%
	MATH 96	69	29%	71%	41%
	MATH 104	58	24%	76%	50%
	MATH 116	57	24%	82%	72%
	MATH 141	20	8%	85%	70%
Spring 2019 MATH 96	MATH 96	46	32%	50%	28%
	MATH 119	45	31%	44%	38%
	MATH 104	28	19%	46%	39%
	MATH 116	24	17%	54%	46%
	MATH 141	12	8%	25%	25%
Fall 2019 MATH 96	MATH 96	35	22%		
	MATH 119	28	18%		
	MATH 104	27	17%		
	MATH 116	19	12%		
	MATH 15A	6	4%		

Note. Student subsequent enrollments were tracked for up to the next three consecutive terms.
The Miramar Only table separates X sections from non-X sections and excludes support courses for MATH 96, MATH 116, and MATH 119.
The SDCCD table does not separate X sections from non-X sections and includes support courses.

MATH 96X Outcomes and Persistence

Table 21
Miramar Only Top 5 Subsequent Courses and Outcomes

Cohort	Course	Subsequent Enrollments	Enrollment Rate	Retention Rate	Success Rate
Fall 2018 MATH 96 X	MATH 104	21	36%	71%	62%
	MATH 119	15	26%	87%	67%
	MATH 119 X	11	19%	55%	18%
	MATH 141	10	17%	70%	50%
	MATH 116	7	12%	100%	71%
Spring 2019 MATH 96 X	MATH 104	19	29%	57%	36%
	MATH 119	13	20%	78%	44%
	MATH 119 X	11	17%	88%	50%
	MATH 96	10	15%	83%	0%
	MATH 121	4	6%	100%	50%
Fall 2019 MATH 96 X	MATH 104	16	21%		
	MATH 119	11	14%		
	MATH 116	8	10%		
	MATH 96	7	9%		
	MATH 119 X	4	5%		

Table 22
SDCCD Top 5 Subsequent Courses and Outcomes

Cohort	Course	Subsequent Enrollments	Enrollment Rate	Retention Rate	Success Rate
Fall 2018 MATH 96 X	MATH 119	30	52%	73%	50%
	MATH 104	23	40%	74%	65%
	MATH 15A	12	21%	67%	33%
	MATH 141	11	19%	64%	45%
	MATH 116	11	19%	100%	73%
Spring 2019 MATH 96 X	MATH 119	27	42%	52%	30%
	MATH 104	21	32%	38%	24%
	MATH 96	13	20%	46%	0%
	MATH 15A	12	18%	58%	42%
	MATH 116	10	15%	60%	50%
Fall 2019 MATH 96 X	MATH 104	18	23%		
	MATH 119	17	22%		
	MATH 116	11	14%		
	MATH 96	10	13%		
	MATH 15A	5	6%		

Note. Student subsequent enrollments were tracked for up to the next three consecutive terms.
The Miramar Only table separates X sections from non-X sections and excludes support courses for MATH 96, MATH 116, and MATH 119.
The SDCCD table does not separate X sections from non-X sections and includes support courses.

Disproportionate Impact (DI)
MATH 96 & 96X

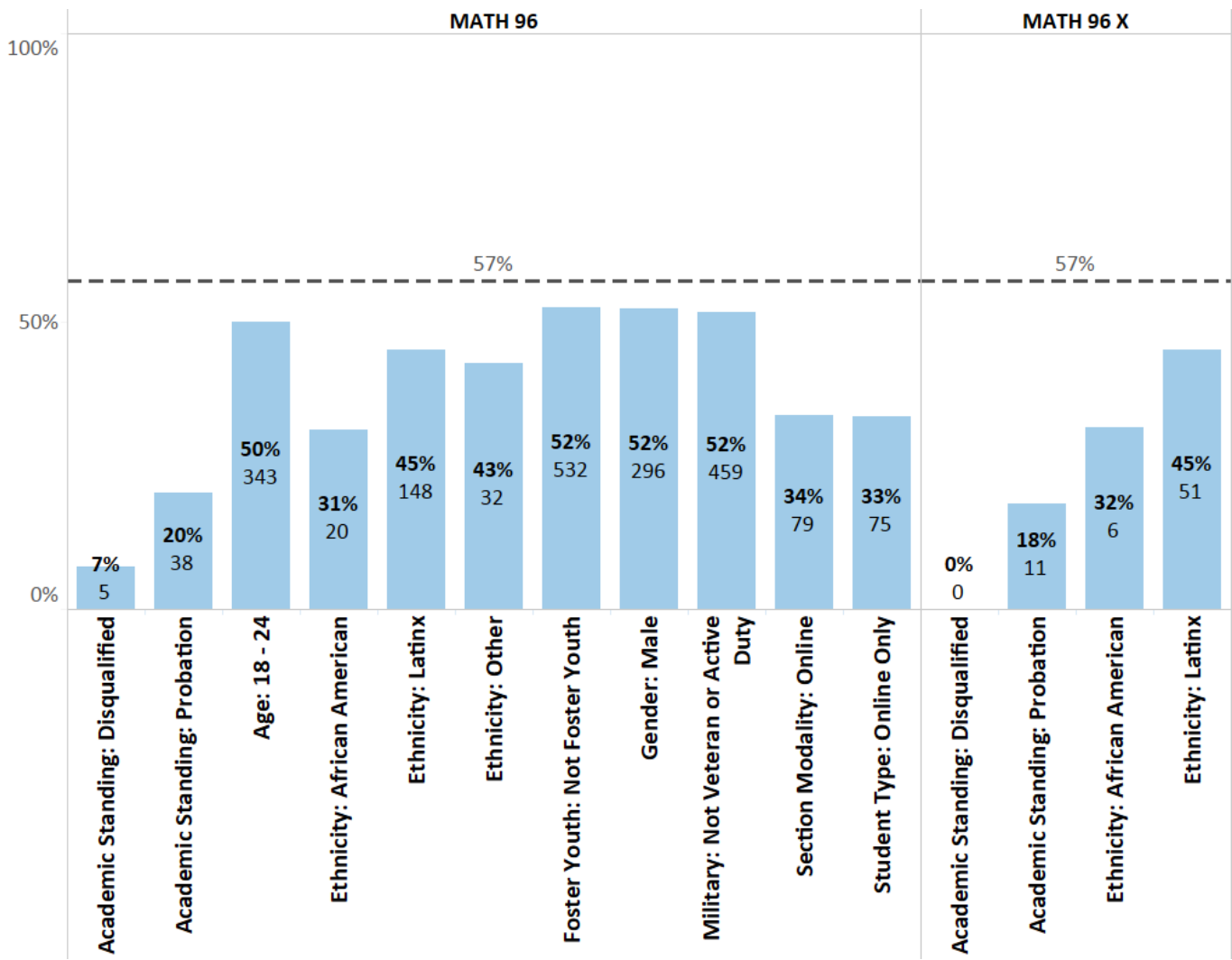# Disproportionate Impact (DI)
MATH 96 & 96X

Figure 27
Cohort Retention DIs
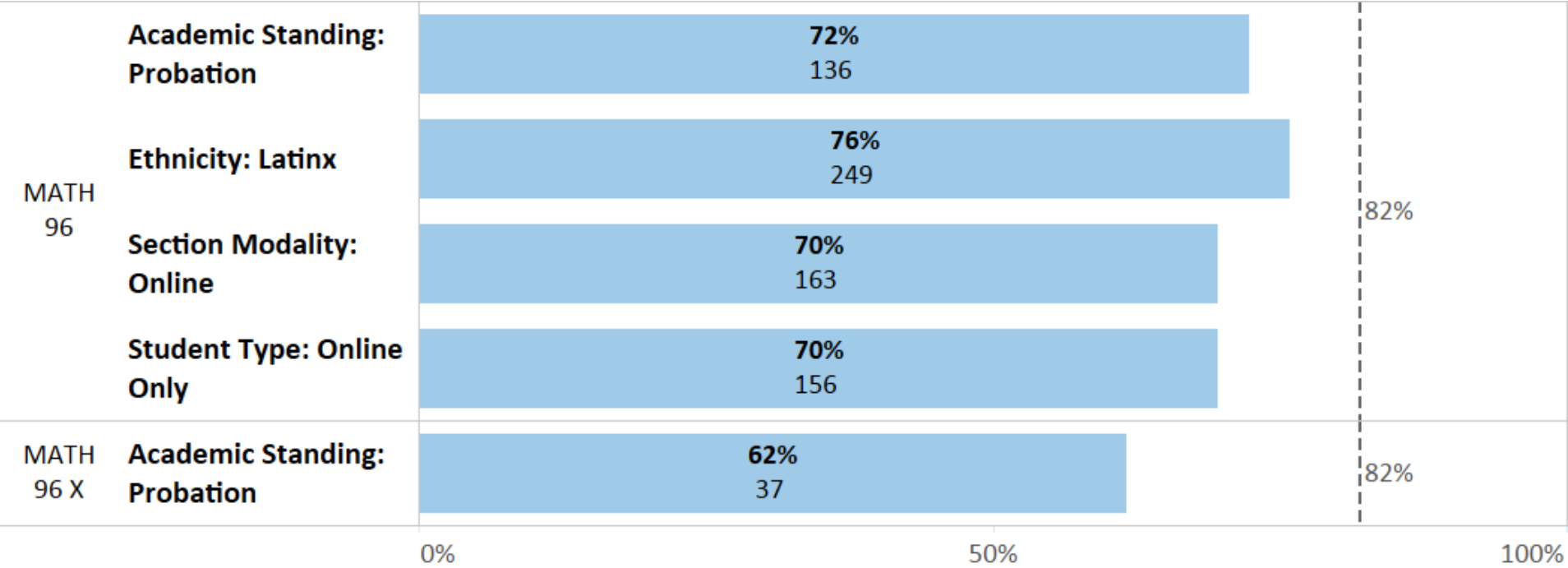
Note. Equity gap benchmarks are average success and retention rates for all students who took MATH 96 in fall and spring terms from 2014/15 – 2016/17.

