College of Alameda, Math 13-213 data comparison, Fall 2017 & Spring 2018

Prepared by PCCD Research Analyst, Dominique Benavides, dbenavides@peralta.edu

Overview

Institutional research was asked to examine the success rates of College of Alameda's Math 13 with and without co-requisite Math 213 for Fall 2017 and Spring 2018. The following parameters were requested for the data comparison:

1. Students who completed Math 203 or 206
2. Students with pre-requisite clearance by a counselor (milestones cleared them into Math 13)
3. Students with no pre-requisite clearance or pre-requisite course completion for Math 13

Method and determination of comparison groups

For the comparison, students who successfully completed Math 203 or 206 with a grade A, B, C, or P were grouped with students who had a pre-requisite clearance by a counselor using milestone "MATH – J" due to overlap in the data. Students who had no pre-req clearance or had not taken Math 203 or 206 were also grouped. These groups were then examined for their overall success rate, followed by their success rate *with* coreq 213 and *without* coreq 213.

Success rate is determined by the number of students who successfully pass a course with a grade A, B, C, or P divided by the number of students enrolled in the course at census. Retention rate is calculated by the number of students who did not withdraw from the course divided by the number of students enrolled in the course at census.

Analysis

In Fall 2017, 352 students took Math 13 at College of Alameda. 232 students successfully passed the course with a grade A, B, C, or P. The overall success rate was 66%. The retention rate was 86%. Students who identified as Black/African American, Hispanic/Latino, and/or Pacific Islanders, had lower success rates than the overall Math 13 success rates of 66%.

Math 13, Fall 2017	No. of Students	No. of Success	Success Rate	No. of Retained	Retention Rate	No. of Withdraws
Asian	127	94	74%	115	91%	12
Black / African American	61	36	59%	49	80%	12
Hispanic / Latino	79	42	53%	67	85%	12
Pacific Islander	4	0	0%	2	50%	2
Two or More	17	12	71%	14	82%	3
Unknown / NR	9	7	78%	8	89%	1
White	54	41	76%	47	87%	7
Grand Total	**351**	**232**	**66%**	**302**	**86%**	**49**

Students who took the co-requisite Math 213 with Math 13 had a higher success rate of 78% compared to those who took the course alone, 64%.

Math 13 with 213, Fall 2017	No. of Students	No. of Success	Success Rate
Asian	13	8	62%
Black / African American	11	10	91%
Hispanic / Latino	11	9	82%
Two or More	2	2	100%
Unknown / NR	1	1	100%
White	7	5	71%
Grand Total	**45**	**35**	**78%**

Math 13 without 213, Fall 2017	No. of Students	No. of Success	Success Rate
Asian	114	86	75%
Black / African American	50	26	52%
Hispanic / Latino	69	33	48%
Pacific Islander	4	0	0%
Two or More	15	10	67%
Unknown / NR	8	6	75%
White	47	36	77%
Grand Total	**307**	**197**	**64%**

Students who had no pre-req clearance by counselor (no milestone of MATH-J) or no pre-req course completion for Math 13 (no completion of either Math 203 or 206) had a lower success rate of 61% compared to the overall success rate.

Math 13, NO pre-req clearance, Fall 2017	No. of Students	No. of Success	Success Rate
Asian	35	24	69%
Black / African American	31	21	68%
Hispanic / Latino	30	12	40%
Pacific Islander	2	0	0%
Two or More	7	6	86%
Unknown / NR	3	2	67%
White	23	15	65%
Grand Total	**131**	**80**	**61%**

However, students who took the co-requisite had a higher success rate of 70% compared to the students who did not take the co-requisite of 59%.

Math 13 with 213, NO pre-req clearance, Fall 2017	No. of Students	No. of Success	Success Rate
Asian	3	1	33%
Black / African American	8	7	88%
Hispanic / Latino	4	2	50%
Two or More	2	2	100%
Unknown / NR	1	1	100%
White	2	1	50%
Grand Total	**20**	**14**	**70%**

Math 13 without 213, NO pre-req clearance, Fall 2017	No. of Students	No. of Success	Success Rate
Asian	32	23	72%
Black / African American	23	14	61%
Hispanic / Latino	26	10	38%
Pacific Islander	2	0	0%
Two or More	5	4	80%
Unknown / NR	2	1	50%
White	21	14	67%
Grand Total	**111**	**66**	**59%**

Students who either placed into Math 13 by completing Math 203 or 206 or through pre-req clearance by a counselor (milestone MATH – J), had a success rate of 69% that was higher than the overall rate of 66%.

Math 13, pre-req clearance, Fall 2017	No. of Students	No. of Success	Success Rate
Asian	92	70	76%
Black / African American	30	15	50%
Hispanic / Latino	49	30	61%
Pacific Islander	2	0	0%
Two or More	10	6	60%
Unknown / NR	6	5	83%
White	31	26	84%
Grand Total	**220**	**152**	**69%**

Students with pre-req clearance and took the co-req 213 had an 84% success rate compared to those that did not take the co-req at 67%.

