



**STUDENT SUCCESS & COURSE COMPLETION BY HEALTH & WELLNESS CENTER
UTILIZATION, 2010-2011 THROUGH 2012-2013**

Prepared by Benjamin Gamboa
August 8, 2013
RRN: 285

Student Success & Course Completion by Health & Wellness Center Utilization, 2010-2011 through 2012-2013

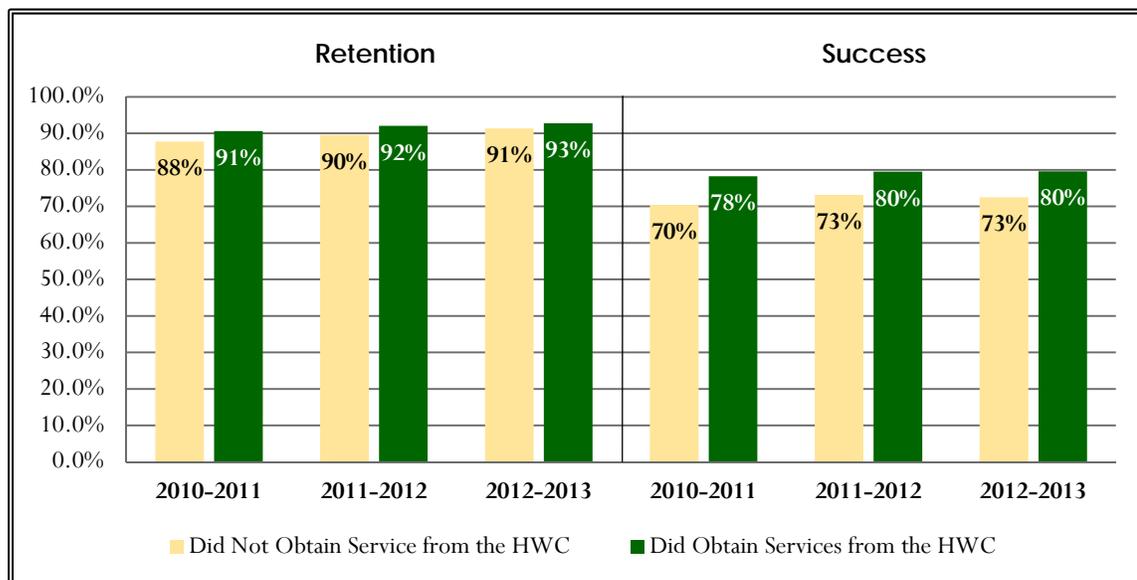
Introduction

This report compares the success and course completion rates of students who obtained service from the Health and Wellness Center (HWC) with those students in the same sections who did not from 2010-2011 through 2012-2013.