Disproportionate Impact (DI)
MATH 96 & 96X

Figure 28
Cohort Success DIs

Disproportionate Impact (DI)
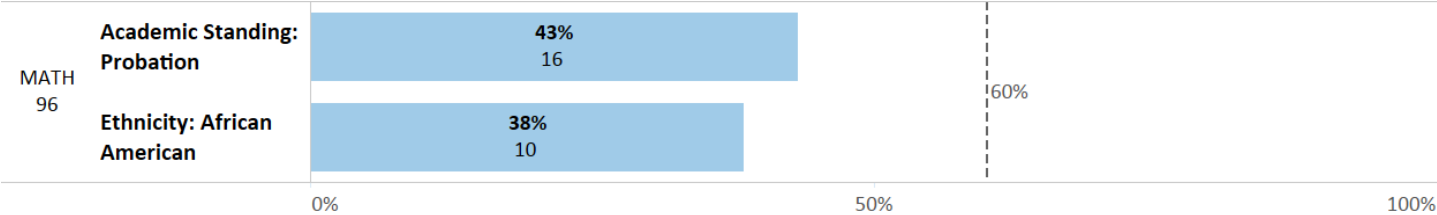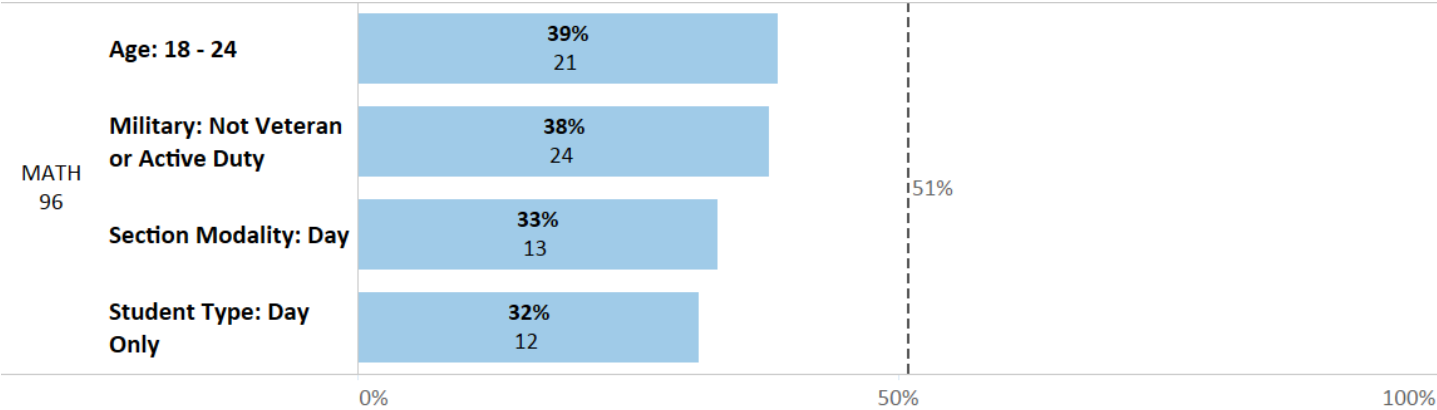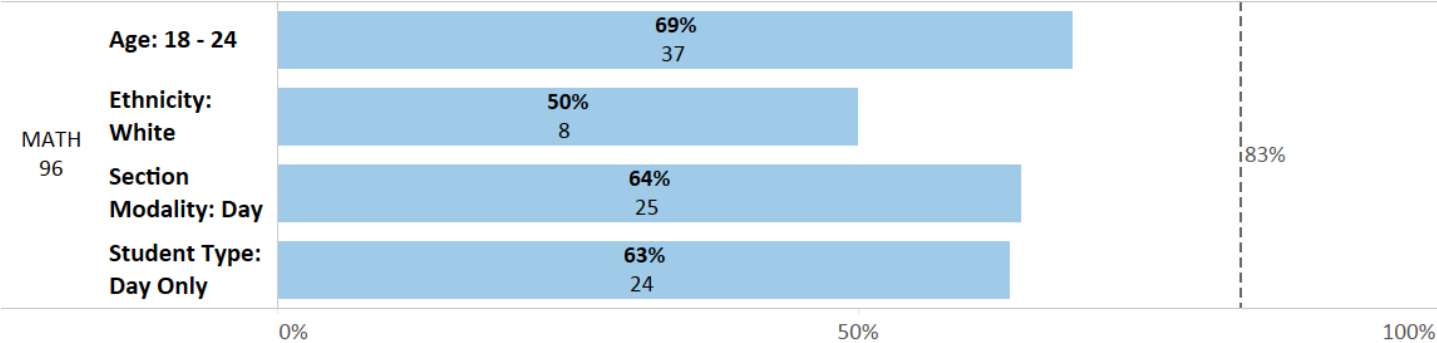# MATH 96 & 96X

Figure 29
Annual Persistence Success DIs

MATH 96

Academic Standing: Probation	43% / 16
Ethnicity: African American	38% / 10

60%

Figure 30
Annual Repetition Success DIs

MATH 96

Age: 18 - 24	39% / 21
Military: Not Veteran or Active Duty	38% / 24
Section Modality: Day	33% / 13
Student Type: Day Only	32% / 12

51%

Disproportionate Impact (DI)
MATH 96 & 96X

Figure 31
Annual Repetition Retention DIs

Disproportionate Impact (DI)
MATH 96 & 96X
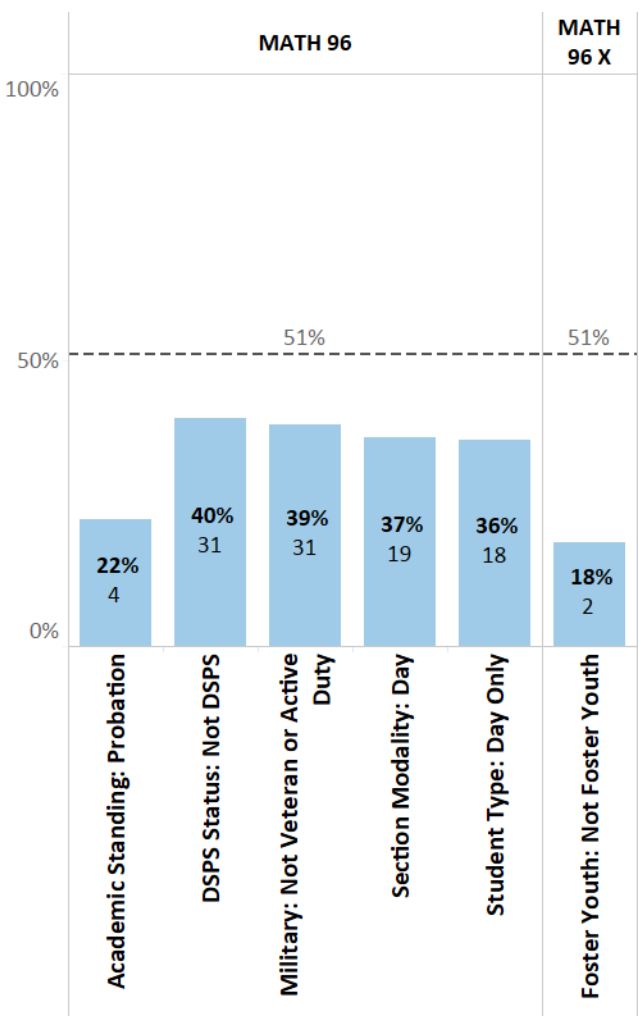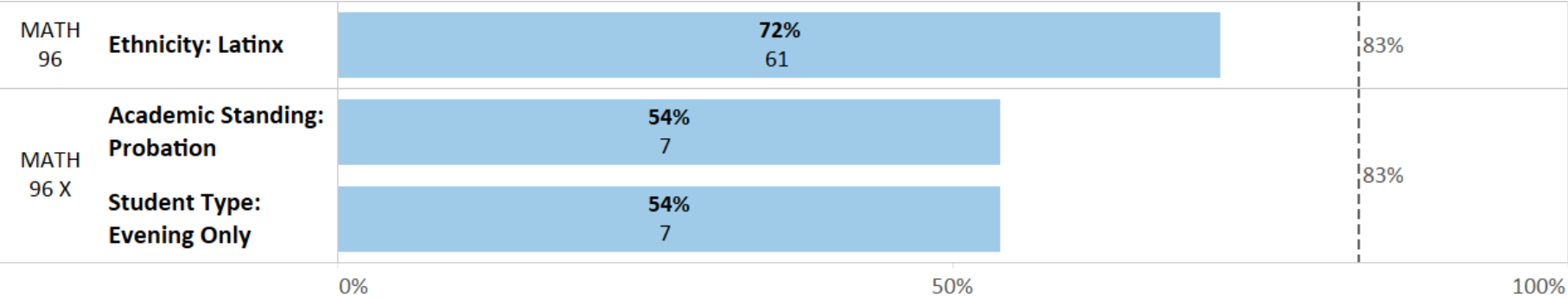

