Spring 2017
English Student Assistant Program Evaluation

CRC Research Office
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Background

Student assistants (SAs) are available in all basic skills English courses at Cosumnes River College (ENGWR 42 and ENGWR 58) to help with assignments inside and outside of class. In spring 2017, SAs were also offered in seven college-level English writing courses (ENGWR 101) and all college-level English reading courses (ENGRD 110). In spring 2017, a total of 21 English courses participated in the SA program, providing assistance to 603 students. The purpose of this evaluation was to replicate/extend findings from previous evaluations of the English Student Assistant Program (from fall/summer 2015 and spring 2016) and to identify any changes in program effectiveness. The analysis for basic skills courses was intended to replicate previous findings, whereas as separate analysis was intended to demonstrate SA effectiveness in college-level courses.

Findings

Basic Skills English Courses

1. Students who sought help from their SA outside of class more often were more likely to succeed relative to their peers (Table 1b, page 3). This finding replicates the primary finding of previous evaluations. Note that success was defined as receiving an A, B, C, or P in an English course.
2. Additionally, students who sought help from their SA outside of class more often were also less likely to withdraw from their English course (Table 1b, page 3). This finding expands upon the fall 2015 SA evaluation.
3. Approximately 46.9% of students (60 out of 128) visited their SA outside of class. This constitutes a 5.6% increase over the spring 2016 term (41.3%).

College-Level English Courses

1. College-level English students who sought help from their SA outside of class more often were more likely to succeed relative to their peers (Table 2b, page 5).
2. There was no significant difference in retention between students who sought help from their SA and their peers who did not.
3. Students in ENGWR 101 had a higher SA attendance rate than their peers in ENGRD 110 (44.6% vs. 22%).
4. Increasing the number of times all students receive help from their SA has the potential of reducing equity differences in success (Table 3, page 8), although encouraging attendance for student groups with lower success rates would also be effective.

Limitations

There are three notable limitations to the present investigation. First, students who choose to seek help from their SA might be different from other students in motivation and/or other psychological factors. The difference between students who seek and do not seek assistance might therefore be explained by motivation – and not necessarily help from their SA. Second, 14 out of 21 sections (356 out of 603 students) provided attendance data. Compared to the student demographic profile of the missing roster data, the collected data has a larger proportion of Hispanic/Latino (40.6% vs. 33.7%) and a smaller proportion of female (49.2% vs. 55.1%) and Asian/Filipino/Pacific Islander students (27.3% vs. 31.7%). The average age of students represented in the collected rosters is 22 whereas the average age of the students from the missing rosters is 24.3. Thus, although unlikely in light of previous studies, these findings may not be fully representative. Finally, rosters used for tracking were created prior to the semester's census date, which may have contributed to missing or incomplete data within the 14 sections collected. Results should be interpreted with caution as low sample sizes limit the power of a statistical model's ability to find differences.

Recommendations

Overall, the findings regarding the effectiveness of SAs were positive. Students who visited their SAs achieved a higher success rate than their peers who did not. This finding was true for both the basic skills and college-level English courses that offered SA. Additionally, the percentage of basic skills English students visiting their SAs increased from the previous spring term. However, the results from the statistical analyses were somewhat limited due to the small sample sizes. The following are research recommendations focused on improving student usage:

1. Conduct a study to identify groups of at-risk students who do not utilize SA.
2. Conduct a follow-up study to identify incentives that could encourage at-risk students to visit their SA for help.
3. Conduct a longitudinal study that examines how students, who were previously enrolled English courses that offered SA and visited their SA, perform in their subsequent English course.

Student SA Usage, Success, and Retention

Method

Shortly before the spring 2017 census date, the Research Office generated SA attendance tracking sheets for all basic skills English courses, all ENGRD 110 courses, and seven ENGWR 101 courses. These tracking sheets were then used by SAs to record the number of times each student sought help from their SA *outside of class* on a weekly basis. At the end of the spring 2017 semester, 14 out of the 21 tracking sheets were returned to the Research Office. The Research Office then merged these sheets with demographic and official grade data in late June. The resulting dataset was used to test the association between SA usage and success/retention and to evaluate potential equity differences in program usage. Note that success was defined as receiving an A, B, C, or P in an English course, and retention was defined as receiving any grade other than a "W".

Student Population Description and Usage Rates

Of the 603 students enrolled in English courses offering SA, 356 students had attendance data tracked. Students whose self-reported race was categorized as "Multi-race/Unknown/Other" and Native American students were excluded from the study due to their small sample size in the class data (n=25). Therefore, a total of 331 students in 14 courses were included in this study.

