



Institutional Effectiveness, Research, & Planning

Math Success Center Data Report 2015-18

December 17, 2018

This report examines the relationship between visiting Cerritos College's Math Success Center (Math SC) and academic outcomes of students enrolled in a math course during the 2016-18 school years. The report also compares academic outcomes between students who chose to visit the Math SC and those who did not.

EXECUTIVE SUMMARY

The students who visited Math SC were more likely to pass and complete math courses than those who did not visit the Math SC. Similarly, students who visited the center more often were more likely to pass and complete their course than students who visited less often.

Details of the Data

In total, 3,704 unduplicated students visited the Math SC¹ during the 2017-18 school year; a 15% increase from the previous year total of 3,222 unduplicated students. Of the 3,704 unduplicated students who visited the success center for math, 3,204 were enrolled in a math course during fall 2017 or spring 2018. Math SC participants were categorized according to their total number of visits during the last three school years. The categories were **minimal user** (1 visit), **casual user** (2-5 visits), **moderate user** (6-10 visits), **frequent user** (11-20 visits) and **extreme user** (21 and more visits). Most Math SC participants were minimal or casual users. About 85% of students who visited the Math SC at least once for math-themed tutoring, directed learning activities (DLAs), or workshops over the past three academic years were enrolled in at least one math course during that school year.

Table 1. Frequencies for Math Success Center Student Visits

Type	Year	Minimum	Maximum	Mode	Median	Mean	SD	Sum
Visits	2015-2016	1	193	1	3	9.5	16.8	31512
	2016-2017	1	349	1	5	16.0	26.9	51608
	2017-2018	1	337	1	6	14.0	22.8	51945
Time Spent	2015-2016	30	12:00:00	36	01:21:02	01:37:12	01:18:14	2127 d 05:46:59
	2016-2017	30	12:37:48	36	01:13:08	01:25:00	01:01:12	3046 d 05:50:39
	2017-2018	30	13:00:00	01:00:00	01:11:21	01:27:10	01:04:54	3144 d 07:26:00

¹ Visits to the Math SC include math tutoring, directed learning activities, and workshops. Data were cleaned to only count visits that lasted between 30 seconds and 14 hours. All during the fall and spring semesters.