Figure 32
Term Persistence Success DIs
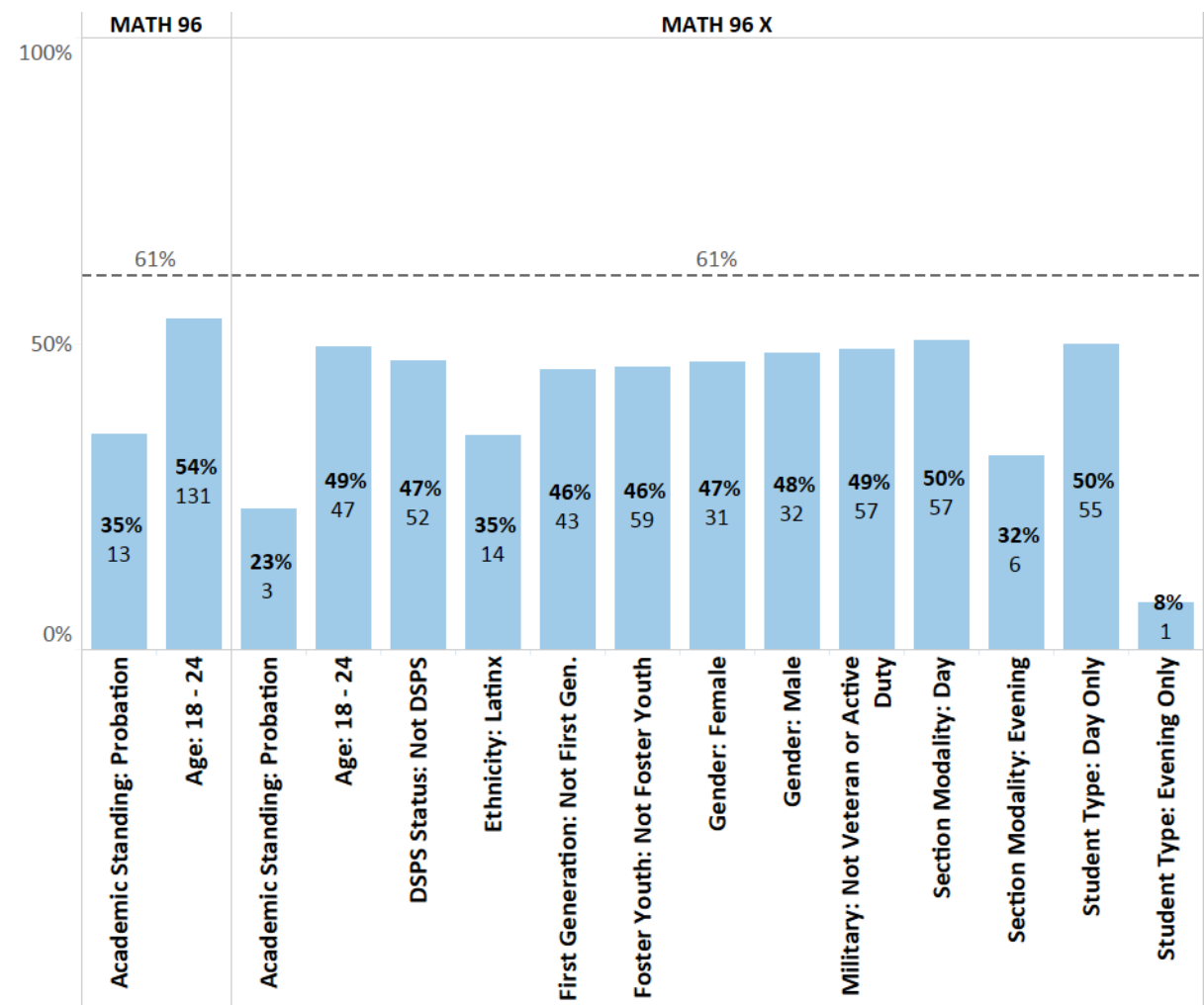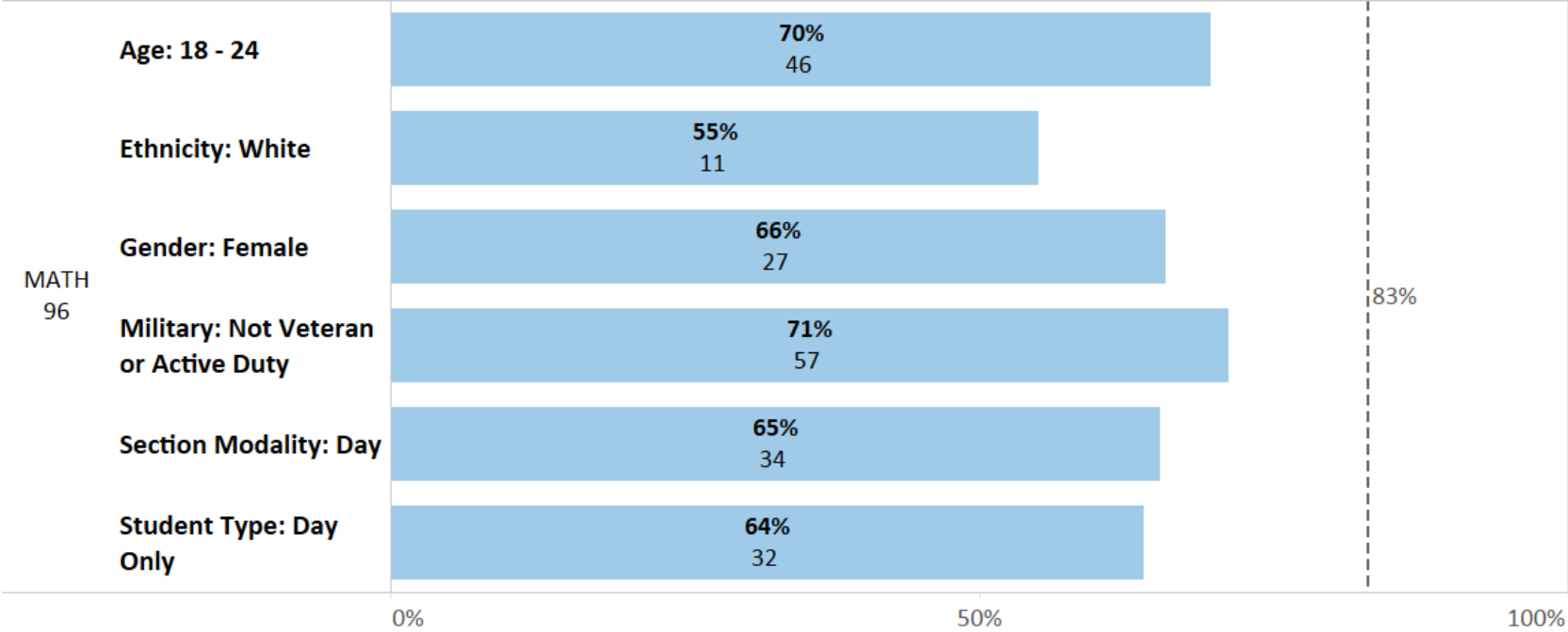

Figure 33
Term Repetition Success DIs

Disproportionate Impact (DI)
MATH 96 & 96X

Figure 34
Term Persistence Retention DIs

MATH 96	Ethnicity: Latinx	72% 61	83%
MATH 96 X	Academic Standing: Probation	54% 7	83%
	Student Type: Evening Only	54% 7	

Disproportionate Impact (DI)
MATH 96 & 96X

Figure 35
Term Repetition Retention DIs

Math 116 and Math 116X

MATH 116 and 116X Trends

MATH 116X cohorts had:

- Higher retention and success rates in cohort enrollments than non-X cohorts and benchmark cohort
- Term persistence rates similar to the benchmark cohort and higher than non-X cohorts
- Higher term course repetition rates than non-X and benchmark cohorts

MATH 116 cohorts had:

- Term persistence retention and success rates higher than X cohorts
- Persistence rates lower than X cohorts and the benchmark cohort
- Annual course repetition rates higher the benchmark cohort and X cohorts

Both MATH 116 and MATH 116X cohorts had:

- No disproportionate impacts indicated
- Cohort course retention and success rates equal to or higher than the benchmark cohort
- Term persistence retention and success rates equal to or lower than the benchmark cohort
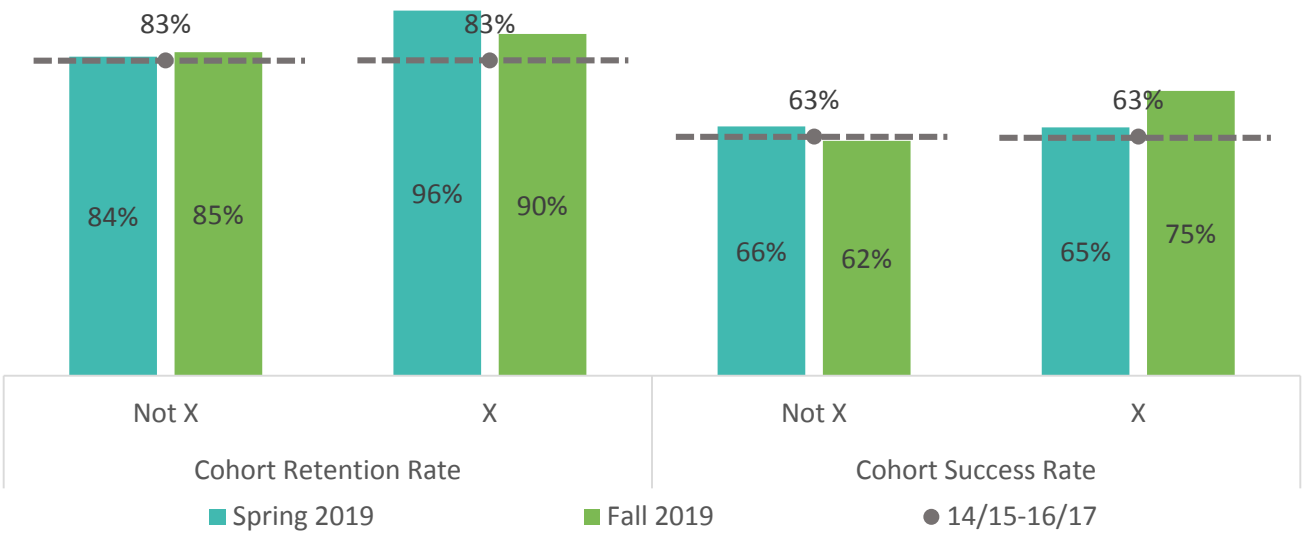
MATH 116 & 116X Outcomes and Persistence

Table 23
Cohort Outcomes

Cohort Term	Enrollments		Cohort Retention Count		Cohort Retention Rate		Cohort Success Count		Cohort Success Rate	
	Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Spring 2019	169	26	142	25	84%	96%	111	17	66%	65%
Fall 2019	257	40	219	36	85%	90%	159	30	62%	75%
Grand Total/Average	**426**	**66**	**361**	**61**	**85%**	**92%**	**270**	**47**	**63%**	**71%**
Benchmark	**1,670**		**1,379**		**83%**		**1,044**		**63%**	

Note. The benchmark cohort consists of students who took MATH 116 during fall and spring terms at Miramar College from 2014/15 – 2016/17.

Figure 36
Cohort Outcomes

MATH 116 & 116X Outcomes and Persistence

Table 24
Persistence Rates

Cohort Term	Cohort Outcome	Cohort Headcount		Term Persistence		Term Persistence Rate		Annual Persistence		Annual Persistence Rate	
		Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Spring 2019	Succeeded	111	17	42	7	38%	41%	50	11	45%	65%
	Failed	58	9	27	3	47%	33%	34	3	59%	33%
	Total	**169**	**26**	**69**	**10**	**41%**	**38%**	**84**	**14**	**50%**	**54%**
Fall 2019	Succeeded	159	30	93	15	58%	50%				
	Failed	98	10	27	6	28%	60%				
	Total	**257**	**40**	**120**	**21**	**47%**	**53%**				
Grand Total/Average		**426**	**66**	**189**	**31**	**44%**	**47%**	**84**	**14**	**50%**	**54%**
Benchmark	Succeeded	1,044		551		53%		641		61%	
	Failed	626		235		38%		302		48%	
Grand Total/Average		**1,670**		**786**		**47%**		**943**		**56%**	

Note. A student is considered persistent if they took any other math class at SDCCD in a term subsequent to their cohort term. For spring, enrollment in the following summer or fall is considered "next term." For fall, the next term is spring.
Benchmarks are the average persistence rates for any math courses taken by students in MATH 116 cohorts between 2014/15 – 2016/17 after their cohort term.

