

De Anza College Office of Institutional Research and Planning

To: Anne Argyriou and Kirstin Skager, Reading Department Chairs

From: Mallory Newell, De Anza Researcher

Date: 6/27/2017

Subject: Multiple Measures Rule Set – De Anza College Specific Analysis – Reading

In order to generate multiple measures rule sets based on high school transcripts for the Reading department, data for students who attended De Anza College and enrolled in a Reading course and had a high school transcript available in CalPass Plus between 2004 and 2014 was used. This resulted in 11,436 students in the Reading file. The following analysis provides the results of the analysis of De Anza student high school transcript data.

The rule sets for students who enroll at De Anza directly after high school were similar to the statewide models. However, students who take at least one term off before coming to De Anza (Non Direct Matriculants) resulted in a slightly higher GPA cut off.

One of the concerns raised by the English department is that they would like to retain their course success rates in EWRT1A, EWRT200, and EWRT211 while using high school GPA as a multiple measure assessment. It is assumed this would be the case for the Reading department as well.

Table 1 lists the average course success rates for EWRT1A, READ211 and READ200 between 2013-14 and 2016-17, the corresponding average course grade and the corresponding average grade point scale for the course (as the decision trees displayed below are built using the corresponding average grade point scale value):

Table 1. 4-Year Average Success Rates in EWRT and Reading Courses – De Anza College

EWRT1A (Test Out of Read)	READ211	READ200
80% or a B- or a 2.7	79% or a C+ or a 2.3	75% or a C or a 2.0

Success rates obtained from the Inquiry Tool for 2013-14 through winter 2017. GPA to course grade conversions from: <http://www.collegeboard.com/html/academicTracker-howtoconvert.html>.

Of the sample of students included in the De Anza Model (11,436) who took a Reading class at De Anza, Table 2 displays details of their high school GPA.

Table 2. GPA of Sample of Students Used to Derive the De Anza Rule Sets

Mean GPA (average)	Mode GPA (appears most often)	Median GPA (right in the middle)
2.56	3.0	2.60

GPA's are based on the highest GPA available, which for the majority of students was a 12th grade GPA.

Table 3 below displays the rule sets for students who either enroll directly from high school to De Anza who we have complete 11th grade transcripts for (Direct Matriculants) and students who may take one or more terms off between high school and college, and whom we have complete 12th grade transcripts for (Non-Direct Matriculants).

The first column provides the [statewide recommendations from The RP Group](#) for colleges who have a reading course which a student places into at one-level below transfer level. Since students can test out of the reading requirement, the first row includes that rule set as well.

The second column provides the rule set based on an analysis of only students enrolled in reading courses at De Anza College.

The third column provides the recommended rule set in order to retain current success rates in EWRT1A, READ211, and READ200.

Table 3. Comparison of Statewide Rule Sets to De Anza Rule Set to the Recommended Rule Set

Level	Direct Matriculants (Up through 11 th grade)			Non-Direct Matriculants (Up through 12 th grade)		
	Statewide Model	De Anza Model	Recommended	Statewide Model	De Anza Model	Recommended
Test out	GPA>=2.8*	GPA>=2.8	GPA>=2.8 or 2.9	GPA>=2.5	GPA>=2.7 AND most recent English enrollment was less than or equal to 2.5 terms prior	GPA>=2.7 AND English course enrollment less than or equal to 2.5 terms prior
One-level below	GPA>=2.3**	GPA>=2.3	GPA>=2.5 or 2.6	GPA>=2.0 AND 12 th grade English course grade of C+ or better OR GPA>=2.0 AND English CST of 274	GPA>=2.5	GPA>=2.5
Two-levels below	GPA>=1.9***	Everyone Else	Everyone Else	CST score of 310 or higher	Everyone Else	Everyone Else

* The probability of success for students who test out of a Reading course is >=75%. ** The probability of success for a student placed into one-level below is >=65%. *** The probability of success for a student placed into two-levels below is >=60%.

De Anza Decision Trees

The following trees are being displayed as a reference point to what the English department at De Anza may be considering, which should be taken into consideration when discussing the Reading decision trees appropriate for the department.

