#### De Anza College Office of Institutional Research and Planning

- To: Jerry Rosenberg, Dean PSME Division
- From: Mallory Newell, College Researcher Nergal Issaie, Student Assistant

Date: 1/14/2011

Subject: EnableMath Survey Results, Fall 2010

An online survey of EnableMath was emailed to a sample of 802 students of De Anza College at the end of the fall quarter 2010. A total of 93 students completed the online survey for a response rate of 12%. This response rate is below that of fall 2008 (306 respondents) and winter 2008 (291 respondents). The fall 2008 data is used to compare to the fall 2010 results when there is a significant change in trends.

Important Highlights Include:

- Fifty-seven percent of respondents report this is their first math class at De Anza College. This response is down from 63% in fall 2008.
- Eighty-six percent of respondents report this is their first math class using EnableMath. This response is the same as fall 2008.
- Twenty-eight percent of respondents report they spend between 5-9 hours per week (on average) doing math outside of the regular class/lab. This response is the same as fall 2008.
- Sixty-one percent of respondents "agree" or "strongly agree" that they felt more engaged using EnableMath software. This response is down from 78% in fall 2008.
- Fifty-seven percent of respondents report they "agree" or "strongly agree" that EnableMath helped them learn more math than they would have without the software. This response is down from 72% in fall 2008.
- Fifty-eight percent of respondents report they "agree" or "strongly agree" that EnableMath helped to improve their grade. This response is down from 76% in fall 2008.
- Forty-nine percent of respondents report they "agree" or "strongly agree" that they learned some facts from EnableMath that were not presented in the lecture. This response is down from 62% in fall 2008.
- Sixty-two percent of respondents report they "agree" or "strongly agree" they would take another math class with EnableMath. This response is down from 78% in fall 2008.
- Fifty-nine percent of respondents report they "agree" or "strongly agree" they would recommend the EnableMath program to other students. This response is down from 80% in fall 2008.

• Fifty percent of respondents who report they spend more than 5 hours doing math outside of class "agree" or "strongly agree" that EnableMath helped to improve their grade. This response is down from 78% in fall 2008.

All EnableMath sections were given the opportunity to participate in the survey. The sections listed below participated in the fall 2010 survey. The table includes the total number of respondents in each section and the percent of the total for each class.

	Percent out of	respondents	Respon	se rate per				
			Mat	th114	Ma	th210	Mat	th212
Section	Ν	%	Ν	%	Ν	%	N	%
MATH-11402 LOGVINENKO	10	11%	10	19%				
MATH-11403 MATHIOS	1	1%	1	2%				
MATH-11404 LO	5	5%	5	9%				
MATH-11406 LO	2	2%	2	4%				
MATH-11413 LOGVINENKO	3	3%	3	6%				
MATH-11414 LOGVINENKO	3	3%	3	6%				
MATH-11415 LOGVINENKO	4	4%	4	7%				
MATH-11461 ABB	12	13%	12	22%				
MATH-11464 TRAYER	9	10%	9	17%				
MATH-11468 ABB	5	5%	5	9%				
MATH-21003 LESKINEN	5	5%			5	50%		
MATH-21005 LESKINEN	2	2%			2	20%		
MATH-21009 VISWANADHA	2	2%			2	20%		
MATH-21021 PLUM	1	1%			1	10%		
MATH-21202 ISON	5	5%					5	17%
MATH-21204 ISON	5	5%					5	17%
MATH-21207 LOGVINENKO	5	5%					5	17%
MATH-21213 ISON	3	3%					3	10%
MATH-21221 LOPEZ	3	3%					3	10%
MATH-21226 GERAGHTY	2	2%					2	7%
MATH-21261 SALES	2	2%					2	7%
MATH-21262 SALES	4	4%					4	14%
Total	93	100%	54	100%	10	100%	29	100%

#### EnableMath sections that did not participate in the survey include:

MATH-210.-06D PLUM MATH-114.-62Z PLUM

#### Email sent to students:

De Anza College is interested in learning your opinion!

We are conducting a short survey (12 questions) about your experience with the EnableMath software this term.

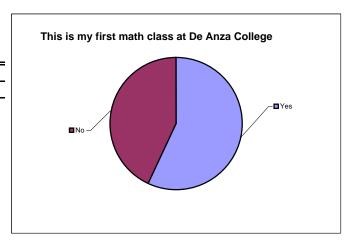
The survey can be completed at: http://www.research.fhda.edu/cgibin/rws3.pl?FORM=enablemathfall

Thank you very much for your participation.

