

Early college placement testing: Outcomes and impacts of the Early ACCUPLACER partnership

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Executive summary

The Early ACCUPLACER Program was administered in partnership between the University of Alaska (UAA) and Anchorage School District (ASD) between 2006 and 2013. Using the UAA placement test (ACCUPLACER) as an instructional tool, the program intended to help students understand the differences between high school graduation requirements and college-level coursework. Test scores were used to advise students to take more rigorous high school curricula so they would be better prepared for the academic expectations of the college environment. In its seven years of operation, the program served thousands of ASD students.

This report reviews Early ACCUPLACER test scores and subsequent academic performance for high school juniors and seniors who tested in the 2009-2010 and 2010-2011 academic years. The data show that, at the time of testing, many of those high school students' test scores would place them into developmental classes in college. This analysis was unable to examine high school transcripts to see whether or not students heeded advice to take additional and more rigorous high school courses; however, by following the participants who subsequently attended college in the UA system¹, the data show:

- Students who participated in the program did not exhibit substantively higher college placement test scores than other incoming students who did not receive the intervention.
- Most students who participated in the program performed better on the test at the time of college matriculation than when they took it in high school, but the increases in performance, on average, were not large enough to change their recommended course placements. For approximately a quarter of students, test performance decreased between high school and college.
- Upon matriculation, more students needed developmental coursework in math than in English or reading.
- Upon attending college, between two-thirds and three-quarters of the Early ACCUPLACER program participants performed well enough in their first year to meet eligibility requirements for federal financial aid.
- Persistence rates for Early ACCUPLACER participants were slightly higher than the overall UAA rates; however they were similar to other recent high school graduates, who tend to have higher persistence rates than nontraditional-aged students.

The data suggest that the program did not significantly impact the college readiness or later college performance for its participants who later attended UA. However, the data and literature suggest opportunities to use high school-college partnerships as part of a robust outreach agenda.

Recommendations include evaluating the relationship between high school course-taking behavior and college readiness, and broadening the definition of “college readiness” to include other attributes known to promote success.

¹The high school test data do not speak for all of ASD students because the students were a self-selecting population, and the college performance data do not reflect all program participants, because not all of them attended college in the UA system.

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Introduction

This report describes the Early ACCUPLACER program, a college readiness initiative delivered as a partnership between the University of Alaska Anchorage (UAA) and the Anchorage School District (ASD). Operating between 2006 and 2013, the program provided early college placement testing to high school juniors and seniors throughout Anchorage. This report summarizes program activities and outcomes from historical program data available in its last semester of operation (spring 2013). It compares the high school test performance of juniors and seniors in reading, English, and math, and reviews college performance outcomes for the students who subsequently attended the University of Alaska (UA).

Program history

The ACCUPLACER is a standardized suite of tests developed by the College Board. UAA uses its *Sentence Skills, Reading Comprehension, Elementary Algebra, and College Math* batteries to ascertain current levels of performance and place students into college- or developmental-level courses.² The Early ACCUPLACER program was initiated in 2006 to address concerns about the high numbers of students testing into developmental education at UAA. Its theory of change was that helping students to understand the gap between high school graduation requirements and college expectations would encourage them to make more rigorous academic choices at the secondary level (McCabe, 2003), as student choice in high school is an important contributor to college preparedness (Nunley, Shartle-Galotto & Smith, 2000).

There is an emerging body of literature that supports early testing programs for promoting college readiness, and the ACCUPLACER test is one of several available tools. Reviews of recent publications and best practice literature highlight two prevailing ways to use ACCUPLACER. The first is as a pre/post-test instrument; in this model, faculty or staff administer the test, deliver an intervention, and then re-administer the test to measure the effectiveness of the intervention. This type of application usually targets a specific skill set and employs the diagnostic features of the instrument; it is designed to influence curricular decisions and pedagogical approaches at the secondary level, though postsecondary institutions often administer these programs as part of their outreach efforts.

The second prevailing ACCUPLACER application described in the literature is to use test scores to advise students with the intent of encouraging them to pursue more rigorous high school curricula. In this model, the ACCUPLACER test is administered to high school students and the scores are presented to students as an advising opportunity and to inform their enrollment decisions (see Nunley et. al, 2000). These programs employ a team-based approach, and best practice models cite high levels of support and engagement from the secondary and postsecondary administrators, teachers, advisors, and counselors. The *ACCUPLACER Guide to Testing and Innovative Practices* provides comprehensive and summative information about applications and uses nationwide.

² Noting the limitations of placement testing as the sole determinant in course placement, faculty at the University of Alaska are working to incorporate more comprehensive indicators in its placement processes, with changes expected in the upcoming fiscal year (see UA Faculty Alliance Resolutions 2017-04 and 2017-05).

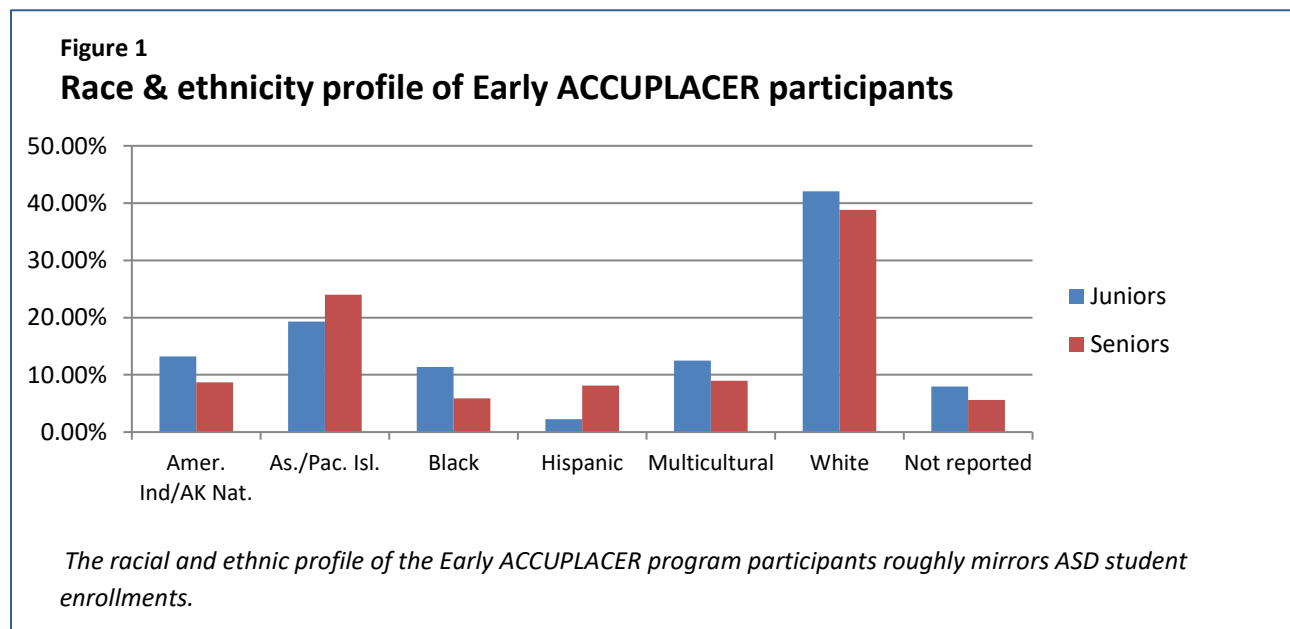
The ASD/UAA Early ACCUPLACER program operated in the latter realm, but it is important to note that the elaborate and integrated secondary-postsecondary partnerships described as ideal in the best practice literature were not as robust between ASD and UAA. In the implemented model, ASD counselors recruited students to take the test at their local high schools; it was administered on a voluntary basis after school, and as students completed the test, they met with a UAA representative who interpreted the scores for the student using UAA course cut scores for context. Explicitly not a recruitment initiative, the UAA representative used the ACCUPLACER scores to enumerate steps the student could take while still in high school to augment their academic preparedness for college.

Method

Data used in this report comes from two sources: the ACCUPLACER database supported the College Board, which contains individual student test performance; and the UAA BANNER student database, which supplied college transcript data, high school transcript data (which is loaded into BANNER when students are admitted to the college), and demographic data. The ACCUPLACER database does not contain UAA identification numbers, so student records were matched by hand using name, high school, high school graduation date, and birth date.

