This report examines the relationship between visiting discipline specific tutoring at the Student Success Center and academic outcomes for the 2016 and 2017 school years. The report also compares course outcomes between students who chose to visit the success center and those who did not.

EXECUTIVE SUMMARY

- Students were most likely to come to the success center for help with American Sign Language, Chemistry, and Physics.
- The overall number of visits for discipline specific tutoring declined from the 2016 school year to the 2017 school year. However, the number of visits for Chemistry and Anatomy and Physiology increased.
- Students who visited the student success center had higher levels of completion and success than students who did not visit the center.

Details of the Data

A total of 405 students visited the Student Success Center for discipline specific tutoring during fall 2016 and spring 2017. The students visited the center approximately 1400 times (Table 1). Students were most likely to visit the center seeking assistance with Anatomy and Physiology, Chemistry, and Physics (Table 1). Tables 2 and 3 contain additional information about the average number of visits and the average amount of time spent in the center. The analysis focuses on the completion and success rates of students who visited the Student Success Center during the relevant time period. We also compared their outcomes to those of students enrolled in the same course sections who did not visit the Student Success Center.

Table 1. Number of Visits to the Student Success Center by Subject and Term.

Subject	Term			
	Fall 2015	Spring 2016	Fall 2016	Spring 2017
Anatomy & Physiology	176	147	355	171
American Sign Language	1100	185	420	10
Anthropology	15	19	—	—
Biology	179	331	—	19
Chemistry	518	543	1009	1063
Chinese	12	*	—	—
CIS	227	298	128	*
Earth Science	53	*	*	*
Economics	—	14	—	—
German	10	*	—	—
Japanese	*	—	—	—
Microbiology	*	—	—	11
Music	74	11	—	—
Physics	174	402	337	52
Psychology	84	86	28	93
Spanish	73	67	—	32

*Cell contains fewer than 10 students.

Table 2. Mean and Standard Deviation for Number of Visits to the Student Success Center by Subject and Term.

Subject	Term							
	Fall 2015		Spring 2016		Fall 2016		Spring 2017	
	Average	SD	Average	SD	Average	SD	Average	SD
Anatomy & Physiology	5.76	4.16	5.16	3.85	8.88	10.07	6.11	6.75
American Sign Language	9.90	9.00	5.29	3.76	3.75	4.95	2.50	1.73
Anthropology	4.60	2.41	2.37	1.77	—	—	—	—
Biology	14.27	12.29	18.59	17.96	14.21	16.14	6.33	7.57
Chemistry	11.32	9.58	12.28	8.93	—	—	11.19	12.91
Chinese	1.67	0.49	2.00	0.00	6.74	13.67	—	—
CIS	5.65	3.78	6.89	4.86	2.00	—	2.00	1.73
Earth Science	13.57	7.89	1.40	0.55	—	—	1.00	0.00
Economics	2.86	1.41	—	—	—	—	—	—
German	2.00	0.82	2.00	0.00	—	—	—	—
Japanese	1.25	0.46	—	—	—	—	—	—
Microbiology	1.00	0.00	—	—	—	—	11.00	—
Music	6.14	3.43	2.27	1.42	—	—	—	—
Physics	7.07	4.38	10.30	8.70	12.96	18.94	10.40	14.19
Psychology	3.88	2.36	3.81	2.65	3.50	4.34	4.04	4.63
Spanish	1.60	0.91	14.91	13.76	—	—	2.29	1.82

Table 3. Mean and Standard Deviation for Number of Minutes Spent per visit in the Student Success Center by Subject and Term.

Subject	Term							
	Fall 2015		Spring 2016		Fall 2016		Spring 2017	
	Average	SD	Average	SD	Average	SD	Average	SD
Anatomy & Physiology	69.1	66.48	72.23	72.5	114.95	66.24	84.56	41.92
American Sign Language	84	50.81	78.72	58.12	65.28	45.70	43.80	17.28
Anthropology	38.22	47.97	62.84	46.5	—	—	—	—
Biology	51.32	68.71	74.42	78.94	—	—	100.00	69.28
Chemistry	56.17	47.15	58.38	65.94	71.78	54.59	87.85	70.62
Chinese	79.08	61.79	49.45	30.75	—	—	—	—
CIS	61.78	48.26	89.79	74.9	42.32	46.69	19.20	33.26
Earth Science	54.16	38.89	64.59	65.34	—	—	22.78	13.35
Economics	33.53	40.47	—	—	—	—	—	—
German	49.23	35.44	48.51	62.61	—	—	—	—
Japanese	61.62	45.99	—	—	—	—	—	—
Microbiology	0.6	0	—	—	109.80	—	180.00	—
Music	52.12	28.49	39.72	38.43	—	—	—	—
Physics*	65.72	63.44	74.44	64.69	—	—	59.53	26.79
Psychology	84.56	80.58	67.17	63.79	33.20	36.85	77.76	34.32
Spanish	84.48	90.85	75.58	69.05	—	—	93.35	95.09

