

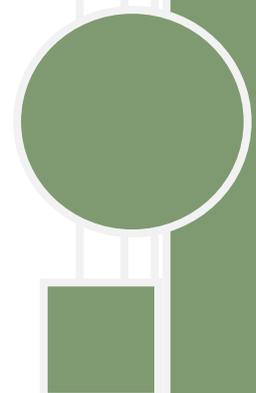
NORCO COLLEGE SUMMER ADVANTAGE PROGRAM

2015 Cohort

A summary of program outcomes and longitudinal tracking of students

Office of Institutional Effectiveness

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INTRODUCTION

The Summer Advantage Program was created as an intervention for graduating seniors in the Corona-Norco Unified School District who may not have placed at a level of English or math equivalent to their high school preparation. It was based on the assumption that students would get “best placement” if they were allowed to show what they know through intensive workshops involving brush-up sessions and testing on material they should already have covered in their high school course work. After thorough evaluation by faculty of their knowledge of critical concepts in English and math, students either received their best placement by staying at the level of initial placement or by being advanced to a higher level. Through this process, students had the potential of advancing up to three levels in English or math; potentially reducing time in basic skills courses by as much as 3 semesters. In addition to the English or math workshops, students were also required to complete a full-day orientation during Norco Orientation Week (NOW). During NOW, students were given an overview of Norco College requirements for certificates, degrees, and transfer; introduced to special programs and services for student success; and finally, each student was given a 2-semester educational plan from a counselor to guide their first year in college. Upon completion of NOW, students were given access to early registration and highly encouraged to enroll in English and/or math courses during their first year.

To get into the Summer Advantage Program, students were required to complete a few short steps. First they needed to fill out the college application and receive a student ID. The next step was to complete a short Summer Advantage Program application including contact information. The last step was completing the placement exam. Once these steps were completed, students were assigned to workshops based on eight criteria including high school courses, Early Assessment Program (EAP) status, and college placement level. The specific criteria are listed below:

- Passed Algebra II with “C” or better
- Expository Reading & Writing Course (ERWC in senior year)- “C” or better 1st semester
- Enrolled in a qualifying senior math course
- EAP math status
- EAP English status

- English placement
- Reading placement
- Math placement

In general, students were directed to either English or math workshops depending on where they placed the lowest. When students happened to place at college-level in English and math, or when the placement test had appropriately placed them in English and math, they were directed to NOW only.

The 2015 Summer Advantage Program included 3 components: the English component (called Academic Discourse workshops), the math component (called True Skills workshops), and the NOW week. English and math workshops were 8 days in length, and NOW was a one-day extended orientation. English workshops did not differentiate students into higher- or lower-levels. However, math workshops were established for Pre-Algebra, Elementary Algebra, and Intermediate Algebra placement levels. Students were allowed to move from one math workshop to the next two-week workshop if they showed evidence of requisite skills and knowledge upon completion of the initial workshop. As mentioned previously, students were placed in either English or math workshops (or neither) based on where they placed lowest. Once they completed the workshop requirement (if necessary), all Summer Advantage students were required to complete their assigned NOW day to receive early registration.

OUTCOMES OF SUMMER ADVANTAGE SESSION

By the end of the 2015 program, 982 students applied to Summer Advantage and 674 completed all steps to be eligible for the program. Four hundred twenty-seven students completed an English or math workshop, and 483 students completed the entire program (workshop if necessary and NOW). Table 1 below indicates number of completers for each component.

Finding students' best placement frequently resulted in students advancing in math or English levels. Table 2 below indicates the number of English levels students advanced as a result of their participation in the English workshops. The total number of levels advanced (i.e. terms saved) was 221 and the average number of English levels advanced per student was 1.3, which indicated most student advanced 1 or more levels. Table 3 below indicates the number of levels advanced in math workshops. The total number of levels advanced was 97 for math participants and the average number of math levels advanced per student was 0.39, which indicated most students did not advance higher in math.

