The Influence of Reading Level on Course Success at Santa Ana College
Compiled by the RSCCD Research Department, December 2006

Background

Santa Ana College (SAC) faculty is in the process of assessing the relationship between reading ability and course success. In this study, course success rates and average scores were analyzed at the four reading placement test cut score intervals, as well as overall correlations between success and reading levels for Fall 2005 and Spring 2006 students at SAC.

Established cut scores place at SAC reading course levels by grade equivalencies, as follows:
- 0-16   Reading N80   up to 7th grade reading level
- 17-20   Reading N90/N95   7th-9.9th grade reading level
- 21-24   Reading 100   10th grade reading level
- 25-35   12th grade reading level

Summary of Findings

On average, successful students had higher scores on the CTEP Reading Placement Test than non-successful students—both for transferable and non-transferable coursework.

- Success (A,B,C,CR) in transferable coursework correlated significantly with reading placement test scores.

Table 1 Average CTEP Reading Test Scores vs. Course Success at SAC Fall 2005-Spring 2006		
	Average CTEP Reading Score	
Course Success	**<100 courses**	**100+ courses**
	n=597	**n=1885**
A,B,C,CR	20.45	22.76
D,F,NC	18.99	20.60
W,I	20.00	22.01
Total	20.11	22.22
correlation	0.053	.102*

*significant at the .01 level

Reading course level placements were then compared to course success in individual subject areas; significant correlations were found in criminal justice, ESL, fire technology, history, philosophy, and physics.

Table 2 Subject Areas Where Reading Level is Correlated with Course Success (Fall 2005 to Spring 2006)		
Subject Area	**count**	**pearson corr.**
criminal justice	61	.272*
ESL	17	.505*
Fire Technology	84	.264*
History	68	.262*
Philosophy	50	.482**
Physics	13	.572*
Reading	44	.470**

*significant at the.05 level
**significant at the .01 level

The final step was to analyze the relationship in "high enrollment" courses across all subject areas; those key courses that correlated significantly (at the .01 level) with reading ability were Criminal Justice 101, Economics 120, and Philosophy 106. However, these high enrollment courses analyzed as a single, larger group also showed significance (at the .05 level).

These findings should not be interpreted to diminish the contribution that reading skills make to success. Because all students enrolled do not have reading scores, sample sizes are small and yield inconclusive results. A detail of data is included in this report.

Detail of Findings

Table 3 Average CTEP Reading Test Scores by Course Success, Fall 2005 to Spring 2006		
Subject Area by Course Success	**Average Reading Test Score**	**Pearson Correlation**
Accounting 101		
A,B,C,CR	19.60	
D,F,NC	17.00	
W,I	23.00	0.078
Anthropology 100		
A,B,C,CR	22.29	
D,F,NC	27.00	
W,I	21.50	0.020
Anthropology 101		
A,B,C,CR	23.20	
D,F,NC	26.00	
W,I	21.00	0.093
Art 100		
A,B,C,CR	21.82	
D,F,NC	20.00	
W,I	25.33	0.033
Biology 109		
A,B,C,CR	22.27	
D,F,NC	19.50	
W,I	21.43	0.113
Business 100		
A,B,C,CR	23.60	
D,F,NC	19.00	
W,I	15.50	0.433
Chemistry 109		
A,B,C,CR	19.00	
D,F,NC		
W,I	17.00	0.189
Chicano Studies 101		
A,B,C,CR	19.40	
D,F,NC	16.00	
W,I	19.40	0.090
Computer Science 100		
A,B,C,CR	22.62	
D,F,NC	22.00	
W,I	22.43	0.032
Counseling 100		
A,B,C,CR	22.00	
D,F,NC	24.00	
W,I		0.132

Table 3 Average CTEP Reading Test Scores by Course Success, Fall 2005 to Spring 2006		
Subject Area by Course Success	**Average Reading Test Score**	**Pearson Correlation**
Counseling 107		
A,B,C,CR	18.88	
D,F,NC	19.40	
W,I	21.80	0.146
Criminal Justice 101		
A,B,C,CR	28.60	
D,F,NC	19.67	
W,I	21.73	.346*
Economics 120		
A,B,C,CR	27.29	
D,F,NC	15.00	
W,I	23.00	.716*
Economics 121		
A,B,C,CR	22.67	
D,F,NC		
W,I	26.00	0.294
English N50		
A,B,C,CR	15.60	
D,F,NC	11.64	
W,I	19.67	0.230
English 060		
A,B,C,CR	17.44	
D,F,NC	9.25	
W,I	16.63	0.284
English 061		
A,B,C,CR	20.79	
D,F,NC	19.00	
W,I	19.08	232.000
English 101		
A,B,C,CR	23.29	
D,F,NC	22.00	
W,I	22.78	0.073
Geography 100		
A,B,C,CR	25.83	
D,F,NC	21.33	
W,I	24.00	0.335
Geology 101		
A,B,C,CR	23.67	
D,F,NC	15.50	
W,I	24.50	0.333