Summary of Findings

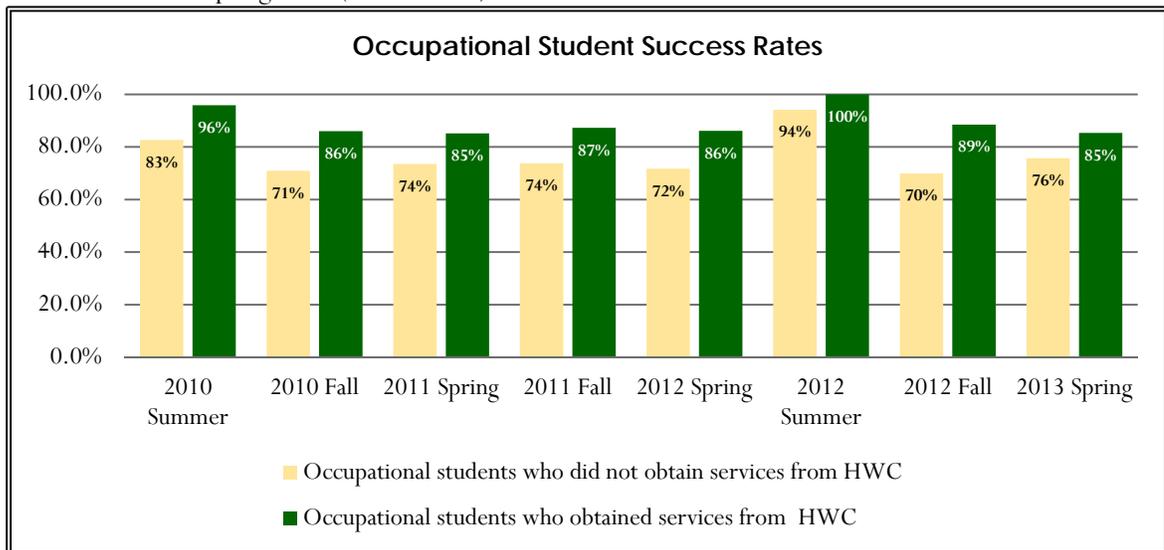
- Over the last three academic years, 2,536 students (11%) were identified as obtaining services from the HWC and earning a grade on record.
- Students who obtained services from the HWC had slightly higher course completion (92%) and success (79%) rates than students who did not obtain services from the HWC (90% and 72%, respectively), although the differences were not substantial ($ES < 0.20$).

Figure 1: Overall Course Completion and Success of CHC students for 2010-2011, 2011-2012, and 2012-2013 by HWC service utilization

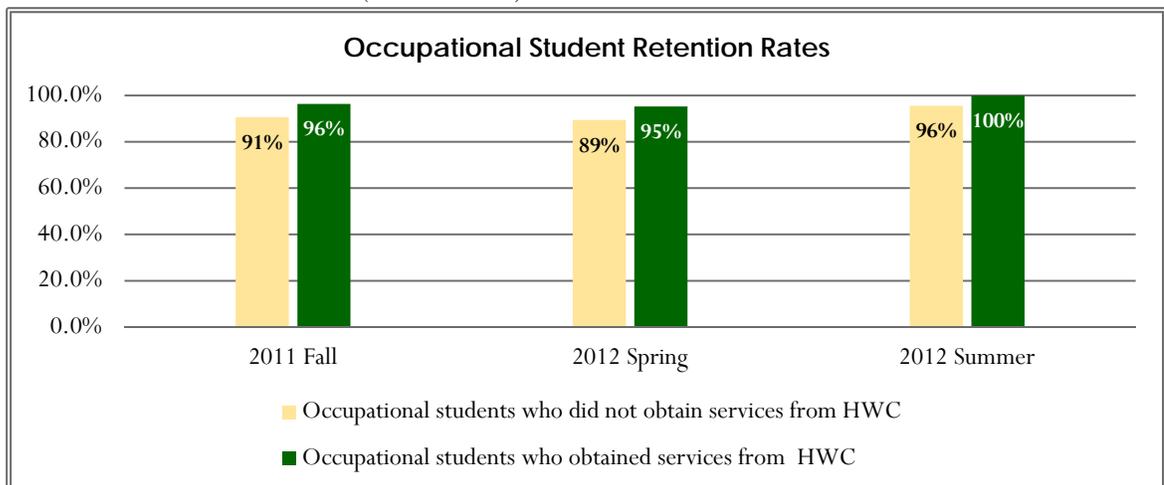


- Asian students who obtained services from the HWC were substantially ($ES = 0.20$) more likely to successfully complete their course (84%) than Asian students who did not obtain services from the HWC (75%).
- African American students who obtained services from the HWC were substantially ($ES = 0.25$) more likely to successfully complete their course (79%) than African American students who did not obtain services from the HWC (68%).
- Male students who obtained service from the HWC were substantially ($ES = 0.23$) more likely to successfully complete their course (81%) than male students who did not obtain services from the HWC (70%).
- Students who were 35-39 years old and obtained services from the HWC were substantially ($ES = 0.20$) more likely to successfully complete their course (85%) than students who were 35-39 years old and did not obtain services from the HWC (77%).