Due to a data input error, the minutes spent for Physics were incorrect. The data have been excluded.

Academic Achievement for Success Center Users and Non-Users

Table 4 shows indicators of academic achievement for Success Center users and non-users. On average, Success Center users had higher GPAs, earned more cumulative units, and enrolled in more units in the semester in which took their course.

Table 4. Comparison of Success Center Users and Non-Users on Academic Achievement Indicators.

Academic Achievement	School Year							
	2016				2017			
	No Tutoring		Tutoring		No Tutoring		Tutoring	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Cumulative GPA	2.65	0.87	2.93	0.64	2.84	0.76	3.01	0.60
Cumulative Units	44.51	30.87	49.43	32.15	54.34	31.85	59.53	32.33
Units Taken	6.94	4.78	9.43	4.21	7.77	4.85	9.79	3.98

Demographic Data for SC Users and Non-Users

Tables 5 through 7 show demographic data for students who visited the Student Success Center and for their peers who were enrolled in the same course sections but chose not to visit. The groups have similar gender (Table 5), ethnic (Table 6), and age (Table 7) composition.

Table 5. Comparison of Students by Gender

Gender	School Year							
	2016				2017			
	No Tutoring		Tutoring		No Tutoring		Tutoring	
	N	Percent	N	Percent	N	Percent	N	Percent
Female	6318	54%	563	59%	3755	55%	261	57%
Male	5220	44%	374	39%	2919	43%	184	40%
Unknown	206	2%	24	2%	114	2%	12	3%
Total	11744	100%	961	100%	6788	100%	457	100%

Table 6. Comparison of Students by Ethnicity

Race	School Year							
	2016				2017			
	No Tutoring		Tutoring		No Tutoring		Tutoring	
	N	Percent	N	Percent	N	Percent	N	Percent
Asian	1834	16%	145	15%	1256	19%	91	20%
Black	390	3%	45	5%	171	3%	30	7%
Hispanic	7672	65%	633	66%	4376	64%	277	61%
White	468	4%	34	4%	170	3%	*	2%
Native American	539	5%	42	4%	304	4%	19	4%
Unknown/Other	841	7%	62	6%	511	8%	32	7%
Total	11744	100%	961	100%	6788	100%	457	100%

*Cell contains fewer than 10 students.

Table 7. Comparison of Students by Age Group

School Year

Age Group	2016				2017			
	No Tutoring		Tutoring		No Tutoring		Tutoring	
	N	Percent	N	Percent	N	Percent	N	Percent
19 or younger	2759	23%	247	26%	886	13%	73	16%
20-24	5722	49%	433	45%	3668	54%	225	49%
25-29	1865	16%	133	14%	1309	19%	94	21%
30-34	628	5%	65	7%	458	7%	23	5%
35 or older	768	7%	83	9%	467	7%	42	9%
Total	11742	100%	961	100%	6788	100%	457	100%

Comparing Outcomes between the Tutoring and No Tutoring Groups

Our first set of analyses focused on comparing completion and success rates between students who visited the Student Success Center and students who did not visit the center.

Completion Rates. Completion rate was defined as the percentage of students that earned a grade in the course (A, B, C, D, F, P, or NP) and did not withdraw. Table 8 shows the number of enrollments and the completion rate in each discipline across the school years. Students who visited the Student Success center had higher completion rates in each discipline than their counterparts who did not visit. Across the two school years, students who visited the Success Center completed their courses 91% of the time, whereas those who did not visit completed their courses 81% of the time. A chi-square test showed that the overall difference in completion rates was statistically significant, $\chi^2(1) = 117.06$, $p < .01$.

Table 9. Completion Rates for No Tutoring and Tutoring Groups.