MATH 116 & 116X Outcomes and Persistence
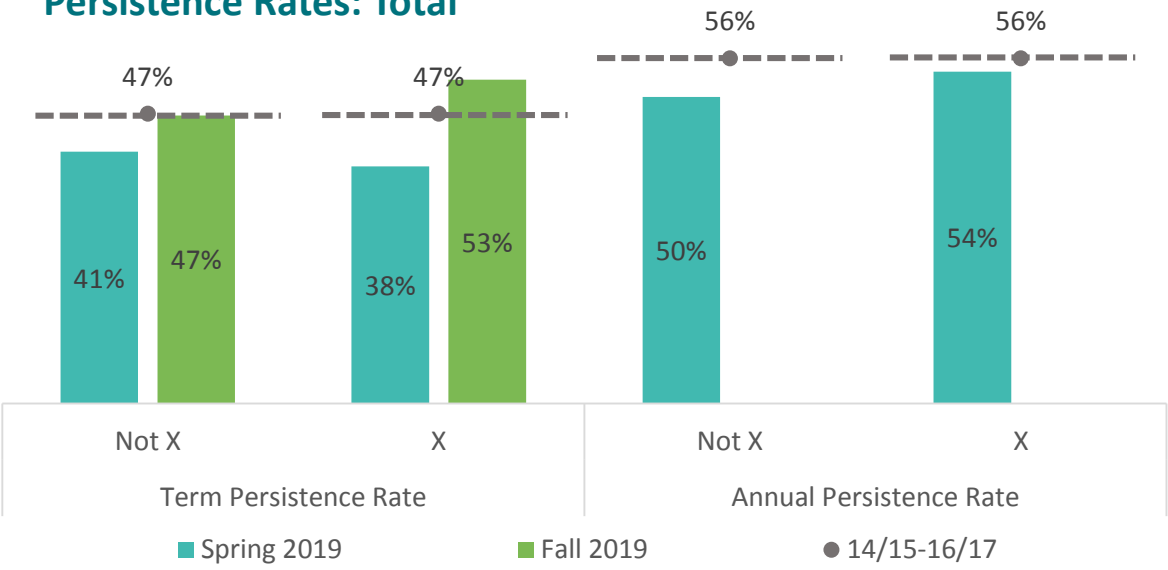
Figure 37
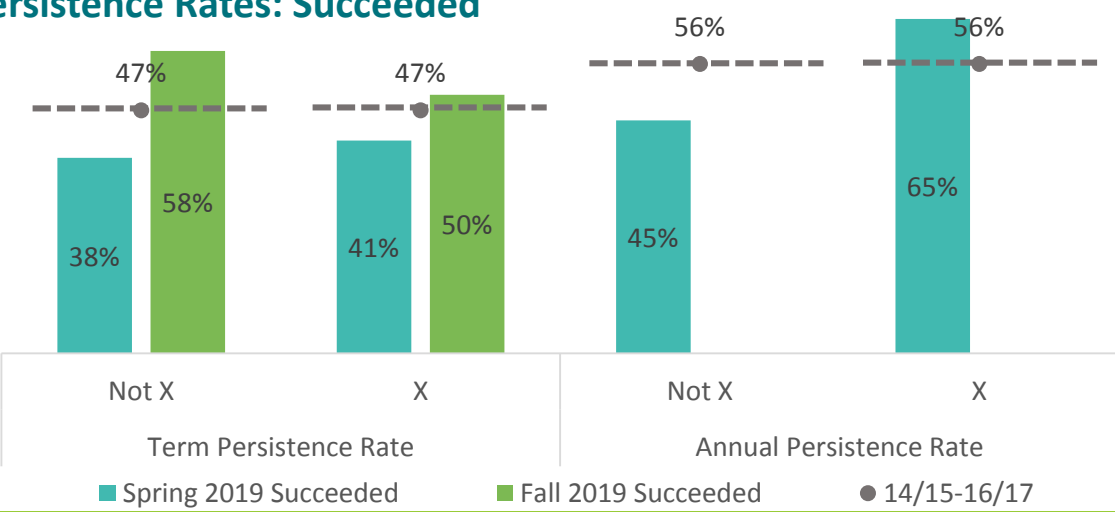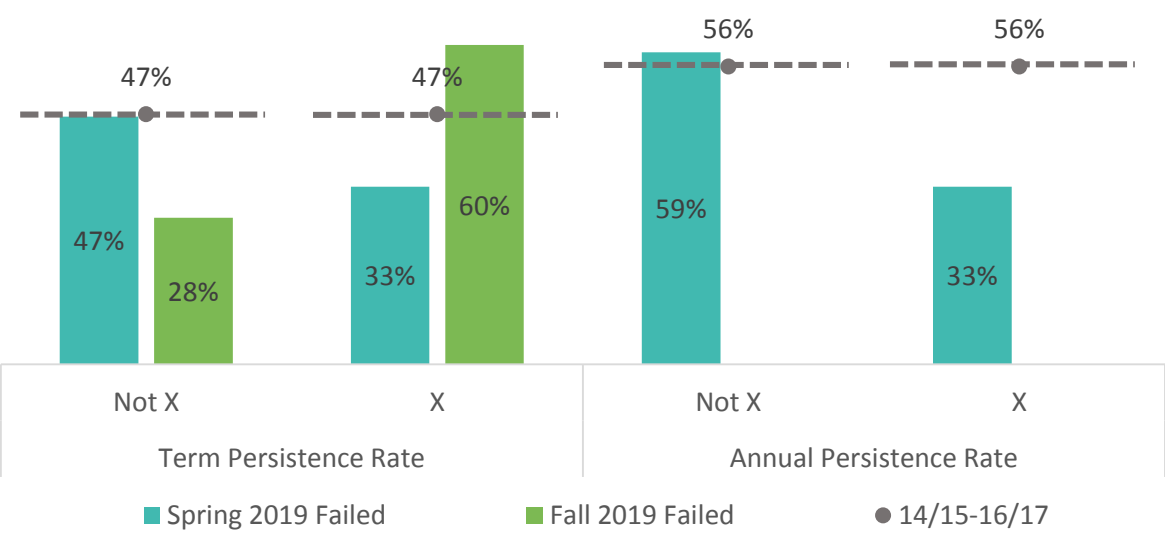## Persistence Rates: Total

Term Persistence Rate / Annual Persistence Rate

Not X: 41% (Spring 2019), 47% (Fall 2019), 47% (14/15-16/17)
X: 38% (Spring 2019), 53% (Fall 2019), 47% (14/15-16/17)
Not X: 50% (Spring 2019), 56% (14/15-16/17)
X: 54% (Spring 2019), 56% (14/15-16/17)

■ Spring 2019   ■ Fall 2019   ● 14/15-16/17

Figure 38
Persistence Rates: Succeeded

Term Persistence Rate / Annual Persistence Rate

Not X: 38% (Spring 2019), 58% (Fall 2019), 47% (14/15-16/17)
X: 41% (Spring 2019), 50% (Fall 2019), 47% (14/15-16/17)
Not X: 45% (Spring 2019), 56% (14/15-16/17)
X: 65% (Spring 2019), 56% (14/15-16/17)

■ Spring 2019 Succeeded   ■ Fall 2019 Succeeded   ● 14/15-16/17

Figure 39
Persistence Rates: Failed

Term Persistence Rate / Annual Persistence Rate

Not X: 47% (Spring 2019 Failed), 28% (Fall 2019 Failed), 47% (14/15-16/17)
X: 33% (Spring 2019 Failed), 60% (Fall 2019 Failed), 47% (14/15-16/17)
Not X: 59% (Spring 2019 Failed), 56% (14/15-16/17)
X: 33% (Spring 2019 Failed), 56% (14/15-16/17)

■ Spring 2019 Failed   ■ Fall 2019 Failed   ● 14/15-16/17

MATH 116 & 116X Outcomes and Persistence

Table 25
Term Persistent Enrollment Outcomes

Cohort Term	Cohort Outcome	Enrollments		Retention Counts		Retention Rate		Success Counts		Success Rate	
		Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Spring 2019	Succeeded	46	7	39	5	85%	71%	34	4	74%	57%
	Failed	30	5	28	5	93%	100%	19	3	63%	60%
Grand Total/Average		**76**	**12**	**67**	**10**	**88%**	**83%**	**53**	**7**	**70%**	**58%**
Benchmark	Succeeded	604		550		91%		483		80%	
	Failed	268		215		80%		149		56%	
Grand Total/Average		**872**		**765**		**88%**		**632**		**72%**	

Note. Benchmark rates are the average success and retention rates in any persisted math courses taken by students in MATH 116 cohorts between 2014/15 – 2016/17.