- Students who earned a grade on record in occupational courses were substantially ($ES = 0.36$) more likely to obtain services from the HWC (27%) than students who earned a grade on record in courses not designated as occupational (14%).
- Students in occupational courses who obtained services from the HWC were substantially ($ES > 0.20$) more likely to successfully complete their course compared to students in the same sections who did not obtain services from the HWC in the following terms:
 - Summer 2010 (96% to 83%),
 - Fall 2010 (86% to 71%),
 - Spring 2011 (85% to 74%),
 - Fall 2011 (87% to 74%),
 - Spring 2012 (86% to 72%),
 - Summer 2012 (100% to 94%),
 - Fall 2012 (89% to 70%), and
 - Spring 2013 (85% to 76%).



- Students in occupational courses who obtained services from the HWC were substantially ($ES > 0.20$) more likely to have higher course completion rates compared to students in the same sections who did not obtain services from the HWC in the following terms:
 - Fall 2011 (96% to 91%),
 - Spring 2012 (95% to 89%), and
 - Summer 2012 (100% to 96%).



Methodology

Data from Ellucian and SARS Grid were combined to examine the relationship of student success and course completion between students who obtained services from the HWC and those who did not from 2010-2011 to 2012-2013. A limitation within SARS Grid causes services received by a student during a single appointment to be recorded multiple times with the same date; therefore, students who receive multiple services on the same day were counted as a single contact. This limitation also possibly undercounted students who may have visited the HWC multiple times in a single day for distinctly different reasons.

Students who were identified as receiving at least one service from the HWC and earning a grade on record (GOR) within an academic term were compared to students who earned a GOR in the same sections but did not obtain any services at the HWC in order to control for other factors, such as instructor, course, etc.

GOR refers to one of the following grades: A, B, C, D, F, CR, NC, I or W. Course completion is defined as the number of A, B, C, D, F, CR, NC or I grades divided by the number of GOR. Success is defined as the number of A, B, C, or CR grades divided by the number of GOR.

Students enrolled in select occupational courses are required by the instructor to utilize services offered by the HWC, so students who were identified as receiving at least one service from the HWC and earning a GOR in an occupational course within an academic term were also compared to students who earned a GOR in the same sections but did not obtain any services at the HWC. An occupational course refers to a course with a SAM priority code designation of A (apprenticeship), B (advanced occupational), or C (clearly occupational). When analyzing the relationship of a SAM priority code D (possibly occupational) course with HWC utilization rates, D courses were found to be more similar to other courses that are not designated as occupational and were subsequently combined with non-occupational courses.

The effect size statistic is commonly used in meta-analyses. A meta-analysis uses quantitative techniques to determine the average effect of a given technique over multiple studies. Noticing that even small differences can be statistically significant when large pools of data are analyzed, Jacob Cohen developed one method of interpreting effect size. Cohen defined “small,” “medium,” and “large” effect sizes. He explained that an effect size of 0.20 can be considered small, an effect size of .50 can be considered medium, and an effect size of 0.80 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 less than 0.05). Accordingly, using Cohen as a guide, a substantial effect would be 0.20 or higher.

Due to large populations in the samples of students who utilize services offered by the HWC and those in the same sections, statistically significant relationships inherently exist when there is a substantial effect size; therefore, statistically significant relationships are not noted in the findings. Statistical significance (the “p” value) is still included in each table where the effect size is measured.

Participation

While the number of students enrolled at CHC steadily decreased between 2010-2011 and 2012-2013, the number of students utilizing services offered by the HWC increased by 3% over the same time period. The number of students utilizing HWC services increased from 846 (10%) in 2010-2011 to 924 (13%) in 2012-2013.

