



**THE RELATIONSHIP BETWEEN SOAR AND STUDENT SUCCESS BY HIGH SCHOOL
AND TERM**

Fall 2009 to Fall 2012

Prepared by Keith Wurtz
June 10, 2013
RRN: 380

The Relationship between SOAR and Student Success by High School and Term

Fall 2009 to Fall 2012

Introduction

This report compares Crafton Hills College (CHC) students who participated in SOA³R with Crafton Hills College Students from the same high schools who did not participate in SOA³R from Fall 2009 to Fall 2012. SOA³R refers to new Student Orientation, Application, Assessment, Advising and Registration. SOA³R provides students with the opportunity to participate in the enrollment process required for new students. Crafton Hills Staff are available at the high school campus to assist prospective students with their applications, registration, academic support, and a first year Student Education Plan (SEP).

Summary of Results

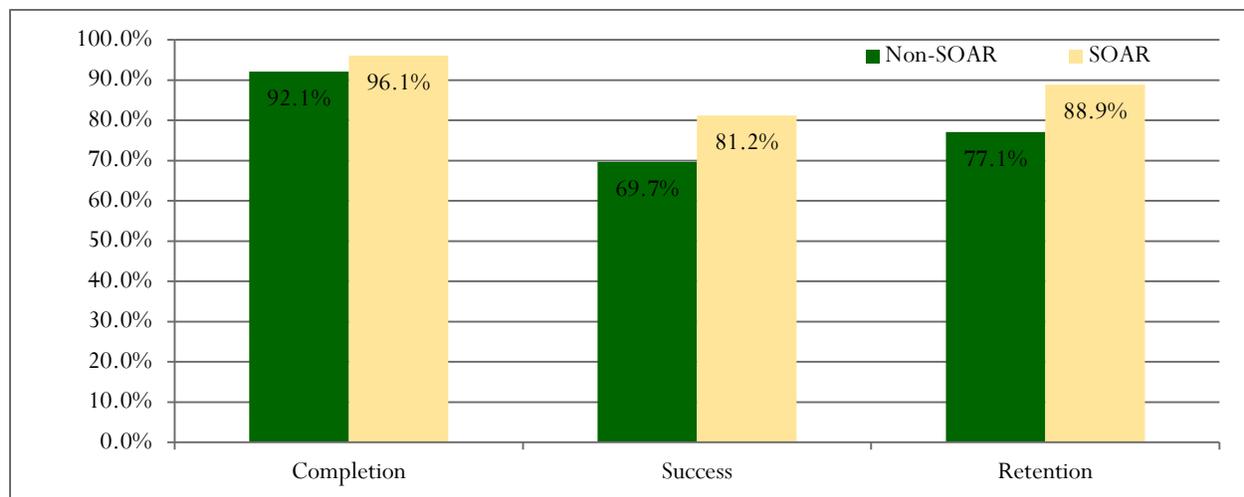
Sample

- 1,433 students have participated in SOA³R from Fall 2009 to Fall 2012
- The number of students participating in SOA³R has increased from 318 in Fall 2009 to 385 in Fall 2012, a 21% increase

Findings

- High school students who participated in SOA³R had a statistically significantly higher **completion rate** (96%) than students from the same high schools who did not participate in SOA³R (92%)
- High school students who participated in SOA³R had a statistically significantly higher **success rate** (81%) in the subsequent fall semester than students from the same high schools who did not participate in SOA³R (70%)
- High school students who participated in SOA³R had a statistically significantly and substantially higher **fall to spring retention rate** (89%) than students from the same high schools who did not participate in SOA³R (77%)

Figure 1: Success, Completion, and Retention Rate of Crafton students who participated and did not participate in SOA³R from Fall 2009 to Fall 2012.



Methodology

The CHC Counseling Office provided the Office of Institutional Effectiveness, Research & Planning (OIERP) with databases of students who participated in SOA³R from Fall 2009 to Fall 2012 disaggregated by term and high school. The high schools that had students participate in SOA³R included Citrus Valley, Green Valley, Grove, Orangewood, Redlands East Valley, Redlands, San Geronio, and Yucaipa. CCCApply—the online admission application center for California Community Colleges—was used to identify a similar comparison group to SOA³R students. Students who completed high school in the same year that the SOA³R cohort did and enrolled at Crafton from the same high school were included in the comparison group.