Figure 40
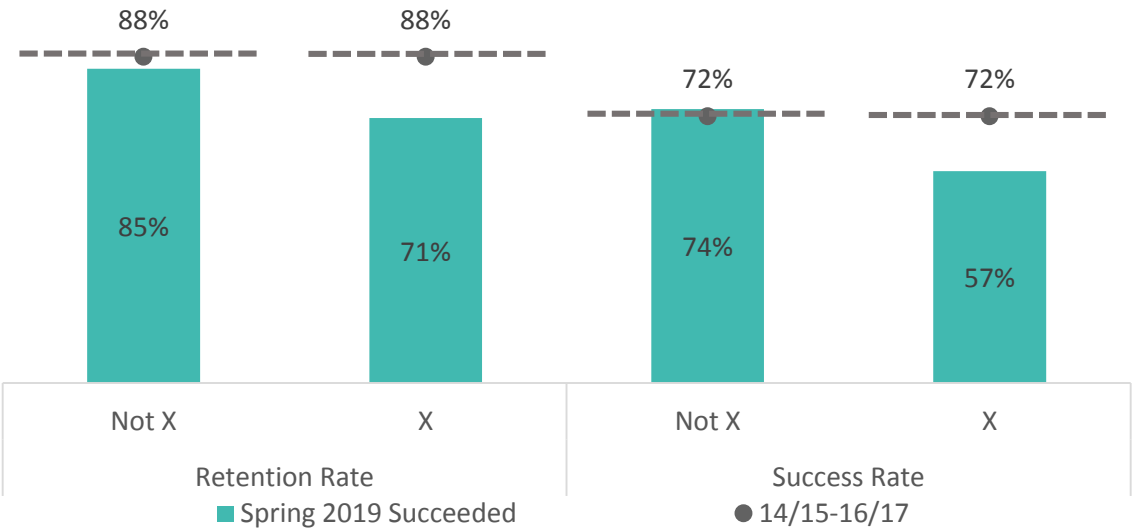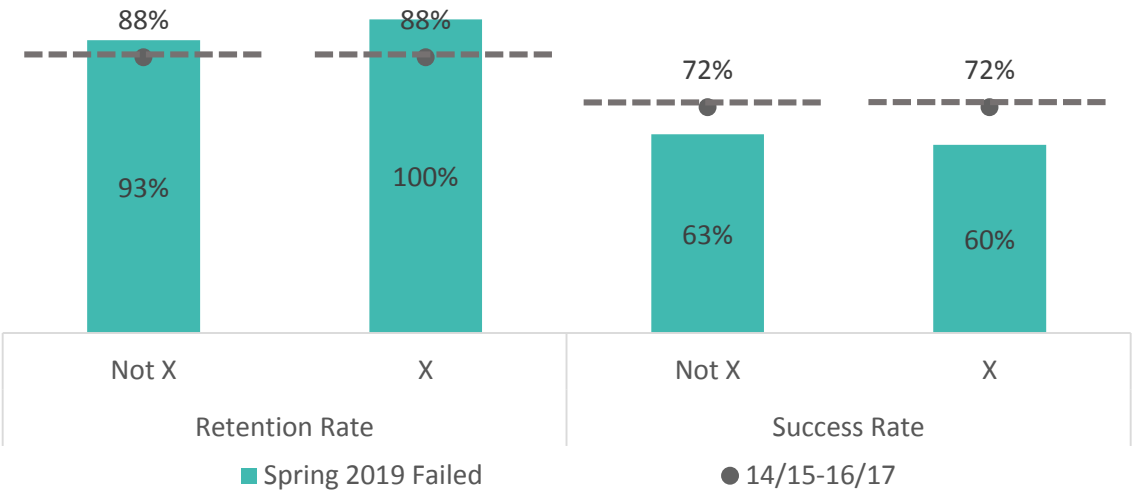**Term Persistent Enrollment Outcomes: Succeeded**

*Figure 41*
Term Persistent Enrollment Outcomes: Failed

MATH 116 & 116X Outcomes and Persistence

Table 26

Course Repetition Rates

| Cohort Term	Headcount of Failed		Term Repetition Count		Term Repetition Rate		Annual Repetition Count		Annual Repetition Rate	
	Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Spring 2019	58	9	22	2	38%	22%	25	2	43%	22%
Fall 2019	98	10	17	4	17%	40%				
Grand Total/Average	**156**	**19**	**39**	**6**	**25%**	**32%**	**25**	**2**	**43%**	**22%**
Benchmark	**626**		**163**		**26%**		**222**		**35%**	

Figure 42
Course Repetition Rates
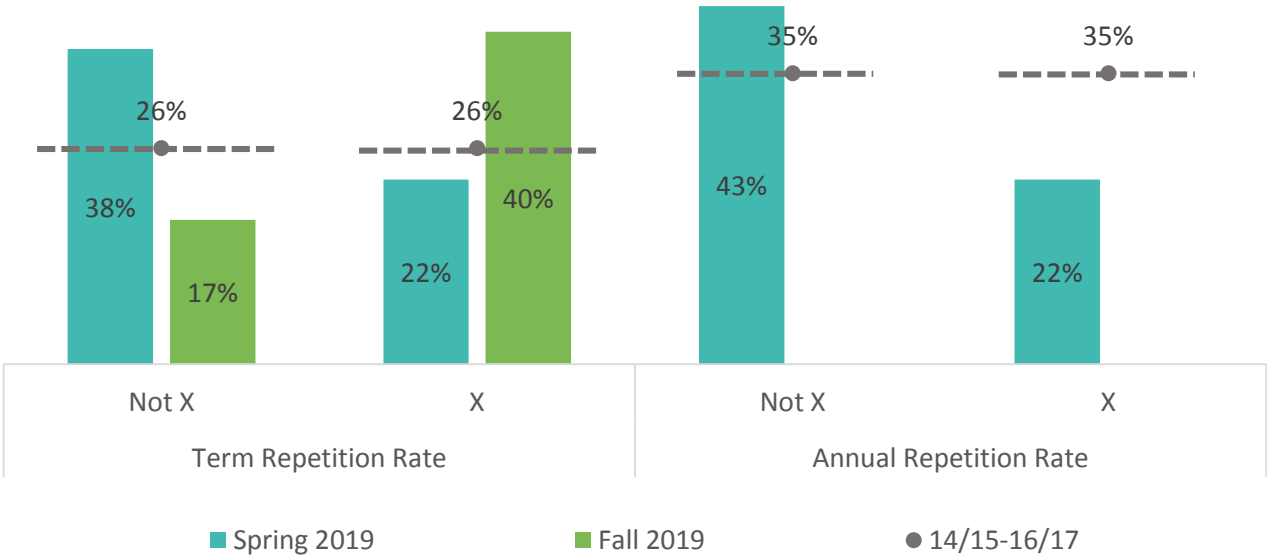
MATH 116 & 116X Outcomes and Persistence

Table 27
Term Course Repetition Outcomes

Cohort Term	Enrollment		Retention Count		Retention Rate		Success Count		Success Rate	
	Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Spring 2019	22	2	21	2	95%	100%	15	2	68%	100%
Grand Total/Average	**22**	**2**	**21**	**2**	**95%**	**100%**	**15**	**2**	**68%**	**100%**
Benchmark	**165**		**135**		**82%**		**100**		**61%**	

Figure 43
Term Course Repetition Outcomesc

Spring 2019   ● 14/15-16/17
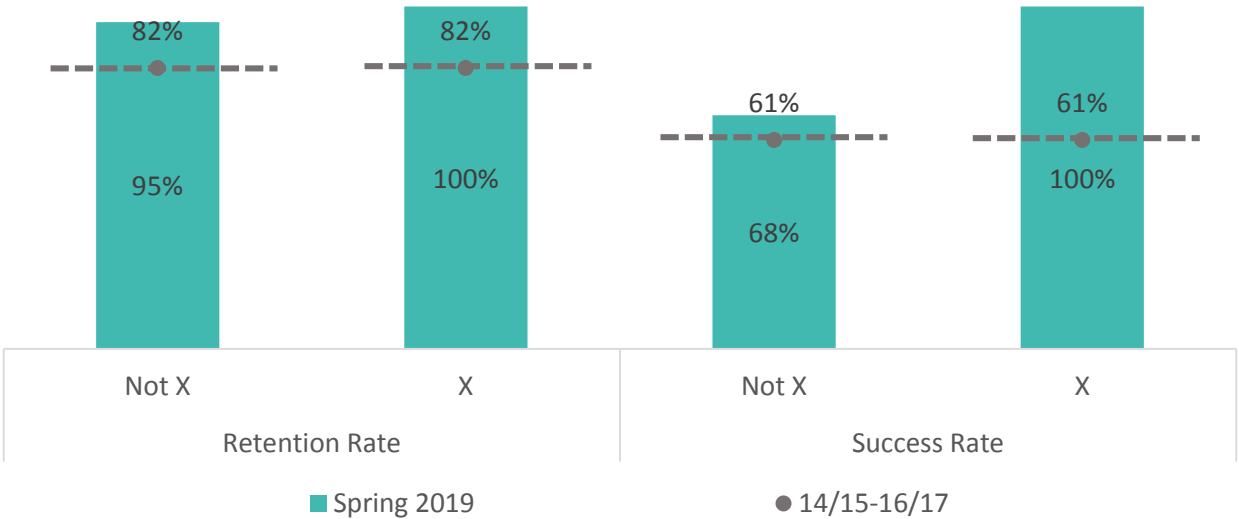
MATH 116 Outcomes and Persistence

Table 28
Miramar Only Top 5 Subsequent Courses and Outcomes

Cohort	Course	Subsequent Enrollments	Enrollment Rate	Retention Rate	Success Rate
Spring 2019 MATH 116	MATH 121	42	38%	76%	60%
	MATH 119	21	19%	92%	83%
	MATH 116	21	19%	94%	72%
	MATH 104	5	5%	100%	50%
	MATH 141	3	3%	100%	100%
Fall 2019 MATH 116	MATH 121	58	36%		
	MATH 119	32	20%		
	MATH 116	9	6%		
	MATH 116 X	4	3%		
	MATH 104	4	3%		

Table 29
SDCCD Top 5 Subsequent Courses and Outcomes

Cohort	Course	Subsequent Enrollments	Enrollment Rate	Retention Rate	Success Rate
Spring 2019 MATH 116	MATH 121	49	44%	49%	39%
	MATH 116	28	25%	75%	54%
	MATH 119	26	23%	54%	50%
	MATH 104	7	6%	43%	29%
	MATH 141	4	4%	50%	50%
Fall 2019 MATH 116	MATH 121	64	40%		
	MATH 119	35	22%		
	MATH 116	17	11%		
	MATH 15C	5	3%		
	MATH 141	4	3%		

Note. Student subsequent enrollments were tracked for up to the next three consecutive terms.
The Miramar Only table separates X sections from non-X sections and excludes support courses for MATH 96, MATH 116, and MATH 119.
The SDCCD table does not separate X sections from non-X sections and includes support courses.

MATH 116X Outcomes and Persistence

Table 30
Miramar Only Top 5 Subsequent Courses and Outcomes

Cohort	Course	Subsequent Enrollments	Enrollment Rate	Retention Rate	Success Rate
Spring 2019 MATH 116 X	MATH 119	9	53%	83%	50%
	MATH 121	4	24%	100%	100%
	MATH 119 X	2	12%	100%	0%
	MATH 116	2	12%	100%	100%
Fall 2019 MATH 116 X	MATH 121	14	47%		
	MATH 119	5	17%		
	MATH 116	3	10%		
	MATH 141	1	3%		
	MATH 116 X	1	3%		

Table 31
SDCCD Top 5 Subsequent Courses and Outcomes

Cohort	Course	Subsequent Enrollments	Enrollment Rate	Retention Rate	Success Rate
Spring 2019 MATH 116 X	MATH 119	11	65%	55%	27%
	MATH 121	5	29%	20%	20%
	MATH 15A	2	12%	50%	50%
	MATH 116	2	12%	100%	100%
	MATH 141	1	6%	0%	0%
Fall 2019 MATH 116 X	MATH 121	15	50%		
	MATH 119	5	17%		
	MATH 116	4	13%		
	MATH 15C	1	3%		
	MATH 141	1	3%		

Note. Student subsequent enrollments were tracked for up to the next three consecutive terms.
The Miramar Only table separates X sections from non-X sections and excludes support courses for MATH 96, MATH 116, and MATH 119.
The SDCCD table does not separate X sections from non-X sections and includes support courses.