Table 3
Average CTEP Reading Test Scores by Course Success, Fall 2005 to Spring 2006

Subject Area by Course Success	Average Reading Test Score	Pearson Correlation
History 101		
A,B,C,CR	24.40	
D,F,NC	24.00	
W,I	24.33	0.055
IDS 155		
A,B,C,CR	24.56	
D,F,NC	24.56	
W,I	16.75	0.339
Math N05		
A,B,C,CR	17.80	
D,F,NC	22.00	
W,I	18.50	0.285
Math N06		
A,B,C,CR	17.75	
D,F,NC	16.00	
W,I	19.17	0.290
Math N48		
A,B,C,CR	21.09	
D,F,NC	20.13	
W,I	20.88	0.052
Math 060		
A,B,C,CR	22.02	
D,F,NC	21.32	
W,I	21.55	0.032
Math 080		
A,B,C,CR	22.20	
D,F,NC	20.47	
W,I	22.58	0.041
Math 105		0.241
A,B,C,CR	24.00	

Table 3
Average CTEP Reading Test Scores by Course Success, Fall 2005 to Spring 2006

Subject Area by Course Success	Average Reading Test Score	Pearson Correlation
D,F,NC	24.00	
W,I	20.67	
Math 140		
A,B,C,CR	20.70	
D,F,NC	22.00	
W,I	21.64	0.091
Philosophy 106		
A,B,C,CR	26.20	
D,F,NC	21.83	
W,I	18.29	.528**
Political Science 101		
A,B,C,CR	21.84	
D,F,NC	20.33	
W,I	22.00	0.059
Psychology 100		
A,B,C,CR	20.59	
D,F,NC	18.83	
W,I	21.52	0.035
Sociology 100		
A,B,C,CR	23.63	
D,F,NC	19.00	
W,I	24.23	0.072
TOTAL		
A,B,C,CR	21.76	
D,F,NC	19.61	
W,I	21.51	.077*

*significant at the .05 level
**significant at the .01 level

Reading Ability (Grade Level Equivalency) for Students in "High Enrollment" Courses	Course Success Fall 2005-Spring 2006	
	Total Count	% Successful
Accounting 101		
up to 7th grade	5	40%
7th-9.9th grade	5	0%
10th grade	5	60%
12th grade	4	0%
Total	19	26%
Anthropology 100		
up to 7th grade	1	100%
7th-9.9th grade	5	20%
10th grade	4	50%
12th grade	6	50%
Total	16	44%
Anthropology 101		
up to 7th grade	2	100%
7th-9.9th grade	3	67%
10th grade	4	25%
12th grade	6	83%
Total	15	67%
Art 100		
up to 7th grade	6	67%
7th-9.9th grade	6	67%
10th grade	10	50%
12th grade	12	75%
Total	34	65%
Biology 109		
up to 7th grade	10	40%
7th-9.9th grade	10	50%
10th grade	24	50%
12th grade	18	67%
Total	62	53%
Business 100		
up to 7th grade	3	33%
7th-9.9th grade	3	67%
10th grade	1	0%
12th grade	2	100%
Total	9	56%
Chemistry 109		
up to 7th grade	1	100%
7th-9.9th grade	1	0%
10th grade		
12th grade	1	100%
Total	3	67%
Chicano Studies 101		