Figure 1. Count of Math SC Participants, Unduplicated

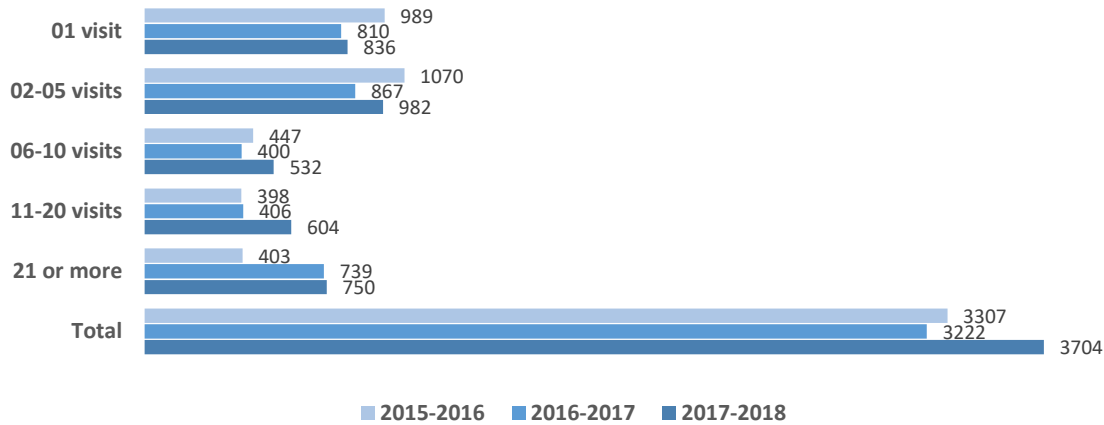


Figure 2. Count of Math SC Participants Enrolled in Math Course, Unduplicated

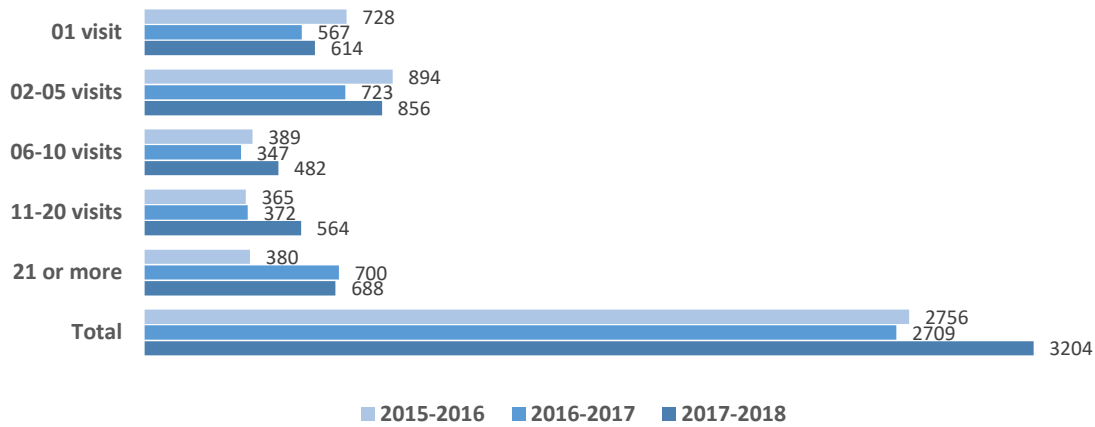
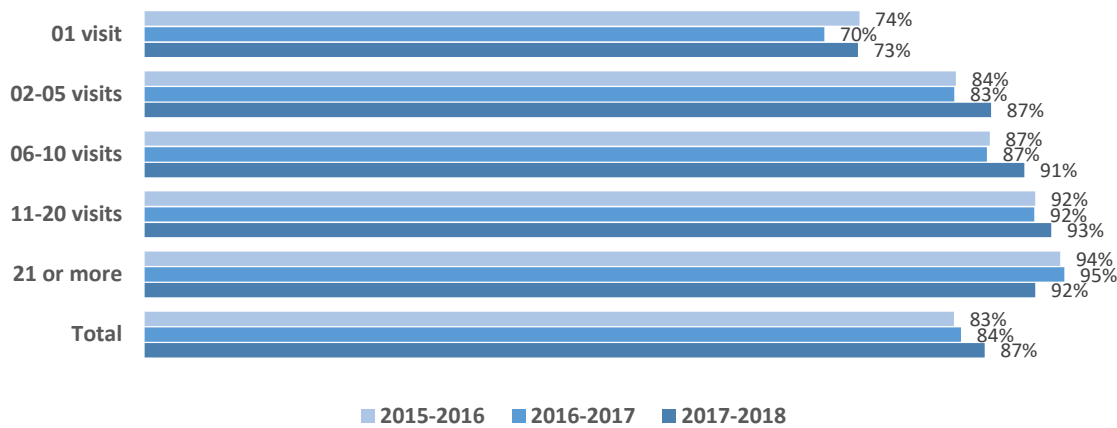


Figure 3. Percent of Math SC Participants Enrolled in Math Course



Math Enrollments by Course

Table 2 shows the number of enrollments in each math course by school year. Overall, Math 60 had the highest number of enrollees who visited the Math SC (963 in 2018) and the highest total number of enrollments (2,853 in 2018).

Table 2. Math SC Enrollments by Math Course

Math Class*	2015-2016			2016-2017			2017-2018		
	Math SC	Overall	%	Math SC	Overall	%	Math SC	Overall	%
5	61	201	30.3	26	99	26.3	52	186	28
40	311	1375	22.6	191	1109	17.2	366	1069	34.2
60	816	2562	31.9	939	2467	38.1	963	2853	33.8
70	66	239	27.6	79	242	32.6	74	261	28.4
75	22	70	31.4	93	186	50	122	265	46
80	599	1866	32.1	724	1904	38	901	2315	38.9
80A	194	704	27.6	172	746	23.1	208	497	41.9
80B	155	467	33.2	132	440	30	133	359	37
105	16	30	53.3	13	30	43.3	7	28	25
110A	25	76	32.9	14	50	28	24	69	34.8
110B	14	29	48.3	8	35	22.9	11	24	45.8
112	328	867	37.8	459	950	48.3	511	1292	39.6
114	308	821	37.5	218	751	29	316	827	38.2
115	4	28	14.3	4	13	30.8			
116	97	238	40.8	91	204	44.6	74	169	43.8
140	193	432	44.7	162	437	37.1	238	509	46.8
150	186	363	51.2						
155				82	166	49.4	168	364	46.2
170	191	323	59.1	180	324	55.6	169	326	51.8
190	116	199	58.3	150	214	70.1	110	232	47.4
220	62	134	46.3	63	128	49.2			
225							33	70	47.1
250	30	73	41.1	46	72	63.9	44	80	55
Overall	3794	11097	34.2	3846	10567	36.4	4524	11795	38.4

*Students may be enrolled in multiple courses in the same term and throughout the school year.

Academic Achievement for Math SC Participants and Non-Participants

Table 3 shows indicators of academic achievement for Math SC participants and non-participants. Overall, Math SC participants had higher cumulative GPAs, enrolled in more units during the semester they took a math course, and had a higher cumulative unit count than non-participants.

Table 3. Comparison of Math SC Participants and Non-Participants Enrolled in a Math Course on Academic Achievement Indicators.