EnableMath Survey Result, Fall 2010 De Anza College Research

# Response N % Yes 53 57% No 40 43% Total 93 100%

This is my first math class at De Anza College



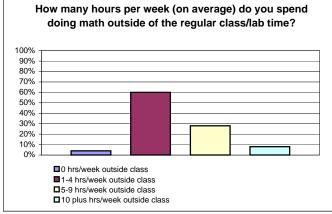
#### What grade do you expect to receive in this class?

Response	Ν	%
A	33	36%
В	25	27%
С	26	29%
D	2	2%
F	5	5%
Total	91	100%

What grade do you expect to receive in this class? 100% 90% 80% 70% 60% 50% 40% 30% 20% 10% 0% ΠA ∎B □C ۵D F

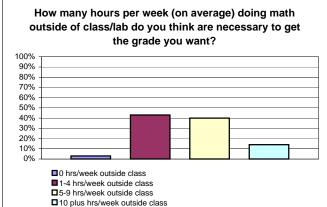
## How many hours per week (on average) do you spend doing math outside of the regular class/lab time?

Response	Ν	%
0 hrs/week outside class	4	4%
1-4 hrs/week outside class	56	60%
5-9 hrs/week outside class	26	28%
10 plus hrs/week outside class	7	8%
Total	93	100%



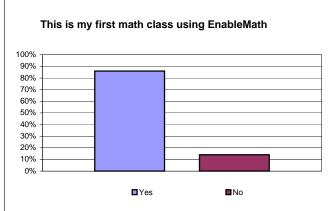
How many hours per week (on average) doing math outside of class/lab do you think are necessary to get the grade you want?

Response	Ν	%
0 hrs/week outside class	3	3%
1-4 hrs/week outside class	40	43%
5-9 hrs/week outside class	37	40%
10 plus hrs/week outside class	13	14%
Total	93	100%



#### This is my first math class using EnableMath

Response	Ν	%
Yes	78	86%
No	13	14%
Total	91	100%



#### Please rate your experience with the EnableMath software this semester

	Strongly Agree		Ag	jree	Disa	agree	Strongly	Disagree	Т	otal
Question	N	%	Ν	%	Ν	%	N	%	Ν	%
1. I felt more engaged using EnableMath software	17	19%	38	42%	18	20%	17	19%	90	100%
2. EnableMath helped me learn more math than I would have without the software	15	17%	36	40%	18	20%	20	22%	89	100%
3. EnableMath helped to improve my grade	17	19%	35	39%	17	19%	21	23%	90	100%
4. I learned some facts from EnableMath that were not presented in the lecture	14	16%	30	33%	28	31%	18	20%	90	100%
5. I would take another math class with EnableMath	26	29%	29	33%	12	13%	22	25%	89	100%
<ol><li>I would recommend the EnableMath program to other students</li></ol>	30	33%	23	26%	14	16%	23	26%	90	100%

					0 hrs/week 1-4 hrs/week 5-9 hrs/wee outside class outside class outside class			10 plus h outside		Total Responses				
					Ν	%	Ν	%	Ν	%	Ν	%	Ν	%
		rs per week (o ath outside of			4	4%	56	60%	26	28%	7	8%	93	100%
math c	outside o	rs per week (o f class/lab do et the grade ye	you think a	-	3	3%	40	43%	37	40%	13	14%	93	100%
							Y	es	١	٩٥	Total Res	sponses		
							Ν	%	Ν	%	Ν	%		
		This is my fir					53	57%	40	43%	93	100%		
		This is my fir	rst math cla	iss using E	EnableN	1ath	78	86%	13	14%	91	100%		
Expect		Expect		Expect			otal		5+ hou		Less thar			otal
				in the c			onses		homew		homewor			onses
<u>N</u> 33	% 36%	<u>N</u> 25	<u>%</u> 27%	<u>N</u> 26	% 29%	N 91	% 100%		<u>N</u> 33	% 35%	<u>N</u> 60	% 65%	<u>N</u> 93	% 100%
33	30%	25	21 70	20	29%	91	100 %		33	33%	00	05%	93	100%
			-	Strongly	Agree	Ag	ree	Disa	gree	Strongl	y Disagre	Tot	al	
Questi	on			Ν	%	Ν	%	Ν	%	Ν	%	Ν	%	
	t more e Math so	ngaged using oftware		17	19%	38	42%	18	20%	17	19%	90	100%	
		helped me lea												
		uld have witho	out the	15	17%	36	40%	18	20%	20	22%	89	100%	
softwa														
3. Ena grade	3. EnableMath helped to improve my					35	39%	17	19%	21	23%	90	100%	
	4. I learned some facts from													
Enable	Math th	at were not pre	14	16%	30	33%	28	31%	18	20%	90	100%		
	the lecture													
	5. I would take another math class with EnableMath 26					29	33%	12	13%	22	25%	89	100%	
	6. I would recommend the EnableMath 30 program to other students					23	26%	14	16%	23	26%	90	100%	