Basic Skills English Courses

The overall success rate for basic skills English courses can be found in Table 1a, and attendance data can be found in Table 1b/Figure 1. Compared to spring 2016, the attendance rate increased from 41.3% to 46.9%. Students in ENGWR 58 had a higher attendance rate than their peers in ENGWR 42 (51.6% vs. 34.3%). Asian/Filipino/Pacific Islander and male students had the highest attendance rate. However, there were no statistically significant differences in participation rate on the basis of ethnicity, gender, or age. It appears as if the number of visits peaked during the week of March 6th and dipped until the week of April 17th (the week after Spring Break).

Table 1a. *Spring 2017 Basic Skills English Courses: Demographic Characteristics and Success/Retention Rates*

	Headcounts		Course Success		Retention Rate	
Demographic	**N**	**% or Avg.**	**N**	**%**	**N**	**%**
Gender						
Female	68	49.6%	88	60.3%	58	85.3%
Male	64	46.7%	82	54.7%	59	92.2%
Unknown	-	-	-	66.7%	-	100.0%
Ethnicity						
African American	19	14.8%	11	57.9%	14	73.7%
Asian/Filipino/Pacific Islander	35	27.3%	29	82.9%	33	94.3%
Hispanic/Latino	52	40.6%	32	61.5%	46	88.5%
White	22	17.2%	16	72.7%	21	95.5%
Course						
ENGWR 42	35	27.3%	23	65.7%	31	88.6%
ENGWR 58	93	72.7%	65	69.9%	83	89.2%
Average Age		22				
Total	**128**		**88**	**68.8%**	**114**	**89.1%**

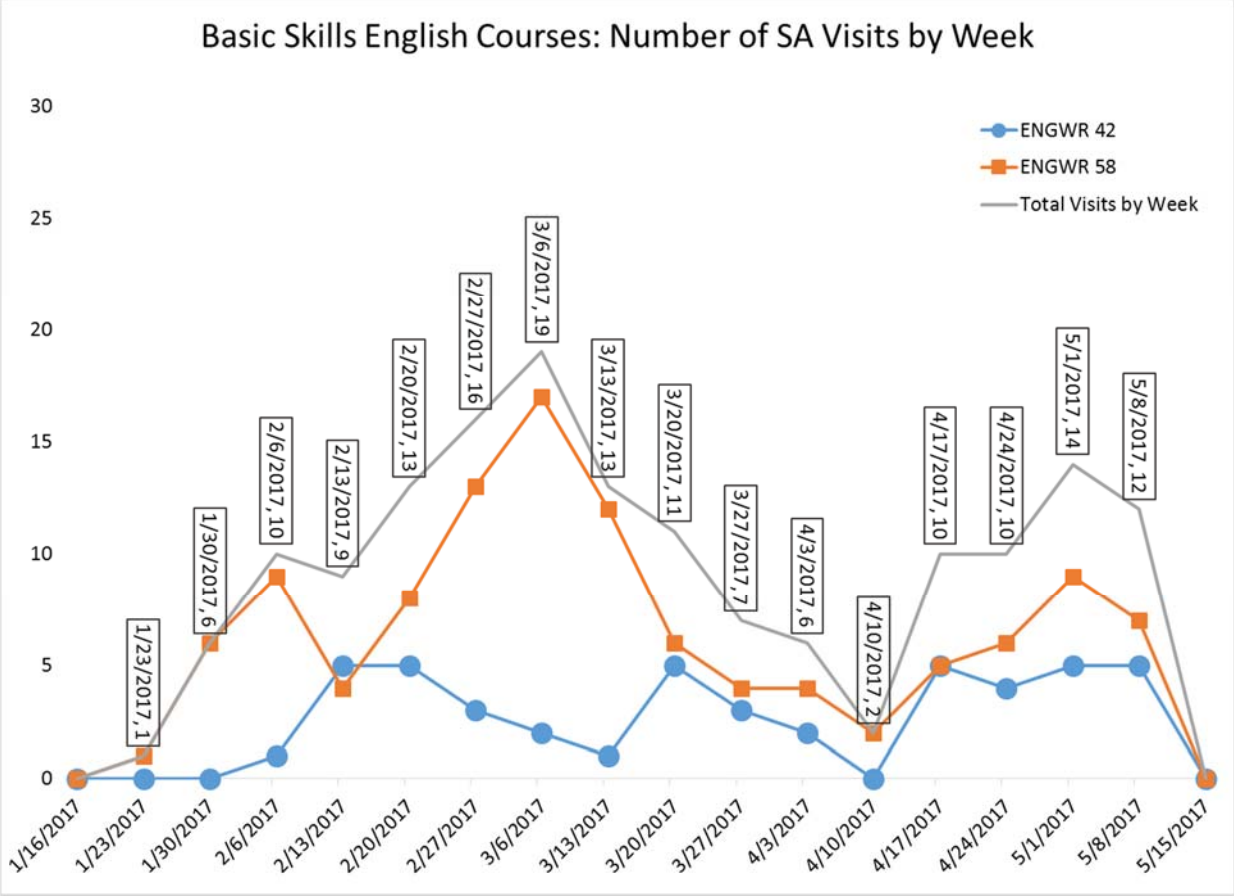
Note. Sample sizes suppressed when headcounts less than 10.