Outcomes	Year	SC Median	No SC Median	SC Mean	No SC Mean	SC SD	No SC SD
Cumulative GPA	2015-2016	2.86	2.65	2.81	2.51	0.70	0.88
	2016-2017	2.92	2.72	2.82	2.59	0.71	0.85
	2017-2018	2.90	2.68	2.81	2.54	0.72	0.88
Cumulative Units	2015-2016	41.0	31.0	46.3	38.6	31.1	29.7
	2016-2017	42.0	33.5	48.5	41.1	34.4	30.8
	2017-2018	44.0	32.5	48.6	41.4	32.0	30.9
Units Taken	2015-2016	9.0	7.0	9.0	7.6	4.5	4.5
	2016-2017	10.0	8.0	9.4	8.0	4.5	4.6
	2017-2018	10.0	9.0	9.5	8.4	4.6	4.7

Demographic Data for Math SC Participants and Non-Participants

Tables 4 through 6 show demographic data for students who enrolled in a math course in the last three school years. The tables compare students who visited the Math Success Center to students who did not.

In terms of gender (Table 4), female students were more likely to participate in Math Success Center activities over the last three school years at a rate two to three percent higher than non-participants and at a rate one to two percent higher than the gender distribution in overall math enrollments.

In terms of race and ethnicity (Table 5), the Math Success Center figures generally reflect math enrollments. African American/Black and American Indian/Alaska National students participate in the Math Success Center at rate slightly above their proportion of the overall math enrollment population while Hispanic/Latino students (and to a smaller extent Asian students) participate at a rate slightly lower than their proportion of the overall math enrollment population.

Finally, in terms of age (Table 6), there is a symmetrical relationship between older students (25 and older) and younger students (24 and under). Older students participate in the Math Success Center about four points above their proportion of math enrollments. On the other hand, younger students participate in the Math Success Center about four points below their proportion of math enrollments.

Table 4. Comparison of Math SC Participants and Non-Participants Enrolled in a Math Course by Gender

Demo Var	2015-2016				2016-2017				2017-2018			
Gender	SC Count	SC Percent	No SC Count	No SC Percent	SC Count	SC Percent	No SC Count	No SC Percent	SC Count	SC Percent	No SC Count	No SC Percent
F	1470	53.3	3080	51.2	1480	54.6	2884	51.6	1742	54.4	3040	51.6
M	1227	44.5	2837	47.2	1173	43.3	2616	46.8	1403	43.8	2769	47
U	59	2.1	93	1.5	56	2.1	90	1.6	59	1.8	88	1.5
Total	2756	100	6010	100	2709	100	5590	100	3204	100	5897	100

Table 5. Comparison of Math SC Participants and Non-Participants Enrolled in a Math Course by Ethnicity

Demo Var	2015-2016				2016-2017				2017-2018			
Race/Ethnicity	SC Count	SC Percent	No SC Count	No SC Percent	SC Count	SC Percent	No SC Count	No SC Percent	SC Count	SC Percent	No SC Count	No SC Percent
Af Am/Black	98	3.6	159	2.6	83	3.1	96	1.7	82	2.6	91	1.5
Am In/AK Nat.	160	5.8	256	4.3	176	6.5	296	5.3	202	6.3	332	5.6
Asian	321	11.6	791	13.2	387	14.3	818	14.6	510	15.9	916	15.5
Filipino	52	1.9	100	1.7	25	0.9	65	1.2	28	0.9	48	0.8
Hispanic/Latino	1823	66.1	4055	67.5	1794	66.2	3816	68.3	2113	65.9	4034	68.4
Multiracial	2	0.1	2	0	1	0						
Pacific Islander	22	0.8	31	0.5	13	0.5	34	0.6	18	0.6	36	0.6
Unknown	197	7.1	407	6.8	174	6.4	349	6.2	211	6.6	372	6.3
White	81	2.9	209	3.5	56	2.1	116	2.1	40	1.2	68	1.2
Total	2756	100	6010	100	2709	100	5590	100	3204	100	5897	100

Table 6. Comparison of Math SC Participants and Non-Participants Enrolled in a Math Course by Age Group

Demo Var	2015-2016				2016-2017				2017-2018			
Age	SC Count	SC Percent	No SC Count	No SC Percent	SC Count	SC Percent	No SC Count	No SC Percent	SC Count	SC Percent	No SC Count	No SC Percent
19 or younger	765	27	1989	32.6	804	29	1909	33.6	1020	31	2163	36.2
20-24	1219	43	2667	43.7	1149	41.4	2383	42	1329	40.4	2418	40.5
25-29	430	15.2	839	13.7	385	13.9	787	13.9	450	13.7	839	14.1
30-34	154	5.4	300	4.9	192	6.9	300	5.3	209	6.4	265	4.4
35-39	106	3.7	143	2.3	92	3.3	136	2.4	119	3.6	141	2.4
40-49	110	3.9	128	2.1	103	3.7	117	2.1	110	3.3	115	1.9
50 or older	54	1.9	36	0.6	52	1.9	42	0.7	54	1.6	29	0.5
Total	2838	100	6102	100	2777	100	5674	100	3291	100	5970	100