## The following section sorts the results by the students' response to the grade they expect to receive in the class

#### Expect an A in the Class

						1-4 hrs/week outside class		5-9 hrs/week outside class		10 plus hrs/week outside class			otal onses
				N	%	N	%	N	%	N	%	N	%
How many hou spend doing m time?	•	•	•	3	9%	22	67%	6	18%	2	6%	33	100%
How many hou math outside o necessary to g	f class/lab do	you think a		1	3%	20	61%	10	30%	2	6%	33	100%
						Y	es	1	No	Total Res	ponses		
						N	%	Ν	%	Ν	%		
		irst math cla				24	73%	9	27%	33	100%		
	This is my f	first math cla	ass using E	EnableN	lath	30	91%	3	9%	33	100%		
	Experin the	class	Total Res	oonses				5+ hou homev	vork	Less than homework	(		otal onses
	N % N							N	%	N	%	Ν	%
	33	100%	33	100%				8	24%	25	76%	33	100%
Question		-	Strongly . N	Agree %	Ag N	ree %	Disa N	agree %	Strongl N	ly Disagree %	Tota N	al %	
1. I felt more e		I	8	25%	17	53%	4	13%	3	9%	32	100%	
EnableMath so 2. EnableMath		arn moro											
math than I wo software	uld have with	out the	5	16%	17	55%	7	23%	2	6%	31	100%	
3. EnableMath grade	helped to im	8	25%	15	47%	7	22%	2	6%	32	100%	-	
4. I learned so	4. I learned some facts from EnableMath that were not presented in 6 the lecture					44%	8	25%	4	13%	32	100%	
5. I would take EnableMath	5. I would take another math class with 12 EnableMath					44%	4	13%	2	6%	32	100%	
	6. I would recommend the EnableMath 13 program to other students					34%	5	16%	3	9%	32	100%	

#### Expect an B in the Class

·			0 hrs/week outside class		1-4 hrs/week outside class		5-9 hrs/week outside class		10 plus hrs/week outside class			otal onses	
				N	%	N	%	N	%	N	%	N	%
How many hour spend doing ma time?	•	• •	•	1	4%	18	72%	5	20%	1	4%	25	100%
How many hour math outside of necessary to ge	class/lab do	you think a		2	8%	8	32%	13	52%	2	8%	25	100%
						Y	es		No	Total Res	sponses		
						N	%	Ν	%	Ν	%		
	This is my f	irst math cla	ass at De A	Anza Co	llege	16	64%	9	36%	25	100%		
	This is my f	irst math cla	ass using E	EnableN	lath	22	88%	3	12%	25	100%		
	Expection Expection Expected E	class	Total Res	oonses				5+ hou homev	vork	Less than homewor	k		otal onses
	N % N							N	%	Ν	%	Ν	%
	25	100%	25	100%				6	24%	19	76%	25	100%
Question			Strongly A	Agree %	Ag N	ree %	Disa N	agree %	Strong N	ly Disagree %	e Tota N	al %	
1. I felt more en			5	20%	10	40%	5	20%	5	20%	25	100%	-
2. EnableMath math than I wou software	EnableMath software 2. EnableMath helped me learn more math than I would have without the 4						5	20%	6	24%	25	100%	
3. EnableMath I grade	helped to imp	prove my	7	28%	8	32%	4	16%	6	24%	25	100%	
4. I learned son	4. I learned some facts from EnableMath that were not presented in 4 the lecture					28%	8	32%	6	24%	25	100%	
5. I would take a EnableMath	7	29%	6	25%	5	21%	6	25%	24	100%			
6. I would recor program to othe	9	36%	6	24%	2	8%	8	32%	25	100%			

