



Evaluation of the English Multiple Measures Placement System at Cosumnes River College (Fall 2018)

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Background

In fall 2017, the English department at Cosumnes River College (CRC) began placing students with their self-reported high school GPA. Students who reported a GPA of 2.6 or higher were placed into transfer-level English writing (ENGWR 300). This rule was used *disjunctively* with the Accuplacer assessment test such that each student was assigned the highest of their test or high school GPA placement. The new placement system resulted in an increase in first-year transfer-level completion (29.5% in 2016-2017 vs. 36.3% in 2017-2018) without a decrease in course success¹. Nevertheless, concern about equity gaps and students with lower GPAs resulted in a change in placement for fall 2018. Specifically, the English department decided to continue using the aforementioned disjunctive placement method but with a GPA cut-off of 3.0. Students with a 2.6 to 2.99 GPA would therefore be placed one-level below transfer. These students could enroll in transfer-level English with an additional 3-unit co-requisite support lab (ENGWR 108; presuming they did not place in transfer-level by an assessment test). Given this change, the evaluation described here had three primary purposes:

- 1) Replicate findings from the previous evaluation demonstrating an increase in placement rates without a decline in course success in transfer-level English.
- 2) Evaluate whether or not a 3.0 GPA cut-off reduces equity gaps in ENGWR 300 course success.
- 3) Given the importance of transfer-level English to student completion (e.g., earning a degree/transferring), evaluate how the change in GPA cut-off could impact overall completion rates.

Summary of Findings

Replication of Previous Findings

- 1) In fall 2018, the transfer-level placement rate was still higher than fall 2016 (66.9% vs. 51.5%, respectively; *Table 1*, page 3). Nevertheless, overall transfer-level placement decreased from fall 2017 by 16.2 percentage points.
 - a. Equity gaps in transfer-level placement increased for increased for African American, Foster Youth, Pacific Islander, male, and low-income students (*Table 2*, page 4). Equity gaps decreased slightly for Hispanic/Latino students.
- 2) This increase in placement was not detrimental to course success. Success rates for the fall 2018 cohort were slightly higher than that of fall 2017 – (68% vs. 69.6%, respectively; *Table 3*, page 5). The overall increase in success rate was likely driven by the change to a 3.0 GPA cut-off. Students in the 3.0 to 4.0 range had a 77.2% success rate in the fall 2018 cohort.

Impact of the 3.0 GPA Cut-Off on Equity Gaps in ENGWR 300 Course Success

- 1) In fall 2017, equity gaps in ENGWR 300 *course success* were smaller for Hispanic/Latino students in the 3.0 – 4.0 GPA range. On the other hand, equity gaps in course success were *larger* for African American and low-income students in the 3.0 – 4.0 GPA range. Thus a change to a 3.0 GPA cut-off would not have reduced equity gaps for these student groups (*Table 4*, page 6).

¹ http://crc.losrios.edu/files/ie/Evaluation_of_MMAPP_English_Placement.pdf

- 2) In fall 2018, equity gaps in ENGWR 300 course success for African American students were again larger when looking exclusively in the 3.0 - 4.0 range. They were also larger for Hispanic/Latino students, multi-race students, and low-income students in the 3.0 - 4.0 range (*Table 4, page 6*)

3.0 GPA Cut-Off and Overall Completion Rates

- 1) In fall 2017, if students in the 2.6 to 2.99 GPA range had been required to take a co-requisite (because of a below-transfer-level placement), their projected completion rate would be lower (*Table 5, page 7*).

Conclusions and Caveats

Relative to fall 2016, students continue to place into transfer-level English at higher rates without a detriment to course success in ENGWR 300. However, on the basis of the findings presented here, the GPA cut-off of 3.0 does not appear to be the solution to closing equity gaps in ENGWR 300. In both fall 2017 and fall 2018, student groups in the 3.0 to 4.0 GPA range had larger equity gaps compared to students overall. Additionally, the 3.0 GPA cut-off may detriment students in the 2.6 to 2.99 GPA range by lowering three-year completion rates.

Note that the statistical projections discussed here focused only on students in the 2.6 to 2.99 GPA range. These students had a 58.9% success rate in ENGWR 300 in fall 2017. Students with lower success rates in ENGWR 300 (e.g. like those with less than a 2.6 GPA) could certainly benefit from co-requisite support, and the projections described here do not apply to those circumstances.

