



Career Services Usage and Student Success

This report explores the association between career services usage and student success (defined by persistence and outcomes as measured on the National Survey of Student Engagement) among first-time, full-time (FTFT) and transfer cohorts at CSU.

Executive Summary

There are demographic differences in who uses career services. Career services users are more likely to be non-residents and have a higher average CCHE index score. Among students who do not visit career services, there is a higher percentage of Pell Grant recipients, males, and first-generation students. The rate of students visiting career services by college also varies. Students from Intra-University, Business, and Engineering make up the top three colleges visiting career services.

Because these differences in student demographics might influence persistence rates (e.g., first-generation students are less likely to persist compared to continuing-generation students), this report utilizes multivariate analyses to control for these demographic variables and test whether an association exists between career services use and persistence. For example, logistic regression models are used to assess the association between career services use and persistence after controlling for demographic variables and index score. Additionally, this analysis also explored if there are statistically significant interactions between career services use and persistence for students with gap attributes (first-generation, racially minoritized or Pell recipient). Results show that students who visit career services have a higher persistence rate to their 2nd and 3rd fall terms than students who do not use career services. This positive association is not statistically significant for persistence to the 4th fall and the positive associations between career services use and persistence to the 2nd and 3rd fall semesters are not differentially associated with gap attributes. Going to career center is equally effective (in terms of increasing persistence to 2nd and 3rd fall semesters) for students with gap attributes compared to the overall population.

The majority of students who visit career services visit once. Nearly 90 percent of students who visit career services visit 1-3 times. A small portion of students who visit career services visit 4 or more times. The percentage of students visiting career services in their first year has declined some. Nearly 20 percent of students from the fall 2013 cohort visited career services in their first year, while just over 10 percent of students in the fall 2015 and fall 2016 cohorts visited career services in their first year. Among career services visitors, nearly a third of students in FA13-FA15 cohorts visit during their first fall term.

There are positive associations between career services use and student engagement (as measured by the NSSE) on two of three items included in this analysis. Among students who visited career services, 50.5 percent report talking about their career plans with a faculty member Often or Very Often. Among students who did not visit career services, 40.6 percent report talking about their career plans with a faculty member Often or Very Often. Students who visit career services are also more likely to report participating in an internship, co-op, or other work-related activity.



Population

The population included in this analysis are full-time, first-time and transfer students from the FA13 through FA16 cohorts. All analyses in this brief are restricted to this subset of the population because data collection from career services began in FA13 so students from this and more recent cohorts have participation data for all of the terms they enroll at CSU. Career services participation data was collected by the Career Center and joined with data in IRP&E's system of record. The Career Center data includes information from the main Career Center, the College of Business Career Management Center, the College of Agricultural Sciences Student Success Center, and the College of Engineering Student Success Center. Whether a student visits career services, however, is not differentiated by which office they visit; this report uses this broader definition to consider student use of career services in general.

This population criterion reduces the count of career services students from over 14,000 to about 5,400. The majority (about 90%) of these excluded students started in a term other than FA13, FA14, FA15, or FA16. These students are excluded because visits to career services prior to FA13 are unknown and the data is incomplete. The majority of the remaining career services students that are excluded from this analysis utilized career services as a graduate student (a small proportion of students, about 350, are excluded because they did not enroll full-time during their first fall semester).

Student Success Outcomes

Student success is measured across the following variables:

- ✚ Persistence (2nd, 3rd, and 4th fall semesters)
- ✚ Outcomes as measured on the National Survey of Student Engagement (NSSE), such as:
 - Career-related conversations with faculty members
 - Participation in internships, co-ops, field experiences and other career-related activities
 - Perceived gains in acquiring job- or work-related knowledge and skills

Methodology

In order to account for the time varying nature of career services visits, the analyses related to persistence are limited to students that enroll in the spring semester prior to the persistence measure. For instance, fourth fall persistence is only measured among students who persisted to their third spring semester. This ensures that all of the students included in the fourth fall persistence measures had equal opportunity to visit career services. This adjustment is important because if prior spring persistence is not accounted for, the difference in fourth fall persistence by whether a student visited career services increases to nearly 18 PP (compared to the 0.4 PP difference presented in Table 6 below). This large difference in persistence by career services visit status is largely because the majority of students who do not persist to their third spring have less opportunity to visit career services and also do not persist to their fourth fall.