A file of all students enrolled in subsequent fall semester from Fall 2009 to Fall 2012 was generated from Ellucian (i.e. Datatel). Coding was created to identify students who were successful (earned an A, B, C, or CR grade) or unsuccessful (earned a grade of D, F, FW, NC, I, or W). Success rate was calculated by dividing the number of successful grades by the number of grades on record (GOR; A, B, C, D, F, P, NP, I, or W). Completion rate refers to the number of students who earned an A, B, C, D, F, P, NP, or I divided by the number of GOR. Fall to spring retention rate identifies the number of students in fall who earned a GOR and who also earned a grade on record in the subsequent spring semester.

A limitation to the comparison between entering students from the same high school and students who participated in SOAR at the high school is that skill level of the student was not controlled for. In addition, academic support programs like Left Lane, that students may have participated in once they arrived at Crafton, were also not controlled for.

Five SOAR students in Fall 2012 were identified as students who attended either Citrus Valley, REV, or YHS in the database provided by the CHC Counseling Office. However, these students were identified as coming from a home school on their applications to Crafton. Accordingly, these five students were excluded from the study. In addition, three students in 2009 identified as being from YHS were also identified as being from an “other” California high school on the Crafton application and were also excluded from the study. Similarly, six students were identified as YHS students in the database provided by the CHC Counseling Office and were identified as being from Green Valley High School on their Crafton applications. These students were treated as Green Valley High School students and remained in the study.

Effect Size and Statistical Significance. The effect size statistic is commonly used in meta-analyses. A meta-analysis uses quantitative techniques to summarize the findings from a number of studies on a particular topic to determine the average effect of a given technique. One method of interpreting effect size was developed by Jacob Cohen. Jacob Cohen defined “small,” “medium,” and “large” effect sizes. He explained that an effect size of .20 can be considered small, an effect size of .50 can be considered medium, and an effect size of .80 can be considered large. Effect size is calculated by dividing the difference of the two means by the pooled standard deviation. It is important to mention that the number of students in each group does not influence Effect Size; whereas, when statistical significance is calculated the number of students in each group does influence the significance level (i.e. “p” value being lower than .05). Accordingly, using Cohen as a guide, a substantial effect would be .20 or higher.

Sample

Table 1 illustrates the number of students who participated in SOA³R from Fall 2009 to Fall 2012 disaggregated by term and high school. Specifically, three high schools participated in SOA³R for

the first time in Fall 2012: Citrus Valley, Green Valley, and Orangewood. Three high schools have participated in SOA³R all four years from 2009 to 2012: Redlands East Valley, Redlands, and Yucaipa. The number of students participating in SOA³R has increased from 318 in Fall 2009 to 385 in Fall 2012, a 21% increase. In total, over the last four years, 1,433 students have participated in SOA³R.

Table 1: Fall 2009 to Fall 2012 Unduplicated Students who participated in SOA³R by Term and High School.

High School	2009FA	2010FA	2011FA	2012FA	Total
Citrus Valley	0	0	0	60	60
Green Valley	0	0	0	6	6
Grove	0	0	9	7	16
Orangewood	0	0	0	20	20
Redlands East Valley	113	123	126	78	440
Redlands	21	36	81	53	191
San Gorgonio	0	7	17	23	47
Yucaipa	184	143	188	136	651
Total	318	309	421	385	1,433

Tables 2 and 3 illustrate the number of SOA³R students who earned a GOR in the subsequent fall semester after participating in SOA³R. Overall, the percent of students who attended SOA³R and earned a GOR in the subsequent fall semester increased from 73% in Fall 2009 to 77% in Fall 2012; indicating that students who participate in SOA³R also enroll in courses at Crafton. Across all four years, the high school with the highest rate of earning a GOR at Crafton after participating in SOA³R was Redlands East Valley High School (79%).

Table 2: Fall 2009 to Fall 2012 Unduplicated Students who Attended SOAR and who Earned a GOR in the Subsequent Fall Semester by High School and Term.