Completion and Success Rates by Math SC

Completion. Completion rate is the percentage of students that earn a grade (A, B, C, D, F, P, or NP) and do not withdraw from a course. Table 7 compares completion rates for Math SC participants and non-participants by course, with a chi-square test of independence denoting a significant difference between Math SC participants and non-participants annually and over SY16-18 in terms of completion rates ($\chi^2(1) = 294.31, p < .001$).

Further analysis showed that the risk of not completing was 41% higher for Math SC non-participants relative to Math SC participants (RR 1.41, 95% CI: 1.35-1.47).

Table 7. Completion Rates by course for Math SC Participants and Non-Participants by Math Course

Math Class	2015-2016				2016-2017				2017-2018			
	SC %	SC Enrl.	No SC %	No SC Enrl.	SC %	SC Enrl.	No SC %	No SC Enrl.	SC %	SC Enrl.	No SC %	No SC Enrl.
5	85	61	70	140	85	26	67	73	67	52	69	134
40	81	311	75	1064	85	191	74	918	78	366	77	703
60	75	816	66	1746	81	939	69	1528	74	963	66	1890
70	89	66	79	173	85	79	74	163	77	74	66	187
75	100	22	81	48	88	93	71	93	82	122	66	143
80	80	599	70	1267	81	724	69	1180	78	901	75	1414
80A	82	194	79	510	83	172	76	574	71	208	70	289
80B	85	155	79	312	92	132	74	308	89	133	86	226
105	81	16	57	14	92	13	82	17	71	7	86	21
110A	100	25	96	51	100	14	97	36	100	24	87	45
110B	86	14	93	15	62	8	78	27	91	11	85	13
112	83	328	72	539	80	459	72	491	86	511	73	781
114	65	308	55	513	70	218	62	533	64	316	57	511
115	50	4	67	24	50	4	56	9				
116	93	97	77	141	80	91	69	113	85	74	72	95
140	79	193	66	239	80	162	69	275	73	238	61	271
150	78	186	72	177								
155					80	82	67	84	77	168	70	196
170	80	191	63	132	78	180	71	144	78	169	70	157
190	80	116	63	83	77	150	52	64	76	110	67	122
220	79	62	64	72	92	63	78	65				
225									97	33	86	37
250	90	30	67	43	78	46	62	26	84	44	89	36
Overall	79	3794	70	7303	81	3846	71	6721	77	4524	70	7271

Student Success. Success rate is the percentage of students that earn a grade of A, B, C, or P (passing); while failure is the percentage of students that earn a grade of D, F, W, FW, or NP (not passing). Table 8 compares success rates for Math SC participants and non-participants by course, with a chi-square test of independence denoting a significant difference between Math SC participants and non-participants annually and over SY16-18 in terms of success rates, ($\chi^2(1) = 557.32, p < .001$). Further analysis showed that the risk of not passing was 37% higher for Math SC non-participants, relative to Math SC participants (RR 1.37, 95% CI: 1.33-1.40).

Table 8. Comparison of Success Rates for Math SC Participants and Non-Participants by Math Course

Math Class	2015-2016				2016-2017				2017-2018			
	SC %	SC Enrl.	No SC %	No SC Enrl.	SC %	SC Enrl.	No SC %	No SC Enrl.	SC %	SC Enrl.	No SC %	No SC Enrl.
5	77	61	57	140	62	26	56	73	54	52	49	134
40	69	311	56	1064	68	191	55	918	59	366	50	703
60	57	816	44	1746	60	939	45	1528	52	963	37	1890
70	80	66	66	173	67	79	61	163	70	74	51	187
75	82	22	58	48	65	93	41	93	53	122	44	143
80	64	599	52	1267	67	724	48	1180	58	901	46	1414
80A	70	194	61	510	66	172	61	574	51	208	51	289
80B	77	155	67	312	81	132	64	308	80	133	68	226
105	69	16	36	14	85	13	76	17	71	7	62	21
110A	100	25	96	51	86	14	92	36	83	24	62	45
110B	64	14	93	15	62	8	63	27	45	11	69	13
112	75	328	62	539	70	459	57	491	71	511	55	781
114	55	308	41	513	60	218	46	533	51	316	38	511
115	50	4	58	24	25	4	56	9				
116	79	97	63	141	73	91	59	113	72	74	58	95
140	70	193	48	239	70	162	56	275	57	238	42	271
150	69	186	61	177								
155					76	82	51	84	59	168	49	196
170	69	191	48	132	68	180	60	144	54	169	46	157
190	77	116	48	83	71	150	42	64	57	110	43	122
220	69	62	46	72	84	63	63	65				
225									73	33	65	37
250	83	30	58	43	65	46	35	26	75	44	67	36
Overall	67	3794	53	7303	67	3846	52	6721	59	4524	46	7271

Frequency of Math SC Visits and Course Outcomes

The final two columns of Table 9 show the success and completion rates for Math SC participants by the number of times they visit the Math SC each school year. These data suggest a positive relationship between number of visits to the Math SC and completion/success rates.