This report uses multivariate analyses to investigate whether career services participation is associated with persistence as well as if the association is dependent on gap attributes. Table 3 in the persistence section of this report shows percentage differences in student persistence by career services visit status and uses logistic regression models to test whether these differences in persistence rates are significant after accounting for whether a student was a Pell Grant recipient, male, resident of Colorado, first-generation college student, or racially minoritized student. Separate logistic regression models were run by transfer student status to examine



how these analyses differed between new students and transfer students. Aside from the analyses presented in Table 3, all other tests for statistical significance in this report represent findings from bivariate chi-squared tests.

Findings from the NSSE data only include information for students in the system of record who also took the NSSE, so they are more limited than other sections in this report. Furthermore, the NSSE section is limited to students who are seniors/fourth year students during the 2016 data collection. The majority of students who responded to the NSSE survey have visited career services. This pattern is important to note because overall career services attendance is much lower (22.9% compared to 57.1% for NSSE students) in the general population used in prior sections. In other words, NSSE responses are biased towards career services users.

Demographics

This section displays the demographic attributes of students by career services visit status (in this section, a student is considered a visitor if they ever visited career services). Table 1, below, provides a cumulative look at several demographic groups and what percent of students in those groups visit career services.

Table 1. Demographic Group Representation and Average Index Scores by Career Services Visit

	Did Not Visit CS (N = 18,207)	Visited CS (N = 5,397)
Pell Grant Recipient*	23.0%	21.3%
Male*	48.1%	42.7%
Non-Resident*	28.6%	31.5%
First Generation Student*	26.3%	23.6%
Racially Minoritized Student¹	20.9%	19.9%
Transfer Student	22.8%	24.0%
Average CCHE Index Score*	112.8	116.4

¹Racially Minoritized is defined as a student who is not White, not an international student, and did not reply 'No Response' when asked to identify their race/ethnicity

*Asterisks indicate a statistically significant association ($p \leq .01$) between demographic category and career services visit status

Among students who visited career services, there is a higher percentage of non-residents and transfer students, and students who visit career services have a higher average CCHE index score than students who do not visit career services. Among students who never visited career services, there is a higher percentage of Pell Grant recipients, males, and first generation students. There is a similar percentage of transfer students and racially minoritized students when comparing students who visited career services and those who did not visit career services.



Table 2 displays the cohort college major distribution by career services visitor status.

Table 2. Cohort College Representation by Career Services Visit

	Did Not Visit CS (N = 18,207)	Visited CS (N = 5,397)
Agricultural Sciences*	5.1%	10.9%
Business*	5.0%	15.0%
Engineering*	9.7%	15.0%
Health and Human Sciences*	14.3%	10.8%
Intra-University*	24.8%	20.0%
Liberal Arts*	14.5%	7.9%
Natural Sciences*	19.0%	12.9%
Veterinary Medicine & Biomedical Sciences	2.8%	3.4%
Warner College of Natural Resources	4.9%	4.1%
Grand Total	100.0%	100.0%

*Asterisks indicate a statistically significant association ($p \leq .01$) between cohort college and career services visit status

The following three colleges are overrepresented among career services visitors: Agricultural Sciences, Business, and Engineering. The following four colleges are underrepresented among career services visitors: Health and Human Sciences, Intra-University, Liberal Arts, and Natural Sciences. Veterinary Medicine & Biomedical Sciences and the Warner College of Natural Resources are both similarly represented between career services visitors and career services non-visitors.



Career Services Use Characteristics

This section provides data on overall career services use and differences in career services use patterns by cohort term. Figure 1 shows career services visits in the first year by cohort term and transfer status.