Student participation

This report includes students who participated in the Early ACCUPLACER testing program in the 2009-2010 and 2010-2011 academic years³. During this two-year period, the ACCUPLACER test was administered to 862 students; 10% were juniors, 42% were seniors tested in the fall, and 48% were seniors tested in the spring. The analysis excludes the seniors who tested in the spring for two reasons;



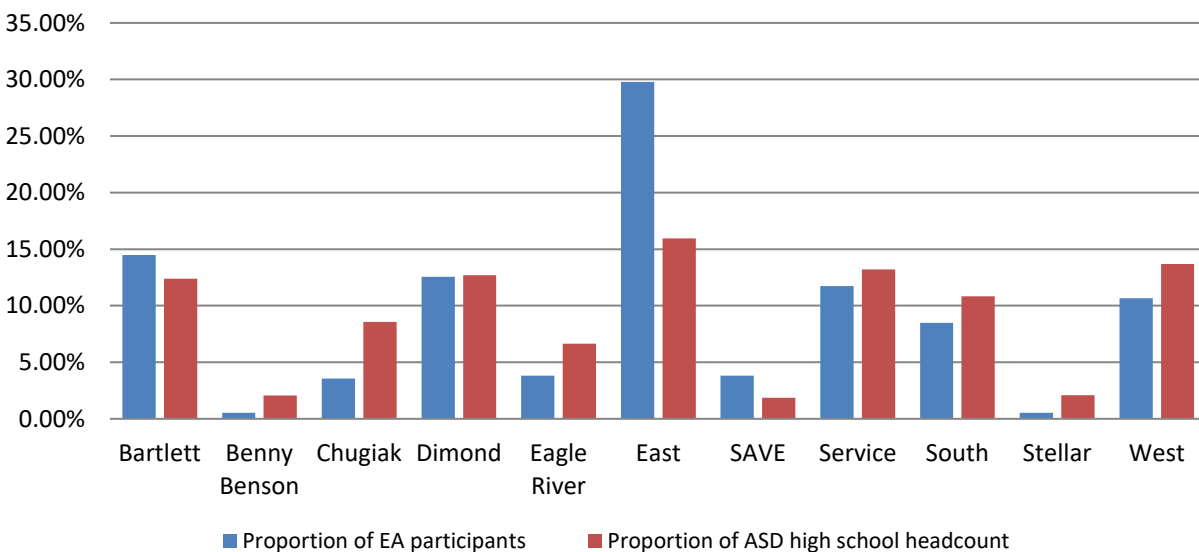
³ The data were drawn by program administrators in spring 2013. As the program was intended to impact college success (such as course enrollment and persistence), college performance data lagged 3 years following the students' participation.

first, few seniors who tested in the spring retok the ACCUPLACER exam, rendering pre/post-test comparison moot. Second, as the program was intended to influence students' high school choices, seniors who tested in the spring were wrapping up their high school coursework and activities, rather than planning them, so their participation misaligned with the program objectives.

Males comprised approximately 20% of all Early ACCUPLACER participants, which is lower than the proportion of males in Anchorage high schools (where they make up about half of the student body) and in college at UAA (where males comprise approximately 42% of total enrollments, per the National Center for Education Statistics). The racial/ethnic distribution of the participants are reported in figure 1, but the race categories in the ACCUPLACER database do not match Census or BANNER categories used by ASD or UAA, which makes comparison difficult. However in 2012, ASD reported that 45% of its students were White, 16% were Asian or Pacific Islander, 14% claimed 2 or more races, 11% identified as Hispanic, and all other categories comprised less than 10% of its student demographic. The data suggest that the Early ACCUPLACER program did not disproportionately test students of color.

Participation by high school was largely representative of the distribution of students across ASD, and is represented in Figure 2. With the exception of East High School, which comprised a larger proportion of ACCUPLACER students than its share of the ASD headcount, the proportion of students participating at each location roughly mirrored ASD enrollments.

Figure 2
Distribution of Early ACCUPLACER participants



Participation in the Early ACCUPLACER program mostly mirrored ASD student enrollments. Participation was largely dependent on recruitment efforts at individual schools. The test was administered in the fall and spring at Bartlett, Dimond, Eagle River, East, Service, South, and West. Testing administration in Chugiak was cancelled for one scheduled session due to inclement weather, and the test was offered once per year at SAVE and Benny Benson because the schools' smaller enrollments allowed all students the opportunity to test in a single administration. The test was not offered at Polaris or Highland Tech.

The high school academic profile of participants is less complete; high school enrollment and performance data were only available for students who subsequently provided transcripts to UAA, which accounts for 75% of the juniors but only 36% of seniors who participated in the program. However, the available data suggest that students who participated in the program and subsequently enrolled at UAA were, generally, high-performing. Table 1 shows that these students had an average high school GPA of higher than 3.0 and were in better than the 60th percentile of their respective graduating classes.

Table 1

Academic profile of Early ACCUPLACER participants

	n	% of EA participants	Average class rank (percentile)	Average HS GPA
Juniors	66	75	64.98	3.16
Seniors tested in fall	128	36	62.55	3.01

The data presented in this report describes students who, on average, were in higher than the 60th percentile of their graduating class, and had GPAs above 3.0. This report discusses the impacts of the Early ACCUPLACER program as a college readiness intervention and does not speak to the general preparation of ASD students.

The Center for Alaska Education Policy Research at UAA (2011) reported that approximately 61% of graduates in ASD attend college. Per UA databases, 1253 students who graduated from an ASD high school in the spring of 2011 enrolled at UAA the subsequent fall, which represents approximately 41% of ASD’s 2011 senior class. Thus the students who participated in the Early ACCUPLACER program were more likely to attend college than those who did not; rather than suggest a causal relationship, the test likely attracted students who were thinking about attending college in general or attending UAA in particular.

Findings

Findings are reported and interpreted using ACCUPLACER score ranges, developmental placement cut scores, and college success indicators of persistence, completion rate, and GPA. **Score ranges** used for the histograms in this report are from the *ACCUPLACER Program Manual*, because these ranges are static, whereas cut scores at UAA are periodically adjusted during the testing period. **Developmental placement** in this report is determined using cut scores that were applied in the spring 2013 semester; these appear in the adjacent tables and are provided for reference.

Early ACCUPLACER test performance in high school

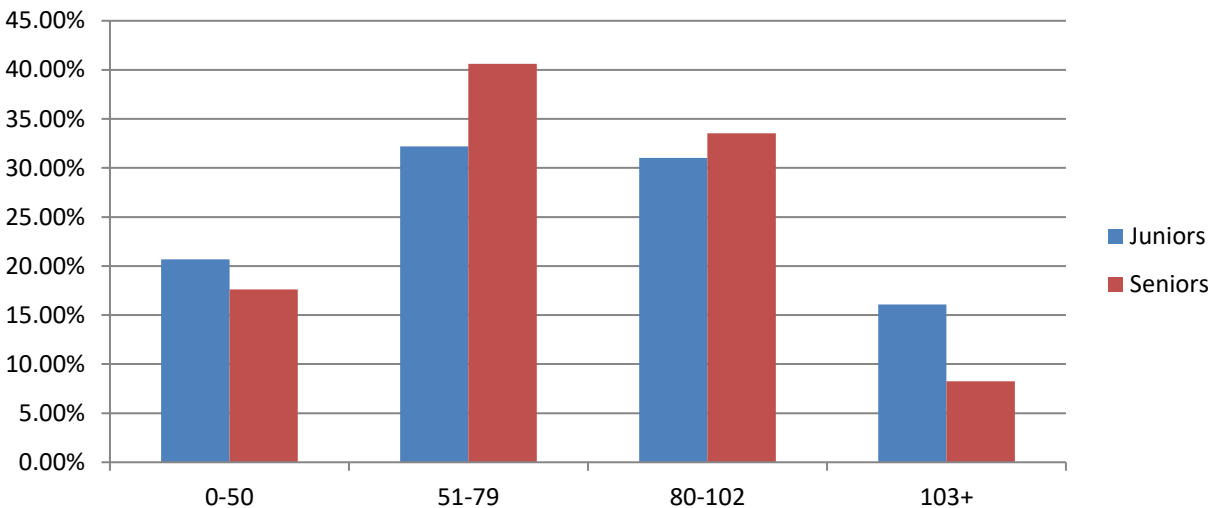
The first metric reports how high school students performed on the Early ACCUPLACER test, and aggregates the performance by class level (junior or senior) from both academic years.

Reading Comprehension

Early ACCUPLACER test performance for *Reading Comprehension* is represented in the histogram in Figure 3. The average scores for juniors and seniors were 74.6 and 72.5, respectively, and an independent t-test identified no significant difference between the two groups. Table 2 provides a reference for current UAA cut scores.