Table 9. Math SC User Profile Data

Year	Frequency of Visits	Count of Visitors	Percent of Total	Average Frequency	Average Time	Completion Rate	Success Rate
2015-2016	01 visit	728	26	1	01:01:05	73	58
	02-05 visits	894	32	3.11	01:17:21	78	63
	06-10 visits	389	14	7.78	01:19:39	77	67
	11-20 visits	365	13	14.7	01:29:02	83	71
	21 or more	380	14	45.06	01:49:32	89	83
	Total	2756	100	10.53	01:38:20	79	67
2016-2017	01 visit	567	21	1	01:01:52	73	56
	02-05 visits	723	27	3.09	01:14:34	77	60
	06-10 visits	347	13	7.72	01:21:44	80	62
	11-20 visits	372	14	15.05	01:21:23	82	69
	21 or more	700	26	53.11	01:26:44	88	80
	Total	2709	100	17.81	01:24:59	81	67
2017-2018	01 visit	614	19	1	01:04:05	74	50
	02-05 visits	856	27	3.16	01:11:17	69	49
	06-10 visits	482	15	7.84	01:23:06	72	53
	11-20 visits	564	18	15.07	01:27:02	84	65
	21 or more	688	21	46.6	01:31:12	87	72
	Total	3204	100	14.88	01:28:20	77	59

Directed Learning Activities

In SY 2018, the success center hosted 554 Math Directed Learning Activities (DLA) for 208 unduplicated students. Of those 208, 149 were enrolled in in math courses during fall 2017 or spring 2018. The total number of Math DLA visits dropped 66% between SY 2016 and SY 2017 and grew 42% between SY 2017 and SY 2018. Table 10 lists the count of Math DLA visits by topics.

Math DLA participants were categorized according to their total number of visits during the last three school years. The categories, again, were **minimal user** (1 visit), **casual user** (2-5 visits), **moderate user** (6-10 visits), **frequent user** (11-20 visits) and **extreme user** (21 and more visits). Most Math DLA participants were minimal or casual users. Given the fluctuation in Math DLA participation over the past three school years, other participant trends were not readily apparent.