Figure 1. Percent of Students Visiting Career Services in First Year, by Cohort Term

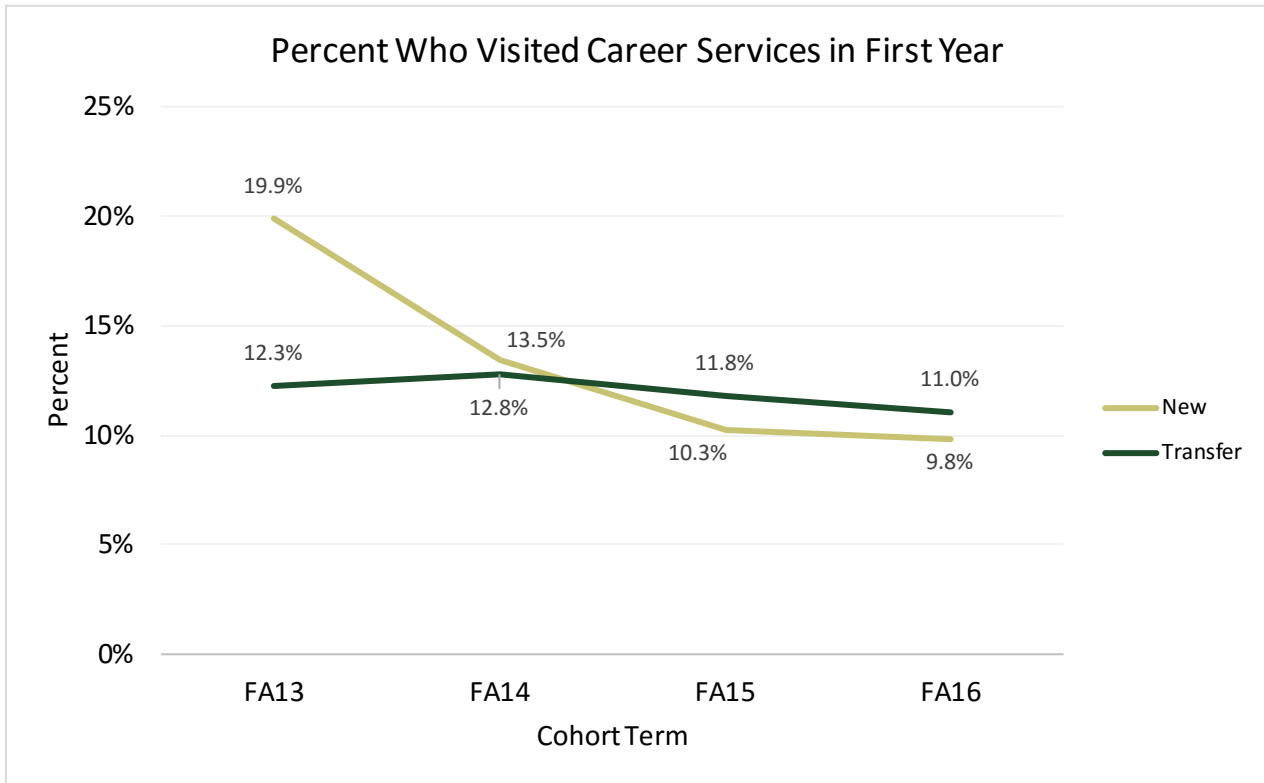


Figure 1 shows that the percentage of first-time and transfer students visiting career services in their first year has declined over the past four cohorts. The percentage of transfer students who visit career services in their first year has remained fairly stable for the last four cohorts but the percentage of new students who are first-year career services visitors has declined by 10 PPs over the past four cohorts.

Although the majority of the FA13-FA15 cohorts don't go to career services their first fall, among students who ever visit career services, a third of students make their visit during the first fall. The median number of times students visit career services — among career services visitors — is one visit. The majority of students who visit career services only visit once. Nearly 90 percent of students who visit career services visit 1-3 times. A small portion of students who visit career services visit 4 or more times. For a detailed look at the number of times students visit career services, see Table 7 in Appendix A.

Student Success by Career Services Attendance

This section presents several basic findings related to student success outcomes and career services visit patterns. The first subsection considers students' persistence outcomes and the second section considers student outcomes as defined on select questions from the NSSE data.