Figure 3

Distribution of *Reading Comprehension* scores



The score ranges are set in the ACCUPLACER Program Manual and can be interpreted as follows:

- **51** – Students are able to comprehend short passages with uncomplicated ideas, straightforward presentation, and for the most part, subject matter that reflects everyday experience. They are able to recognize the main idea and less central ideas, recognize the tone of the passage when questions do not require fine distinctions, and recognize relationships between sentences, such as the use of one sentence to illustrate another.
- **80** - Students are able to comprehend short passages with moderately uncomplicated ideas and organization. These students are able to: answer questions that require them to synthesize information, including gauging point of view and intended audience, recognize organizing principles in a paragraph or passage, identify contradictory or contrasting statements.
- **103 or higher** - Students are able to comprehend short passages that are somewhat complex in terms of the ideas conveyed, and that deal with academic subject matter, often in a theoretical framework. These students are able to: extract points that are merely implied, follow moderately complex arguments or speculations, recognize tone, and analyze the logic employed by the author in making an argument.

Table 2

Reading cut scores as of spring, 2013

	Reading course	Cut score range	Juniors testing at this level	Seniors testing at this level
Developmental	PRPE 070	0-49	34%	29%
	PRPE 076	50-64		
Preparatory	PRPE 107	65-84	34%	33%
College-level	(no reading class)	85+	32%	38%

Using 2013 cut scores, 34% of Juniors and 29% of seniors would test into a developmental reading class; 34 and 33%,

respectively, would be recommended to take PRPE 107, a college-level but preparatory-style reading

class. Thirty-two percent of juniors and 38% of seniors had test scores above 85, indicating they satisfied UAA criteria for college-level reading. The lack of a significant distinction in reading levels for juniors and seniors is an interesting finding, as it suggests that students may not intensively develop their reading skills in their senior year of high school.

Sentence Skills

The 2013 UAA English placement process combined *Reading Comprehension* and *Sentence Skills* ACCUPLACER scores; the cut ranges are detailed in table 3, and Appendix B details the *Sentence Skills* score ranges from the ACCUPLACER manual. Using 90 as the threshold (half of the composite score), 44% of juniors and 35% of seniors tested would place into freshman English (ENGL 111). Figure 4 presents a histogram of the score distribution using the ACCUPLACER ranges.

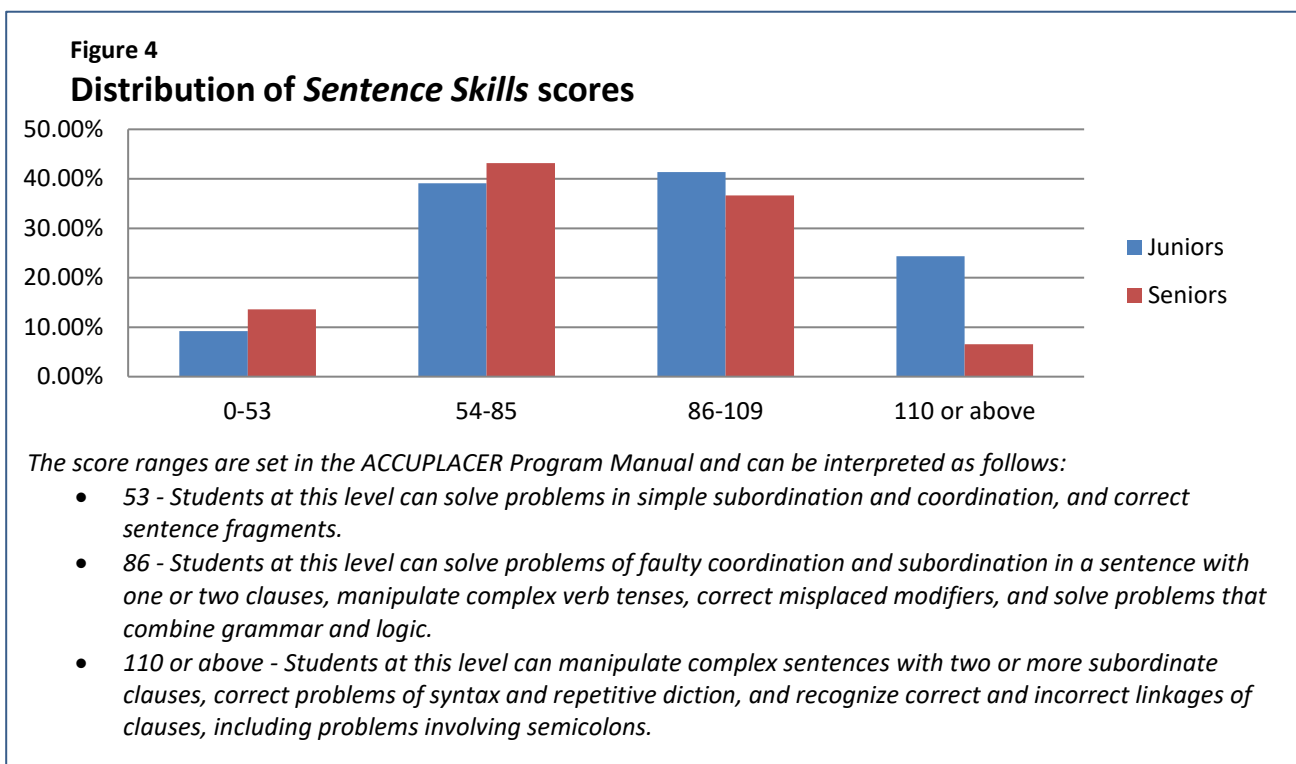


Table 3
Reading cut scores as of spring, 2013

	Reading course	Combined RC & SS score	Juniors achieving 90+	Seniors achieving 90+
Developmental	PRPE 080	0-109		
	PRPE 086	110-149		
Preparatory	PRPE 108	150-179		
College-level	ENGL 111	180+	44%	35%

The average score for juniors was 82.4 and seniors, 79.5. An independent t-test found no significant difference between

the two groups, though this could be attributed to the small n for juniors. The lack of difference in performance of juniors and seniors is interesting, but given the self-selecting nature of the student population, little can be extrapolated from these findings.

Math

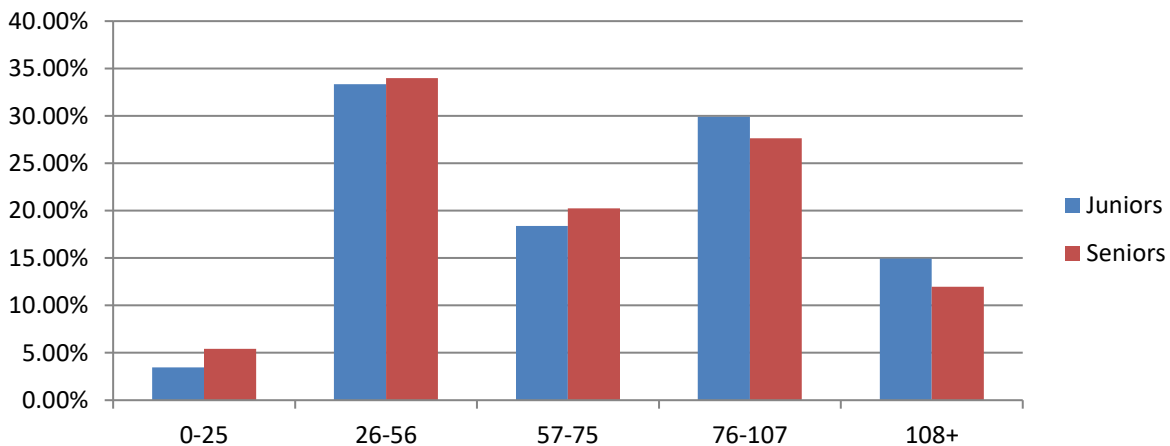
ACCUPLACER assesses math skills using two separate instruments. The *Elementary Algebra* questions

Table 4 |
Math cut scores as of spring, 2013

	Reading course	Cut score range	Juniors testing at this level	Seniors testing at this level
Developmental	MATH 054	EA 0-47	55%	60%
	MATH 055	EA 48-69		
Preparatory	MATH 105	EA 70 + CM <50	38%	29%
College-level	MATH 107	CM 50-59	7%	11%

are algorithmically generated, with each question adjusting to the students' performance. All students participate in the *Elementary Algebra* portion of the test, and those who score sufficiently well are advanced to the *College Math* component. The College Board has chunked *Elementary Algebra* into five score ranges; for this test, the College Board test also provided descriptive labels for score ranges, which appear under Figure 5. Per 2013 UAA cut scores, students would be placed in developmental math (MATH 054 or 055) with an *Elementary Algebra* score of 69 or lower. Using this cut score, approximately 55% of juniors and 60% of seniors would test into a developmental math course.