Table 1: Utilization rates of the HWC 2010-2011, 2011-2012, and 2012-2013

Academic Year	#	N	%
2010-2011	846	8704	9.7%
2011-2012	766	7683	10.0%
2012-2013	924	7084	13.0%
Total	2536	22059	10.8%

Note: “#” refers to the unduplicated headcount of students who obtained services from the HWC and earned a GOR, “N” refers to the unduplicated headcount of students who earned a GOR, and “%” refers to the utilization rate.

Demographics

Table 2 illustrates the HWC utilization rates for each academic year disaggregated by ethnicity, gender and age. Caucasian students (46%), females (58%) and students 20-24 years old (39%) had higher utilization rates than other groups in the same demographic category. Notably, the female student utilization rate (58%) is higher than the general unduplicated female student population at CHC (51%) during the same academic years.

Table 2: Utilization rates of the HWC by demographic

Demographic	Academic Year						Total	
	2010-2011		2011-2012		2012-2013		N	%
	N	%	N	%	N	%		
Ethnicity								
Asian	73	6.6%	55	5.6%	52	5.7%	180	6.0%
African American	82	7.4%	83	8.5%	82	8.9%	247	8.2%
Hispanic	390	35.4%	350	35.8%	361	39.3%	1101	36.7%
Native American	31	2.8%	24	2.5%	26	2.8%	81	2.7%
Caucasian	519	47.1%	460	47.1%	396	43.1%	1375	45.9%
Other/Unknown	8	.7%	5	.5%	1	.1%	14	0.5%
Gender								
Female	625	56.7%	563	57.6%	551	60.0%	1739	58.0%
Male	475	43.1%	412	42.2%	367	40.0%	1254	41.8%
Missing	3	.3%	2	.2%	0	0.0%	5	0.2%
Age								
19 or younger	333	30.2%	254	26.0%	245	26.7%	832	27.8%
20-24	435	39.4%	365	37.4%	356	38.8%	1156	38.6%
25-29	151	13.7%	154	15.8%	145	15.8%	450	15.0%
30-34	68	6.2%	78	8.0%	59	6.4%	205	6.8%
35-39	44	4.0%	39	4.0%	37	4.0%	120	4.0%
40-49	49	4.4%	48	4.9%	47	5.1%	144	4.8%
50 and above	23	2.1%	39	4.0%	29	3.2%	91	3.0%

Findings

Table 3 illustrates the course completion and success rates of students who obtained services from the HWC in an academic year compared to students in the same sections who did not obtain services from the HWC. Students who obtained services from the HWC had on average slightly higher course completion (92%) and success (79%) rates than students who did not obtain services from the HWC (90% and 72%, respectively), although the differences were not substantial ($ES > 0.20$).

Table 3: Course completion and success rates of students utilizing the HWC

Outcome	Did Obtain Services from the HWC			Did Not Obtain Service from the HWC			ES	p-value
	#	N	%	#	N	%		
2010-2011								
Course Completion	4291	4736	90.6%	26517	30216	87.8%	0.09	<0.001
Success	3706	4736	78.3%	21269	30216	70.4%	0.17	<0.001
2011-2012								
Course Completion	4125	4482	92.0%	24387	27225	89.6%	0.08	<0.001
Success	3564	4482	79.5%	19913	27225	73.1%	0.15	<0.001
2012-2013								
Course Completion	3986	4297	92.8%	23775	26027	91.3%	0.05	0.001
Success	3421	4297	79.6%	18866	26027	72.5%	0.16	<0.001

Table 4 illustrates the course completion and success rates of students by demographic who obtained services from the HWC and earned a GOR compared to students in the same demographic who did not obtain services from the HWC. Asian students who obtained services from the HWC were substantially (ES = 0.20) more likely to successfully complete their course (84%) than Asian students who did not obtain services from the HWC (75%). African American students who obtained services from the HWC were substantially (ES = 0.25) more likely to successfully complete their course (79%) than African American students who did not obtain services from the HWC (68%). Male students who obtained service from the HWC were substantially (ES = 0.23) more likely to successfully complete their course (81%) than male students who did not obtain services from the HWC (70%). Students who are 35-39 years old and obtained services from the HWC were substantially (ES = 0.20) more likely to successfully complete their course (85%) than students who are 35-39 years old and did not obtain services from the HWC (77%).