Reading Ability (Grade Level Equivalency) for Students in "High Enrollment" Courses	Course Success Fall 2005-Spring 2006	
	Total Count	% Successful
up to 7th grade	2	0%
7th-9.9th grade	5	60%
10th grade	3	67%
12th grade	1	0%
Total	11	46%
Computer Science 100		
up to 7th grade	3	67%
7th-9.9th grade	5	60%
10th grade	8	38%
12th grade	7	71%
Total	23	57%
Counseling 100		
up to 7th grade	1	100%
7th-9.9th grade	1	100%
10th grade	1	0%
12th grade	1	100%
Total	4	75%
Counseling 107		
up to 7th grade	5	40%
7th-9.9th grade	5	80%
10th grade	5	40%
12th grade	3	0%
Total	18	44%
Criminal Justice 101		
up to 7th grade	6	17%
7th-9.9th grade	9	22%
10th grade	9	22%
12th grade	13	39%
Total	37	27%
Economics 120		
up to 7th grade	2	0%
7th-9.9th grade	2	50%
10th grade	2	0%
12th grade	7	86%
Total	13	54%
Economics 121		
up to 7th grade	1	100%
7th-9.9th grade	1	100%
10th grade	7	71%
12th grade	3	67%
Total	12	75%
English N50		
up to 7th grade	15	33%

Reading Ability (Grade Level Equivalency) for Students in "High Enrollment" Courses	Course Success Fall 2005-Spring 2006	
	Total Count	% Successful
7th-9.9th grade	7	57%
10th grade	2	50%
12th grade		
Total	24	42%
English N60		
up to 7th grade	21	62%
7th-9.9th grade	14	79%
10th grade	7	86%
12th grade	2	100%
Total	44	73%
English 061		
up to 7th grade	9	44%
7th-9.9th grade	24	54%
10th grade	18	67%
12th grade	5	80%
Total	56	59%
English 101		
up to 7th grade	12	50%
7th-9.9th grade	11	46%
10th grade	19	53%
12th grade	32	53%
Total	74	51%
Geography 100		
up to 7th grade		
7th-9.9th grade	2	50%
10th grade	6	33%
12th grade	7	43%
Total	15	40%
Geology 101		
up to 7th grade	2	50%
7th-9.9th grade	1	0%
10th grade	3	67%
12th grade	4	75%
Total	10	60%
History 101		
up to 7th grade		
7th-9.9th grade		
10th grade	3	67%
12th grade	3	100%
Total	6	83%
IDS 155		
up to 7th grade	2	0%
7th-9.9th grade	4	50%
10th grade	4	25%

Reading Ability (Grade Level Equivalency) for Students in "High Enrollment" Courses	Course Success Fall 2005-Spring 2006	
	Total Count	% Successful
12th grade	8	75%
Total	18	50%
Math N05		
up to 7th grade	3	100%
7th-9.9th grade	1	100%
10th grade	1	0%
12th grade	1	100%
Total	6	83%
Math N06		
up to 7th grade	6	67%
7th-9.9th grade	7	43%
10th grade	6	50%
12th grade	2	100%
Total	21	57%
Math N48		
up to 7th grade	16	50%
7th-9.9th grade	11	64%
10th grade	19	37%
12th grade	19	58%
Total	65	51%
Math 060		
up to 7th grade	24	46%
7th-9.9th grade	20	35%
10th grade	24	42%
12th grade	38	40%
Total	106	41%
Math 080		
up to 7th grade	11	27%
7th-9.9th grade	15	40%
10th grade	25	52%
12th grade	27	48%
Total	78	45%
Math 105		
up to 7th grade	2	0%
7th-9.9th grade	2	0%
10th grade	4	50%
12th grade	5	40%
Total	13	31%
Math 140		
up to 7th grade	6	50%
7th-9.9th grade	8	38%
10th grade	8	13%
12th grade	8	38%
Total	30	33%

Reading Ability (Grade Level Equivalency) for Students in "High Enrollment" Courses	Course Success Fall 2005-Spring 2006	
	Total Count	% Successful
Philosophy 106		
up to 7th grade	4	0%
7th-9.9th grade	4	25%
10th grade	7	57%
12th grade	8	63%
Total	23	44%
Political Science 101		
up to 7th grade	6	83%
7th-9.9th grade	19	58%
10th grade	16	63%
12th grade	16	75%
Total	57	67%
Psychology 100		
up to 7th grade	13	69%
7th-9.9th grade	13	39%

Reading Ability (Grade Level Equivalency) for Students in "High Enrollment" Courses	Course Success Fall 2005-Spring 2006	
	Total Count	% Successful
10th grade	19	26%
12th grade	15	67%
Total	60	48%
Sociology 100		
up to 7th grade	4	25%
7th-9.9th grade	5	60%
10th grade	11	46%
12th grade	14	50%
Total	34	47%
TOTAL		
up to 7th grade	483	50%
7th-9.9th grade	528	56%
10th grade	663	53%
12th grade	808	62%
Total	2482	56%