

Fall 2019 and spring 2020 Dual Enrolled Crafton Hills College Students

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Purpose of Brief

To examine the characteristics of Crafton Hills College 2019-2020 dual enrolled students and the relationship between dual enrolled students and course success.

Summary of Findings

- There were 18 dual enrolled sections at four high schools
- A higher proportion of female students (60%) are dual enrolled when compared to all other CHC female students (56%)
- Dual enrolled students were more likely to be Asian and from two or more races when compared to the CHC population

Relationship between Dual Enrolled Students and Course Success

- Dual enrolled students had a statistically significantly and substantially higher course success rate (86%) than non-dual enrolled 18-year-old or younger students enrolled in the same course (77%)
- Dual enrolled students had a non-significant although, substantially higher course success rate (85%) than non-dual enrolled 18-year-old or younger students (79%) enrolled in the same course taught by the same instructor during the same academic year
- Ten (71%) of the fourteen dual enrolled courses, had higher course success rates than the non-dual enrolled courses

Overview

The Crafton Hills College (CHC) Instructional Office and Enrollment Strategies Committee requested that the CHC Office of Institutional Effectiveness, Research, and Planning examine the relationship between students who are dual enrolled and course success. This report illustrates the number of fall 2019 and spring 2020 dual enrolled students, demographics of dual enrolled students, and course success rate of dual enrolled students by comparison group. Dual enrollment refers to sections where high school special admit students enroll in the courses after the K-12 school day. The dual enrollment courses selected are based on career and academic pathways.

Possible Implications

When analyzing the data provided in this brief there are implications that can help to inform Crafton's future work with dual enrolled students.

- Since dual enrolled students were most likely to be 17-18 years old, Crafton may want to focus on reaching out to these age groups at local high schools
- Given that dual enrolled students were least likely to attend Yucaipa High School in both fall and spring compared to the other participating high schools, Crafton may want to begin their focus on reaching out to 17-18 year-old students at local high schools at Yucaipa High School
- Additionally, since dual enrolled students were less likely to identify as African American, Caucasian, and Native American when compared to the Crafton population, Crafton may want to consider expanding dual enrollment as a strategy to increase access to these groups

Methodology

According to the [CCCCO and the RP Group](#) dual enrollment refers to high school students enrolled in community college credit courses and is the preferred term, rather than the use of concurrent enrollment. Dual enrollment is the term used in this report.

Sample

In the fall 2019 term there were four high schools and eight Crafton dual enrolled sections. In Spring 2020 there were ten dual enrolled sections. The disciplines included Arabic, Art, American Sign Language, Child Development, Communication Studies, Counseling, English, Fire Technology, History, Music, and Sociology.

Table 1: Fall 2019 and spring 2020 Dual Enrolled Sections by High School.

High School	Fall 2019 Sections	Spring 2020 Section
Citrus Valley	ARABIC-101-62	ARABIC-102-60
	ASL-101-60	ASL-102-60
	HIST-100-55**	ENGL-101-23
		MUSIC-103-55**
Redlands	ART-175-50	ART-124-57
	CD-105-50	COUN-120-50**
Redlands East Valley	COUN-110-55	COMMST-100-54**
	FIRET-100-56**	ENGL-101-32
		FIRET-101-55
Yucaipa	COMMST-100-51	SOC-100-02**

** These sections were included in the second comparison group. The second comparison groups consisted of students in the same course, taught by the same instructor during the same academic year.

Table 2: Number of Dual Enrolled Sections Offered at High Schools by Course, Title, and Term from fall 2019 to spring 2020.