Table 4: Course completion and success rates of students utilizing the HWC by demographic

Demographic		Did Obtain Services from the HWC			Did Not Obtain Service from the HWC			ES	p-value
		#	N	%	#	N	%		
Ethnicity	Asian								
	Course Completion	751	811	92.6%	4239	4669	90.8%	0.06	0.074
	Success	679	811	83.7%	3513	4669	75.2%	0.20	<0.001
	African American								
	Course Completion	999	1096	91.1%	5107	5790	88.2%	0.09	0.002
	Success	868	1096	79.2%	3919	5790	67.7%	0.25	<0.001
	Hispanic								
	Course Completion	4651	5074	91.7%	27871	31337	88.9%	0.09	<0.001
	Success	3902	5074	76.9%	21504	31337	68.6%	0.18	<0.001
	Native American								
	Course Completion	342	391	87.5%	1460	1666	87.6%	-0.01	0.928
	Success	288	391	73.7%	1155	1666	69.3%	0.09	<0.001
	Caucasian								
	Course Completion	5608	6082	92.2%	35329	39256	90.0%	0.07	<0.001
Success	4911	6082	80.7%	29400	39256	74.9%	0.14	<0.001	
Other/Unknown									
Course Completion	51	61	83.6%	673	750	89.7%	-0.20	0.212	
Success	43	61	70.5%	557	750	74.3%	-0.09	0.536	
Gender	Female								
	Course Completion	7202	7861	91.6%	37172	41375	89.8%	0.06	<0.001
	Success	6133	7861	78.0%	30410	41375	73.5%	0.10	<0.001
	Male								
	Course Completion	5174	5626	92.0%	37407	41986	89.1%	0.09	<0.001
	Success	4540	5626	80.7%	29552	41986	70.4%	0.23	<0.001
Missing									
Course Completion	26	28	92.9%	100	107	93.5%	-0.02	0.913	
Success	18	28	64.3%	86	107	80.4%	-0.38	0.110	

(Table 4 continues on page 7.)

(Table 4 continued from page 6.)

Table 4: Course completion and success rates of students utilizing the HWC by demographic

Demographic	Did Obtain Services from the HWC			Did Not Obtain Service from the HWC			ES	p-value	
	#	N	%	#	N	%			
Age	19 or younger								
	Course Completion	1097	1177	93.2%	9036	9663	93.5%	-0.01	0.691
	Success	912	1177	77.5%	6986	9663	72.3%	0.12	<0.001
	20-24								
	Course Completion	6231	6796	91.7%	43642	48851	89.3%	0.08	<0.001
	Success	5248	6796	77.2%	34143	48851	69.9%	0.16	<0.001
	25-29								
	Course Completion	2342	2551	91.8%	10712	12292	87.1%	0.14	<0.001
	Success	2074	2551	81.3%	9000	12292	73.2%	0.19	<0.001
	30-34								
	Course Completion	1201	1305	92.0%	4375	4983	87.8%	0.13	<0.001
	Success	1060	1305	81.2%	3782	4983	75.9%	0.13	<0.001
	35-39								
	Course Completion	573	618	92.7%	2218	2503	88.6%	0.13	<0.001
	Success	527	618	85.3%	1933	2503	77.2%	0.20	<0.001
	40-49								
	Course Completion	512	580	88.3%	2829	3145	90.0%	-0.06	0.245
	Success	463	580	79.8%	2537	3145	80.7%	-0.02	0.643
	50 and above								
	Course Completion	446	488	91.4%	1859	2022	91.9%	-0.02	0.699
Success	407	488	83.4%	1663	2022	82.2%	0.03	0.540	

Table 5 analyzes the utilization rates for students who earned a GOR in an occupational course compared to students who earned a GOR in a course not designated as occupational. Students who earned a grade on record in occupational courses were substantially (ES = 0.36) more likely to obtain services from the HWC (27%) than students who earned a grade on record in courses not designated as occupational (14%). Students enrolled in select occupational courses were required to utilize services offered by the HWC as a part of their grade possibly explaining the higher utilization rates.