Figures 1-2 display the decision trees generated specifically for De Anza College using a data file of only De Anza students who enrolled in an English course between 2004 and 2014. This resulted in 27,810 students in the English file.

Figure 1: EWRT1A – Students with transcripts up through 11th grade

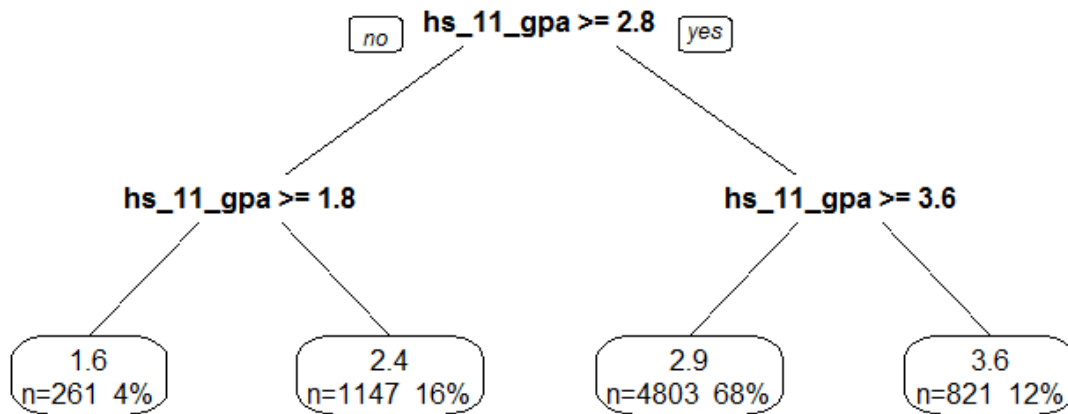


Figure 1 displays the decision tree for De Anza students whose first course enrolled was EWRT1A and who we have complete 11th grade transcripts for. The top node of the tree shows that students with a 2.8 GPA or higher will result in a 70% or higher success rate in the course. If you travel down the branch to the right towards the “yes” path, students with equal to or greater than a 2.8 GPA but less than a 3.6 GPA make up 68% of the total students (4,803) who took EWRT1A as their first course, and these students have a probability of success of 2.9 or a B or better in EWRT1A. Since the average success rate in EWRT1A at De Anza is a 2.7 or B-, setting the GPA cut off slightly above the recommended 2.8 at 2.9 would retain the current success rate of the course which is at a 2.7 or 80%. The statewide model recommends >= 2.6 GPA for this level. This corresponds well with the test out rate for the Reading trees.

