

De Anza College Office of Institutional Research and Planning

To: Jerry Rosenberg, Dean of Physical Sciences, Math and Engineering

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Subject: Math Performance Success – Three-Year Tracking

Background

The Math Performance Success Program (MPS) is modeled as a supportive learning environment with a team of faculty, counselors, and tutors that work with students to help them succeed in Math 210, 212, 114 and 10.

Methodology:

For this analysis, MPS sections of Math 210, 212, 114 and 10 were tracked from 2009-10 to 2011-12. Unduplicated student counts by ethnicity, gender, residency status, major, educational goal, and cumulative GPA were included. As well as overall success rates and success rates by ethnicity and gender over the three-year period. Success is calculated on A, B, C and P grades while non success is D, F, and NP grades and Withdraw is W grades.

Student Enrollments

Table 1. Three-Year Enrollment by Course for all MPS Sections

	2009-10		2010-11		2011-12		Total	
	Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
MATHD210.	36	22%	62	38%	67	41%	165	10%
MATHD212.	132	29%	143	31%	179	39%	454	27%
MATHD114.	178	30%	198	33%	217	37%	593	35%
MATHD010.	181	37%	211	43%	103	21%	495	29%
Total	527	31%	614	36%	566	33%	1,707	100%

Note: Totals include students taking multiple courses or taking the same course more than once.

- In 2009-10, 527 students went through the MPS program, in 2010-11, 614 students went through the program and in 2011-12, and 566 students were in the program, for a total of 1,707 student enrollments for three-years.
- Over the three-year period, Math 114 had the highest enrollment making up 35% of total enrollment followed by Math 10 at 29% of total enrollment, and Math 212 at 27% of total enrollment.

Annual Success Rates

Table 2. Annual Success Rates for MPS and Comparable Non MPS Courses

			Pass		Did Not Pass		Withdraw		Total	
			Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
2009-10	MPS	FACE_TO_FACE	423	80%	58	11%	46	9%	527	100%
	OTHER	FACE_TO_FACE	6,064	58%	2,478	24%	1,904	18%	10,446	100%
	OTHER	DISTANCE	318	43%	226	30%	199	27%	743	100%
2010-11	MPS	FACE_TO_FACE	466	76%	96	16%	52	8%	614	100%
	OTHER	FACE_TO_FACE	6,083	58%	2,503	24%	1,836	18%	10,422	100%
	OTHER	DISTANCE	315	52%	133	22%	163	27%	611	100%
2011-12	MPS	FACE_TO_FACE	445	79%	93	16%	28	5%	566	100%
	OTHER	FACE_TO_FACE	6,450	60%	2,579	24%	1,752	16%	10,781	100%
	OTHER	DISTANCE	272	47%	169	29%	141	24%	582	100%

Note: MPS and Other include all sections of Math 210, 212, 114, and 10 and offered in each year in the MPS or traditional face-to-face or online formats.

- MPS sections exhibited higher success rates than comparable non MPS sections over the three-year period.
- Success rates were around 80% in 2009-10 and 2011-12 and 76% in 2010-11, well above the success rates of non MPS sections.

Table 3. Annual Success Rates for MPS and Comparable Non MPS Courses by Gender

			Pass		Did Not Pass		Withdraw		Total	
			Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
Female	MPS	FACE_TO_FACE	781	79%	142	14%	64	6%	987	100%
	OTHER	FACE_TO_FACE	9,373	62%	3,327	22%	2,496	16%	15,196	100%
	OTHER	DISTANCE	532	48%	288	26%	281	26%	1,101	100%
Male	MPS	FACE_TO_FACE	553	77%	105	15%	62	9%	720	100%
	OTHER	FACE_TO_FACE	9,224	56%	4,233	26%	2,996	18%	16,453	100%
	OTHER	DISTANCE	373	45%	240	29%	222	27%	835	100%

Note: MPS and Other include all sections of Math 210, 212, 114, and 10 offered between 2009-10 and 2011-12 in the MPS or traditional face-to-face or online formats.

- In MPS sections over the three-year period, females had a slightly higher success rate than males, 79% for females compared to 77% for males.
- For all ‘Other’ Math sections taught in the face-to-face format, females exhibit a higher success rate than males by 6 percentage points, 62% for females compared to 56% for males.
- For all ‘Other’ Math sections taught in the distance format, females have slightly higher success rates than males, but both are much lower than the face-to-face traditional format and the MPS format, 48% for females and 45% for males. The withdraw rates is highest for distance sections, though similar for females and males, 26% for females and 27% for males.