Disproportionate Impact (DI)
MATH 116 & 116X

Disproportionate Impact (DI)
MATH 116 & 116X

Figure 44
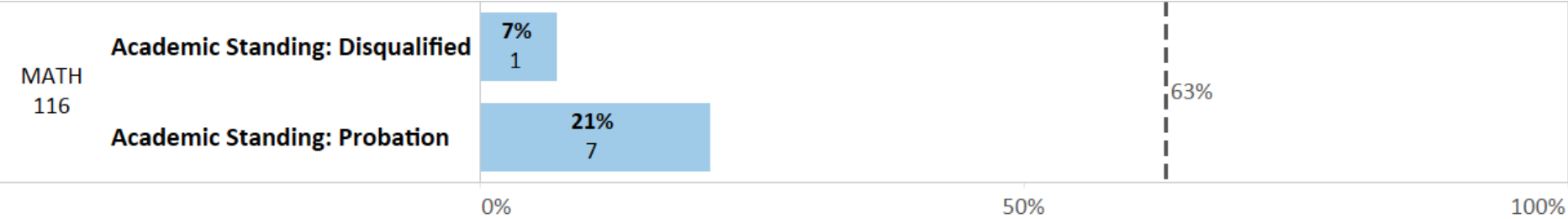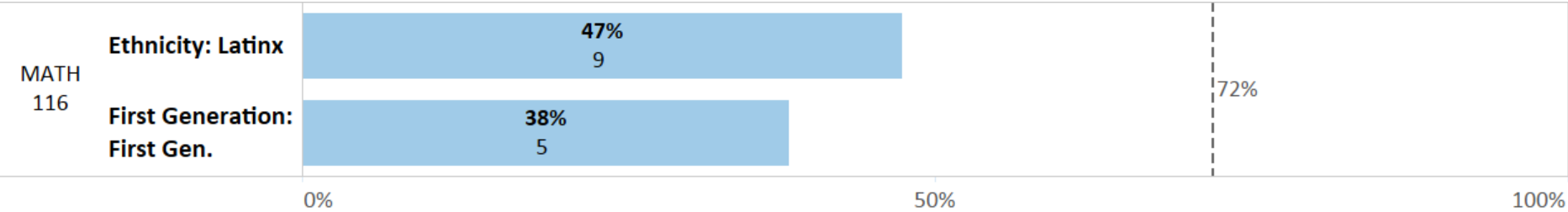**Cohort Success DIs**

Figure 45
Term Persistence Success DIs

Note. Equity gap benchmarks are average success and retention rates for all students who took MATH 116 in fall and spring terms from 2014/15 – 2016/17.

Math 119 and Math 119X

MATH 119 and 119X Trends

MATH 119X cohorts had:

- Higher cohort enrollment retention rates than non-X cohorts
- Higher persistent rates than non-X cohorts
- Higher term persistence retention and success rates than non-X cohorts

MATH 119X cohorts had:

- Higher cohort enrollment success rates than X cohorts
- Disproportionate impacts indicated for Fall 2019 cohort enrollment retention rate

Both MATH 119 and 119X cohorts had:

- Cohort enrollment retention rates similar to the benchmark cohort
- Cohort enrollment success rates lower than the benchmark cohort
- Term persistence rates lower than the benchmark cohort
- Term persistence retention and success rates lower than the benchmark cohort
- Term course repetition enrollment rates similar to the benchmark cohort
- Term course repetition success rates similar to the benchmark cohort
- Term course repetition retention rates lower than the benchmark cohort
- Disproportionate impacts indicated for:
 - Spring and fall 2019 cohort enrollment success rates

MATH 119 & 119X Outcomes and Persistence

Table 32
Cohort Outcomes

Cohort Term	Enrollments		Cohort Retention Count		Cohort Retention Rate		Cohort Success Count		Cohort Success Rate	
	Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Spring 2019	370	115	315	91	85%	79%	243	63	66%	55%
Fall 2019	395	210	319	185	81%	88%	253	111	64%	53%
Grand Total/Average	**765**	**325**	**634**	**276**	**83%**	**85%**	**496**	**174**	**65%**	**54%**
Benchmark	**2,829**		**2,441**		**86%**		**2,036**		**72%**	

Note: The benchmark cohort consists of students who took MATH 119 during fall and spring terms at Miramar College from 2014/15 – 2016/17.

Figure 46
Cohort Outcomes
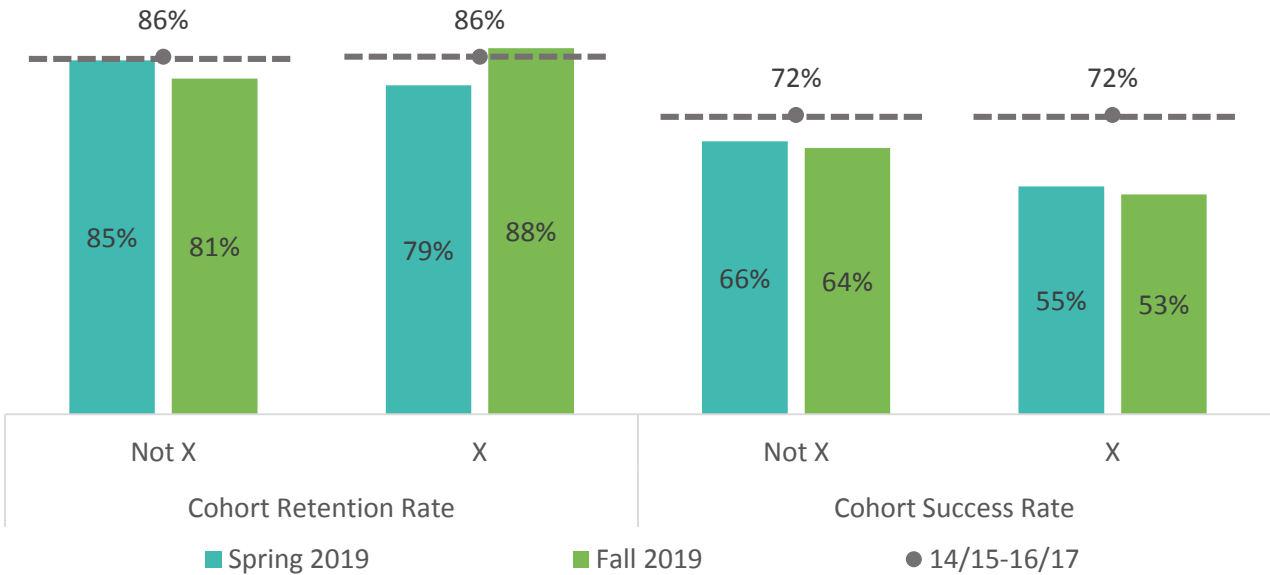
MATH 119 & 119X Outcomes and Persistence

Table 33
Persistence Rates

Cohort Term	Cohort Outcome	Cohort Headcount		Term Persistence		Term Persistence Rate		Annual Persistence		Annual Persistence Rate	
		Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Spring 2019	Succeeded	243	63	34	10	14%	16%	46	13	19%	21%
	Failed	127	52	42	24	33%	46%	56	30	44%	58%
	Total	**370**	**115**	**76**	**34**	**21%**	**30%**	**102**	**43**	**28%**	**37%**
Fall 2019	Succeeded	253	111	44	13	17%	12%				
	Failed	142	99	36	27	25%	27%				
	Total	**395**	**210**	**80**	**40**	**20%**	**19%**				
Grand Total/Average		**765**	**325**	**156**	**74**	**20%**	**23%**	**102**	**43**	**28%**	**37%**
Benchmark	Succeeded	2,036		466		23%		577		28%	
	Failed	793		271		34%		374		47%	
Grand Total/Average		**2,829**		**737**		**26%**		**951**		**34%**	

Note. A student is considered persistent if they took any other math class at SDCCD in a term subsequent to their cohort term. For spring, enrollment in the following summer or fall is considered "next term." For fall, the next term is spring.
Benchmarks are the average persistence rates for any math courses taken by students in MATH 119 cohorts between 2014/15 – 2016/17 after their cohort term.

MATH 119 & 119X Outcomes and Persistence
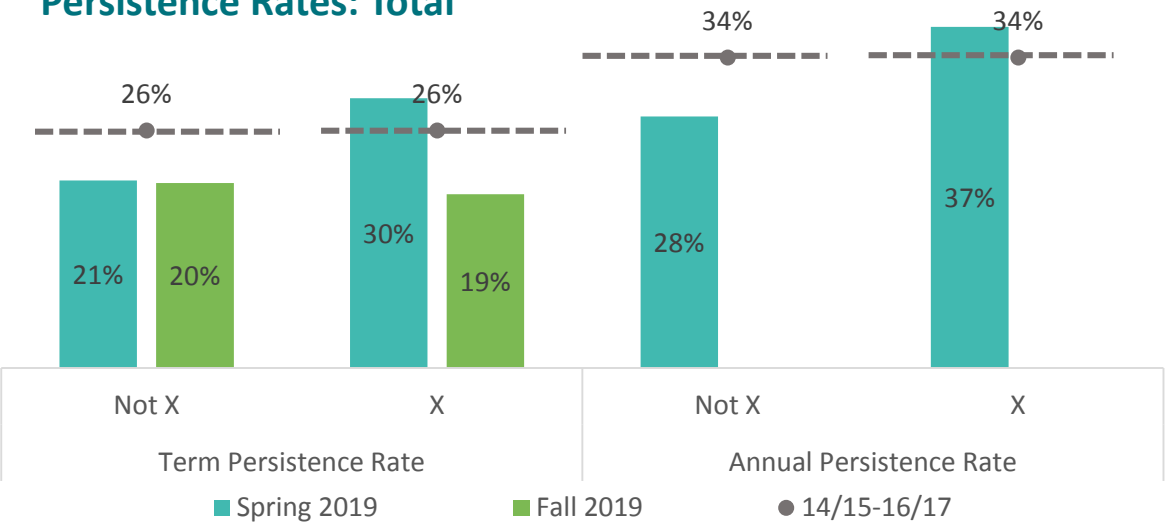
Figure 47
Persistence Rates: Total