Persistence

Tables 3, below, displays persistence rates by career services visit status and transfer status.

Table 3. Persistence Rates by Whether Student Visited Career Services²

	2nd Fall Persistence* (FA13-FA16)		3rd Fall Persistence* (FA13-FA15)		4th Fall Persistence (FA13-FA14)	
	New	Transfer	New	Transfer	New	Transfer
Did Not Visit CC In Year(s) Prior	89.2%	91.0%	93.6%	94.7%	96.8%	96.3%
Visited CC in Year(s) Prior	93.5%	94.2%	95.6%	97.6%	97.4%	97.2%
Percentage Point Difference	-4.2	-3.1	-2.0	-2.9	-0.7	-1.0

²Analysis is limited to students who persisted to the spring semester prior to the persistence measure. For example, for the 3rd fall persistence column, the analysis only includes students who persisted to the 2nd spring.

*Asterisks indicate a statistically significant association between persistence and career center visit status, controlling for all demographic variables in Table 1

In all three persistence measures, students who visit career services have a higher persistence rate, even when separated by transfer student status. Only two of these percentage differences, however, are statistically significant, as indicated with an asterisk. New freshmen who visit career services in the years prior to the persistence measure have a 4.3 PP and 2 PP higher persistence rate for 2nd and 3rd fall terms, respectively, compared to new freshmen who do not visit career services. Transfer students who visit career services in the years prior to the persistence measure have a 3.2 and 2.9 PP higher persistence rate for 2nd and 3rd fall terms, respectively, compared to transfer students who do not visit career services.

It is important to note here that while Table 3 only presents percentages and PP differences in persistence rates by transfer status and career services visitor status, the analyses used to test statistical significance controlled for demographic variables such as Pell Grant recipient, gender, first-generation student, racially minoritized student, transfer student, and average CCHE index score. Since several of these demographic variables are related to career services participation, controlling for them provides an understanding of whether the association between career services participation and persistence exists after taking into account these factors. After controlling for these demographic factors, there is still a statistically significant association between career services participation and 2nd and 3rd fall persistence. Additionally, these regression models tested for statistically significant interactions between career services usage and persistence by first generation status, racially minoritized status and Pell recipient status. None of these interactions are significant indicating that the associations between career center usage and persistence to the 2nd and 3rd fall are similar for students with gap attributes compared to the overall population. By request, the Career Center can disaggregate the results in table 3 by demographic attribute as well as by college.

NSSE Outcomes

The following three tables present findings from three NSSE items that are conceptually related to students' career-related experiences at CSU, including conversations about career plans with faculty, participation in internships or similar work-related experiences, and perceived gains in acquiring job- or work-related knowledge and skills.



Table 4 presents information on whether students talk with faculty members about their career plans.

Table 4. Talked about career plans with a faculty member

	Did Not Visit CS		Visited CS	
	Frequency	Percent	Frequency	Percent
Very Often	132	16.9%	220	21.2%
Often	185	23.7%	304	29.3%
Sometimes	303	38.8%	412	39.8%
Never	161	20.6%	100	9.7%
Grand Total	781	100.0%	1036	100.0%

Among students who visited the career services, 50.5 percent report talking about their career plans with a faculty member Often or Very Often. Among students who did not visit career services, 40.6 percent report talking about their career plans with a faculty member Often or Very Often. These differences are statistically significant.

Table 5 shows patterns of participation in internships and other work-related activities.

Table 5. Internship, co-op, field experience, student teaching, or clinical placement

	Did Not Visit CS		Visited CS	
	Frequency	Percent	Frequency	Percent
Done or in progress	439	56.2%	662	63.6%
Plan to do	165	21.1%	200	19.2%
Have not decided	51	6.5%	46	4.4%
Do not plan to do	126	16.1%	133	12.8%
Grand Total	781	100.0%	1041	100.0%

Students who have visited career services have a higher percentage who report having participated in an internship, co-op, field experience, student teaching, or clinical placement. Among students who did not visit career services, a higher percentage do not plan to participate in an internship or similar activity. These differences are statistically significant.

