

# De Anza College Office of Institutional Research and Planning

**To:** Title 3 Math Team

**From:** Mallory Newell, De Anza Researcher

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**Subject:** Title 3 Math Interventions – Fall 2010 - Winter 2012

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The math department ran the following interventions with Title 3 funding in fall 2010, winter 2011, spring 2011, fall 2011 and winter 2012: Enable Math, Enable Math with a Tutor, CREM, Group Tutoring, In Class Tutoring and MPS. Students in Math 114, 212 and 210 participating in one of the listed interventions were compared to all other students in the same quarter in the same course level without an intervention. Online sections of math classes were excluded from the analysis as to only compare face-to-face sections. Success rates by course and quarter were provided. Success is defined as A, B, C, and P grades while non success are D, F and I grades and withdraw are W grades.

It appears that MPS and Enable Math with a Tutor are highly effective in elevating the success rates of students well above students at the same course level without the intervention. Enable Math with a Tutor sections had higher success rates than Enable Math sections without the additional tutor. The CREM intervention also seemed to elevate the success of students well above that of students without an intervention (with the exception of Winter 2011). In Class Tutors and Group Tutors did not seem to elevate the success rates of the intervention groups to match that of the non-intervention group, suggesting that this type of intervention does not significantly enhance course success.

## **Table 1. Success Rates – Fall 2010**

- For MATH 114, Group Tutor (47%) and In Class Tutor (53%) had lower success rates than non intervention sections (59%), while MPS (88%) and Enable Math with a Tutor (68%) had success rates well above the non intervention sections.
- For MATH 212, all interventions had success rates above the non intervention sections with the exception of In Class Tutor section which had the same success rate (50%).
- For Math 210, Group Tutor (38%) had lower success rates than non intervention sections (66%) while MPS (68%) and Enable Math with a Tutor (62%) had success rates well above the non intervention sections.

		Fall 2010							
		Success		Non Success		Withdraw		Total	
		Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
MATHD114.	No Intervention	361	59%	166	27%	86	14%	613	100%
	ENABLE w Tutor	240	68%	72	21%	39	11%	351	100%
	IN CLASS TUTOR	21	53%	10	25%	9	23%	40	100%
	GROUP TUTOR	34	47%	18	25%	20	28%	72	100%
	MPS	30	88%	4	12%			34	100%
MATHD212.	No Intervention	259	50%	173	34%	82	16%	514	100%
	ENABLE w Tutor	156	70%	41	18%	25	11%	222	100%
	IN CLASS TUTOR	53	50%	33	31%	21	20%	107	100%
	GROUP TUTOR	85	55%	50	32%	20	13%	155	100%
	MPS	44	58%	16	21%	16	21%	76	100%
MATHD210.	No Intervention	251	66%	93	24%	36	9%	380	100%
	ENABLE w Tutor	43	62%	21	30%	5	7%	69	100%
	GROUP TUTOR	27	38%	37	52%	7	10%	71	100%
	MPS	41	68%	14	23%	5	8%	60	100%
	LinC	19	73%	6	23%	1	4%	26	100%
Total		1,664	60%	754	27%	372	13%	2,790	100%

LinC section not supported by Title 3 funds.

**Table 2. Success Rates – Winter 2011**

- For MATH 114, MPS (92%) and Enable Math with a Tutor (65%) had success rates above the non intervention sections (58%).
- For Math 212, all interventions had a higher success rate than the non intervention sections with the exception of In Class Tutor (46%) which had a slightly lower success rate than non intervention sections (49%).

		Winter 2011							
		Success		Non Success		Withdraw		Total	
		Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
MATHD114.	No Intervention	307	58%	144	27%	76	14%	527	100%
	ENABLE w Tutor	274	65%	80	19%	65	16%	419	100%
	MPS	91	92%	3	3%	5	5%	99	100%
MATH 212	No Intervention	218	49%	131	29%	96	22%	445	100%
	ENABLE w Tutor	109	60%	53	29%	20	11%	182	100%
	IN CLASS TUTOR	18	46%	10	26%	11	28%	39	100%
	GROUP TUTOR	83	67%	28	23%	12	10%	123	100%
	LinC/GROUP TUTOR	17	81%	2	10%	2	10%	21	100%
	MPS	53	82%	11	17%	1	2%	65	100%
MATHD210.	No Intervention	209	56%	109	29%	54	15%	372	100%
Total		1,379	60%	571	25%	342	15%	2,292	100%

**Table 3. Success Rates – Spring 2011**

- For MATH 114, all interventions had a higher success rate than the non intervention sections with the exception of In Class Tutor (39%) which had lower success rates than non intervention sections (54%).
- For MATH 212, Enable Math had a lower success rate (43%) than the non intervention sections (52%), while Enable Math with a Tutor (67%) and Group Tutor sections (61%) had higher success rates than the non intervention sections.

