Norco College Summer Advantage Program

2014 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)-"A" or "B" 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 2014 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 2014 program, 856 students applied to Summer Advantage and 631 completed all steps to be eligible for the program. Four hundred thirty-eight students completed an English or math workshop, and 493 students completed their NOW day. 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 259 and the average number of English levels advanced per student was 1.1. Table 3 below indicates the number of levels advanced in math workshops. The total number of levels advanced was 226 for math participants and the average number of math levels advanced per student was also 1.1, similar to English participants.

Table 1-Summer Advantage Completers

Workshop	# Students
English	229
Math	209
NOW	493

**18 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	47	20.5%
1	105	45.9%
2	77	33.6%

Table 3-Number of Levels Advanced - Math

Math Levels Advanced	# Students	Percent
0	63	30.1%
1	81	38.8%
2	50	23.9%
3	15	7.2%

OUTCOMES OF SUMMER ADVANTAGE STUDENTS IN ALL CLASSES FALL 2014 SEMESTER

Fall 2014 enrollment for Summer Advantage students who enrolled past census in at least one course resulted in a total of 438 students. Summer Advantage students enrolled in 11.7 units on average, while all other first-time Norco students enrolled in 8.5 units on average. As mentioned previously, Summer Advantage students were encouraged to register in English and math courses during early registration. To identify whether there was an impact in type of courses enrolled, a comparison was made between Summer Advantage and first-time students on enrollment in English and math courses during the fall 2014 semester. Tables 4 and 5 below compare the average unit load and English/math enrollment between Summer Advantage and first-time college students

Table 4-Comparison of Average Units Attempted

	Average Unit Course Load
Summer Advantage	11.7
First-Time Students	8.5

Table 5-Comparison of Course Intensity between Summer Advantage & 1st Time Students

	Enrolled in Math and English	Enrolled in Math or English	Not enrolled in Math or English	Did not Enroll beyond census
Summer Advantage	344/438 (78.5%)	79/438 (18.0%)	15/438 (3.4%)	37
First-Time Students	266/1169 (22.8%)	456/1169 (39.0%)	447/1169 (38.2%)	n/a

To assess the level of achievement during the fall semester, success and retention rates for all courses was 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 no significant difference in course success or retention existed between Summer Advantage and first-time college students during fall 2014. The lack of significance by no means indicated a lack of success. Rather, it showed that Summer Advantage students were able to advance in placement levels without impacting their success. In addition, 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 2014. Table 7 below shows the success and retention rates of this analysis. As indicated by the very similar outcomes, there was no significant difference between the two groups. These data supported the idea that Summer Advantage students were not only prepared for the English and math courses to which they were advanced, but also were ready to assume a full-time course load. This was an encouraging finding , especially due to the fact that in the same analysis conducted on the 2013 cohort, the SA students performed at a significantly lower level of success and retention overall. The reasons for this improvement may have been related to increased support to the 2014 SA students by counseling over the entire year. One 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	63.0%	89.5%
First-Time Students	62.9%	88.6%

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=290)	1028	65.6%
All First-Time Students (n=290)	1067	65.6%

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	438	63.0%	1169	62.9%
Female	219	66.6%	544	67.8%
Male	216	59.3%	619	58.4%
Unknown	3	66.7%	6	76.2%

Table 9-Success Rate Disaggregated by Ethnicity

	SA Student Success Rate		First time student success rate	
Total	438	63.0%	1169	62.9%
Asian/PI	23	85.7%	82	77.2%
African American	28	57.3%*	62	58.8%*
Hispanic	285	61.3%*	724	60.7%*
Native American/Alaskan	0	n/a	4	63.6%
White	83	65.8%*	256	65.8%
Two or more races	17	55.8%	37	57.0%
Unknown	2	37.5%	4	66.7%

(*Indicates disproportionate impact-groups with *n* less than 20 are not included)

MATH OUTCOMES IN FALL 2014

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 209 SA participants who completed the math workshops, 161

enrolled in a math course in fall 2014 (77% math enrollment rate). As indicated in Table 10, seventy-nine of these students succeeded in their math classes (49.1%). The comparison group showed a success rate of 63.3% (1445/2282). A t-test to compare means was computed to see if the difference in success rates was significant. The success rates of these two groups were significantly different from each other with Summer Advantage students being significantly less successful than all other first-time students.