34%   34%
26%   26%
21% 20% 30% 19% 28% 37%

| Term Persistence Rate | | Annual Persistence Rate | |
| Not X | X | Not X | X |

■ Spring 2019   ■ Fall 2019   ● 14/15-16/17

Figure 49
Persistence Rates: Failed

26%   26%   34%   34%
33% 25% 46% 27% 44% 58%

| Term Persistence Rate | | Annual Persistence Rate | |
| Not X | X | Not X | X |

■ Spring 2019 Failed   ■ Fall 2019 Failed   ● 14/15-16/17

Figure 48
Persistence Rates: Succeeded

34%   34%
26%   26%
14% 17% 16% 12% 19% 21%

| Term Persistence Rate | | Annual Persistence Rate | |
| Not X | X | Not X | X |

■ Spring 2019 Succeeded   ■ Fall 2019 Succeeded   ● 14/15-16/17
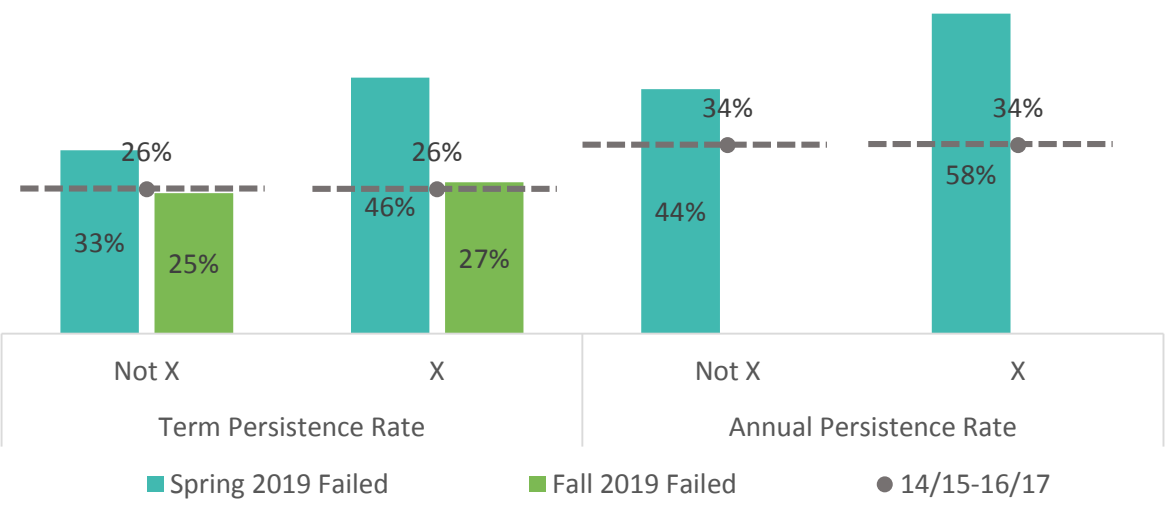
MATH 119 & 119X Outcomes and Persistence

Table 34
Term Persistent Enrollment Outcomes

Cohort Term	Cohort Outcome	Enrollments		Retention Counts		Retention Rate		Success Counts		Success Rate	
		Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Spring 2019	Succeeded	45	13	36	12	80%	92%	32	10	71%	77%
	Failed	52	36	39	28	75%	78%	29	22	56%	61%
Grand Total/Average		**97**	**49**	**75**	**40**	**77%**	**82%**	**61**	**32**	**63%**	**65%**
Benchmark	Succeeded	517		459		89%		386		75%	
	Failed	303		239		79%		161		53%	
Grand Total/Average		**820**		**698**		**85%**		**547**		**67%**	

Note. Benchmark rates are the average success and retention rates in any persisted math courses taken by students in MATH 119 cohorts between 2014/15 – 2016/17.

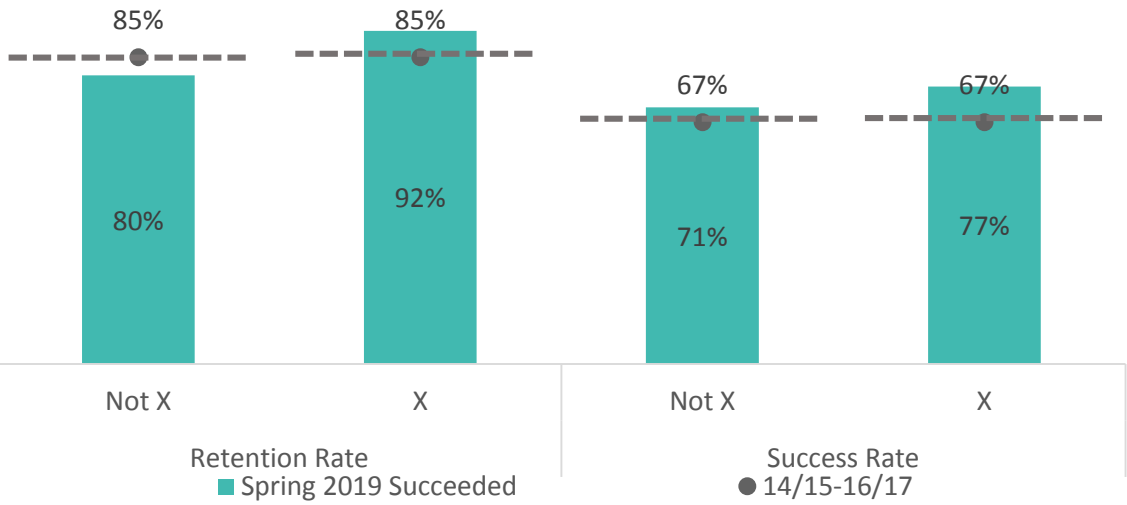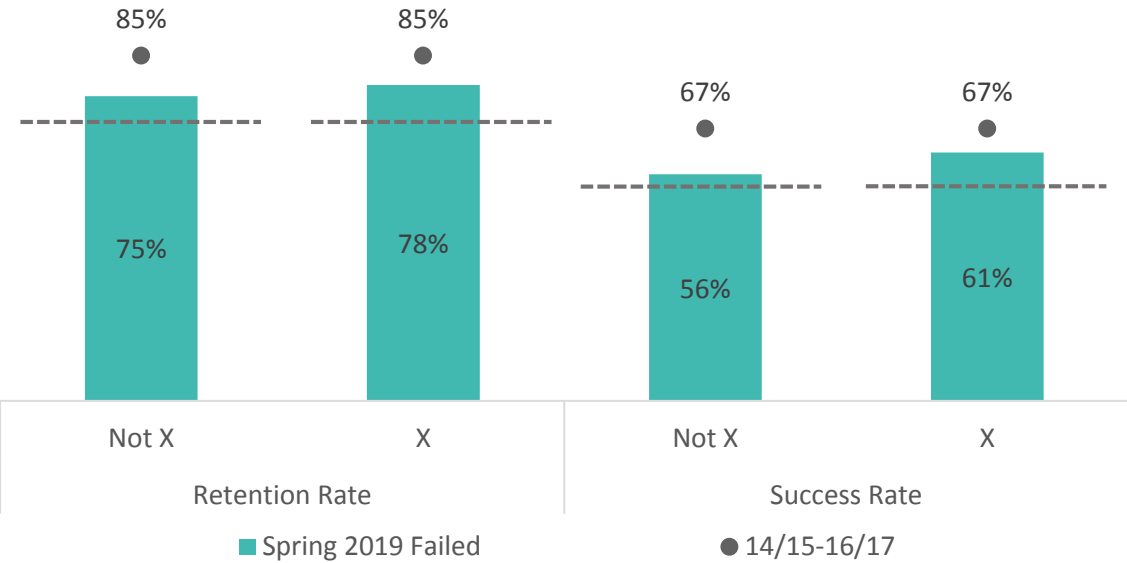*Figure 50*
Term Persistent Enrollment Outcomes: Succeeded


Figure 51
Term Persistent Enrollment Outcomes: Failed

MATH 119 & 119X Outcomes and Persistence

Course Repetition Rates

| Cohort Term	Headcount of Failed		Term Repetition Count		Term Repetition Rate		Annual Repetition Count		Annual Repetition Rate	
	Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Spring 2019	127	52	35	17	28%	33%	46	20	36%	38%
Fall 2019	142	99	27	19	19%	19%				
Grand Total/Average	**269**	**151**	**62**	**36**	**23%**	**24%**	**46**	**20**	**36%**	**38%**
Benchmark	**793**		**205**		**26%**		**304**		**38%**	

Figure 52
Course Repetition Rates
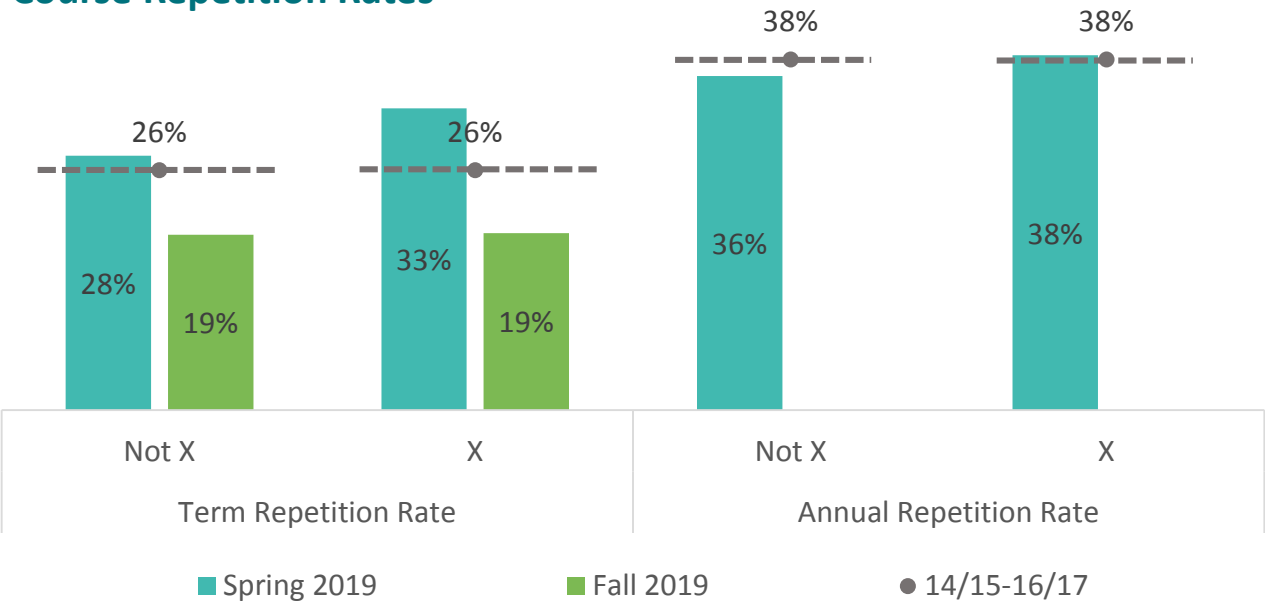
MATH 119 & 119X Outcomes and Persistence