Figure 4. Count of Math DLA Participants, Unduplicated

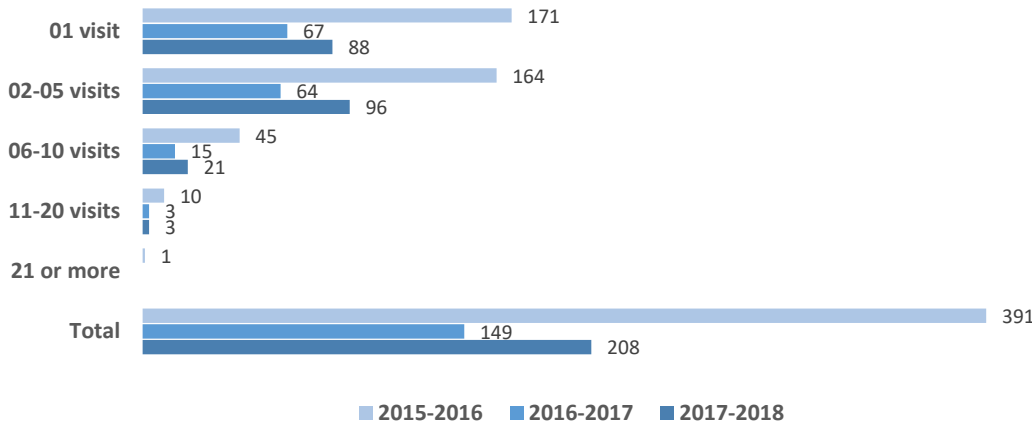


Figure 5. Count of Math DLA Participants Enrolled in Math Course, Unduplicated

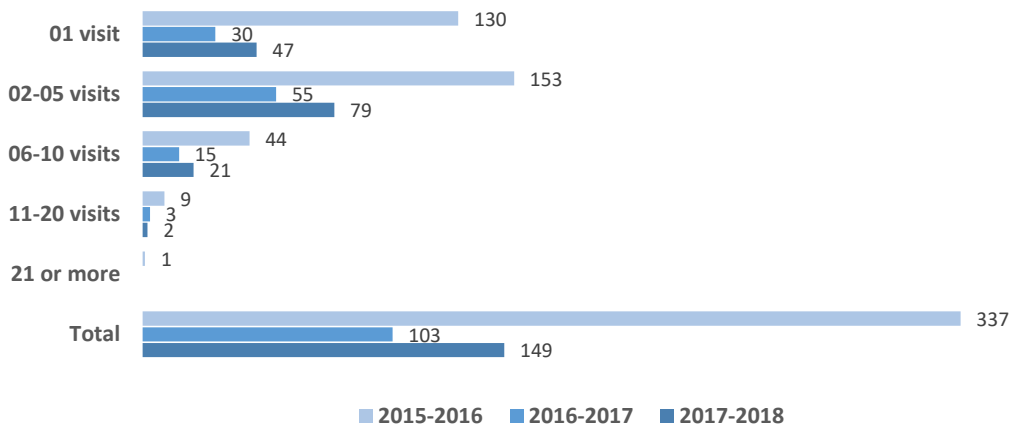


Figure 6. Percent of Math DLA Participants Enrolled in Math Course

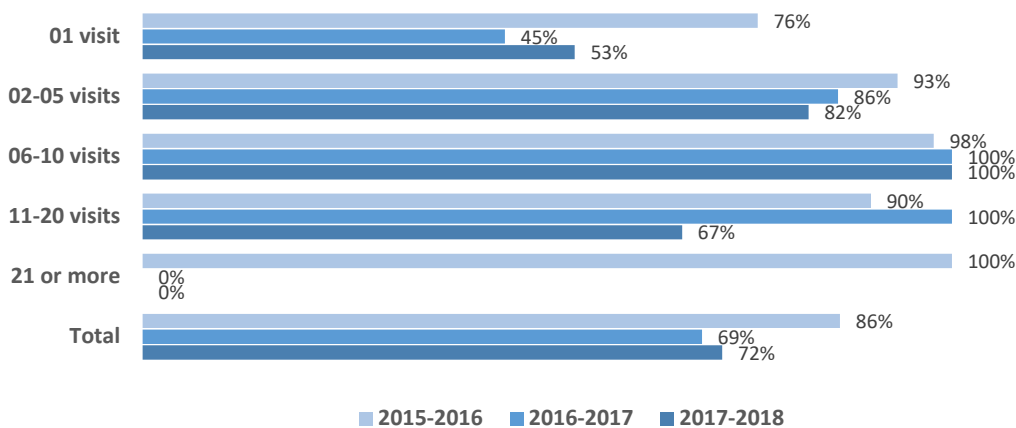


Table 10. Count of Math DLA visits by type

Directed Learning Activity	2015-2016	2016-2017	2017-2018
M001.1 - Equivalent Fractions	26	3	18
M002.1 - Order of Operations	23	3	18
M003.1 - Unit Conversion	6	3	2
M004.1 - Adding and Subtracting Integers	36	2	17
M005.1 - Order of Operations - Scientific Calcula	7	2	2
M006.1 - Solving Basic Linear Equations Using Chips	13	2	9
M007.1 - Adding and Subtracting Fractions-Fraction Tiles	12	8	6
M008.1 - Applying The Concepts of Percent	7	2	1
M009.1 - Proportional Reasoning	3	7	1
M010.1 - Adding and Subtracting Whole Numbers	12	1	2
M011.1 - Multiplying and Dividing Whole Numbers	7	1	2
M012.1 - Adding and Subtracting Decimals	7	6	6
M013.1 - Multiplying and Dividing Decimals	9	2	4
M014.1 - After-Exam Debriefing	211	3	3
M101.1 - Linear Model Applications	33	10	11
M102.1 - Scientific Notation	57	22	19
M103.1 - Word Problems (Investments)	55	8	13
M104.1 - Word Problems (Mixtures)	51	14	4
M105.1 - Word Problems (Coin)	34	3	13
M106.1 - Word Problems (Translation)	32	4	12
M107.1 - Word Problems: Uniform Motion	13	3	10
M108.1 - Solving Linear Equations	65	34	30
M109.1 - Quadratic Formula	74	34	32
M110.1 - Translating Algebraic Expressions	32	8	12
M111.1 - Transformations Using Parent Graphs	25	2	12
M112.1 - Factoring Up to Four Terms	57	33	36
M113.1 - Factoring: 3-Terms (ac Method)	33	28	68
M114.1 - Factoring: Two Terms	109	46	72
M115.1 - Factoring: 3-Terms (a=1)	35	30	34
M116.1 - Factoring: 3-Terms (does not equal 1)	26	6	10
M401.1 - Pythagorean Theorem	14	5	4
M402.1 - Simplifying Using Trigonometric Identities	1		
M403.1 - Graphing Sine and Cosine Functions (Part One)	1		
M404.1 - Graphing Sine And Cosine Functions (Part Two)		1	1
M601.1 - Pharamacology Calculations	44	48	61
M602.1 - Reading a Food Label		5	9
M603.1 - Unit Converstion: Volume Areas		1	
Total	1170	390	554

Demographic Data for Math DLA Participants and Non-Participants

Tables 11 through 13 show demographic data for students who enrolled in a math course in the last three academic years. The tables compare math DLA participants to non-math DLA participants at the Math SC.