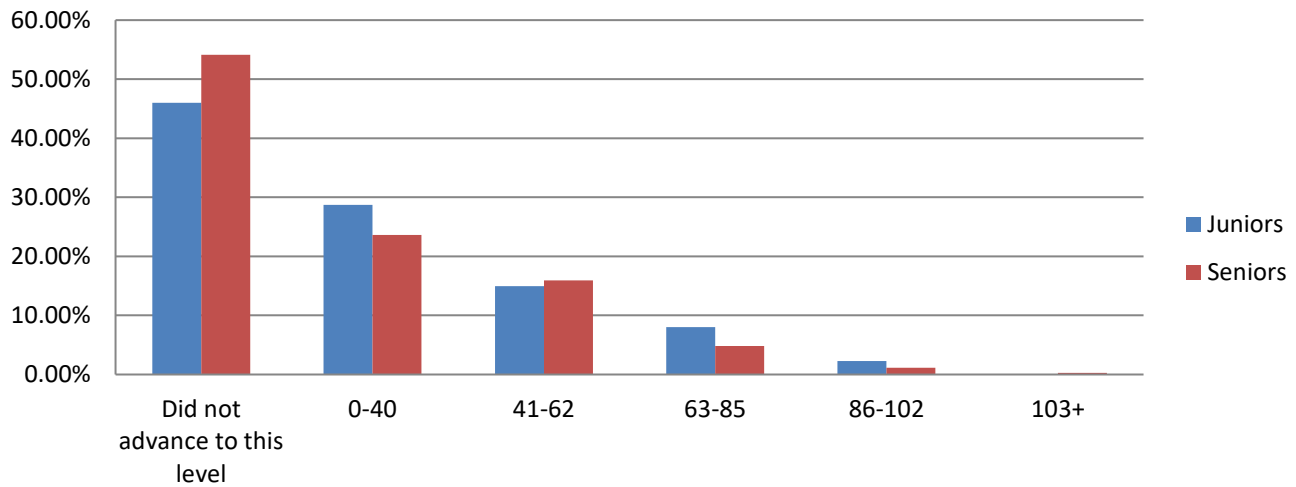
Figure 5
Distribution of *Elementary Algebra* scores



The score ranges are set in the ACCUPLACER Program Manual and can be interpreted as follows:

- 26 (Minimal Pre-Algebra Skills) - Students at this level demonstrate a sense of order relationships and the relative size of signed numbers, and the ability to multiply a whole number by a binomial.
- 57 (Minimal Elementary Algebra Skills) – Students at this level can perform operations with signed numbers, combine like terms, multiply binomials, and evaluate algebraic expressions.
- 76 (Sufficient Elementary Algebra Skills) - At this level, the skills in the previous category have been developed. Students at this level can add radicals, add algebraic fractions, and evaluate algebraic expressions; factor quadratic expressions in the form $ax^2 + bx + c$, where $a = 1$; factor the difference of squares; square binomials; and solve linear equations with integer coefficients.
- 108 (Substantial Elementary Algebra Skills) – Students at this level can simplify algebraic expressions, factor quadratic expressions where $a = 1$, solve quadratic equations, solve linear equations with fractional and literal coefficients and linear inequalities with integer coefficients, solve systems of equations, identify graphical properties of equations and inequalities.

Figure 6
Distribution of *College Math* scores



The score ranges are set in the ACCUPLACER Program Manual and can be interpreted as follows:

- *40 - Students scoring at this level can: identify common factors, factor binomials and trinomials, manipulate factors to simplify complex fractions. These students should be considered for placement into intermediate algebra.*
- *63 - Students scoring at this level can demonstrate the following additional skills: work with algebraic expressions involving real number exponents; factor polynomial expressions; simplify and perform arithmetic operations with rational expressions, including complex fractions; solve and graph linear equations and inequalities; solve absolute value equations; solve quadratic equations by factoring; graph simple parabolas; understand function notation, such as determining the value of a function for a specific number in the domain; a limited understanding of the concept of function on a more sophisticated level, such as determining the value of the composition of two functions; and a rudimentary understanding of coordinate geometry and trigonometry.*
- *86 - Students scoring at this level can demonstrate the following additional skills: understand polynomial functions; evaluate and simplify expressions involving functional notation, including composition of functions; and solve simple equations involving trigonometric functions, logarithmic functions, and exponential functions.*
- *103 or above - Students scoring at this level can demonstrate the following additional skills: perform algebraic operations and solve equations with complex numbers; understand the relationship between exponents and logarithms and the rules that govern the manipulation of logarithms and exponents; understand trigonometric functions and their inverses; solve trigonometric equations; manipulate trigonometric identities; solve right-triangle problems; and recognize graphic properties of functions such as absolute value, quadratic, and logarithmic.*

Placement into college-level math (MATH 107) requires a *College Math* score of 50 or higher. Figure 6 details student placement into the score ranges as described by the College Board, which are detailed in Appendix D. Per UAA's 2013 cut scores, fewer than 7% of juniors and 11% of seniors would be considered eligible to take MATH 107 sequence based on their Early ACCUPLACER scores. The remaining 38% of juniors and 29% of seniors who placed out of developmental math but not quite into MATH 107 would be eligible to take MATH 105. An independent t-test found no significant difference between the performance of juniors and seniors. Nonetheless, several studies note that students who do not take math in their senior year perform more poorly on their college placement tests (see Hoyt & Sorensen,

2001; University of Texas at Austin, 2006), thus further interpreting this finding would require a review of the high school transcripts to determine students' course-taking behavior.

In summary, the review of Early ACCUPLACER test data found that, using UAA's 2013 cut scores as benchmarks, approximately one-third of students would test out of preparatory reading courses, one third would be eligible for ENGL 111, and one tenth would be eligible for MATH 107. Academic records in BANNER note that the juniors and seniors who volunteered for the test and subsequently enrolled were not significantly different in GPA or class rank, so it is interesting to see that there was little difference between students' performance at the junior and senior level. Though the self-selecting population sampling method cautions extrapolating too much from these scores, the results do suggest an opportunity to increase rigor in the students' senior year.

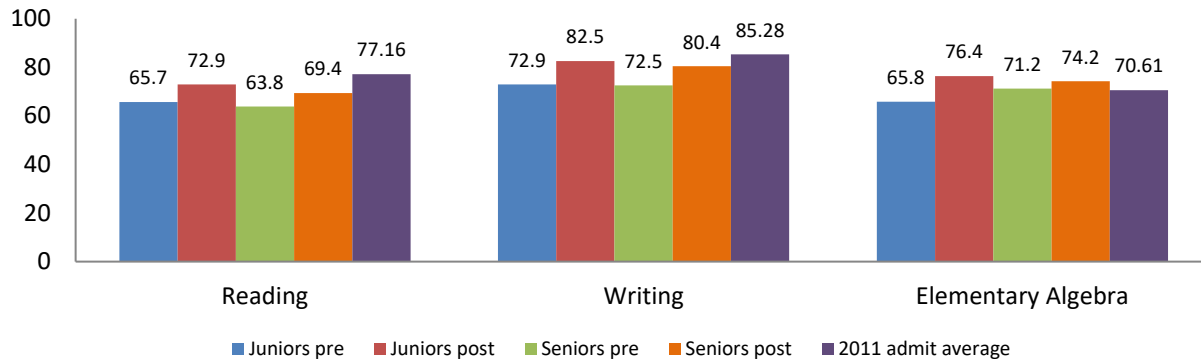
Academic readiness upon matriculation at UAA

Academic readiness was operationalized in two ways to prepare this report: by examining placement test data upon matriculation, and by examining students' enrollments and success in math and English courses at UAA. Post-test data and enrollment data are useful for comparison, though they are not without methodological problems. First, not all students post-tested; second, not all students who post-tested enrolled; and third, not all students who enrolled post-tested. Because ACCUPLACER test scores are valid for one calendar year, even some seniors who tested in the fall used their Early ACCUPLACER scores for college placement. Many also used ACT or SAT scores, and a validated concordance table for these instruments and ACCUPLACER is not available for these tests. Nonetheless, an analysis was completed with available data; n values were 38 for juniors and 94 for seniors.