#### Expect an C in the Class

$\frac{1}{1  for any bours per week (on average) do you per doing math outside of the regular class/lab 0 0% 12 46% 11 42% 3 12% 26 100% 10% 112 46% 11 42% 3 12% 26 100% 10% 10% 112 46% 11 42% 3 12% 26 100% 10% 10% 10% 10% 10% 10% 10% 10% 10$	•							1-4 hrs/week outside class		5-9 hrs/week outside class		<ul><li>10 plus hrs/week</li><li>outside class</li></ul>		otal onses
How many hours per week (on average) do you spend doing math outside of the regular class/lab 0 0% 12 46% 11 42% 3 12% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 12 46% 14 54% 26 100% 12 46% 14 54% 26 100% 12 46% 14 54% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 38% 7 27% 26 100% 10 42% 14 54% 12 46% 26 100% 10 42% 14 10 0% 10 48% and helped me learm more math than l would have without the 4 17% 8 33% 6 25% 6 25% 24 100% 10 42% 4 17% 24 100% 10 42% 4 17% 24 100% 10 42% 4 17% 24 100% 10 42% 4 17% 24 100% 10 42% 4 100%														
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N  %  N  M  M	math outside of	class/lab do	you think a		0	0%	9	35%	10	38%	7	27%	26	100%
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $							Y	es	1	No	Total Res	sponses		
This is my first math class using EnableMath1979%521%24100%Expect a C in the class $\overline{N}$ $\overline{N}$ $\overline{N}$ $\overline{N}$ $\overline{N}$ $26$ 100%26100% $\overline{N}$ $\overline{N}$ $\overline{N}$ $\overline{N}$ $26$ 100%26100% $\overline{N}$ $\overline{N}$ $\overline{N}$ $\overline{N}$ $\overline{N}$ $\overline{26}$ 100%26100% $\overline{N}$ $\overline{N}$ $\overline{N}$ $\overline{N}$ $\overline{N}$ $\overline{14}$ 54%1246%26100%Strongly Agree EnableMath software2 $\overline{N}$ $\overline{N}$ $\overline{N}$ $\overline{N}$ 2. EnableMath helped me learn more math than I would have without the 							Ν	%	Ν	%	Ν	%		
$\frac{1}{N} \frac{1}{N} \frac{N}{N} \frac{N}$														
$\ln \ln $		This is my	first math cla	ass using E	EnableM	lath	19	79%	5	21%	24	100%		
$26$ $100\%$ $26$ $100\%$ $\overline{14}$ $54\%$ $12$ $46\%$ $26$ $100\%$ QuestionN%N%N%N%N%N%1. I felt more engaged using EnableMath software2 $8\%$ $11$ $46\%$ $8$ $33\%$ $3$ $13\%$ $24$ $100\%$ 2. EnableMath helped me learn more math than I would have without the software4 $17\%$ $8$ $33\%$ $6$ $25\%$ $6$ $25\%$ $24$ $100\%$ 3. EnableMath helped to improve my grade1 $4\%$ $11$ $46\%$ $5$ $21\%$ $7$ $29\%$ $24$ $100\%$ 4. I learned some facts from EnableMath that were not presented in EnableMath2 $8\%$ $8$ $33\%$ $10$ $42\%$ $4$ $17\%$ $24$ $100\%$ 5. I would take another math class with EnableMath5 $21\%$ $8$ $33\%$ $3$ $13\%$ $8$ $33\%$ $24$ $100\%$ 6. I would recommend the EnableMath6 $25\%$ 4 $17\%$ $7$ $29\%$ $24$ $100\%$			class	Total Res					homew	vork	homewor	k	Resp	onses
Strongly Agree QuestionN %%N %%N %%Total N1. I felt more engaged using EnableMath software28%1146%833%313%24100%2. EnableMath helped me learn more math than I would have without the software417%833%625%625%24100%3. EnableMath helped to improve my grade14%1146%521%729%24100%4. I learned some facts from EnableMath that were not presented in the lecture28%833%1042%417%24100%5. I would take another math class with EnableMath521%833%313%833%24100%6. I would recommend the EnableMath625%417%729%729%24100%														
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EnableMath software28%1148%833%313%24100%2. EnableMath helped me learn more math than I would have without the software417%833%625%625%24100%3. EnableMath helped to improve my grade14%1146%521%729%24100%4. I learned some facts from EnableMath that were not presented in the lecture28%833%1042%417%24100%5. I would take another math class with EnableMath521%833%313%833%24100%6. I would recommend the EnableMath625%417%729%729%24100%	Question				-	-								
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grade14%1146%521%729%24100%4. I learned some facts fromEnableMath that were not presented in the lecture28%833%1042%417%24100%5. I would take another math class with EnableMath521%833%313%833%24100%6. I would recommend the EnableMath625%417%729%729%24100%	math than I wou software	2. EnableMath helped me learn more nath than I would have without the 4					33%	6	25%	6	25%	24	100%	
EnableMath that were not presented in the lecture28%833%1042%417%24100%5. I would take another math class with EnableMath521%833%313%833%24100%6. I would recommend the EnableMath625%417%729%729%24100%		helped to im	1	4%	11	46%	5	21%	7	29%	24	100%	_	
EnableMath         5         21%         8         33%         3         13%         8         33%         24         100%           6. I would recommend the EnableMath         6         25%         4         17%         7         29%         7         29%         24         100%	4. I learned son EnableMath tha	2	8%	8	33%	10	42%	4	17%	24	100%			
6 25% 4 17% 7 29% 7 29% 24 100%	EnableMath 5				21%	8	33%	3	13%	8	33%	24	100%	
		6					17%	7	29%	7	29%	24	100%	