Subject	2016				2017			
	No Tutoring		Tutoring		No Tutoring		Tutoring	
	N	Rate	N	Rate	N	Rate	N	Rate
Anatomy & Physiology	1279	75%	128	86%	667	82%	67	90%
American Sign Language	811	79%	412	94%	366	81%	115	95%
Anthropology	781	85%	22	95%	—	—	—	—
Biology	1214	83%	61	84%	142	79%	*	100%
Chemistry	1636	76%	325	89%	1025	75%	165	93%
CIS	1702	93%	192	93%	501	78%	22	91%
Chinese	115	81%	*	100%	—	—	—	—
Earth Science	139	89%	*	100%	127	92%	*	100%
Economics	174	78%	*	86%	—	—	—	—
German	63	71%	*	88%	—	—	—	—
Japanese	88	77%	*	100%	—	—	—	—
Microbiology	86	76%	*	100%	60	68%	*	100%
Music	944	88%	77	95%	—	—	—	—
Physics	765	77%	157	78%	413	79%	30	77%
Psychology	2565	90%	117	90%	1247	88%	31	90%
Spanish	1010	86%	72	90%	272	83%	14	86%

*Cell contains fewer than 10 students.

Success Rates. Success rate was defined as the percentage of students earning a grade of A, B, C, or P (passing). Table 9 shows the number of enrollments and the success rate in each discipline across the four terms. Students who visited the student success center had higher success rates in each discipline than their counterparts who did not visit. Across the two school years, students who visited the Success Center successfully completed their courses 82% of the time, whereas those who did not visit successfully completed 67% of the time. A chi-square test showed that the overall difference in success rates was statistically significant, $\chi^2(1) = 177.83$, $p < .01$.

Table 9. Success Rates for No Tutoring and Tutoring Groups.

| | 2016 | | | | 2017 | | | |
| | No Tutoring | | Tutoring | | No Tutoring | | Tutoring | |
Subject	N	Rate	N	Rate	N	Rate	N	Rate
Anatomy & Physiology	1279	61%	128	74%	667	69%	67	79%
American Sign Language	811	65%	412	84%	366	68%	115	81%
Anthropology	781	62%	22	68%	—	—	—	—
Biology	1214	67%	61	79%	142	65%	*	100%
Chemistry	1636	63%	325	80%	1025	59%	165	81%
Chinese	115	72%	*	89%	501	63%	22	82%
CIS	1702	57%	192	83%	—	—	—	—
Earth Science	139	87%	*	100%	127	91%	*	100%
Economics	174	61%	*	71%	—	—	—	—
German	63	67%	*	88%	—	—	—	—
Japanese	88	66%	*	100%	—	—	—	—
Microbiology	86	65%	*	100%	60	60%	*	0%
Music	944	79%	77	91%	—	—	—	—
Physics	765	64%	157	73%	413	64%	30	67%
Psychology	2565	76%	117	91%	1247	72%	31	87%
Spanish	1010	75%	72	83%	272	72%	14	86%

*Cell contains fewer than 10 students.

Frequency of Success Center Visits and Course Outcomes
The Success Center users were categorized according to their total number of visits during the 2016-17 school year. The categories were minimal user (1 visit), casual user (2-5 visits), moderate user (6-10 visits), frequent user (11-20 visits) and extreme user (21 and more visits). The final two columns of Table 10 show the success and completion rates for each user type. The columns show increases in success and completion rates as the frequency of visits increases.

Table 10. Success Center User Profile Data

| School Year | User Type | | | Visits | | | Outcome Rates | |
		Number	Percent of Total	Range	Average Number	Average Time	Completion	Success
2016	Minimal	423	42%	1	1.00	1.03	87%	78%
	Casual	402	40%	2-5	2.97	3.66	92%	83%

	Moderate	104	10%	6-10	7.61	9.32	95%	87%
	Frequent	63	6%	11-20	13.68	17.90	95%	89%
	Extreme	*	1%	21 or more	28.22	34.33	100%	88%
	Total	1001	100%		3.52	4.31	91%	82%
2017	Minimal	128	28%	1	1.00	1.10	89%	76%
	Casual	163	36%	2-5	3.09	6.18	91%	80%
	Moderate	62	14%	6-10	7.98	8.15	98%	79%
	Frequent	56	12%	11-20	14.96	23.34	96%	82%
	Extreme	48	11%	21 or more	37.00	22.36	89%	86%
	Total	457	100%		8.18	8.83	92%	80%

*Cell contains fewer than 10 students.