Pre-post test performance

As Figure 8 indicates, the average post-test score was higher than the pre-test score for both juniors and seniors in all three content areas. A correlated t-test noted that these differences in pre- and post-scores were significant in all cases. However the statistical significance is of questionable practical significance, as the small improvements in scores most of the time would not result in higher course placement. A separate analysis of institutional data was used to determine the average admission ACCUPLACER score for ASD students who graduated in the spring of 2011 and subsequently were admitted as students at UAA in the fall 2011 semester. That number is also represented in Figure 8. Though the chart represents slight differences in average scores, it is in the same placement range as students' post-test scores, suggesting that students who participated in the Early ACCUPLACER program did not actualize significantly different course placements than students at ASD who did not participate in the program.

Figure 8
Pre-post ACCUPLACER test scores for of EA participants

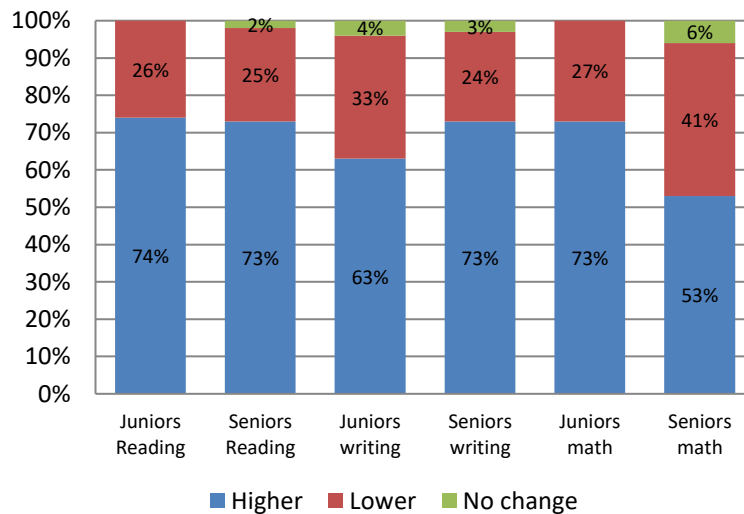


On average, Early ACCUPLACER program participants scored slightly higher on the test when they came to college than when they took it in high school, and their performance was not markedly different from other incoming students.

Though average scores improved, approximately 25% of students who retested scored lower on their post-test than on the pre-test. Figure 9 presents an overview of pre- and post-test performance. Lower test performance after 1 to 3 semesters of high school instruction is interesting, especially when noting that the post-test score is a composite score, meaning that many students took the ACCUPLACER test more than one time and used their highest score for placement in the post-test setting, whereas the pre-test was a one-shot

administration. Student maturation as they became accustomed to the test would suggest that they would perform better in subsequent setting; in other words, students generally perform better the second or third time they take a test. Furthermore, the post-test was higher stakes, tied to college enrollments and financial commitments, and would suggest higher student investment in this test outcome, which would promote better test performance. Though 75% of students did improve their performance, the 25% of students who exhibit a decline despite testing advantages warrants attention and consideration.

Figure 9
Pre-post test performance of EA participants



Though most of the Early ACCUPLACER program participants improved their test performance, a small number showed no improvement and about one quarter had lower scores when they retook the test for college placement.

Math and English course performance

To measure academic readiness this report also considered student enrollments in math and English courses. There are some validity threats to this method; cut scores are used to place students into different levels of developmental or general education classes, but students do not have to enroll for those classes, even if they take other college classes. Anecdotally, faculty and staff are aware that many students avoid enrolling in courses they are “afraid of” in their first year, so the self-selecting nature of course enrollment compounded with the self-selecting participant population cautions extrapolating the findings to other students. Nonetheless, it is worth examining what courses students took and how they performed in those courses.

The analysis includes the first English or math course that students took within the first year of college following their high school graduation so as to align with the post-test scores and also because, with elapsed time, the placement test’s ability to represent current performance levels wanes. The analysis considers both the first courses that students took and their success in those courses. The assumption was if the students were more academically self-aware, they would do well wherever they placed.

In English, 56% of juniors and 48% of seniors enrolled in English 111 or a higher sequence course as their first writing course at UAA. Approximately 75% of Early ACCUPLACER participants passed their first English class with a grade of A, B, or C. Figures 10 and 11 represent English placements and success.

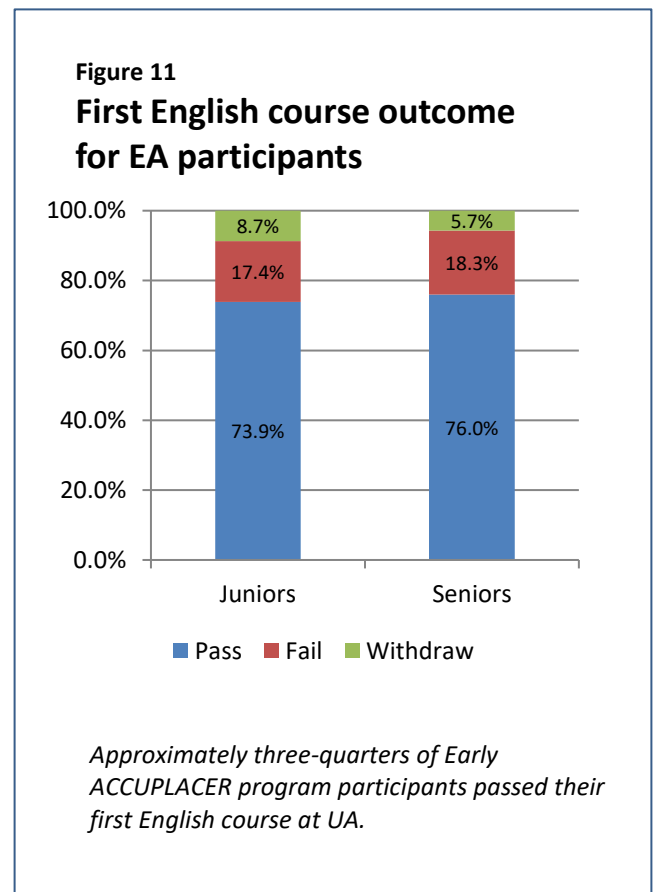
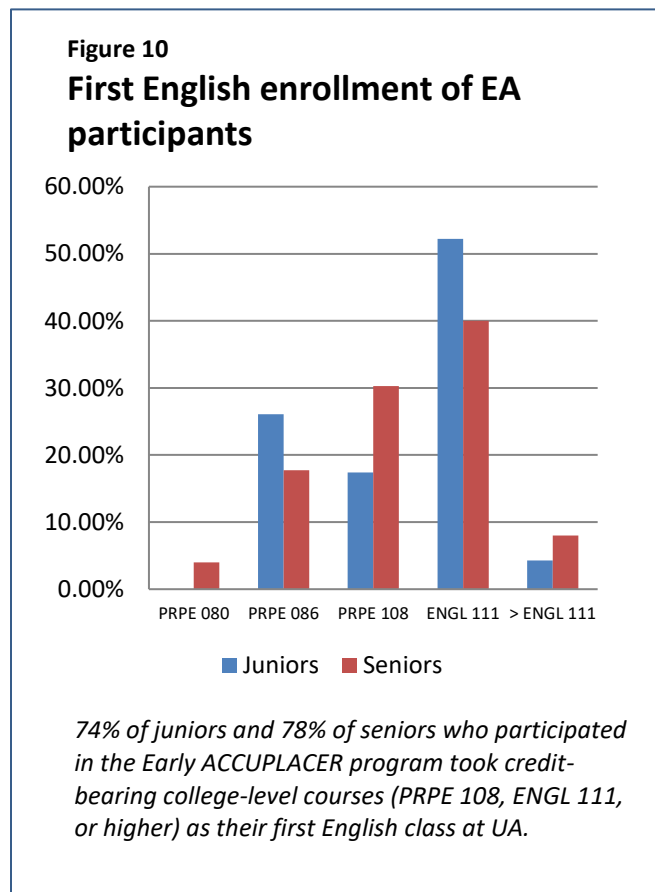
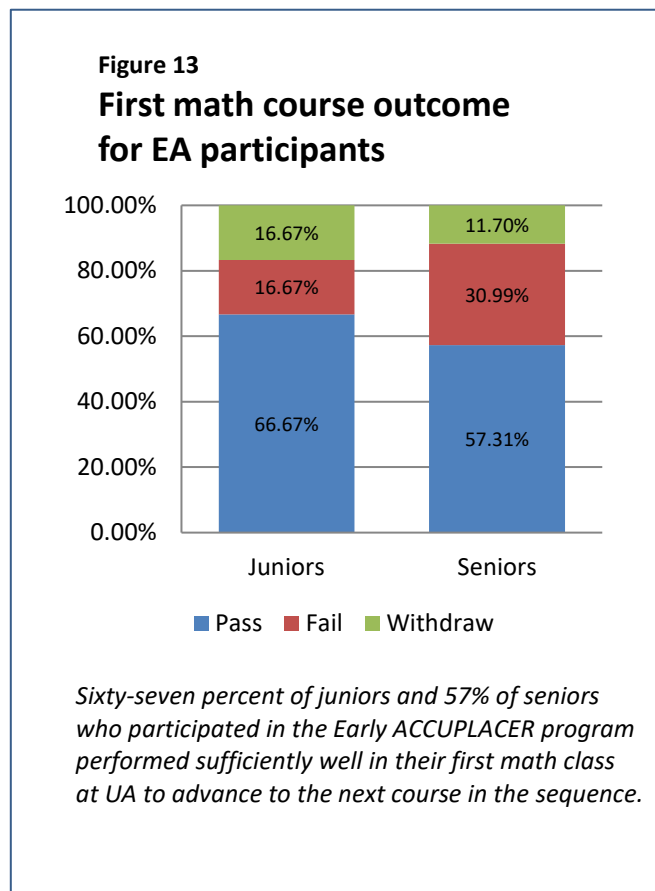
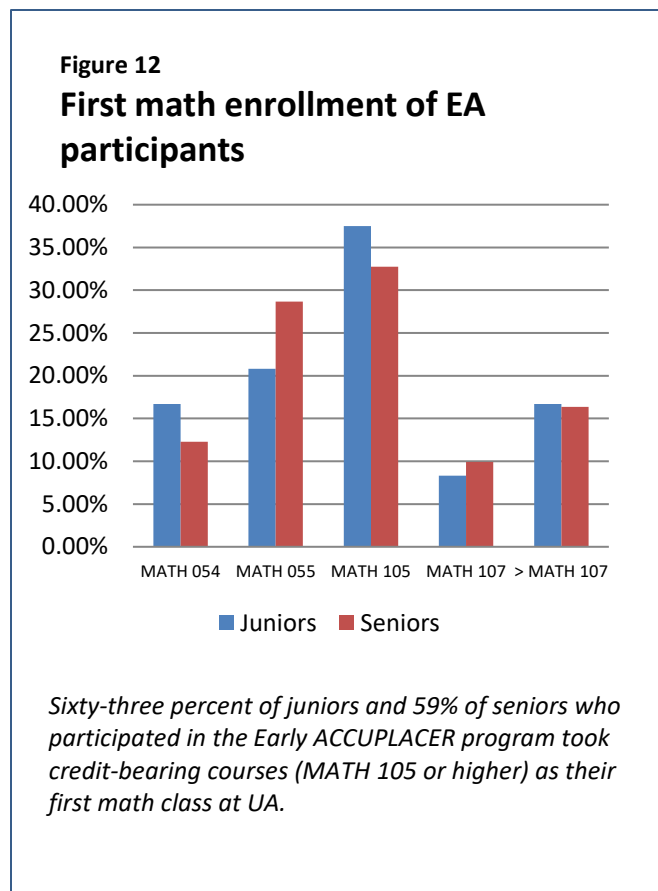