Figure 2: EWRT1A – Students with transcripts up through 12th grade

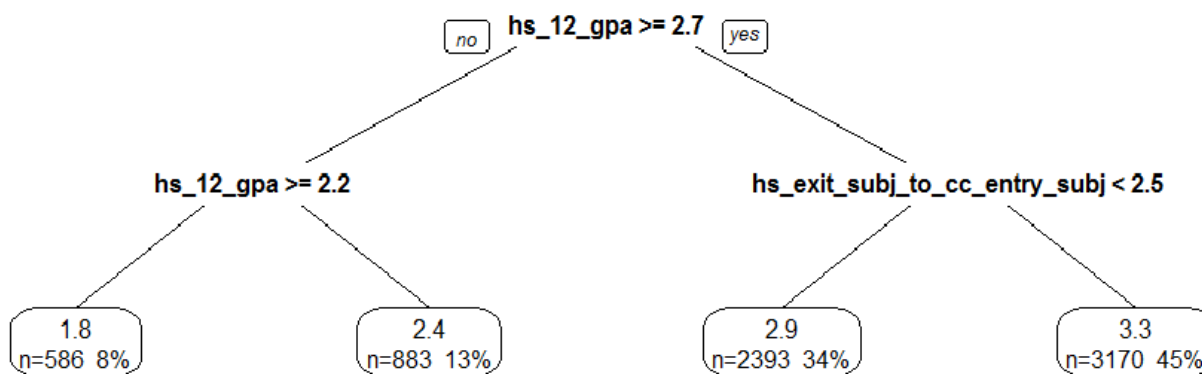


Figure 2 displays the decision tree for De Anza students whose first course enrolled was EWRT1A and who we have complete 12th grade transcripts for. The top node of the tree shows that students with a 2.7 GPA or higher will result in a 70% or higher success rate in the course. If you travel down the branch to the right, students who enrolled in an English course less than 2.5 terms after completing their English course in high school (2,393) make up 34% of the students and have a success rate of 2.9 or a B average in EWRT1A. On the right hand side, these students (3,170) took more than 2.5 terms off before enrolling in EWRT1A, these students have a probability of success of 3.3 or a B+ or better in the course. Since the average success rate in EWRT1A at De Anza is a 2.7 or B-, setting the GPA cut off at the recommended 2.7 plus checking for their most recent English enrollment less than or equal to 2.5 terms prior, would retain the current success rate of the course which is at a 2.7 or 80%. The statewide model recommends ≥ 2.6 GPA for this level.

Figures 3-4 display the decision trees generated specifically for De Anza College using a data file of only De Anza students who enrolled in a Reading course between 2004 and 2014. This resulted in 11,436 students in the Reading file.

Figure 3: READ211 – Students with transcripts up through 11th grade

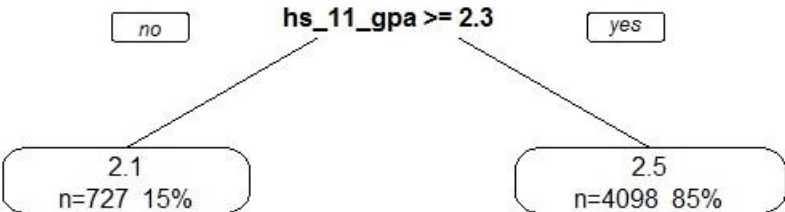


Figure 3 displays the decision tree for De Anza students whose first course enrolled was READ211 and who we have complete 11th grade transcripts for. The top node of the tree shows that students with a 2.3 GPA or higher have a probability of success of 65% or higher. If you travel down the right side, students who have greater than a 2.3 GPA in high school make up 85% of all students who enrolled in READ211 as their first course (4,098) and have a probability of success of 2.5 or a C+/B-. Since the average success rate in READ211 at De Anza is 79% or a C+ or 2.3, setting the GPA cut off at a GPA of 2.5 or 2.6 for this group would retain the current success rate of the course. The recommendation would also align with the recommendations for EWRT211. The statewide and the De Anza model recommends ≥ 2.3 GPA for this level.

Figure 4: READ211 – Students with transcripts up through 12th grade

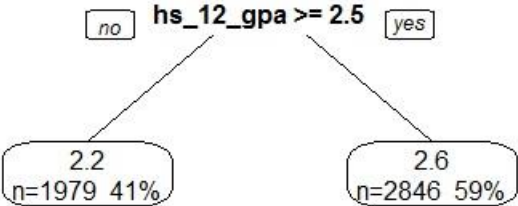


Figure 4 displays the decision tree for De Anza students whose first course enrolled was READ211 and who we have complete 12th grade transcripts for. The top node of the tree shows that students with a 2.5 GPA or higher have a probability of success of 65% or higher. If you travel down the right side, students who have greater than a 2.5 GPA in high school make up 59% of all students

who enrolled in READ211 as their first course (2,846) and have a probability of success of 2.6 or a C+/B-. Since the average success rate in READ211 at De Anza is 79% or a C+ or 2.3, setting the GPA cut off at the recommended GPA of 2.5 for this group would retain the current success rate of the course. The recommendation for EWRT211 is a GPA of 2.4 or better and checking for prior English enrollment one term prior. The statewide model recommends a $GPA \geq 2.0$ AND 12th grade English course grade of C+ or better OR $GPA \geq 2.0$ AND English CST of 274.

There was not enough data to generate De Anza decision trees for READ200, but since it is the lowest level to place into the sequence, any student with complete 11th or 12th grade transcripts who has a $GPA \leq 2.4$ could place into READ200. The recommendations for EWRT200 for Direct Matriculants is a GPA of 2.1 or 2.2 or higher