Replication of Previous Findings

Placement Summary

Placement data for fall 2017 (February 1st to August 20th, 2017) were compared to placement data from fall 2018 (February 1st to August 20th, 2018). *Table 1* below presents transfer-level placement rates by each demographic group for fall 2017 and fall 2018, respectively. Overall, the transfer-level placement rate declined from 83.1% to 66.9% - a decrease of 16.2 percentage points. However, the overall transfer-level placement rate was still much higher than fall 2016 (51.5%).

A *percentage point gap* was calculated for each demographic group within each year. Percentage point gaps are calculated by subtracting the overall transfer-level placement rate from each group rate. These percentage point gaps are displayed in *Table 2*. Groups that are disproportionately impacted (as defined by the California Community Colleges Chancellors Office) are highlighted in red. Percentage point gaps in placement increased for African American, Foster Youth, Pacific Islander, male, and low-income students. On the other hand, the gap for Hispanic/Latino students shrank.

Table 1. Transfer-Level Placement Rates by Demographic Group

Demographic	Fall 2017		Fall 2018	
	% Transfer	Total Number of Students Placed	% Transfer	Total Number of Students Placed
Ethnicity				
<i>African American</i>	72.3%	603	55.2%	1217
<i>Asian</i>	88.7%	803	72.6%	1819
<i>Filipino</i>	86.0%	214	73.6%	481
<i>Hispanic/Latino</i>	78.7%	1005	63.5%	2200
<i>Native American</i>	90.7%	54	70.9%	110
<i>Other Non-White</i>			85.7%	14
<i>Pacific Islander</i>	80.0%	60	59.4%	133
<i>Unknown</i>	82.2%	101	66.4%	229
<i>White</i>	91.1%	711	72.5%	1491
Gender				
<i>Female</i>	84.5%	1758	70.7%	4135
<i>Male</i>	81.9%	1736	62.1%	3463
<i>Unknown</i>	77.2%	57	72.9%	96
Foster Youth				
<i>Foster Youth</i>	71.4%	126	52.6%	247
<i>Not Foster Youth</i>	83.5%	3425	67.3%	7447
Veteran				
<i>Not Veteran</i>	82.9%	3491	66.9%	7593
<i>Veteran</i>	96.7%	60	65.3%	101

Low Income				
<i>Low Income</i>	80.0%	1985	63.3%	4328
<i>Not Low Income</i>	87.0%	1566	71.4%	3366
Total	83.1%	3551	66.9%	7694

Table 2. Equity Gaps in Transfer-Level Placement (Percentage Point Gap Method)

Demographic	Fall 2017	Fall 2018
Ethnicity		
<i>African American</i>	-10.8%	-11.7%
<i>Asian</i>	5.6%	5.7%
<i>Filipino</i>	2.9%	6.7%
<i>Hispanic/Latino</i>	-4.4%	-3.4%
<i>Native American</i>	7.6%	4.0%
<i>Other Non-White</i>	<10	18.8%
<i>Pacific Islander</i>	-3.1%	-7.5%
<i>Unknown</i>	-0.9%	-0.5%
<i>White</i>	8.0%	5.6%
Gender		
<i>Female</i>	1.4%	3.8%
<i>Male</i>	-1.2%	-4.7%
<i>Unknown</i>	-5.9%	6.0%
Foster Youth		
<i>Foster Youth</i>	-11.7%	-14.2%
<i>Not Foster Youth</i>	0.4%	0.5%
Veteran		
<i>Not Veteran</i>	-0.2%	0.0%
<i>Veteran</i>	13.6%	-1.5%
Low Income		
<i>Low Income</i>	-3.1%	-3.6%
<i>Not Low Income</i>	3.9%	4.6%

Course Success

Placement data were gathered from the February 1st implementation date to the first day of classes in fall 2018. From this cohort of students, enrollment, demographic, and course success data were pulled for those that enrolled in ENGWR 300 for the first time as a result of their placement. This cohort will be referred to as the *fall 2018 cohort*. The same data were gathered for fall 2017. Success rates disaggregated by demographic group can be found in *Table 3* below. Success rates rose slightly for students in ENGWR 300 as a result of their placement – from 68% in fall 2017 to 69.6% in fall 2018. The increase in success rate was likely driven by the change to a 3.0 GPA cut-off. Students in the 3.0 to 4.0 range had a 77.2% success rate in the Fall 2018 cohort.

