Evaluation of First Year Experience, Summer 2017

CRC Office of Institutional Effectiveness

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Background

The First Year Experience (FYE) Program at Cosumnes River College (CRC) provides support to new high school graduates with the goal of increasing completion (degree, certificate, and/or transfer). As part of the FYE program, students participate in a summer experience program, receive personalized follow-up and educational planning services, gain access to special events, and are provided free text books. Students who participate in FYE must enroll in 12 units and must stay enrolled in the courses outlined in their educational plan. They are also required to attend tutoring if their GPA drops below 2.5. The investigation described herein sought to evaluate the effectiveness of the FYE program. This evaluation focused on short-term indicators of program effectiveness because students in the 2016-17 cohort have not had enough time to complete a degree and/or transfer. Specifically, if the goal of FYE is to improve student completion, then students in the program should be more successful in their courses, persist at higher rates, and complete more units.

Method

GPA, units completed, and persistence data *for fall and spring combined* were pulled for 185 FYE students from the Los Rios Peoplesoft Database for the 2016-17 academic year. These students were compared to a cohort of 1107 recent high school graduates enrolled in fall 2016 (the *non-FYE cohort*). To be included in this non-FYE cohort, students had to have attended high school within seven months of the start of fall at CRC. They also must have attended a feeder high school in the Elk Grove Unified School District (EGUSD): Cosumnes Oaks, Elk Grove, Florin, Monterey Trail, Franklin, Laguna Creek, Pleasant Grove, Sheldon, or Valley High. These high schools were highly represented within the FYE cohort, and therefore, including only these high schools in the non-FYE cohort promoted a more valid comparison.

Summary of Findings

1) FYE and non-FYE students differed in ethnicity such that Hispanic/Latino students constituted a significantly larger proportion of students in FYE (39.1% in FYE vs. 29.1% in non-FYE). FYE and non-FYE students did not differ in age or gender.
2) Over the course of fall and spring, students in the FYE cohort completed significantly more units than students in the non-FYE cohort (23.2 vs. 19.5 on average, respectively).
3) Students in the FYE cohort did not have a significantly higher GPA than non-FYE students (2.27 vs 2.20, respectively). This suggests that students in FYE perform equivalently to non-FYE students.
4) The difference in persistence between FYE and non-FYE students was not statistically significant (88.0% vs. 83.7%, respectively).

Conclusions and Limitations

The findings from this study suggest that students in the FYE program complete more units than non-FYE students. FYE students also appear to have statistically equivalent GPAs when compared to non-FYE students and persist at similar rates. In the case of persistence, the difference between the two groups was not statistically significant. It should be noted, however, that the difference in persistence may have been significant with larger sample sizes. These findings suggest that while the FYE program improves unit completion, it does not necessarily lead to greater course success or persistence. One possible

interpretation of this finding is that FYE successfully increases unit load/completion without detriment to student success and persistence.

The findings presented here should be interpreted with caution. Students who volunteer for the FYE program may be different from non-FYE students in a factor unrelated to the program. For instance, FYE students may simply be more motivated, and therefore, they are more likely to enroll in and complete more units. Another limitation of the study concerns the sample size. Statistically speaking, the smaller sample size in the FYE group might have hindered our ability to find significant differences, especially in terms of persistence.

Student Population Description

A demographic description of FYE and non-FYE students can be found in *Table 1*, and a breakdown of unit load, units completed, GPA, and persistence can be found in *Table 2*. Due to small sample sizes, students who are Native American and students with unknown ethnicity were excluded from analyses. A total of 1178 students were included in statistical analyses when testing for differences in units completed and persistence. Finally, because some students withdrew and/or took pass/no pass courses, a total of 1122 students were included in analyses of GPA.

A generalized linear model was used to test for demographic differences between FYE and Non-FYE students. There were significant differences in ethnicity across groups, $\Delta\chi^2(6) = 14.75$, $p < .05$, such that students who are Hispanic/Latino constituted a larger proportion of FYE students. There were no significant differences with regards to age and gender. However, the difference in gender was nearly significant, $\Delta\chi^2(1) = 3.40$, *ns.*, such that students who are female constituted a larger proportion of the FYE group.