Math 13 with 213, pre-req clearance, Fall 2017	No. of Students	No. of Success	Success Rate
Asian	10	7	70%
Black / African American	3	3	100%
Hispanic / Latino	7	7	100%
White	5	4	80%
Grand Total	**25**	**21**	**84%**

Math 13 without 213, pre-req clearance, Fall 2017	No. of Students	No. of Success	Success Rate
Asian	82	63	77%
Black / African American	27	12	44%
Hispanic / Latino	42	23	55%
Pacific Islander	2	0	0%
Two or More	10	6	60%
Unknown / NR	6	5	83%
White	26	22	85%
Grand Total	**195**	**131**	**67%**

In **Spring 2018**, 415 students took Math 13 at College of Alameda. The success rate was 68% with 283 students successfully passing and a retention rate of 87%. Students who identified as Black/African American, Hispanic/Latino, American Indian and/or Pacific Islanders, had lower success rates than the overall Math 13 success rates of 68%.

Math 13, Spring 18	No. of Students	No. of Success	Success Rate	No. of Retained	Retention Rate	No. of Withdraws
American Indian	1	0	0%	1	100%	0
Asian	137	102	74%	124	91%	13
Black / African American	82	50	61%	66	80%	16
Hispanic / Latino	109	71	65%	95	87%	14
Pacific Islander	4	2	50%	3	75%	1
Two or More	30	18	60%	22	73%	8
Unknown / NR	6	5	83%	6	100%	0
White	46	35	76%	43	93%	3
Grand Total	**415**	**283**	**68%**	**360**	**87%**	**55**

Students who took the co-requisite Math 213 with Math 13 had a higher success rate of 72% compared to those who took the course alone, 67%.

Math 13 with 213, Spring 2018	No. of Students	No. of Success	Success Rate
Asian	23	19	83%
Black / African American	24	16	67%
Hispanic / Latino	23	15	65%
Two or More	10	6	60%
Unknown / NR	3	2	67%
White	11	10	91%
Grand Total	**94**	**68**	**72%**

Math 13 without 213, Spring 2018	No. of Students	No. of Success	Success Rate
American Indian	1	0	0%
Asian	114	83	73%
Black / African American	58	34	59%
Hispanic / Latino	86	56	65%
Pacific Islander	4	2	50%
Two or More	20	12	60%
Unknown / NR	3	3	100%
White	35	25	71%
Grand Total	**321**	**215**	**67%**

Students who had no pre-req clearance by counselor (no milestone of MATH-J) or no pre-req course completion for Math 13 (no completion of either Math 203 or 206) had a lower success rate of 65% (3% points less) than the overall Spring 18 rate.

Math 13, NO pre-req clearance, Spring 2018	No. of Students	No. of Success	Success Rate
Asian	38	27	71%
Black / African American	22	14	64%
Hispanic / Latino	30	20	67%
Pacific Islander	1	1	100%
Two or More	5	2	40%
Unknown / NR	4	3	75%
White	13	7	54%
Grand Total	**113**	**74**	**65%**

Math 13 with 213, NO pre-req clearance, Spring 2018	No. of Students	No. of Success	Success Rate
Asian	9	7	78%
Black / African American	8	4	50%
Hispanic / Latino	10	7	70%
Two or More	4	2	50%
Unknown / NR	2	1	50%
White	3	2	67%
Grand Total	**36**	**23**	**64%**

Math 13 without 213, NO pre-req clearance, Spring 2018	No. of Students	No. of Success	Success Rate
Asian	29	20	69%
Black / African American	14	10	71%
Hispanic / Latino	20	13	65%
Pacific Islander	1	1	100%
Two or More	1	0	0%
Unknown / NR	2	2	100%
White	10	5	50%
Grand Total	**77**	**51**	**66%**

Students who either placed into Math 13 by completing Math 203 or 206 or through pre-req clearance by a counselor (milestone MATH – J), had a slightly higher success rate of 69%. In contrast, students with pre-req clearance who took the co-req 213 had a 78% success rate compared to those that did not take the co-req at 67%.

Math 13, pre-req clearance, Spring 2018	No. of Students	No. of Success	Success Rate
American Indian	1	0	0%
Asian	99	75	76%
Black / African American	60	36	60%
Hispanic / Latino	79	51	65%
Pacific Islander	3	1	33%
Two or More	25	16	64%
Unknown / NR	2	2	100%
White	33	28	85%
Grand Total	**302**	**209**	**69%**

Math 13 with 213, pre-req clearance, Spring 2018	No. of Students	No. of Success	Success Rate
Asian	14	12	86%
Black / African American	16	12	75%
Hispanic / Latino	13	8	62%
Two or More	6	4	67%
Unknown / NR	1	1	100%
White	8	8	100%
Grand Total	**58**	**45**	**78%**

Math 13 without 213, pre-req clearance, Spring 2018	No. of Students	No. of Success	Success Rate
American Indian	1	0	0%
Asian	85	63	74%
Black / African American	44	24	55%
Hispanic / Latino	66	43	65%
Pacific Islander	3	1	33%
Two or More	19	12	63%
Unknown / NR	1	1	100%
White	25	20	80%
Grand Total	**244**	**164**	**67%**