Table 36

Term Course Repetition Outcomes

Cohort Term	Enrollment		Retention Count		Retention Rate		Success Count		Success Rate	
	Not X	X	Not X	X	Not X	X	Not X	X	Not X	X
Spring 2019	36	17	27	13	75%	76%	21	10	58%	59%
Grand Total/Average	**36**	**17**	**27**	**13**	**75%**	**76%**	**21**	**10**	**58%**	**59%**
Benchmark	**207**		**174**		**84%**		**121**		**58%**	

Figure 53
Term Course Repetition Outcomes

Spring 2019 ● 14/15-16/17
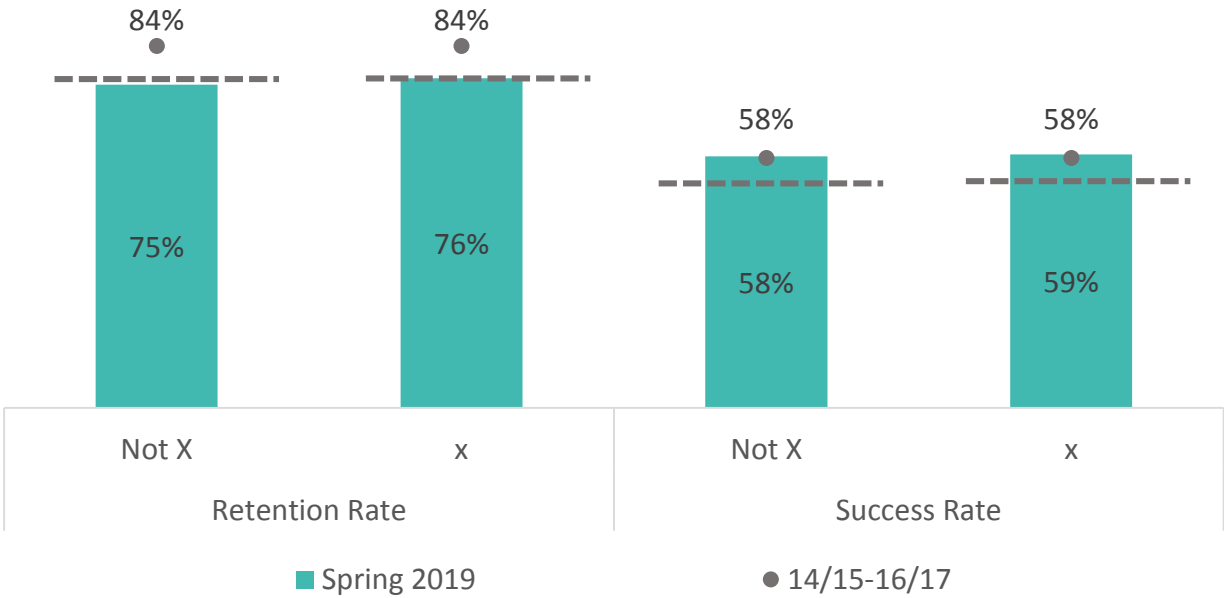
MATH 119 Outcomes and Persistence

Table 37
Miramar Only Top 5 Subsequent Courses and Outcomes

Cohort	Course	Subsequent Enrollments	Enrollment Rate	Retention Rate	Success Rate
Spring 2019 MATH 119	MATH 119	29	12%	70%	60%
	MATH 121	17	7%	50%	50%
	MATH 116	15	6%	75%	67%
	MATH 104	9	4%	100%	80%
	MATH 141	8	3%	100%	100%
Fall 2019 MATH 119	MATH 119	18	7%		
	MATH 116	14	6%		
	MATH 121	10	4%		
	MATH 151	6	2%		
	MATH 119 X	5	2%		

Table 38
SDCCD Top 5 Subsequent Courses and Outcomes

Cohort	Course	Subsequent Enrollments	Enrollment Rate	Retention Rate	Success Rate
Spring 2019 MATH 119	MATH 119	50	21%	54%	42%
	MATH 121	26	11%	31%	27%
	MATH 116	23	9%	57%	48%
	MATH 141	11	5%	45%	36%
	MATH 104	11	5%	45%	36%
Fall 2019 MATH 119	MATH 119	28	11%		
	MATH 116	18	7%		
	MATH 121	13	5%		
	MATH 151	7	3%		
	MATH 104	6	2%		

Note. Student subsequent enrollments were tracked for up to the next three consecutive terms.
The Miramar Only table separates X sections from non-X sections and excludes support courses for MATH 96, MATH 116, and MATH 119.
The SDCCD table does not separate X sections from non-X sections and includes support courses.

MATH 119X Outcomes and Persistence

Table 39
Miramar Only Top 5 Subsequent Courses and Outcomes

Cohort	Course	Subsequent Enrollments	Enrollment Rate	Retention Rate	Success Rate
Spring 2019 MATH 119 X	MATH 119 X	10	16%	88%	63%
	MATH 119	8	13%	67%	50%
	MATH 96	6	10%	100%	40%
	MATH 116	6	10%	75%	25%
	MATH 104	4	6%	100%	100%
Fall 2019 MATH 119 X	MATH 119 X	10	9%		
	MATH 116	8	7%		
	MATH 119	6	5%		
	MATH 104	4	4%		
	MATH 96	1	1%		

Table 40
SDCCD Top 5 Subsequent Courses and Outcomes

Cohort	Course	Subsequent Enrollments	Enrollment Rate	Retention Rate	Success Rate
Spring 2019 MATH 119 X	MATH 119	21	33%	62%	48%
	MATH 15A	12	19%	75%	75%
	MATH 116	11	17%	36%	18%
	MATH 96	8	13%	63%	25%
	MATH 104	4	6%	75%	75%
Fall 2019 MATH 119 X	MATH 119	19	17%		
	MATH 15A	11	10%		
	MATH 116	11	10%		
	MATH 104	5	5%		
	MATH 96	3	3%		

Note. Student subsequent enrollments were tracked for up to the next three consecutive terms.
The Miramar Only table separates X sections from non-X sections and excludes support courses for MATH 96, MATH 116, and MATH 119.
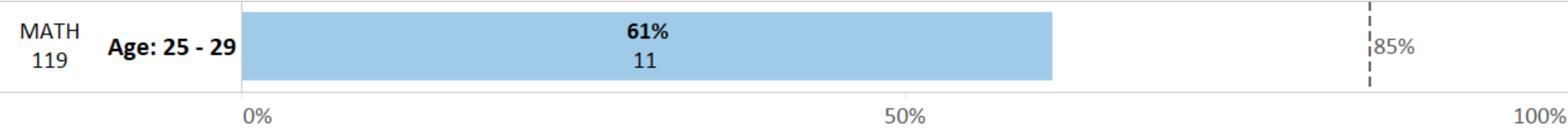The SDCCD table does not separate X sections from non-X sections and includes support courses.

Disproportionate Impact (DI)
MATH 119 & 119X

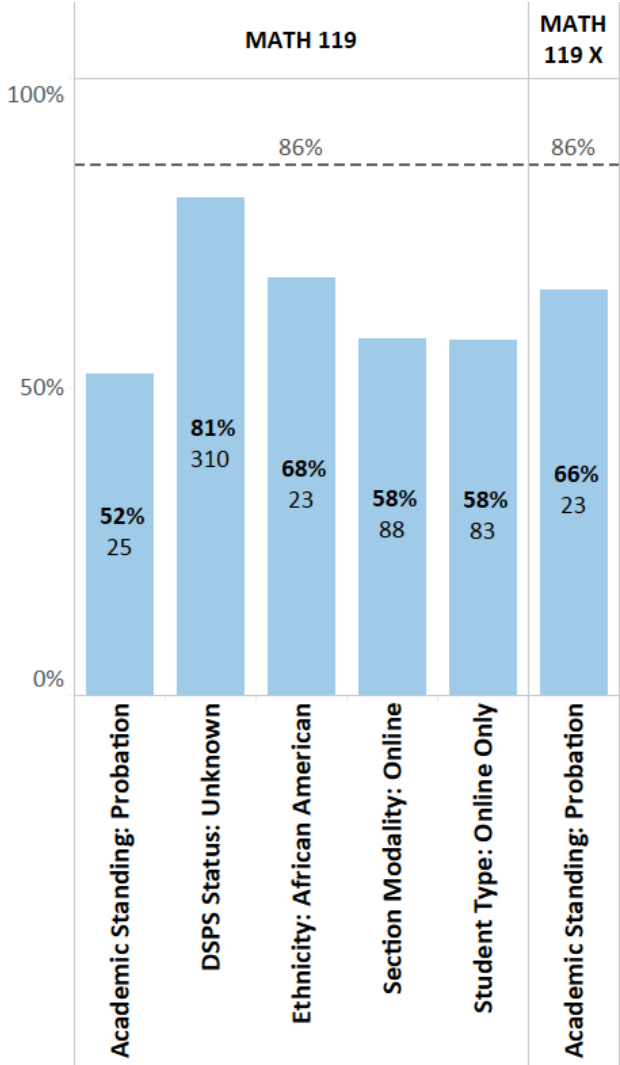# Disproportionate Impact (DI)
MATH 119 & 119X

Figure 54

Term Persistence Retention DIs

		61% 11	85%
MATH 119	Age: 25 - 29		

Note: Equity gap benchmarks are average success and retention rates for all students who took MATH 119 in fall and spring terms from 2014/15 – 2016/17.

Disproportionate Impact (DI)
MATH 119 & 119X

Figure 55
Cohort Retention DIs

Disproportionate Impact (DI)
MATH 119 & 119X

Figure 56
Cohort Success DIs