Table 1. Demographics for FYE and Non-FYE Students

	FYE		Non-FYE	
Demographic	**Headcount**	**%**	**Headcount**	**%**
Ethnicity				
African American	22	12.0%	94	9.5%
Asian	42	22.8%	265	26.7%
Filipino	9	4.9%	64	6.4%
Hispanic/Latino	72	39.1%	289	29.1%
Multi-Race	16	8.7%	99	10.0%
Native American		0.0%	1	0.1%
Pacific Islander		0.0%	14	1.4%
Unknown		0.0%	6	0.6%
White	23	12.5%	162	16.3%
Gender				
Female	100	54.3%	451	45.4%
Male	82	44.6%	506	50.9%
Unknown	2	1.1%	37	3.7%
2016-17 Unit Load				
24 units or more	109	59.2%	372	37.4%
Less than 24 Units	75	40.8%	622	62.6%
Age				
18 or Younger	137	74.5%	783	78.8%
19 or Older	47	25.5%	211	21.2%
Total	**184**		**994**	

Table 2. Units Enrolled/Completed, GPA, and Persistence by FYE and Non-FYE cohorts

	Units Enrolled		Units Completed		GPA		Persistence	
Demographic	**FYE**	**Not FYE**	**FYE**	**Not FYE**	**FYE**	**Not FYE**	**FYE**	**Not FYE**
Ethnicity								
African American	21.8	17.3	15.5	10.7	2.02	1.74	86.4%	80.9%
Asian	25.1	21.4	20.2	16.9	2.52	2.38	88.1%	92.5%
Filipino	22.3	21.1	17.9	16.3	2.88	2.27	77.8%	93.8%
Hispanic/Latino	22.7	18.1	16.0	12.9	2.04	2.09	88.9%	76.5%
Multi-Race	23.1	19.5	18.3	14.2	2.55	2.29	87.5%	85.9%
Native American		24.0		12.0		1.00		100.0%
Pacific Islander		18.8		12.0		1.73		85.7%
Unknown		17.3		12.0		2.05		66.7%
White	23.1	19.5	16.7	14.8	2.30	2.32	91.3%	79.0%
Gender								
Female	23.3	19.6	18.4	14.9	2.41	2.30	88.0%	82.9%
Male	23.1	19.6	15.9	14.2	2.07	2.13	87.8%	86.0%
Unknown	23.5	16.3	17.5	10.6	3.27	1.84	100.0%	62.2%
2016-17 Unit Load								
24 units or more	27.0	27.1	21.9	22.3	2.50	2.54		
Less than 24 Units	17.7	14.9	10.6	9.7	1.90	1.98		
Age								
18 or Younger	23.5	19.7	17.5	14.6	2.31	2.20	89.1%	83.8%
19 or Older	22.6	18.5	16.6	13.5	2.14	2.18	85.1%	83.4%
Overall	**23.2**	**19.5**	**17.3**	**14.4**	**2.27**	**2.20**	**88.0%**	**83.7%**

Note. All variables were measured for fall and spring combined.

Analysis and Technical Specifications

The purpose of the present investigation was to test for differences in units completed, GPA, and persistence between FYE and Non-FYE groups. In the case of units completed and GPA, least squares regressions were used to test for differences, and in the case of persistence, differences were tested using generalized liner models assuming quasibinomial error.

Ethnicity and gender were both significantly correlated with units completed, $F(6, 1161) = 8.91$, $p < .001$ and $F(2, 1011) = 6.39$, $p < .01$, respectively. Because these variables were correlated with units completed, they were statistically controlled for when testing for differences between FYE and Non-FYE students. This is important for removing possible alternative explanations if differences are revealed between the two groups. For example, if FYE students are mostly female and female students complete

more units, then it would be difficult to tell if the FYE was effective because the support provided or because the demographic make-up of the program. After controlling for gender and ethnicity, the difference in units completed between FYE and Non-FYE students was statistically significant, $F(1, 1161) = 18.16$, $p < .001$, such that FYE students completed significantly more units (See *Table 2*).

Ethnicity and gender were also significantly correlated with GPA, $F(6, 1106) = 45.14$, $p < .001$ and $F(2, 1106) = 15.03$, $p < .001$. These variables were therefore controlled when testing for differences between FYE and Non-FYE students. The difference in GPA for FYE and Non-FYE students was not significantly different, $F(1, 1106) = 0.90$, *ns*. (See *Table 2*).

Finally, ethnicity and gender were significantly correlated with persistence, $\Delta\chi^2(6) = 29.64$, $p < .001$ and $\Delta\chi^2(2) = 10.45$, $p < .01$, respectively. Therefore these variables were controlled when testing for differences between FYE and Non-FYE students. The difference in persistence for FYE and Non-FYE students neared significance, $\Delta\chi^2(1) = 2.99$, $p < .10$, such that students in FYE were more likely to persist from fall into spring (See *Table 2*).