High School	Fall 2009			Fall 2010			Fall 2011			Fall 2012		
	GOR	SOA ³ R	% GOR	GOR	SOA ³ R	% GOR	GOR	SOA ³ R	% GOR	GOR	SOA ³ R	% GOR
Citrus Valley										45	60	75.0
Green Valley										6	6	100.0
Grove							4	9	44.4	6	7	85.7
Orangewood										10	20	50.0
REV	88	113	77.9	94	123	76.4	103	126	81.7	63	78	80.8
Redlands	18	21	85.7	24	36	66.7	54	81	66.7	41	53	77.4
San Gorgonio				5	7	71.4	12	17	70.6	19	23	82.6
Yucaipa	125	184	67.9	118	143	82.5	135	188	71.8	108	136	79.4
Total	231	318	72.6	241	309	78.0	308	421	73.2	298	385	77.4

NOTE: GOR – Student earned a grade on record in the subsequent fall semester after participating in SOA³R. SOA³R – Student attended SOA³R at the specified high school. % GOR – is the number of students who earned a GOR divided by the number of students who participated in SOA³R at each high school.

Table 3: Fall 2009 to Fall 2012 Unduplicated Students who Attended SOAR and who Earned a GOR in the Subsequent Fall Semester by High School.

High School	GOR	SOA ³ R	% GOR
Citrus Valley	45	60	75.0
Green Valley	6	6	100.0
Grove	10	16	62.5
Orangewood	10	20	50.0
Redlands East Valley (REV)	348	440	79.1
Redlands	137	191	71.7
San Gorgonio	36	47	76.6
Yucaipa	486	651	74.7
Total	1,078	1,433	75.2

NOTE: GOR – Student earned a grade on record in the subsequent fall semester after participating in SOA³R. SOA³R – Student attended SOA³R at the specified high school. % GOR – is the number of students who earned a GOR divided by the number of students who participated in SOA³R at each high school.

Findings

Referring to Table 4, high school students who participated in SOA³R from Fall 2009 to Fall 2012 had a statistically significantly higher completion rate (96%) in the subsequent fall semester than students from the same high schools who did not participate in SOA³R (92%). Moreover, students who participated in SOA³R from Redlands East Valley, Redlands, and Yucaipa High Schools also had a statistically significantly higher completion rate than students from the same high schools who did not participate in SOA³R. In contrast, high school students who participated in SOA³R from Citrus Valley had a statistically significantly and substantially lower completion rate (79%) than students from Citrus Valley who did not participate in SOA³R (98%) in Fall 2012.

Table 4: Fall 2009 to Fall 2012 Completion Rates for Students by High School with Effect Sizes and P-Values by SOA³R Status.

High School	non-SOA ³ R Students			SOA ³ R Students			ES*	P-Value**
	#	N	%	#	N	%		
Citrus Valley	70	76	92.1	199	207	96.1	.19	.237
Green Valley	48	49	98.0	19	24	79.2	-.71	.041
Grove				35	40	87.5		
Orangewood	15	16	93.8	31	36	86.1	-.24	.436
Redlands East Valley	1,415	1,554	91.1	1,346	1,422	94.7	.14	< .001
Redlands	1,268	1,363	93.0	578	598	96.7	.15	.002
San Gorgonio	180	191	94.2	153	160	95.6	.06	.555
Yucaipa	1,543	1,703	90.6	1,827	1,948	93.8	.12	< .001
Total	70	76	92.1	199	207	96.1	.11	< .001

* A .20 effect size corresponds to a Pearson r of .10. The effect size represents the magnitude of the difference between the target and the baseline measure. Using an effect size increases the likelihood that the difference is not only statistically significant but practical as well.

**The P-Value is an indication of statistical significance. Statistical significance exists when the P-value is less than .05 indicating that the difference between the groups is likely to be due to chance only 5 out of 100 times. It is important to note that the p-value is influenced by the number of cases.