Table 6 presents findings related to students' perceived gains in acquiring job- or work-related knowledge and skills while at Colorado State University.

Table 6. Perceived gains: Acquiring job- or work-related knowledge and skills

	Did Not Visit CS		Visited CS	
	Frequency	Percent	Frequency	Percent
Very Much	244	31.2%	355	34.1%
Quite a bit	274	35.1%	353	33.9%
Some	190	24.3%	236	22.7%
Very little	73	9.3%	96	9.2%
Grand Total	781	100.0%	1040	100.0%



Table 6 shows almost no difference between students who visit career services and those who do not in terms of their self-reported gains in acquiring job- or work-related knowledge and skills while at Colorado State University. As expected, what differences exist between these two groups in this table are not statistically significant.

Conclusions

There are interesting demographic differences between students who visit career services and those who do not. Notably, non-visitors are more likely to be Pell Grant recipients, males, and first-generation students while visitors are more likely to be non-residents and have higher average CCH index scores. These demographic differences may have implications for future recruiting efforts for career services use.

Most students who visit career services only visit once, and 90 percent of students who visit career services visit between 1-3 times. The overall percentage of students who visit career services in their first year has declined over the past few years. Among career services visitors, however, nearly a third of students in FA13-FA15 cohorts visit during their first fall term. These findings suggest that career services employees have a limited amount of time with the typical career services visitor and should either cater their curriculum to a one-visit student or focus on encouraging repeat visits if that is known to help students achieve the career outcomes in which they are interested.

This report shows evidence that career services use is positively associated, regardless of demographic attribute, with several measures of student success, particularly persistence to the 2nd and 3rd fall, even after controlling for relevant demographic variables. Students who visit career services are more likely to have talked about their career plans with a faculty member Often or Very Often and are more likely to have participated in an internship, co-op, or other work-related activity. While these findings do not consider all possible potential influences, they provide promising evidence that career services visits promote student success at CSU, particularly if students are able to visit the career services early in their time in college.



Appendix A

Table 7. Number of Times Students Visited Career Services by Cohort Term and Transfer Status

Number of Visits	Fall 2013				Fall 2014				Fall 2015				Fall 2016			
	New		Transfer		New		Transfer		New		Transfer		New		Transfer	
	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent
1	825	48.1%	229	51.7%	633	55.6%	181	46.9%	495	64.0%	168	55.6%	395	83.2%	107	65.6%
2	417	24.3%	86	19.4%	267	23.5%	88	22.8%	157	20.3%	68	22.5%	49	10.3%	30	18.4%
3	205	11.9%	48	10.8%	116	10.2%	46	11.9%	72	9.3%	25	8.3%	20	4.2%	11	6.7%
4	108	6.3%	27	6.1%	60	5.3%	25	6.5%	26	3.4%	12	4.0%	6	1.3%	7	4.3%
5	52	3.0%	19	4.3%	18	1.6%	13	3.4%	13	1.7%	6	2.0%	3	0.6%	2	1.2%
6	30	1.7%	10	2.3%	23	2.0%	4	1.0%	5	0.6%	5	1.7%	1	0.2%	3	1.8%
7	29	1.7%	7	1.6%	7	0.6%	8	2.1%	1	0.1%	1	0.3%	0	0.0%	1	0.6%
8	16	0.9%	5	1.1%	5	0.4%	7	1.8%	2	0.3%	4	1.3%	1	0.2%	1	0.6%
9	11	0.6%	1	0.2%	1	0.1%	3	0.8%	0	0.0%	5	1.7%	0	0.0%	1	0.6%
10 or more visits	23	1.3%	11	2.5%	8	0.7%	11	2.8%	3	0.4%	8	2.6%	0	0.0%	0	0.0%
Never Visited	2657		830		3146		858		3889		1150		4364		1313	
Grand Total	4,373	100.0%	1273	100.0%	4284	100.0%	1244	100.0%	4663	100.0%	1452	100.0%	4839	100.0%	1476	100.0%