Figure 12 illustrates that 25% of juniors and 26% of seniors (n=23 and 175, respectively) enrolled in MATH 107 or higher as their first math sequence course at UAA. However, Figure 13 illustrates that of all math enrollments, approximately 60% of students (n=24 for juniors and 71 for seniors) performed well enough in their first math course to progress to the next one in the sequence.



To summarize the academic readiness of Early ACCUPLACER participants upon entering college, the data available suggest that students who took the Early ACCUPLACER did not have better college placement test scores than their counterparts who did not participate in the program. For the participants, the data reveal that more students need developmental math coursework than English. They also suggest that students are less likely to be successful in their math classes than their English classes, and will likely need more support in that subject, even when they enroll at the level for which their placement test recommends.

Academic performance

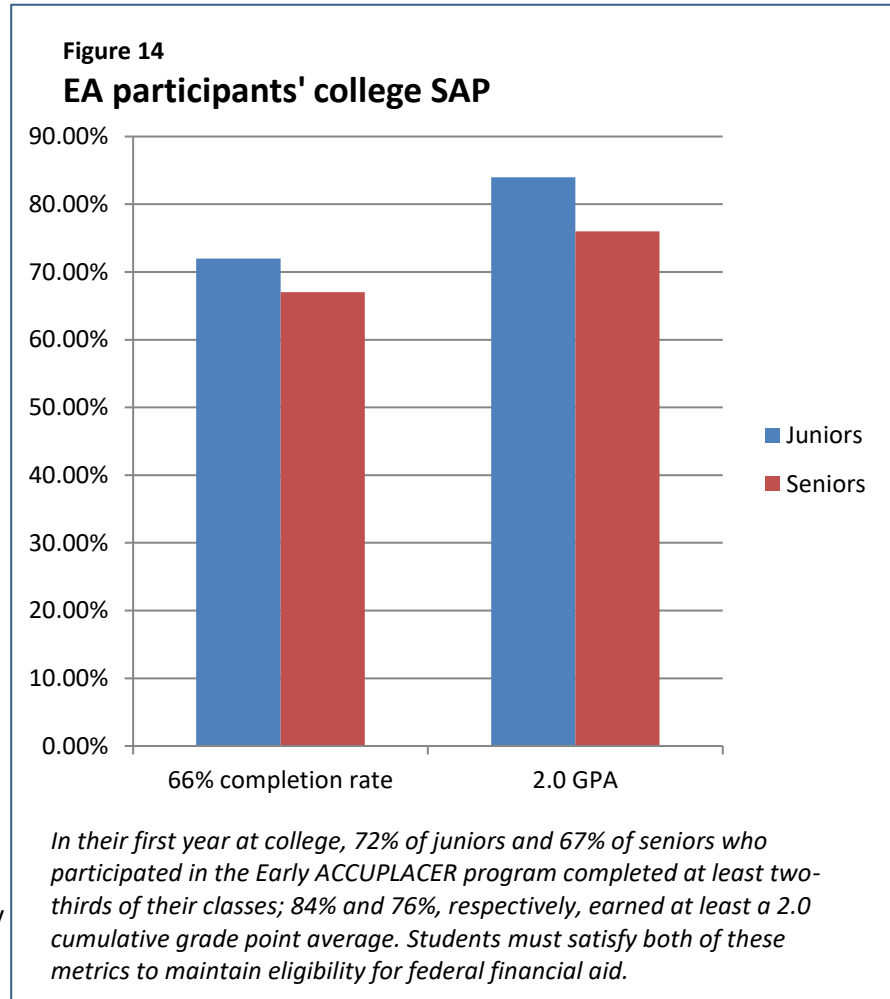
Satisfactory academic progress (SAP) was used to review students' progress in college, as it is the determinant of financial aid eligibility and takes into account two important success metrics: cumulative GPA and completion ratio. For the purpose of this analysis, these metrics are reported separately, though in determining financial aid eligibility, students must satisfy both requisites as well as meet degree requirements within a delineated timeframe to be eligible for ongoing funding.

Satisfactory Academic Performance (SAP)

Completion rate and GPA were calculated for students in the spring following their high school graduation; all students who enrolled at UAA within the year following their graduation (summer, fall, or spring), were included in the calculation. Figure 14 displays these data; n values were 25 for juniors and 207 for seniors.