Course	Course Title	Term	
		Fall 2019	Spring 2020
ARABIC-101	College Arabic I	1	
ARABIC-102	College Arabic II		1
ART-124	Drawing I		1
ART-175	Sculpture	1	
ASL-101	American Sign Language I	1	
ASL-102	American Sign Language II		1
CD-105	Child Growth and Development	1	
COMMST-100	Elements of Public Speaking	1	1
COUN-110	Introduction to Career, Education and Life Planning	1	
COUN-120	Stress Management and Emotional Well-Being		1
ENGL-101	Freshman Composition		2
FIRET-100	Fire Protection Organization	1	
FIRET-101	Fire Prevention Technology		1
HIST-100	History of the United States to 1877	1	
MUSIC-103	Appreciation of American Popular Music		1
SOC-100	Introduction to Sociology		1
	Total Number of Sections	8	10

Table 3 illustrates the number and percent of dual enrolled students by high school and term. Dual enrolled students were most likely to attend Citrus Valley High School in both fall (36%) and spring (32%).

Table 3: Number and Percent of Dual Enrolled Students by High School for fall 2019 and spring 2020.

High School	Term			
	Fall 2019		Spring 2020	
	#	%	#	%
Citrus Valley	50	36.0	44	31.7
Redlands	41	29.5	31	22.3
Redlands East Valley	27	19.4	36	25.9
Yucaipa	21	15.1	28	20.1
Total	139	100.0	139	100.0

Table 4 demonstrates the unduplicated 2019-2020 number and percent of dual enrolled students and all other CHC students by gender, ethnicity, and age. A higher proportion of female students (60%) were dual enrolled compared to all other CHC students (56%). Dual enrolled students were also more likely to be Hispanic (49%) followed by Caucasian students (22%). This pattern is similar to all other CHC students where they were most likely to be Hispanic (49%) followed by Caucasian students (32%). In addition, dual enrolled students were also more likely to be Asian (13% to 6%) and from two or more races (10% to 7%) when compared to CHC students. When examining age, 47% of dual enrolled students were 17 years old or younger and 42% were 18 years.

Table 4: 2019-2020 Unduplicated Dual Enrolled Students and All Other CHC Students by Gender, Age, and Ethnicity.

Demographics	Dual Enrolled Students		All Other CHC Students	
	#	%	#	%
Gender				
Female	128	59.8	4,646	56.1
Male	86	40.2	3,613	43.6
Unknown	0	0	24	0.3
Total	214	100.0	8,283	100.0
Ethnicity				
African American	8	3.7	340	4.1
Asian	28	13.1	497	6.0
Caucasian	47	22.0	2,644	31.9
Hispanic	105	49.1	4,062	49.0
Native American	0	0.0	24	0.3
Two or More Races	22	10.3	569	6.9
Unknown	4	1.9	147	1.8
Total	214	100.0	8,283	100.0
Age				
13	0	0.0	4	0.0
14	0	0.0	6	0.1
15	2	.9	15	0.2
16	21	9.8	64	0.8
17	101	47.2	128	1.5
18	90	42.1	910	11.0
19 years old or older*			7156	86.4
Total	214	100.0	8,283	100.0

* Five students enrolled in a dual enrolled section were between the ages of 19 to 20 and excluded from the study.

Table 5 compares the course success rate of dual enrolled CHC students to all of the other CHC students 18 years old or younger enrolled in the same courses that the dual enrolled students were enrolled in, in fall 2019 and spring 2020. A limitation to comparing dual enrolled students to all other students 18 years old or younger enrolled in the same courses is that the comparison does not control for instructor, section, or dual enrolled student characteristics. The Second Comparison Group compares dual enrolled CHC students to all other CHC students 18 years old or younger enrolled in the same course and taught by the same instructor during the same academic year. A limitation to this comparison is that only 6 out of the 18 dual enrolled sections were included in the comparison and the comparison does not control for section or dual enrolled student characteristics.

Course success is defined as earning a grade of A, B, C, or P divided by the total number of grades on record (GOR): A, B, C, D, F, I, P, NP, or W. The effect size statistic was used to indicate the size of the difference on student course success. Jacob Cohen developed one method of interpreting effect size. 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. Research in the social sciences has indicated that a substantial effect is considered meaningful if the effect size is .10 or higher. 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).