Table 1-Summer Advantage Completers

Workshop	# Students
English	176
Math	251
NOW	504

**21 of the NOW students did not complete their assigned workshop and did not receive early registration.*

Table 2-Number of Levels Advanced - English

English Levels Advanced	# Students	Percent
0	32	18.2%
1	75	42.6%
2	61	34.7%
3	8	4.5%

Table 3-Number of Levels Advanced - Math

Math Levels Advanced	# Students	Percent
0	162	64.5%
1	81	32.3%
2	8	3.2%
3	0	0.0%

OUTCOMES OF SUMMER ADVANTAGE COHORT IN FALL 2015 SEMESTER

Fall 2015 enrollment for Summer Advantage students who remained past census in at least one course resulted in a total of 411 students. Summer Advantage students enrolled in more units on average, than other first-time Norco students as shown in Table 4. As mentioned previously, Summer Advantage students were encouraged to register in English and math courses during early registration. Table 5 below compare English/math enrollment between Summer Advantage and all other first-time college students.

Table 4-Comparison of Average Units Attempted

	Average Unit Course Load
Summer Advantage	11.9
First-Time Students	9.3

Table 5-Comparison of Summer Advantage vs. 1st Time Students in English & Math Enrollment

	Enrolled in Math and English	Enrolled in Math or English	Not enrolled in Math or English	Did not Enroll beyond census
Summer Advantage	342/411 (83.2%)	58/411 (14.1%)	11/411 (2.7%)	72
First-Time Students	344/1301 (26.4%)	506/1301 (38.9%)	451/1301 (34.7%)	n/a

To assess student achievement in general during the fall semester, success and retention rates for all courses enrolled were calculated for Summer Advantage students and all other first-time college students. Success is defined as the percentage of enrollments receiving grades of A, B, C or P (Pass). Retention is defined as the percentage of students who do not receive a W (withdrawal). Table 6 shows that significant significantly higher course success and retention rates were evident for Summer Advantage students in comparison to first-time college students during fall 2015. Had no significant difference existed between groups, it would have been a positive outcome as Summer Advantage performance would have matched all other first-time college students. Indeed, it is even more positive that Summer Advantage students outperformed all other first-time college students in these areas.

There was much encouragement by Summer Advantage faculty and staff for SA students to enroll full-time and to start in English and math in their first semester. This resulted in Summer Advantage students enrolling a course load with higher units and greater intensity (i.e. English and/or math courses) than other first-time college students as indicated in Table 5. To determine how SA students performed in comparison to students taking a similar course load, a further analysis of course outcomes was performed. For this analysis, the comparison group of first-time college students was narrowed down to those who had enrolled in at least one or more English or math courses and had attempted 12 or more units in fall 2015. Table 7 below shows the success and retention rates of this analysis. As indicated by the asterisk (*), there was no significant difference between the two groups. These data support the idea that Summer Advantage students were well-prepared for the English and math courses to which they were advanced, and were ready to assume a full-time course load. One of the reasons for the performance of Summer Advantage students is that one full-time counselor was dedicated to following these students and providing workshops and individual support as they navigated the rigors of the first year in college.

Table 6-Success Rate Comparison-Summer Advantage vs All Other First-Time Students

	Success	Retention
Summer Advantage	73.2%*	91.3%*
First-Time Students	68.7%	88.4%

**T-tests show that the differences between groups for success and retention are significant.*

Table 7-Success Rate of Summer Advantage vs. 1st Time Student with Similar Units/Intensity

Comparison of Overall Success		Enrollments	Success Rate
	Summer Advantage Students (n=298)	1046	75.0%
	All First-Time Students (n=451)	1701	73.0%

Not a significant difference (t = 1.126, p = .260)

To identify if disproportionate impact occurred in any student subgroups, the overall success of SA students and all other first time students at Norco College was disaggregated by gender and ethnicity. Disproportionate impact is calculated by using the highest performing group and identifying how many groups performed less than 80% of the highest performing group. The results of the analysis and identification of disproportionately impacted groups (*) are presented in Tables 8 and 9 below.