Again, the small n for participating juniors does not make comparison of differences between class standings appropriate; however both groups met the GPA requirement at a higher rate than the completion requirement. This suggests that students are withdrawing from courses so as not to have a negative impact on GPA, but this does not neutralize the impact on their completion rates. After a year in college, 30% of the students who participated in the Early ACCUPLACER program did not achieve a satisfactory

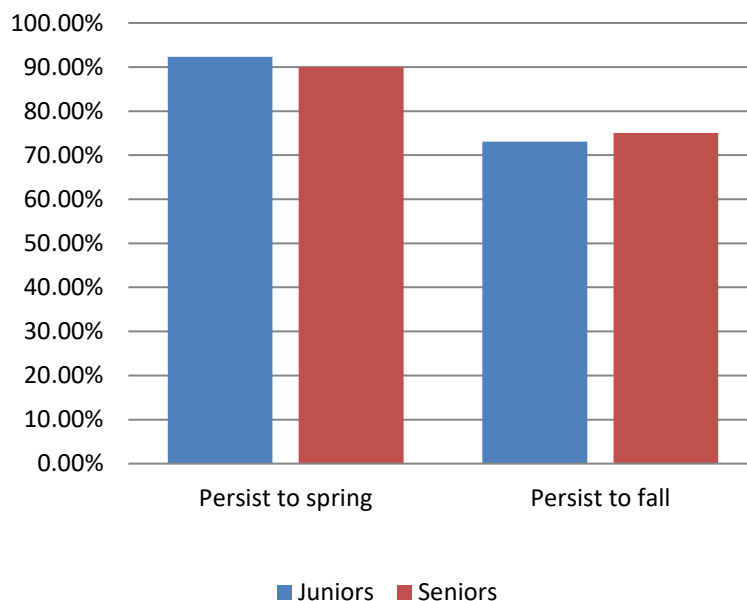
completion rate to qualify for continued federal student aid. Though this does not necessarily mean that they left the university, financial aid is an important determinant in students' abilities to continue their education (Crosta, 2013), and the GPA aspect of SAP is used to calculate academic standing. This is an area for future study; though withdrawing from a course is a healthy academic habit, helping students to assess their readiness to balance work-life commitments or to gauge their academic preparation for the courses for which they enroll may be a valuable place to develop programming.



Persistence

College persistence is measured by reviewing enrollments longitudinally over three semesters: fall-spring-fall; the data are represented in Figure 15 (n=26 for juniors, 200 for seniors). The fall-to-fall persistence rate is slightly higher than the institution-wide rate (the National Center for Education Statistics 2011 cited 70% for full-time students and 52% for part-time students), however these reports consider retention rates for all students, and recent high school graduates (reported here) tend to have higher persistence rates than nontraditional students (Crosta, 2013). Also, in this report, full-time and part-time student persistence rates were combined so as to have a sizeable enough n to report. The persistence rates that resemble institution-wide student performance suggest that the Early ACCUPLACER program did not have a significant impact on student persistence at UAA.

Figure 15
EA participants' college persistence rates



More than 90% of all Early ACCUPLACER participants who started college in the fall semester after their high school graduation also enrolled in the spring semester. Nearly 75% enrolled the following fall.

Discussion

The data reported reflect a self-selecting population, which suggests these students would have higher levels of motivation, academic self-efficacy, college knowledge, and planning. However, the traditional success metrics used for the analysis do not evidence that 2009-2011 Early ACCUPACER participants fared significantly better than other students in the ASD system who enrolled at UA. The discussion below explores possible reasons for this finding.

Metrics and research questions

When a program supported by theory and the literature does not deliver expected results, it is important to consider the method for determining success before dismissing the program's merits. The objective of the Early ACCUPLACER program was to influence students' behavior, encouraging them to take a more rigorous high school schedule that would prepare them for college expectations. The available data do not allow us to ascertain whether or not students heeded this advice. A more appropriate analysis would consider this variable and compare students who took more rigorous classes against students who did not.

Partnerships

Best practices around early testing initiatives situate them within a robust secondary-postsecondary partnership (see McCabe, 2003), and this program did not fully implement that framework. Towards the end of the program administration, staffing changes concomitant with budget cuts in ASD included significant reductions in counseling staff and counseling support staff. Program administration was done by a .20 FTE special projects counselor from the District Office and the District Office's Educational Technology (Ed Tech) department was assigned to test proctoring, but the activity was disconnected from high school counselors on-site. At UAA, administration was managed by three staff members in the CTC's College and Career Readiness department, but was disconnected from faculty and from the freshman transition department in Student Affairs. Though this structure facilitated smooth test administration, it did not engage a support team of counselors and teachers who could follow up with individual students or examine curricular responses to trends in student performance. The positive impacts described by successful programs suggest that partnerships with a clear mission and focus should be the foundation for this work, with the test used as a tool or conversation-starter to which the support network can respond.

Student preparation for college readiness discussions

Within this support network, another consideration is student readiness to have these conversations, and administering the test at the right time. Though Career Pathways © and the Personal Learning and Career Plan (PLCP) are initiatives for both Alaska and ASD, these data suggest that many students are not clear on their future plans, even as they enter their senior year of high school (see also DeFeo, 2014). Though this student planning should improve with the district's investment of resources, the data suggest that the test did not serve as a tool to inform a plan, thus students lacked a context for understanding and applying the scores.

Though the Early ACCUPLACER program was entirely voluntary and held after school, the no-show rate (students who signed up for the test in advance but did not come on the scheduled date) averaged approximately 50%. This phenomenon is worth exploring and may be indicative of the investment or planning that students have in the test and its outcomes. Conversations with test administrators shed some light on this. They identify four distinct groups of students:

- **I am not going to college.** Some students who took the ACCUPLACER test indicated clearly that they did not intend to attend college after high school. Many had future plans including military service, continuing in an existing job, or working within a family business. These students generally took the ACCUPLACER because someone told them to do so, usually their guidance counselor or a parent. The team found that these students were generally not invested in hearing ACCUPLACER scores, as “college readiness” was not relevant to their plans, though they had a cursory interest in their performance and how it compared to other students.
- **I don't know whether or not I am going to college.** Another distinct group of students was those who were undecided about college. In general, these students did not have definitive plans after high school. College was an option but not a focus, and they exhibited a noncommittal attitude; they might pursue college if no other more attractive or accessible options presented themselves.

For these students, it also seemed that a conversation about college readiness was not well contextualized.

- **I know that I am going to college, but I don't have a career goal.** A large number of students indicated that they were planning to go to college, but they had no career goals or major interests identified. These students were interested in hearing the ACCUPLACER results, and generally asked “college knowledge” questions.
- **I am going to college and I have identified career pathways that interest me.** A final group of students came to the advising conversation with the intention of enrolling in college and had some idea of what they wanted to study. Some students had a clear career goal (e.g., nurse or civil engineer), others had narrowed down their career interests to a few pathways (e.g., something in human services or the social sciences). Deeper conversation revealed that some students’ commitment to these goals was fleeting, and they would be reclassified as students in category 3 (e.g., “I am going to be a nurse because I don’t know about any other options,” or “I want to be a lawyer because they make a lot of money.”). However, for the students who had some salience of the career pathway, the ACCUPLACER facilitated good conversation. These students also asked targeted “college knowledge” questions, and asked about admission requirements, coursework, and expectations for specific degrees.

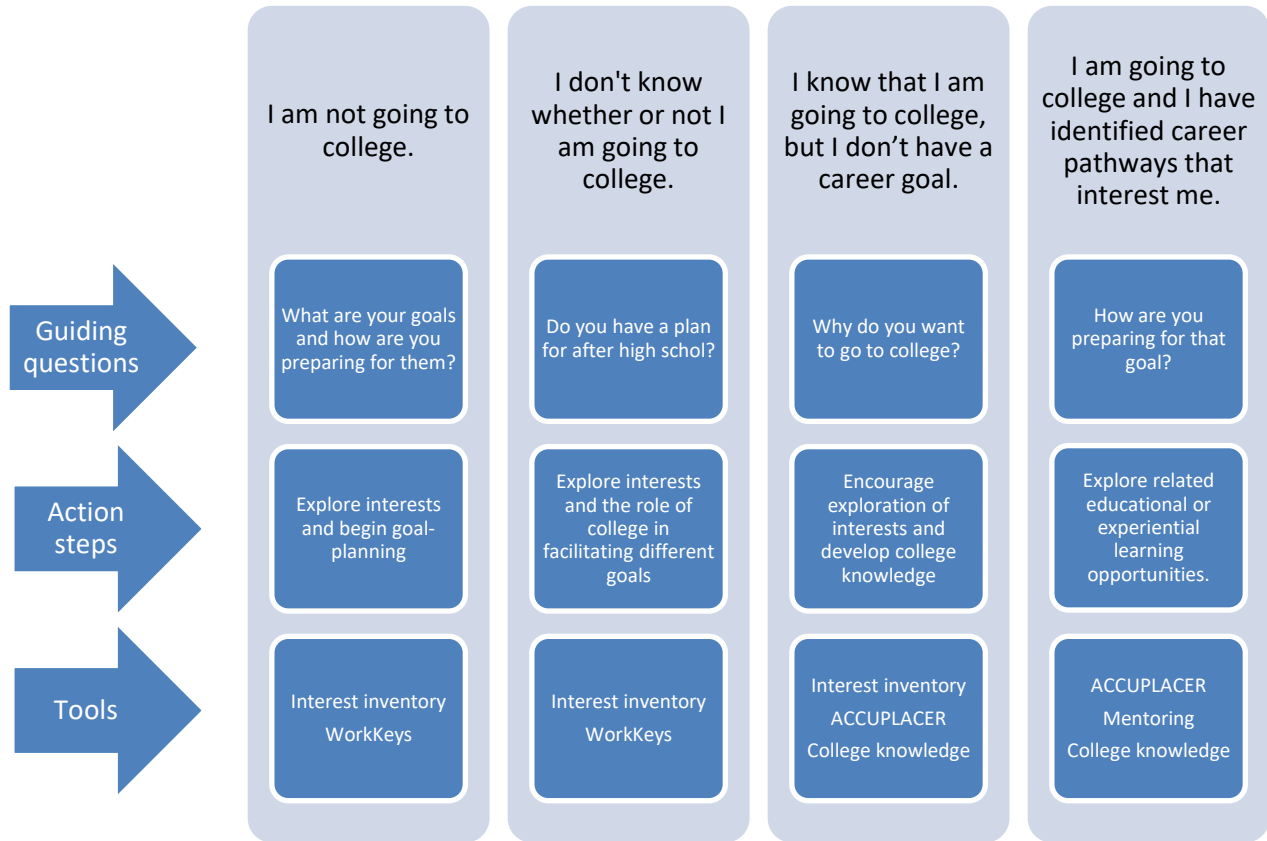
The scope and purpose of the Early ACCUPLACER program suggest that the test is appropriate for students in the latter two categories; students who are undecided about college should to engage in preliminary conversations about postsecondary goals before a discussion about college readiness. A more detailed rubric to identify developmental readiness for different college-planning initiatives may be valuable for students and counselors.