In terms of gender (Table 11), there is a large gender gap between DLA participants and non-participants during SY 2017 and SY 2018, with female participants numbering three times the number of male participants during SY 2018.

In terms of race and ethnicity and age groups (Tables 12 and 13), figures roughly reflect the racial/ethnic and age distributions observed in overall math enrollments. Given the size of the annual DLA subsets, it is difficult to draw any other inferences about the populations' variation in terms of race/ethnicity and age.

Table 11. Comparison of Math DLA Participants and Non-Participants Enrolled in a Math Course by Gender

Demo Var	2015-2016				2016-2017				2017-2018			
	SC Count	SC Percent	No SC Count	No SC Percent	SC Count	SC Percent	No SC Count	No SC Percent	SC Count	SC Percent	No SC Count	No SC Percent
F	188	55.8	4362	51.7	73	70.9	4291	52.4	112	75.2	4670	52.2
M	138	40.9	3926	46.6	28	27.2	3761	45.9	34	22.8	4138	46.2
U	11	3.3	141	1.7	2	1.9	144	1.8	3	2	144	1.6
Total	337	100	8429	100	103	100	8196	100	149	100	8952	100

Table 12. Comparison of Math DLA Participants and Non-Participants Enrolled in a Math Course by Ethnicity

Demo Var	2015-2016				2016-2017				2017-2018			
	SC Count	SC Percent	No SC Count	No SC Percent	SC Count	SC Percent	No SC Count	No SC Percent	SC Count	SC Percent	No SC Count	No SC Percent
Af Am/Black	11	3.3	246	2.9	5	4.9	174	2.1	3	2	170	1.9
Am In/AK Nat.	11	3.3	405	4.8	5	4.9	467	5.7	5	3.4	529	5.9
Asian	41	12.2	1071	12.7	15	14.6	1190	14.5	19	12.8	1407	15.7
Filipino	6	1.8	146	1.7	1	1	89	1.1			76	0.8
Hispanic/Latino	231	68.5	5647	67	70	68	5540	67.6	109	73.2	6038	67.4
Multiracial	1	0.3	3	0			1	0				
Pacific Islander	2	0.6	51	0.6			47	0.6	2	1.3	52	0.6
Unknown	24	7.1	580	6.9	6	5.8	517	6.3	8	5.4	575	6.4
White	10	3	280	3.3	1	1	171	2.1	3	2	105	1.2
Total	337	100	8429	100	103	100	8196	100	149	100	8952	100

Table 13. Comparison of Math DLA Participants and Non-Participants Enrolled in a Math Course by Age

Demo Var	2015-2016				2016-2017				2017-2018			
	SC Count	SC Percent	No SC Count	No SC Percent	SC Count	SC Percent	No SC Count	No SC Percent	SC Count	SC Percent	No SC Count	No SC Percent
19 or younger	89	25.5	2665	31	40	38.1	2673	32	42	27.8	3141	34.5
20-24	146	41.8	3740	43.5	35	33.3	3497	41.9	63	41.7	3684	40.4
25-29	57	16.3	1212	14.1	14	13.3	1158	13.9	21	13.9	1268	13.9
30-34	22	6.3	432	5	8	7.6	484	5.8	12	7.9	462	5.1
35-39	11	3.2	238	2.8	1	1	227	2.7	1	0.7	259	2.8
40-49	11	3.2	227	2.6	4	3.8	216	2.6	7	4.6	218	2.4
50 or older	13	3.7	77	0.9	3	2.9	91	1.1	5	3.3	78	0.9
Total	349	100	8591	100	105	100	8346	100	151	100	9110	100

Academic Outcomes by Math DLA Use

Table 14 shows indicators of academic achievement for Math DLA participants and non-participants. Overall, math DLA participants had higher cumulative GPAs and enrolled in more units during the semester they took a math course. No pattern emerged in terms of cumulative units between DLA participants and non-participants.

Table 14. Comparison of math DLA Participants and Non-Participants Enrolled in a Math Course on Academic Achievement Indicators.