Table 8-Success Rate Disaggregated by Gender

	SA Student Success Rate		First time student success rate	
Total	411	73.2%	1301	68.7%
Female	232	74.3%	589	70.4%
Male	170	70.8%	691	67.2%
Unknown	9	89.3%	21	68.4%

Table 9-Success Rate Disaggregated by Ethnicity

	SA Student Success Rate		First time student success rate	
Total	411	73.2%	1301	68.7%
Asian/PI	37	84.6%	95	83.0%
African American	28	69.2%	69	64.4%*
Hispanic	269	70.7%	791	66.4%
Native American/Alaskan	1	100%	4	60.0%
White	77	74.5%	320	71.1%
Two or more races	5	93.8%	19	66.0%
Unknown	1	100%	3	66.7%

*Indicates disproportionate impact. Groups with *n* less than 20 are not large enough to calculate DI.

Although disproportionate impact was evident among all other first-time African-American students in success, that impact was mitigated in African-American Summer Advantage students. This is a very positive outcome especially considering the topic from an equity perspective.

MATH OUTCOMES IN FALL 2015

Success rates were compared for SA math workshop participants who took math classes in fall semester, and all other students enrolled in the same math classes as the SA participants. Of the 251 SA participants who completed the math workshops, 191 enrolled in a math course in fall 2015 (76% math enrollment rate). As indicated in Table 10, SA math success rates were higher than others in the same class, but not significantly higher as determined by a t-test of independent groups. This is positive as it indicates that math SA workshops completers were well-prepared for their math courses as determined by the workshops faculty.

Table 10- Math Success Rates: Summer Advantage vs Comparison Group

	Success	Percent
SA Math Participant	124/191	64.9%
Non-Participants	1279/2126	60.2%

**Not a significant difference (t = 1.315, p = .190)*

Success rates for SA math participants were disaggregated by number of levels advanced and by math course taken in fall 2015 as shown in Tables 11 and 12, respectively. Digging deeper into the data displayed on Table 11, SA students who advanced were compared to those that stayed where they were placed and the two groups were within 1% of each other. This shows that all students were accurately placed, even when not advanced.

Table 11-Success Rates Disaggregated by Math Levels Advanced

Math Levels Advanced	Count	Percent Successful
0	77/118	65.3%
1	42/66	63.6%
2	5/7	71.4%
3	n/a	n/a
Total	124/191	64.9%

Table 12 shows that SA participants outperformed nonparticipants in all math courses but two: Math 65 (Arithmetic and Pre-Algebra) and Math 12 (Statistics). Reasons for this vary, but given that Math 65 is the bottom-level math, there are possibly other confounding factors for math performance beyond preparation from Summer Advantage. Some of these factors may be issues such as learning disabilities or other challenges. There is not a large difference between outcomes in Math 12, but it is very

popular choice among non-science majors which may account for the similarly low achievement in the course by SA participants and nonparticipants.

Table 12-Success Rates Disaggregated by Math Course

Course	SA Math Participant		Nonparticipants	
	Count	Percent Successful	Count	Percent Successful
Math-65	37/67	55.2%	235/323	72.8%
Math-52	34/50	68.0%	242/444	54.5%
Math-53	3/4	75.0%	22/41	53.7%
Math-35	31/47	66.0%	482/837	57.6%
Math-36	2/2	100%	35/53	66.0%
Math-11	10/10	100%	80/147	54.4%
Math-12	5/9	55.6%	138/233	59.2%
Math-5	2/2	100%	45/48	93.8%
Total	124/191	64.9%	1279/2126	60.2%

ENGLISH OUTCOMES IN FALL 2015

Success rates were computed for English workshop participants who took English classes and all other students enrolled in the same English classes as shown in Table 13. Of the 176 SA participants who completed English workshops, 138 enrolled in an English course in the fall 2015 semester (78% English enrollment rate). Summer Advantage students had somewhat higher success rates than non-participants in the same English classes though not significantly higher as determined by a t-test of independent groups. The success rates not being significantly different from each other indicated that SA English workshop participants demonstrated equivalent preparation for writing and composition as other students in the same classes.