Many students who participated in the program had already taken the ACT or SAT. For students who have already completed these standardized assessments and received their scores, the applicability of the ACCUPLACER test is questionable. It is worth exploring how these existing scores could engage the same college planning conversations.

Figure 17 presents an overview of the four student categories, the guiding question for college and career readiness appropriate for each group, and recommended assessments and conversations to facilitate that goal achievement.

Figure 17

Students' post-high school plans



Students who participated in the Early ACCUPLACER program varied in their post-high school plans. The most relevant planning tools and activities will align with the students' goals and readiness to begin college planning.

Strengths and opportunities

Despite the lack of measureable academic impact, program administrators noted some other affective benefits that this analysis may not have been able to detect. They noted that students liked the immediate feedback that they get during the ACCUPLACER sessions, and said it is helpful that students have context for the scores (actual college course sequences), which makes the test more tangible than other standardized instruments. They also noted that it is important that students receive individualized feedback from a college representative and not from a high school counselor or a parent. For some students, this is the first conversation they had ever had with someone from a college, and counselors regarded this contact as a valuable asset of the program.

However with these merits, they also noted some cautions. Most prominently, the scores can be disappointing for students, and counselors do not know how to handle student frustrations. This has been documented in the literature; Baird (1971) described students who participate in career or academic counseling sessions with three categories: *coolers*, those students whose aspirations are decreased as a result of their interactions, *warmers*, students whose aspirations increase as a result of the interactions, and *stayers*, those who keep their original aspirations, either because they are

encouraged or unaffected by the session. Makela (2010) draws from this framework and posits that some recent approaches to advising and college planning may have the deleterious effect of “cooling out.” She problematizes these processes, noting that unless these conversations about college and career goals are theoretically situated, students can be inadvertently steered and tracked into less rigorous career choices, and this effect generally marginalizes students along socioeconomic or racial lines (Lum, 2008). A clear mission and focus to guide the partnership may help to limit some of these concerns.

Recommendations

The strengths of the Early ACCUPLACER program include a participant pool that was representative of ASD student demographics, and commitment from administrators and leaders in both ASD and UAA. The ACCUPLACER exam itself is cost effective, portable, and provides immediate feedback for students. The use of this instrument for early college testing or college readiness programming is validated in professional practice. Recommendations for decision-makers considering implementing an early testing program include:

Situate early testing within a robust college readiness and planning program

Though all students will eventually exit high school, they have many different postsecondary pathways (Hanson & Pierson, 2016). As students have different goals and different developmental readiness for planning, they will need different treatments and interventions, and at different times (Hughes & Karp, 2006). The ACCUPLACER, if used, should be administered when students have done some pre-college thinking and planning, and provide information that supports their decision-making and planning.

For students to follow through on the academic recommendations generated through ACCUPLACER testing, they will need ongoing and consistent support from the staff and faculty with whom they have established relationships. Maximizing the program’s effectiveness will require continuity of services, reinforcement of the messages communicated to students, and incremental increases in responsibilities; thusly the program should focus on supporting the counselors and faculty who will help students to implement these recommendations.

Develop appropriate evaluation process

Measuring the impacts of such a robust program will also require rethinking program goals and how to measure impacts. The Early ACCUPLACER program can provide valuable information about student performance in academic content areas, but the program evaluation should close the assessment feedback loop and to use these data to identify leading (rather than lagging) indicators that can forecast student needs and provide interventions to students before they “go off track” (Crosta, 2013; Gurantz & Borsato, 2012). To the reported program metrics that are highly quantitative and longitudinal, these additional and interim outcomes must be considered and measured to inform action steps.

Reconceptualize college readiness

The concept of college readiness should be expanded beyond academic indicators. Kobrin (2007) notes,

There are a myriad of ways to determine college readiness benchmarks, with each method producing different results. The disparity in the estimates of the percentage of students ready for college cited in the literature and in the press demonstrates that the method and variables chosen markedly affect the results. (p. 5)

Kobrin's analysis of student performance also noted that other academic readiness indicators could offset the negative predictions about success generated by using standardized test scores alone. It is recommended that other demonstrably impactful components of academic readiness (e.g., academic coursework, class rank, and GPA) be considered in this metric and in outreach activities.

The literature on college and career readiness presents many models (see Gurantz & Borsato, 2012; Conley, 2007), but in general, college readiness is broken into distinct categories:

- Academic content
- Dispositions including feelings of self-efficacy
- Academic habits
- Goals and career planning
- College knowledge

Responsively, in 2015, UA adopted a holistic definition for college readiness:

The University of Alaska defines college readiness as a combination of skills and abilities that position students for success. These include strong academic preparation, effective work and learning habits, knowledge of college culture and expectations, well-defined goals, and the ability to engage in independent problem solving. A student who is college ready has the knowledge and skills needed to enroll in and succeed in first-year courses at the University of Alaska.

Current initiatives on the UA campuses are considering course matching (in contrast to course placement), which considers multiple data sources in helping students choose classes as they begin their college experience (see UA Faculty Alliance Resolutions 2017-04 and 2017-05). Thus a secondary-postsecondary partnership intended to improve college success outcomes must consider other aspects of college readiness, which will complement and contextualize the academic component. This strengths-based approach also needs to consider what different stakeholders think it means to be "college ready" and develop responsive programming around these conceptions.

Ongoing research

This analysis yields a need for additional and ongoing research on college readiness, college transitions, and students' post-high school plans. A robust analysis of the relationship between high school course-taking and performance and college success is warranted. Research is also needed around how the more qualitative and attitudinal aspects of college readiness impact college success, as well as students' aspirations post-high school.

Conclusion

Applying early testing as part of a robust and comprehensive College & Career Readiness initiative has empirical support (McCabe, 2003). Though the Early ACCUPLACER program did not seem to have demonstrable impacts on students' college placement or SAP, the data suggest that this may be related to implementation, not the premise of the idea. The feedback from program administrators supports the implementation concerns. This analysis suggests that simply giving students a standardized college placement test will not in and of itself solve the challenge of developing college readiness. However, using the test as a planning tool within a developed Personal Learning and Career Plan (PLCP) and engaged partnership between high school and postsecondary may have promise. The key is that the test is a complementary tool, not the focus of the initiative.

This initiative is timely at the local level, as ASD develops the PLCP; at the university level, as President Johnsen has identified college readiness as a priority in the strategic pathways initiative; at the state level, concomitant with changes to the common core and the 90 by 2020 initiative, and nationally as these initiatives and programs can provide valuable opportunities for scholarship and serve as best practice models. It also aligns with statewide college readiness initiatives, including the merit-based Alaska Performance Scholarship (APS), which became available to the 2011 high school graduating class; the 65 by 2025 initiative, which emphasizes increasing the number of high school graduates obtaining a postsecondary credential; and the statewide CTE plan, which emphasized preparing Alaskans for careers through training and workforce development. Contextualizing an early college testing program within these initiatives and as a complement to their efforts may be an opportunity for programming and actualizing Alaska's college transition goals.

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