High school students who participated in SOA³R from Fall 2009 to Fall 2012 had a statistically significantly higher success rate (81%) in the subsequent fall semester than students from the same high schools who did not participate in SOA³R (70%, see Table 5). Moreover, students who participated in SOA³R from Redlands and Yucaipa High Schools had a statistically significantly and

substantially higher completion rate than students from the same high schools who did not participate in SOA³R. Students from Redlands East Valley who participated in SOA³R also had a statistically significantly higher success rate (76%) than students from REV who did not participate in SOA³R (69%). In contrast, high school students who participated in SOA³R from Citrus Valley had a statistically significantly and substantially lower success rate (29%) than students from Citrus Valley who did not participate in SOA³R (57%) in Fall 2012.

Table 5: Fall 2009 to Fall 2012 Success Rates for Students by High School with Effect Sizes and P-Values by SOA³R Status.

High School	non-SOA ³ R Students			SOA ³ R Students			ES*	P-Value**
	#	N	%	#	N	%		
Citrus Valley	53	76	69.7%	168	207	81.2%	.28	.058
Green Valley	28	49	57.1%	7	24	29.2%	-.57	.025
Grove				26	40	65.0%		
Orangewood	5	16	31.3%	20	36	55.6%	.49	.107
Redlands East Valley	1,065	1,554	68.5%	1,086	1,422	76.4%	.18	< .001
Redlands	999	1,363	73.3%	493	598	82.4%	.22	< .001
San Geronio	127	191	66.5%	107	160	66.9%	.01	.940
Yucaipa	1,166	1,703	68.5%	1,510	1,948	77.5%	.21	< .001
Total	53	76	69.7%	168	207	81.2%	.17	< .001

* A .20 effect size corresponds to a Pearson r of .10. The effect size represents the magnitude of the difference between the target and the baseline measure. Using an effect size increases the likelihood that the difference is not only statistically significant but practical as well.

**The P-Value is an indication of statistical significance. Statistical significance exists when the P-value is less than .05 indicating that the difference between the groups is likely to be due to chance only 5 out of 100 times. It is important to note that the p-value is influenced by the number of cases.

High school students who participated in SOA³R from Fall 2009 to Fall 2012 had a statistically significantly and substantially higher fall to spring retention rate (89%) than students from the same high schools who did not participate in SOA³R (77%, see Table 6). Moreover, students who participated in SOA³R from Citrus Valley, Redlands East Valley, Redlands and Yucaipa High Schools had a statistically significantly and substantially higher completion rate than students from the same high schools who did not participate in SOA³R.

Table 6: Fall 2009 to Fall 2012 Fall to Spring Retention Rates for Students by High School with Effect Sizes and P-Values by SOA³R Status.

High School	non-SOA ³ R Students			SOA ³ R Students			ES*	P-Value**
	#	N	%	#	N	%		
Citrus Valley	15	22	68.2	42	45	93.3	.74	.028
Green Valley	9	17	52.9	4	6	66.7	.27	.581
Grove				8	10	80.0		
Orangewood	4	8	50.0	6	10	60.0	.19	.693
Redlands East Valley	344	462	74.5	309	348	88.8	.37	< .001
Redlands	308	382	80.6	128	137	93.4	.35	< .001
San Geronio	50	60	83.3	28	36	77.8	-.14	.505
Yucaipa	385	496	77.6	433	486	89.1	.31	< .001
Total	1,115	1,447	77.1	958	1,078	88.9	.31	< .001

* A .20 effect size corresponds to a Pearson r of .10. The effect size represents the magnitude of the difference between the target and the baseline measure. Using an effect size increases the likelihood that the difference is not only statistically significant but practical as well.

**The P-Value is an indication of statistical significance. Statistical significance exists when the P-value is less than .05 indicating that the difference between the groups is likely to be due to chance only 5 out of 100 times. It is important to note that the p-value is influenced by the number of cases.

Any questions regarding this report can be directed to the Office of Institutional Effectiveness, Research, and Planning at (909) 389-3206 or you may send an email to kwurtz@craftonhills.edu: 1314_SOAR_FA09toFA12.docx; SOAR_FA09toFA12.sav; Grades_GOR_FA09toFA12.sav; SOAR_FA09toFA12_GOR_UndupByTerm_Retention.sav.