	Spring 2011							
	Success		Non Success		Withdraw		Total	
	Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
MATHD114. No Intervention	269	54%	134	27%	92	19%	495	100%
CREM	26	68%	8	21%	4	11%	38	100%
ENABLE w Tutor	164	60%	70	26%	38	14%	272	100%
IN CLASS TUTOR	15	39%	14	37%	9	24%	38	100%
MPS	42	69%	14	23%	5	8%	61	100%
MATHD212. No Intervention	262	52%	133	26%	110	22%	505	100%
ENABLE MATH	9	43%	7	33%	5	24%	21	100%
ENABLE w Tutor	129	67%	41	21%	22	11%	192	100%
GROUP TUTOR	23	61%	12	32%	3	8%	38	100%
MATHD210. No Intervention	236	56%	127	30%	62	15%	425	100%
Total	1,175	56%	560	27%	350	17%	2,085	100%

**Table 4. Success Rates – Fall 2011**

- For MATH 114, Enable Math with a Tutor (76%) and In Class Tutor (60%) had higher success rates than the non intervention sections (55%).
- For Math 210, Group Tutor sections had lower success rates (31%) than the non intervention sections (51%) while CREM (81%) and MPS (64%) had success rates higher than the non intervention sections.

	Fall 2011							
	Success		Non Success		Withdraw		Total	
	Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
MATHD114. No Intervention	347	55%	157	25%	126	20%	630	100%
ENABLE w Tutor	187	76%	33	13%	26	11%	246	100%
IN CLASS TUTOR	67	60%	25	22%	20	18%	112	100%
MATHD212. No Intervention	461	55%	228	27%	145	17%	834	100%
ENABLE w Tutor	125	65%	38	20%	28	15%	191	100%
MPS	63	85%	11	15%			74	100%
MATHD210. No Intervention	188	51%	124	34%	57	15%	369	100%
CREM	21	81%	4	15%	1	4%	26	100%
GROUP TUTOR	12	31%	17	44%	10	26%	39	100%
MPS	43	64%	22	33%	2	3%	67	100%
Total	1,514	59%	659	25%	415	16%	2,588	100%

**Table 5. Success Rates – Winter 2012**

- For Math 114, Enable Math (49%) and In Class Tutor sections (56%) had lower success rates than the non intervention sections (61%). MPS (88%) and Enable Math with a Tutor (74%) had higher success rates than the non intervention sections.
- For Math 212, Group Tutor (10%), In Class Tutor (48%) and CREM (50%) all had lower success rates than the non intervention sections (54%), while MPS (72%) and Enable Math (59%) and Enable Math with a Tutor (66%) had higher success rates.
- For Math 210, Enable Math with a Tutor had a similar success rate as the non intervention sections, 50% compared to 47%.

		Winter 2012							
		Success		Non Success		Withdraw		Total	
		Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
MATHD114.	No Intervention	513	61%	211	25%	117	14%	841	100%
	ENABLE MATH	18	49%	10	27%	9	24%	37	100%
	ENABLE w Tutor	134	74%	31	17%	17	9%	182	100%
	IN CLASS TUTOR	18	56%	11	34%	3	9%	32	100%
	MPS	99	88%	10	9%	3	3%	112	100%
MATHD212.	No Intervention	277	54%	153	30%	87	17%	517	100%
	CREM	15	50%	14	47%	1	3%	30	100%
	ENABLE MATH	22	59%	10	27%	5	14%	37	100%
	ENABLE w Tutor	96	66%	25	17%	24	17%	145	100%
	GROUP TUTOR	3	10%	15	50%	12	40%	30	100%
	IN CLASS TUTOR	52	48%	37	34%	20	18%	109	100%
	MPS	76	72%	23	22%	6	6%	105	100%
MATHD210.	No Intervention	157	47%	109	33%	67	20%	333	100%
	ENABLE w Tutor	47	50%	31	33%	16	17%	94	100%
Total		1,527	59%	690	26%	387	15%	2,177	100%