Table 13-Success Rates in English for Summer Advantage and Comparison Group

Groups	Success	Percent
SA English Participant	98/138	71.0%
Non-Participants	718/1031	69.6%

Not a significant difference ($t = -0.972, p = .331$)

English success rates were disaggregated by number of levels advanced, and by English course as summarized respectively in Tables 14 and 15 below. English success by level didn't bear out any clear pattern, but those who advanced two levels appeared to struggle the most. Surprisingly, the highest achieving group by levels advanced was the highest at 3. These students represented those who were placed at the lowest level

(ENG-60A) but were moved to the highest level (ENG-1A) after careful assessment and evaluation of student work. Reviewing success rates by course (Table 15), the Summer Advantage group outperformed non-participants in all courses but ENG-60 and ENG-80. Given the low number of students in ENG-60A, this outcome is a byproduct of having an $n=2$. The lower performance in ENG-80, which is an accelerated course, may have to do with other factors (e.g., non-cognitive, affective issues) than academic preparation necessary for the course.

Table 14-Success Rates Disaggregated by English Levels Advanced

English Levels Advanced	Count	Percent Successful
0	17/24	70.8%
1	44/59	74.6%
2	32/49	65.3%
3	5/6	83.3%
Total	98/138	71.0%

Table 15-Success Rates Disaggregated by English Course

Course	SA English Participant		Nonparticipants	
	Count	Percent Successful	Count	Percent Successful
English-60A	1/2	50.0%	43/55	78.2%
English-60B	10/12	83.3%	104/128	81.3%
English-50	35/48	72.9%	225/336	67.0%
English-80	20/35	57.1%	89/141	63.1%
English-1A	32/41	78.0%	257/371	69.3%
Total	98/138	71.0%	718/1031	69.6%

ANNUAL OUTCOMES (2015-16) FOR SUMMER ADVANTAGE COHORT

To determine impact of the Summer Advantage Program beyond fall semester, outcomes spanning the entire academic year were compared between Summer Advantage students and those starting in college during fall 2015. Annual outcomes assessed were term-to-term retention (fall 15-spring 16 & fall 15-fall 16) and successful completion of transfer-level English and math (pipeline persistence). Retention is defined as students who remain enrolled beyond census in the initial term and the final term in question. For pipeline persistence, successful completion is defined as receiving "C" grade or better in a course. Transfer-level English is ENG 1A (English Composition) and transfer-level for math is defined as any course with an Intermediate Algebra prerequisite.

Retention outcomes resulted in Summer Advantage students significantly outperforming other first time college students. Table 16 shows the outcomes for the two groups in fall-to-spring and fall-to-fall retention.

Table 16-Term-to-term retention for Summer Advantage and Comparison Group

Term-to-Term Retention	Summer Advantage	All Other First-Time College Students
Fall 15-Spring 16	365/411	1003/1301
	88.8%*	77.1%
Fall 15-Fall 16	300/411	738/1301
	73.0%*	56.7%

*Indicates significant difference between groups ($t=6.023$, $p < 0.001$)

** Indicates significant difference between groups ($t=6.286$, $p < 0.001$)

Fall-to-spring and fall-to-fall retention showed group differences of 11.7% and 16.3%, respectively. These differences between groups were statistically significant, and indicated quite clearly that this difference was very unlikely to have occurred by chance. As shown previously, there were several systematic differences (most likely attributable to the influence of the Summer Advantage program) in unit load, and course selection in first semester (English and math enrollment). These may have contributed to increased persistence during the year. In addition, outreach efforts made by counseling mentioned previously, may have also had a positive impact on the Summer Advantage students.