Outcomes	Year	SC Median	No SC Median	SC Mean	No SC Mean	SC SD	No SC SD
Cumulative GPA	2015-2016	2.95	2.70	2.91	2.57	0.63	0.85
	2016-2017	2.74	2.76	2.73	2.64	0.61	0.83
	2017-2018	2.90	2.74	2.80	2.61	0.67	0.85
Cumulative Units	2015-2016	38.0	33.0	44.7	40.2	28.2	30.3
	2016-2017	27.8	36.0	36.4	43.1	29.1	32.0
	2017-2018	40.0	36.0	45.7	43.5	27.6	31.5
Units Taken	2015-2016	10.0	8.0	10.0	7.9	4.2	4.5
	2016-2017	11.0	8.0	10.9	8.4	3.4	4.5
	2017-2018	11.0	9.0	10.4	8.6	4.5	4.6

Completion and Success Rates by Math DLA Use

Completion. Completion rate is the percentage of students that earn a grade (A, B, C, D, F, P, or NP) and do not withdraw from a course. Table 16 compares completion rates for Math DLA participants and non-participants by course, with a chi-square test of independence denoting a significant difference between math DLA participants and non-participants annually and over SY16-18 in terms of completion rates ($\chi^2 (1) = 85.47, p < .001$). Further analysis showed twice the risk of non-completion for Math DLA non-participants relative to Math DLA participants (RR 2.07, 95% CI: 1.75-2.46).

Table 16. Completion Rates by Course for Math DLA Participants and Non-Participants

Math Class	2015-2016				2016-2017				2017-2018			
	SC %	SC Enrl.	No SC %	No SC Enrl.	SC %	SC Enrl.	No SC %	No SC Enrl.	SC %	SC Enrl.	No SC %	No SC Enrl.
5	79	24	74	177			72	98	60	5	69	181
40	88	65	75	1310	60	5	76	1104	95	20	77	1049
60	84	122	68	2440	95	85	73	2382	92	77	68	2776
70	67	3	82	236	75	4	78	238	50	2	69	259
75	100	2	87	68	100	2	79	184	33	3	74	262
80	89	101	72	1765	93	60	73	1844	93	45	76	2270
80A	83	23	80	681			78	746	100	1	70	496
80B	95	20	80	447	50	2	80	438	100	15	87	344
105			70	30			87	30			82	28
110A	100	1	97	75	100	1	98	49			91	69
110B			90	29			74	35			88	24
112	100	13	76	854	67	6	76	944	100	6	78	1286
114	50	8	59	813	60	5	64	746	67	33	59	794
115			64	28			54	13				
116			84	237	100	1	74	203	100	4	77	165
140	100	29	70	403	50	2	73	435	75	4	67	505
150	83	76	73	287								
155							73	166			73	364
170	69	13	73	310			75	324	100	1	74	325
190			73	199			69	214	100	1	71	231
220			71	134			85	128				
225											91	70
250			77	73			72	72			86	80
Overall	86	501	73	10596	90	174	74	10393	88	217	73	11578

Student Success. Success rate is the percentage of students that earn a grade of A, B, C, or P (passing); while failure is the percentage of students that earn a grade of W, D, F, FW, or NP (not passing). Table 16 compares success rates for Math SC participants and non-participants by course, with a chi-square test of independence denoting a significant difference between math DLA participants and non-participants annually and over SY16-18 in terms of success rates, ($\chi^2(1) = 92.19, p < .001$). Further analysis showed that the risk of not passing was 56% higher for math DLA non-participants, relative to math DLA participants (RR 1.56, 95% CI: 1.41-1.73).

Table 16. Comparison of Success Rates for Math DLA Participants and Non-Participants by Math Course

Math Class	2015-2016				2016-2017				2017-2018			
	SC %	SC Enrl.	No SC %	No SC Enrl.	SC %	SC Enrl.	No SC %	No SC Enrl.	SC %	SC Enrl.	No SC %	No SC Enrl.
5	79	24	61	177			58	98	40	5	51	181
40	72	65	58	1310	60	5	57	1104	85	20	53	1049
60	67	122	47	2440	78	85	50	2382	53	77	42	2776
70	67	3	70	236	50	4	63	238	50	2	56	259
75	100	2	65	68	50	2	53	184	33	3	48	262
80	79	101	55	1765	80	60	54	1844	69	45	50	2270
80A	78	23	63	681			62	746	100	1	51	496
80B	75	20	70	447			69	438	87	15	72	344
105			53	30			80	30			64	28
110A	100	1	97	75			92	49			70	69
110B			79	29			63	35			58	24
112	77	13	67	854	33	6	63	944	83	6	61	1286
114	50	8	46	813	60	5	50	746	52	33	42	794
115			57	28			46	13				
116			70	237	100	1	65	203	100	4	63	165
140	100	29	55	403			61	435	50	4	49	505
150	68	76	64	287								
155							63	166			54	364
170	69	13	60	310			65	324	100	1	50	325
190			65	199			62	214	100	1	49	231
220			57	134			73	128				
225											69	70
250			68	73			54	72			71	80
Overall	74	501	57	10596	72	174	57	10393	63	217	51	11578