Table 4. Annual Success Rates for MPS and Comparable Non MPS Courses by Ethnicity

			Pass		Did Not Pass		Withdrew		Total	
			Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
African American	MPS	FACE_TO_FACE	150	69%	47	22%	20	9%	217	100%
	OTHER	FACE_TO_FACE	684	45%	523	34%	323	21%	1,530	100%
	OTHER	DISTANCE	16	19%	36	43%	32	38%	84	100%
Asian	MPS	FACE_TO_FACE	142	84%	15	9%	12	7%	169	100%
	OTHER	FACE_TO_FACE	6,541	68%	1,704	18%	1,350	14%	9,595	100%
	OTHER	DISTANCE	398	58%	150	22%	133	20%	681	100%
Filipino	MPS	FACE_TO_FACE	95	84%	13	12%	5	4%	113	100%
	OTHER	FACE_TO_FACE	1,454	57%	645	25%	453	18%	2,552	100%
	OTHER	DISTANCE	72	44%	45	28%	46	28%	163	100%
Latino/a	MPS	FACE_TO_FACE	478	76%	101	16%	51	8%	630	100%
	OTHER	FACE_TO_FACE	3,852	49%	2,327	30%	1,646	21%	7,825	100%
	OTHER	DISTANCE	65	23%	109	39%	106	38%	280	100%
Native American	MPS	FACE_TO_FACE	17	94%			1	6%	18	100%
	OTHER	FACE_TO_FACE	230	59%	92	24%	65	17%	387	100%
	OTHER	DISTANCE	13	45%	4	14%	12	41%	29	100%
Pacific Islander	MPS	FACE_TO_FACE	26	76%	7	21%	1	3%	34	100%
	OTHER	FACE_TO_FACE	138	50%	74	27%	65	23%	277	100%
	OTHER	DISTANCE	5	29%	3	18%	9	53%	17	100%
White	MPS	FACE_TO_FACE	279	83%	38	11%	21	6%	338	100%
	OTHER	FACE_TO_FACE	3,954	60%	1,495	23%	1,126	17%	6,575	100%
	OTHER	DISTANCE	228	49%	123	26%	116	25%	467	100%
Unknown/Unreported	MPS	FACE_TO_FACE	147	78%	26	14%	15	8%	188	100%
	OTHER	FACE_TO_FACE	1,744	60%	700	24%	464	16%	2,908	100%
	OTHER	DISTANCE	108	50%	58	27%	49	23%	215	100%

Note: MPS and Other include all sections of Math 210, 212, 114, and 10 offered between 2009-10 and 2011-12 in the MPS or traditional face-to-face or online formats.

- African American students in MPS courses have the lowest success rates (69%) of all ethnic groups in MPS courses. However, African American students in MPS courses have much higher success rates than African American students in non MPS sections (45%).
- All other ethnic groups have success rates above 76% in MPS courses.
- The gap in success rates between MPS and non MPS face-to-face sections is over 25% for Filipino, Latino and Pacific Islander students.

Student Demographics

Table 5. Gender Distribution of MPS Students – 2009-10 to 2011-12

	Students	Percent
Female	543	58%
Male	413	42%
Total	956	100%

Note: Unduplicated student count.

- Females enroll in MPS courses at a higher rate (58%) than males (42%).

Table 6. Ethnic Distribution of MPS Students - 2009-10 to 2011-12

	Students	Percent
African American	121	13%
Asian	108	10%
Filipino	68	7%
Latino/a	341	37%
Native American	12	1%
Pacific Islander	15	2%
Unreported/Unknown	100	11%
White	191	20%
Total	956	100%

Note: Unduplicated student count.

- Students that identify as Latino make up 37% of MPS enrollment over the three-year period followed by White students at 20%, African Americans at 13%, Unknown at 11% and Asian at 10%.

Table 7. Residency Status of MPS Students - 2009-10 to 2011-12

	Students	Percent
Resident	900	94%
US resident, non-CA resident	5	0%
Non-Resident, International	6	0%
AB540-Non-Resid Tuit Exmpt	41	5%
Non-Resident	5	0%
Total	957	100%

Note: Unduplicated student counts. Residency status may change resulting in duplicate counts for the same student.

- Students who are California residents make up 94% of total MPS enrollment while AB 540 students make up 5% of total enrollment.

Table 8. Top 10 Majors of MPS Students - 2009-10 to 2011-12

	Students	Percent
Undecided	212	20%
Registered Nurse	93	10%
Business Administration	75	8%
Lib Arts-Soc & Behavioral Sci	77	7%
Liberal Arts - Arts & Letters	65	6%
Law Enforcement	29	3%
Biological Sciences	36	3%
Child Development	34	3%
Medical Assisting	23	3%
Lib Arts-Sci,Math&Engineering	25	2%

- Students enrolled in the MPS program are largely Undecided in their educational major (20%), followed by Nursing (10%), Business Administration (8%), and Liberal Arts (7%).

Table 9. Cumulative GPA - 2009-10 to 2011-12

	Students	Percent
0.0-1.5	57	5%
1.51-2.0	92	9%
2.01-2.5	222	24%
2.51-3.0	327	35%
3.01-3.5	190	20%
3.51-4.0	68	7%
Total	956	100%

Note: Includes unduplicated students' cumulative GPA over their career.

- 59% of students enrolled in the MPS program had a GPA between 2.0 and 3.0 while 27% had a GPA between 3.0 and 4.0.