Pipeline persistence resulted in relatively large differences between Summer Advantage students and fall 2015 first-time college students. Table 17 displays the percentage of students successfully completing transfer-level English and math courses within the first year of attending college.

Table 17-Pipeline Completion in English and Math

Pipeline Completion	Summer Advantage	All Other First-Time College Students
English	202/411	204/1301
	49.1%*	15.7%
Math	103/411	117/1301
	25.1%*	9.0%

*Indicates significant difference between groups ($t=12.549$, $p < 0.001$)

**Indicates significant difference between groups ($t=7.039$, $p < 0.001$)

This outcome represents a goal that is paramount to the Summer Advantage program—reducing time to complete basic skills coursework and increasing success. The difference in English pipeline persistence between Summer Advantage and other first time college students was a phenomenal 33.4%. Summer Advantage students were more than three times as likely to complete transferable English as other first time

college students within the first year of attendance. Math outcomes were also notable with a 16.1% difference between groups. This was close to triple the pipeline completion rate of other first-time college students. It should be noted that the math pipeline is generally longer to complete than English which may account for the relatively lower rate than English.

SUMMARY AND PLANS FOR THE FUTURE

Summer Advantage clearly had a positive impact by saving students a total of 318 terms of remedial course work through their participation in English and math workshops. In addition, Summer Advantage students were more likely to enroll in English or math courses, and were more likely to be full-time students than other first-time college students. During NOW, Summer Advantage students received a comprehensive introduction to many of the essential student services and also received a two-semester educational plan to guide their course selection during the following academic year. This undoubtedly gave students greater preparation and exposure to college than the new students who did not participate. All of these advantages certainly lived up to the namesake of the program.

The data indicated that Summer Advantage students perform significantly better in all classes enrolled in fall 2015 as other full-time first-time students who were also enrolled in English or math. Summer Advantage students who participated in English and math workshops also appeared to be well-prepared for their recommended English and math courses in fall 2015. When extending analyses to year-long outcomes, the difference between groups became much more noticeable with SA students far outperforming the comparison group in term-to-term retention and pipeline persistence in English and math.

During spring 2016, Norco College decided to pilot the state-level Multiple Measures Assessment Project (MMAP). MMAP is a statewide initiative that weights high school grades and non-cognitive variables to a much greater extent than in the past. Up until MMAP, the score on the placement test was by far the strongest placement measure used to establish where a student began in English, math, reading and/or ESL courses. Through very strong research transecting multiple California community colleges, a model was established that found high school grades and overall GPA were much better tools for establishing placement than standardized placement tests. The result was that students were being placed into higher English and math levels, and sustaining equal or greater success rates than students in the same classes but not placed by MMAP. Results for Norco College closely resemble those found at the state-level, though not enough time has elapsed to determine whether MMAP students are performing

successfully in the courses placed by the MMAP model. If Norco College MMAP results show similar outcomes as the Summer Advantage program, serious consideration will be given to replacing the English and math workshops with MMAP placement.

Summer Advantage has provided many students a route to improved success over the past four years. The program was always guided by data, and informed by the experience of faculty and staff. One of the strengths of Summer Advantage over the years has been the integration of the academic and student services “sides of the house”. The focus of the academic faculty involved in Summer Advantage was to make sure students learn what it takes to become a successful student, not only academically but in non-cognitive areas as well. The Norco Orientation Week (which is mainly student services focused) has always been necessary for students to have been considered a completer of the Summer Advantage Program. If MMAP replaces the English and math workshops, the focus on preparing students to be successful in all areas will continue in the remodeled version of Summer Advantage. Though not completely solidified at this point, the new Summer Advantage program model will integrate student success workshops applied to various types of classes (science, math, English, arts & humanities) with information and self-exploration workshops (financial aid, course advisement, career exploration, etc.) The experience of Summer Advantage through the years has been invaluable to bringing Norco into a greater level of incoming student success, as well as evolving to the next level of Summer Advantage 2.0.