## The following section sorts the results by the students' response to the number of hours spent outside the class on Math homework

#### Less than 5 hrs homework

					/week e class		s/week e class		s/week e class	10 plus h outside			otal onses
				Ν	%	Ν	%	Ν	%	Ν	%	N	%
	ours per week (or math outside of	•		4	7%	56	93%					60	100%
math outside	ours per week (o of class/lab do get the grade y	you think a		3	5%	36	60%	20	33%	1	2%	60	100%
						Y	es	Ν	١o	Total Re	sponses		
						N	%	N	%	N	%		
	This is my fi	rst math cla	ss at De A	Anza Co	ollege	38	63%	22	37%	60	100%		
	This is my fi	ss using E	EnableN	/lath	51	85%	9	15%	60	100%			
Expect an A in the class	Expec in the c	Expect in the c			otal onses				Less thar homewor	-	-	otal onses	
N %						%				N	%	N	%
25 42%						100%				60	100%	60	100%
Question		-	Strongly N	Agree %	Ag N	ree %	Disa N	gree %	Strong N	ly Disagre %	Tota N	al %	
1. I felt more EnableMath	engaged using software		15	25%	27	45%	9	15%	9	15%	60	100%	
	th helped me lea vould have witho	11	18%	28	47%	11	18%	10	17%	60	100%		
3. EnableMa grade	th helped to imp	13	22%	24	40%	12	20%	11	18%	60	100%		
EnableMath the lecture	ome facts from that were not pro	13	22%	17	28%	18	30%	12	20%	60	100%		
5. I would tak EnableMath	21	36%	21	36%	7	12%	10	17%	59	100%			
	6. I would recommend the EnableMath program to other students25					28%	8	13%	10	17%	60	100%	

#### 5 + hrs homework

						/week e class	1-4 hrs outside	s/week e class		s/week e class	10 plus h outside			tal onses
					Ν	%	Ν	%	Ν	%	Ν	%	Ν	%
spend time?	doing ma	s per week ( th outside of	the regular	class/lab					26	79%	7	21%	33	100%
math o	utside of	s per week ( class/lab do t the grade y	you think a		0	0%	4	12%	17	52%	12	36%	33	100%
							Y	es	Ν	lo	Total Res	sponses		
							N	%	N	%	N	%		
		This is my fi	irst math cla	ss at De A	Anza Co	ollege	15	45%	18	55%	33	100%		
	ss using E			27	87%	4	13%	31	100%					
Expect		Expec		Expect in the c			otal onses				5 + hrs homewor	Ŀ		tal onses
N						N	%				N	%	N	%
8	29%	6	21%	14	% 50%	28	100%				33	100%	33	100%
Questi	on		-	Strongly N	Agree %	Ag N	ree %	Disa N	gree %	Strongl N	y Disagre %	Tota N	al %	
	: more en Math sof	gaged using tware		2	7%	11	37%	9	30%	8	27%	30	100%	
math th	2. EnableMath helped me learn more math than I would have without the 4 software					8	28%	7	24%	10	34%	29	100%	
3. Enal grade	bleMath I	4	13%	11	37%	5	17%	10	33%	30	100%			
Enable the lec		1	3%	13	43%	10	33%	6	20%	30	100%			
5. I would take another math class with EnableMath 5					17%	8	27%	5	17%	12	40%	30	100%	
	6. I would recommend the EnableMath program to other students 5					6	20%	6	20%	13	43%	30	100%	



## De Anza College EnableMath Survey

This survey will be used for research purposes only. All responses will remain confidential and any data that is reported will be at the aggregate level. You may choose not to answer any question. Thank you for your time and support.	
What class/section are you taking?	Click Here
This is my first math class at De Anza College	Click Here
What grade do you expect to receive in this class?	Click Here
How many hours per week (on average) do you spend doing math outside of the regular class/lab time?	Click Here
How many hours per week (on average) doing math outside of class/lab do you think are necessary to get the grade you want?	Click Here
Please rate your experience with the EnableMath software this semester	
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