Table 1b. *Spring 2017 Basic Skills English Courses: SA Visits Outside of Class, Course Success/Retention for Students Who Used SA Outside of Class*

	Headcount			Course Success		Course Retention	
Demographic	**Visited (N)**	**Visited (%)**	**Average Visits**	**Visited**	**Did Not Visit**	**Visited**	**Did Not Visit**
Gender							
Female	25	39.7%	1.1	74.1%	63.4%	96.3%	78.0%
Male	32	53.3%	1.4	71.4%	58.6%	100.0%	82.8%
Unknown	-	60.0%	1.4	100.0%	50.0%	100.0%	100.0%
Ethnicity							
African American	-	36.8%	1.7	85.7%	41.7%	100.0%	58.3%
Asian/Filipino/Pacific Islander	20	57.1%	1.4	95.0%	66.7%	100.0%	86.7%
Hispanic/Latino	24	46.2%	1.0	62.5%	60.7%	100.0%	78.6%
White	-	40.9%	1.3	66.7%	76.9%	100.0%	92.3%
Course							
ENGWR 42	12	34.3%	1.3	75.0%	60.9%	100.0%	82.6%
ENGWR 58	48	51.6%	1.2	77.1%	62.2%	100.0%	77.8%
Total	**60**	**46.9%**	**1.2**	**76.7%**	**61.8%**	**100.0%**	**79.4%**

Note. Sample sizes suppressed when headcounts less than 10.

Figure 1. *Basic Skills English Courses: Number of SA Visits by Week, Spring 2017*



College-level English Courses

The overall success rate and SA attendance data for college-level English courses are displayed in Tables 2a-b and Figure 2. Students in ENGWR 101 had a higher attendance rate than their peers in ENGRD 110 (44.6% vs. 22%). Asian/Filipino/Pacific Islander, Hispanic/Latino, and female students had the highest attendance rate. While there were no statistically significant differences in participation rate on the basis of ethnicity or gender, older students were significantly more likely to visit the SA for help, $\Delta\chi^2(1) = 82.941$, $p < .001$. It appears as if the number of visits peaked during the week of March 2nd and dipped until the week of April 17th (the week after Spring Break).

Table 2a. *Spring 2017 College-Level English Courses: Demographic Characteristics and Success/Retention Rates*

	Headcounts		Course Success		Retention Rate	
Demographic	**N**	**% or Avg.**	**N**	**%**	**N**	**%**
Gender						
Female	112	55.2%	80	71.4%	101	90.2%
Male	86	42.4%	41	47.7%	71	82.6%
Unknown	-	2.5%	-	40.0%	-	80.0%
Ethnicity						
African American	35	17.2%	16	45.7%	28	80.0%
Asian/Filipino/Pacific Islander	70	34.5%	47	67.1%	66	94.3%

	Headcounts		Course Success		Retention Rate	
Demographic	**N**	**% or Avg.**	**N**	**%**	**N**	**%**
Hispanic/Latino	51	25.1%	27	52.9%	43	84.3%
White	47	23.2%	33	70.2%	39	83.0%
Course						
ENGRD 110	82	40.4%	44	53.7%	73	89.0%
ENGWR 101	121	59.6%	79	65.3%	103	85.1%
Average Age		22.2				
Total	**203**		**123**	**60.6%**	**176**	**86.7%**