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

	Success	Percent
SA Math Participant	79/161	49.1%*
Non-Participants	1445/2282	63.3%

**Significant (t = 3.494, p = .001)*

Success rates for SA math participants were disaggregated by number of levels advanced and by math course taken in fall 2014 as shown in Tables 11 and 12, respectively. Based on the results of Table 11, SA students who advanced three levels were much less likely to succeed in their courses. This represented either a jump from basic arithmetic to intermediate algebra, or from pre-algebra to transfer-level math.

Table 11-Success Rates Disaggregated by Math Levels Advanced

Math Levels Advanced	Count	Percent Successful
0	17/41	41.5%
1	38/67	56.7%
2	22/42	52.4%
3	2/11	18.2%
Total	**79/161**	**49.1%**

Table 12 revealed a pattern that success rates for students enrolled in Math 35 (Intermediate Algebra) and below were significantly lower (44%) than all other students in the same math sections (61%) ($t = -3.651, p < .001$). In further analysis of the Intermediate Algebra and below group, students who advanced 1 or more levels (movers) were compared against those that did not move levels (stayers). Results showed that there was no difference between the movers' and the stayers' success rates within this group (t=0.464, p=0.643). In essence, movers and stayers did equally poorly which indicates that success, or lack thereof, was not due to SA students moving up levels. Table 12 also showed that SA students who took transfer-level math (Math 36, 11, 12 & 5) did not appear to underperform in comparison to other students in their classes. Math SA students had a 66% success rate and nonparticipants in the same

classes had a 70% success rate. The difference between groups was not significant which indicates that SA math workshop completers were prepared to perform as well in transfer-level math classes as nonparticipants. Although there was a large difference in group size between the transfer-level math in SA and nonparticipants, significance testing took this difference into account.

Table 12-Success Rates Disaggregated by Math Course

	SA Math Participant		Nonparticipants	
Course	**Count**	**Percent Successful**	**Count**	**Percent Successful**
Math-63	5/11	45.5%	83/119	69.7%
Math-64	7/12	58.3%	43/64	67.2%
Math-65	6/21	28.6%	176/253	69.6%
Math-52	25/44	56.8%	303/501	60.5%
Math-53	1/2	50.0%	27/51	52.9%
Math-35	12/36	33.3%	394/696	56.6%
Math-36	6/9	66.7%	107/148	72.3%
Math-11	9/9	100%	122/178	68.5%
Math-12	8/14	57.1%	176/231	76.2%
Math-5	0/3	0%	14/41	34.1%
Total	**79/161**	**49.1%**	**1445/2282**	**63.3%**

ENGLISH COURSE OUTCOMES IN FALL 2014

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 229 SA participants who completed English workshops, 174 enrolled in an English course in the fall 2014 Semester (76% English enrollment rate). One hundred twenty of these students succeed in their English class (67.8**%**). The comparison group showed a success rate of 71.3% (847/1225). A t-test to compare means was computed to see if the difference in success rates was significant. These success rates were not significantly different from each other which indicated that SA English workshop participants demonstrated equivalent success levels 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	120/177	67.8%
Non-Participants	874/1225	71.3%

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

English success rates disaggregated by number of levels advanced, and success rates disaggregated by English course are summarized respectively in Tables 14 and 15 below. English success tended to decrease as SA students advanced more levels in the English composition sequence, although students who didn't advance any levels had the lowest success rates. Surprisingly, the majority of the students who didn't advance were not in the lowest English course (ENG-60A), they were in the course one level below transfer (ENG-50). Reasons for this are unknown at this point. However, the English discipline is interested in exploring in more depth by looking at other data elements. Based on low performance of English students who were advanced 3 levels in the 2013 cohort, the English discipline decided that the students would not be advanced that many levels in the 2014 cohort (i.e., moving from the lowest (ENG-60A) to the highest (ENG-1A) English course).