Table 3. Course Success Rates for Students Taking ENGWR 300 for the First Time because of a Transfer-Level Placement

Demographic	Fall 2017 Cohort		Fall 2018 Cohort	
	Total Number of Students	% Successful	Total Number of Students	% Successful
Ethnicity				
<i>African American</i>	65	47.7%	75	53.3%
<i>Asian</i>	216	77.3%	209	77.0%
<i>Filipino</i>	58	72.4%	75	72.0%
<i>Hispanic/Latino</i>	300	60.0%	311	67.5%
<i>Multi-Race</i>	67	68.7%	74	60.8%
<i>Native American</i>	<10		<10	
<i>Other Non-White</i>	<10		<10	
<i>Pacific Islander</i>	<10		11	72.7%
<i>White</i>	218	75.7%	226	73.5%
Gender				
<i>Female</i>	476	69.3%	538	75.1%
<i>Male</i>	455	66.6%	439	62.4%
<i>Unknown</i>				
Foster Youth				
<i>Foster Youth</i>	23	43.5%	<10	
<i>Not Foster Youth</i>	917	68.6%		
Veteran				
<i>Non-Veteran</i>	925	67.9%	974	69.6%
<i>Veteran</i>	15	73.3%	12	66.7%
Low Income				
<i>Low Income</i>	452	63.1%	520	65.8%
<i>Not Low income</i>	488	72.5%	466	73.8%
GPA				
2.6 - 2.99	265	58.9%	123	61.0%

	3.0 - 4.0	514	77.20%	651	77.7%
Total		940	68.0%	986	69.6%

Note. Samples sizes less than 10 are not displayed

Conclusion

Transfer-level placement rates in fall 2018 were still higher than fall 2016, and success rates for students enrolled in ENGWR 300 for the first time were slightly higher. Thus, students were still placed at higher rates without a detriment to course success. Nevertheless, equity gaps in transfer-level placement increased for African American, Foster Youth, male, and low-income students. Additionally, the overall transfer-level placement rate declined by 16.2 percentage points relative to fall 2017.

Impact of the 3.0 GPA Cut-Off on Equity Gaps in ENGWR 300 Course

Success Equity gaps in course success can be found in *Table 4* below. Here equity gaps were calculated by subtracting the average course success rate in ENGWR 300 from the course success rate for each group. In order to determine if a 3.0 GPA cut-off would reduce equity gaps in transfer-level English, the equity gaps for all students (the “All Students” columns) were compared to the equity gaps for students in the 3.0 to 4.0 range (the “3.0 – 4.0 GPA” columns) for fall 2017 and fall 2018.

In fall 2017, equity gaps were *larger* for African American and low-income students in the 3.0 to 4.0 range. They were slightly smaller for Hispanic/Latino students in the 3.0 to 4.0 range. Moreover, in fall 2018, equity gaps were again larger for African American students in the 3.0 to 4.0 range. They were also larger for Hispanic/Latino students, multi-race students, and low-income students. Taken together, these findings suggest that restricting placement to a 3.0 GPA would not have reduced equity gaps for many student groups in fall 2017 and fall 2018, respectively.

Table 4. Equity Gap in Course Success Rate for Students Taking ENGWR 300 for the First-Time because of a Transfer-Level Placement (Percentage Point Gap Method)

Demographic	Fall 2017		Fall 2018	
	All Students	3.0 - 4.0 GPA	All Students	3.0 - 4.0 GPA
Ethnicity				
<i>African American</i>	-20.3%	-21.7%	-16.3%	-19.2%
<i>Asian</i>	9.3%	2.8%	7.4%	7.9%
<i>Filipino</i>	4.4%	-1.6%	2.4%	-3.9%
<i>Hispanic/Latino</i>	-8.0%	-5.9%	-2.1%	-2.9%
<i>Multi-Race</i>	0.7%	2.8%	-8.8%	-9.5%
<i>Native American</i>	<10	<10	<10	<10
<i>Other Non-White</i>	<10	<10	<10	<10
<i>Pacific Islander</i>	<10	<10	3.1%	<10
<i>White</i>	7.7%	8.6%	3.9%	5.1%