Table 5: Analysis of utilization rates of the HWC by occupational course type

Course Type	Did Obtain Services from the HWC			ES	p-value
	#	N	%		
Occupational	490	1845	26.6%	.36	<0.001
Not Occupational	2508	18127	13.8%		

Table 6 illustrates the course completion and success rates of students who obtained services from the HWC and earned a GOR in an occupational course in an academic term compared to students in the same sections who did not obtain services from the HWC. Students in occupational courses who obtained services from the HWC were substantially ($ES > 0.20$) more likely to successfully complete their course compared to students in the same sections who did not obtain services from the HWC in the following terms: Summer 2010 (96% to 83%), Fall 2010 (86% to 71%), Spring 2011 (85% to 74%), Fall 2011 (87% to 74%), Spring 2012 (86% to 72%), Summer 2012 (100% to 94%), Fall 2012 (89% to 70%) and Spring 2013 (85% to 76%). Students in occupational courses who obtained services from the HWC were substantially ($ES > 0.20$) more likely to have higher course completion rates compared to students in the same sections who did not obtain services from the HWC in the following terms: Fall 2011 (96% to 91%), Spring 2012 (95% to 89%), and Summer 2012 (100% to 96%). Students enrolled in select occupational courses were required to utilize services offered by the HWC as a part of their grade possibly explaining the higher success and course completion rates for students who obtained services versus those who did not.

Table 6: Course completion and success rates of students in occupational courses utilizing the HWC by academic term

Term & Outcome		Occupational students who obtained services from HWC			Occupational students who did not obtain services from HWC			ES	p-value
		#	N	%	#	N	%		
2010-2011	2010 Summer								
	Course Completion	24	24	100.0%	74	75	98.7%	0.13	0.320
	Success	23	24	95.8%	62	75	82.7%	0.38	0.032
	2010 Fall								
	Course Completion	568	614	92.5%	1428	1582	90.3%	0.08	0.084
	Success	528	614	86.0%	1122	1582	70.9%	0.35	<0.001
	2011 Spring								
	Course Completion	454	492	92.3%	1318	1466	89.9%	0.08	0.099
	Success	419	492	85.2%	1078	1466	73.5%	0.27	<0.001
2011-2012	2011 Summer								
	Course Completion	38	38	100.0%	138	139	99.3%	0.10	0.319
	Success	38	38	100.0%	138	139	99.3%	0.10	0.319
	2011 Fall								
	Course Completion	500	519	96.3%	1106	1221	90.6%	0.22	<0.001
	Success	453	519	87.3%	901	1221	73.8%	0.32	<0.001
	2012 Spring								
	Course Completion	480	504	95.2%	1093	1223	89.4%	0.21	<0.001
	Success	434	504	86.1%	877	1223	71.7%	0.34	<0.001
2012-2013	2012 Summer								
	Course Completion	23	23	100.0%	130	136	95.6%	0.23	0.014
	Success	23	23	100.0%	128	136	94.1%	0.27	0.004
	2012 Fall								
	Course Completion	484	511	94.7%	1074	1203	89.3%	0.19	<0.001
	Success	452	511	88.5%	841	1203	69.9%	0.43	<0.001
	2013 Spring								
	Course Completion	432	457	94.5%	1099	1191	92.3%	0.09	0.087
	Success	390	457	85.3%	902	1191	75.7%	0.23	<0.001

Any questions regarding this report can be directed to the Office of Institutional Effectiveness, Research, and Planning at (909) 389-3390 or you may send an email to bgamboa@craftonhills.edu:
HWC_success_and_retention_3yrs_1011to1213.docx; Grades_CHC_HW_GOR_1011to1213.sav.