Findings

Table 5 demonstrates that when compared to all other CHC students 18 years’ old or younger enrolled in the same course during the same academic year, dual enrolled students had a statistically significantly and substantially higher course success rate (86%) than non-dual enrolled students (77%). When compared to non-dual enrolled in the same course, and taught by the same instructor during the same academic year, dual enrolled students had a substantially higher course success rate (85%) than non-dual enrolled students (79%); while this difference was not found to be statistically significant, the corresponding effect size (ES) of 0.18 points to a meaningful difference between dual enrolled and non-dual enrolled students.

Table 5: Fall 2019 and Spring 2020 Course Success of Dual Enrolled and Non-Dual Enrolled Students.

	Non-Dual Enrolled Students (18 or Younger)			Dual Enrolled Students (18 or Younger)			Statistically Significant*	Substantially Different*
	#	N	%	#	N	%		
All Courses with at least one dual enrolled section	1,230	1,596	77.1	239	277	86.3	Yes $p < .001$	Yes ES = .24
Second Comparison Group**	62	79	78.5	88	103	85.4	No $p = 0.22$	Yes ES = .18

** Compares dual enrolled students to students enrolled in another section of the same course taught by the same instructor during the same academic year. If a comparison section was not found the section was excluded from the study, only six sections were included (COMMST-100-54, COUN-120-50, FIRET-100-56, HIST-100-55, MUSIC-103-55, and SOC-100-02) in the second comparison group.

Table 6 demonstrates the course success rate of dual enrolled and non-dual enrolled 18 year old or younger students by course. One course in fall 2019 (ARABIC-101) and four courses in spring 2020 (ARABIC-102, ART-124, FIRET-101, and MUSIC-103) all had 100% course success rates. Of the fourteen dual enrolled courses compared to the non-dual enrolled courses, 10 (71%) dual enrolled courses had higher course success rates than the non-dual enrolled courses. On the other hand, the four dual enrolled courses with lower course success rates had comparable course success rates that ranged from 75% to 86%. Specifically, SOC-100 dual enrolled students had an 86% course success rate compared to an 87% non-dual enrolled course success rate. FIRET-100 dual enrolled students had a 75% course success rate compared to non-dual enrolled students who had a 77% course success rate. ART-175 dual enrolled students had a 77% course success rate compared to an 80% non-dual enrolled course success rate. Lastly, COUN-120 dual enrolled students had an 81% course success rate compared to non-dual enrolled students who had an 87% course success rate.

Table 6: Course Success Rates by Course, Dual Enrollment, and Term for fall 2019 to spring 2020.

Course	Non-Dual Enrolled (18 or Younger)			Dual Enrolled Students			Dual Enrolled Success Rate is Higher than Non- Dual Enrolled
	#	N	%	#	N	%	
ARABIC-101				6	6	100.0	
ARABIC-102				5	5	100.0	
ART-124	10	13	76.9	15	15	100.0	Yes
ART-175	4	5	80.0	20	26	76.9	No
ASL-101	54	70	77.1	25	28	89.3	Yes
ASL-102	19	23	82.6	23	24	95.8	Yes
CD-105	43	73	58.9	12	15	80.0	Yes
COMMST-100	160	207	77.3	31	40	77.5	Yes
COUN-110	39	52	75.0	12	15	80.0	Yes
COUN-120	26	30	86.7	13	16	81.3	No
ENGL-101	540	699	77.3	15	16	93.8	Yes
FIRET-100	48	62	77.4	9	12	75.0	No
FIRET-101	32	42	76.2	9	9	100.0	Yes
HIST-100	76	115	66.1	15	17	88.2	Yes
MUSIC-103	56	63	88.9	11	11	100.0	Yes
SOC-100	123	142	86.6	24	28	85.7	No
Total	1,230	1,596	77.1	245	283	86.6	Yes