Gender					
	<i>Female</i>	1.3%	-0.9%	5.5%	1.7%
	<i>Male</i>	-1.4%	1.5%	-7.2%	-3.1%
	<i>Unknown</i>				
Foster Youth					
	<i>Foster Youth</i>	-24.5%	<10	<10	<10
	<i>Not Foster Youth</i>	0.6%			
Veteran					
	<i>Non-Veteran</i>	-0.1%		0.0%	
	<i>Veteran</i>	5.4%	<10	-2.9%	<10
Low Income					
	<i>Low Income</i>	-4.9%	-6.6%	-3.8%	-4.2%
	<i>Not Low income</i>	4.6%	5.9%	4.2%	4.3%

3.0 GPA Cut-Off and Overall Completion Rates

Projecting completion

In order to evaluate the potential impact of the change in GPA cut-off, first-term enrollment and transfer-level English completion data were pulled for cohorts of new students from fall 2010 to fall 2016. These data were used to predict three-year completion – earning an award, transferring, or completing transfer-prepared status (2.0 GPA with 60 transferable units). Completion was a central focus of this analysis because transfer-level English is a key step in overall completion. First-term unit enrollment, transfer-level unit enrollment, transfer-level English completion, and educational goal were all significant predictors of three-year completion². Specifically, students who enroll in more units, enroll in more transfer-level units, complete transfer-level English, and identify as degree seeking in their first term are more likely to complete in three years. It is important to note that completing transfer-level English would have a larger impact on projected completion than an increase in enrollment of one transfer-level unit. This predictive model was used to evaluate various scenarios for students in the 2.6 to 2.99 GPA range.

Evaluating trade-offs

As previously stated, the shift in GPA cut-off will place students in the 2.6 to 2.99 GPA range below transfer-level. These students will be able take transfer-level English (ENGWR 300) but they will be required to take an additional 3-unit co-requisite course (ENGWR 108). This may benefit a student because it could help them complete transfer-level English. In terms of the previously described statistical model, this would result in an increased probability of completing in three years. On the other hand, students would have to take three less transfer-level units because they must enroll in a non-transferable co-requisite. This could result in a decrease in the probability of three-year completion.

² Data were analyzed with binomial logistic regressions: first-term overall units taken ($z = 3.46, p < .001$), first-term transfer units taken ($z = 16.56, p < .001$), first-term transfer-level English completion ($z = 15.09, p < .001$), and educational goal ($z = 2.56, p < .05$) were all significant predictors of three-year completion. The pseudo-correlation for this model was moderate, $pseudor = .37$.

With this in mind, the co-requisite course could improve or delay completion depending on the student. For example:

- 1) A student could have a very low likelihood of passing ENGWR 300. In this case, taking the co-requisite would increase this student’s likelihood of completing in three years. The benefit from ENGWR 300 would offset the detriment of taking three less transfer-level units. Students falling in this category will be referred to as the *benefit group*.
- 2) On the other hand a student could have a high likelihood of passing ENGWR 300. In this case, taking the co-requisite would decrease this student’s likelihood of completing in three years. They could have taken three more transferable units but were instead required to take a co-requisite. Students falling in this category will be referred to here as the *delay group*.

In fall 2017, 58.9% of students in the 2.6 to 2.99 GPA range passed ENGWR 300 without co-requisite support. In the trade-off analysis described here, this success rate was used to estimate the completion rate of the 2.6 to 2.99 group as a whole – with and without the co-requisite using the previously describe statistical model. Of the fall 2017 2.6 to 2.99 GPA group, a total of 58.9% of students would have fallen into the *delay* group. These students passed without a co-requisite. On the other hand 41.1% would have fallen in the *benefit* group because they did not pass and could have benefitted from a co-requisite.

Table 5 below depicts the average completion rate for students in the 2.6 to 2.99 range depending on the impact of the co-requisite course – from a 0% increase in course success (no impact) to a 41% increase in course success (all students successfully complete). Note that completion rates were estimated assuming an overall unit load of 12 units for each student (trends would be the same at any unit load level). Even if the co-requisite course was extremely impactful, the projected three-year completion rate for students in the 2.6 to 2.99 GPA range would have been lower had they been required to take a co-requisite (37.7% vs 39.1%, respectively). The statistically projected improvement in three-year completion (award/transfer) for the students in the *benefit* group would not offset the projected detriment to the students in the *delay* group.

Table 5. Projected three-year completion rates for full-time (12 units) students in the 2.6 to 2.99 GPA placement range

Impact on Course Success of the co-requisite	Co-Requisite Required	No Co-Requisite
+0%	29.0%	39.1%
+10%	31.1%	39.1%
+20%	33.2%	39.1%
+30%	35.3%	39.1%
+41%	37.7%	39.1%