Table 14-Success Rates Disaggregated by English Levels Advanced

English Levels Advanced	Count	Percent Successful
0	18/31	58.1%
1	63/86	73.3%
2	39/60	65.0%
Total	**120/177**	**67.8%**

Table 15-Success Rates Disaggregated by English Course

	SA English Participant		Nonparticipants	
Course	Count	Percent Successful	Count	Percent Successful
English-60A	5/10	50.0%	139/204	68.1%
English-60B	21/28	75.0%	131/180	72.8%
English-50	34/59	57.6%	260/334	77.7%
English-80	28/39	71.8%	63/106	59.4%
English-1A	32/41	78.0%	281/401	70.1%
Total	**120/177**	**67.8%**	**874/1225**	**71.3%**

ANNUAL OUTCOMES (2013-14) FOR SUMMER ADVANTAGE COHORT

To determine if the the effectiveness of the Summer Advantage Program continued beyond fall semester, outcomes spanning the entire academic year were compared between Summer Advantage students and those starting in college during fall 2014. Annual outcomes assessed were term-to-term retention (fall 14-spring 15 & fall 14-fall 15) 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 14-Spring 15	385/438	751/1169
	87.9%*	64.2%
Fall 14-Fall 15	336/438	705/1169
	76.7%**	60.3%

**Indicates significant difference between groups (t=11.28, p< 0.001)*

*** Indicates significant difference between groups (t=6.62, p< 0.001)*

Fall-to-spring and fall-to-fall retention showed group differences of 23.7% and 16.4%, respectively. These differences between groups were statistically significant, and indicated that with utmost confidence one could assume that this difference was very unlikely to occur 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 2014 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	159/438	108/1169
	36.3%*	9.2%
Math	89/438	101/1169
	20.3%**	8.6%

**Indicates significant difference between groups (t=9.998, p< 0.001)*

***Indicates significant difference between groups (t=3.194, p< 0.005)*

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 27.1%. Summer Advantage students were almost four 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 an 11.7% difference between groups. This was more than double 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 485 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 equally as well in all classes enrolled in fall 2014 as other full-time first-time students who were also enrolled in English or math. Summer Advantage students who participated in English workshops also appeared to be well-prepared for their recommended English courses in fall 2014. Summer Advantage students who participated in Math workshops did not perform as well in math courses as other students in the same math classes. However, SA math workshop students who were placed into transfer-level math did equally as well as those who were in the same classes. 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.

Based on these data and the experiences of the faculty and staff involved in the Summer Advantage Program, the following change was made for the 2015 program model for math. Math faculty decided that due to the continued poor performance of SA students in math courses during fall 2014, the holistic placement process would be

changed in 2015 to begin incorporating results of classroom performance (i.e. affective measures and daily progress in the workshops) when making the decision to advance students to higher levels.

Overall, the 2014 Summer Advantage program continued to be guided by data, and informed by the experience of faculty and staff. The increase in scale of the Summer Advantage program is promising for the possible impact it may have on institutional outcomes, as well as the clear impact it had on program participants. This innovative model that integrates instruction, student services, and the local school district attracted national attention by being the 2015 winner of the Teaching and Learning category of the Bellwether Award. Future plans for the program are to continue to follow cohorts into the second year for even longer-term outcomes such as degree attainment and transfer. If Norco College continues to see successful outcomes similar to one-year outcomes, it will consider publishing results in various peer-reviewed journals. Hopefully, through publication and presentations, this innovative model will provide many other institutions information so that they can reproduce positive results similar to those of Norco College.