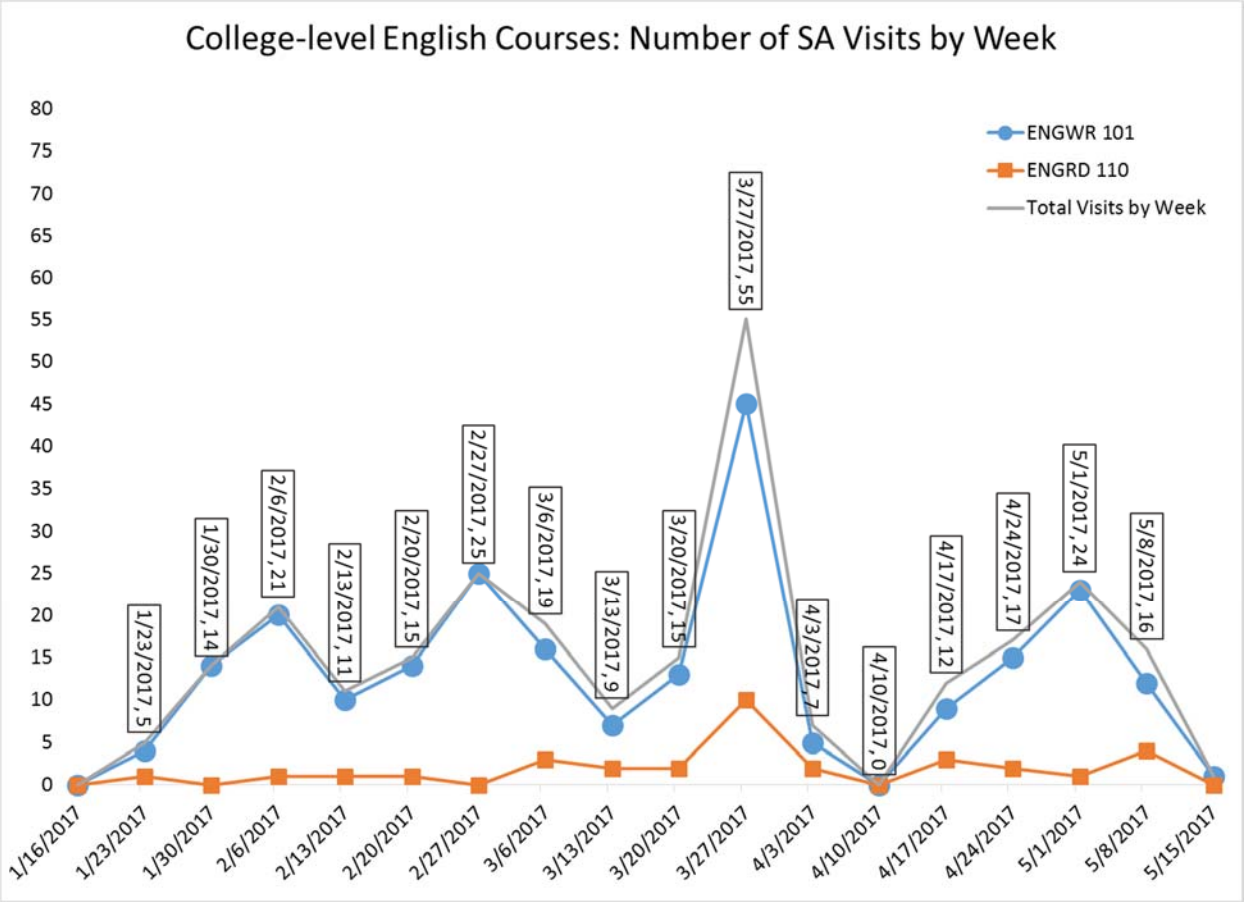
Note. Sample sizes suppressed when headcounts less than 10.

Table 2b. *Spring 2017 College-Level English Courses: SA Visits Outside of Class, Course Success/Retention for Students Who Used SA Outside of Class*

	Headcount			Course Success		Course Retention	
Demographic	**Visited (N)**	**Visited (%)**	**Average Visits**	**Visited**	**Did Not Visit**	**Visited**	**Did Not Visit**
Gender							
Female	44	39.3%	1.3	77.3%	67.6%	93.2%	88.2%
Male	25	29.1%	1.3	72.0%	37.7%	92.0%	78.7%
Unknown	-	60.0%	2.0	66.7%	0.0%	100.0%	50.0%
Ethnicity							
African American	12	34.3%	1.3	58.3%	39.1%	83.3%	78.3%
Asian/Filipino/Pacific Islander	28	40.0%	1.7	85.7%	54.8%	100.0%	90.5%
Hispanic/Latino	20	39.2%	1.0	65.0%	45.2%	85.0%	83.9%
White	12	25.5%	1.0	83.3%	65.7%	100.0%	77.1%
Course							
ENGRD 110	18	22.0%	0.4	72.2%	48.4%	94.4%	87.5%
ENGWR 101	54	44.6%	1.9	75.9%	56.7%	92.6%	79.1%
Total	**72**	**35.5%**	**1.3**	**75.0%**	**52.7%**	**93.1%**	**83.2%**

Note. Sample sizes suppressed when headcounts less than 10.

Figure 2. *College-Level English Courses: Number of SA Visits by Week, Spring 2017*



Results and Analysis (Technical Specifications)

This evaluation sought to replicate/extend findings from previous reports. As such, the association between student success and the number of SA visits outside of class was tested. Additionally, the association between retention and the number of SA visits was tested. In both cases, a logistic regression with a quasibinomial error term was used.

Basic Skills English Courses

With regards to success, in the first step age, gender, and ethnicity were entered as predictors of student success in basic skills English courses that offered SA. Age, gender, and ethnicity did not significantly predict success, and therefore were not included in subsequent analyses. Next, the total number of times a student visited the SA was entered as a predictor of success. The number of times a student visited SA significantly predicted success, $\Delta\chi^2(1) = 8.8284$, $p < .01$, suggesting that success is associated with receiving help from an SA. Findings were similar for student retention. The number of times a student visited SA significantly predicted student retention, $\Delta\chi^2(1) = 14.813$, $p < .001$, suggesting that retention is associated with receiving help from an SA.

College-level English Courses

As with the basic skills English courses, age, gender, and ethnicity were entered as predictors of student success in college-level English courses that offered SA. Gender and ethnicity were significantly associated with success in college-level English courses, $\Delta\chi^2(2) = 15.83$, $p < .001$, $\Delta\chi^2(3) = 10.927$, $p < .05$, respectively. Female students were significantly more likely to succeed than their male peers ($t(1) = -$

3.700, $p < .001$). White and Asian/Filipino/Pacific Islander students were significantly more likely to succeed than African American students ($t(1) = 2.392$, $p < .05$, $t(1), = 2.489$, $p < .05$, respectively). Therefore, gender and ethnicity were used as control variables in subsequent analyses for success in college-level English courses that offered SA. Next, the total number of times a student visited his/her SA was entered as a predictor of success. The number of times a student visited the SA significantly predicted success, $\Delta\chi^2(1) = 6.7726$, $p < .05$.

With regard to retention, only ethnicity significantly associated with retention, $\Delta\chi^2(3) = 7.5633$, $p < .05$. Asian/Filipino/Pacific Islander students were less likely to withdraw from the course than African American students ($t(1) = 2.106$, $p < .05$). Ethnicity was used as a control variable in subsequent analyses for retention. The total number of times a student visited his/her SA was entered as a predictor of retention. The number of times a student visited the SA did not significantly predict retention, $\Delta\chi^2(3) = 5.4186$, *ns.*

Interestingly, because the increase in probability per single SA visit is non-linear, simply increasing the average number of visits for *all* students could reduce achievement gaps between ethnic groups. Table 3 presents the projected probability of success by ethnic group from zero to nine visits. The column "Avg. Difference" is a measure of the average difference in probability of success between groups. Note that as the number of visits increases, the average difference in probability decreases. Also note that it would take African American students eight visits and Hispanic/Latino(a) students four visits to the SA to reach a 70% probability of success in college-level English courses.

Table 3. *Projected probability of success in College-level English courses by number of visits.*

	Probability of Success by Ethnicity				
Number of Visits	**African American**	**Hispanic/Latino**	**Asian**	**White**	**Avg. Difference**
0	40.6%	58.3%	70.2%	75.2%	13.3%
1	44.8%	62.3%	73.6%	78.2%	12.9%
2	49.0%	66.2%	76.8%	81.0%	12.3%
3	53.3%	69.9%	79.7%	83.5%	11.7%
4	57.5%	73.4%	82.3%	85.7%	10.9%
5	61.6%	76.6%	84.7%	87.6%	10.1%
6	65.5%	79.5%	86.7%	89.4%	9.3%
7	69.3%	82.1%	88.6%	90.9%	8.4%
8	72.8%	84.5%	90.2%	92.2%	7.6%
9	76.0%	86.6%	91.6%	93.3%	6.8%