



Evaluation of the Multiple Measures Assessment Project (MMA) Placement System at Cosumnes River College

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Background

In fall 2016, the English department at Cosumnes River College (CRC) implemented the statewide Multiple Measures Assessment Project (MMAP) system for transfer-level placement. Students with at least a 2.6 self-reported high school GPA were placed into transfer-level 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 MMAP system for transfer-level placement was implemented due to the questionable validity of the Accuplacer writing test. Specifically, English faculty observed a tenuous link between the Accuplacer question content and writing ability. Cosumnes River College began using the MMAP rule set for placement on December 8th, 2016. This investigation therefore compared and evaluated placement before and after the December 8th implementation.

Method

Placement data were gathered from the December 8th implementation date to the first day of classes in fall 2017. 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 2017 cohort*. The same data were gathered for fall 2016. Specifically, assessment data were gathered for students that placed between December 8th, 2015 and the first day of classes for fall 2016. Success, demographic, and enrollment data were gathered for students that enrolled in ENGWR 300 for the first time as a result of their placement. This cohort of students acted as the comparison group and is referred to here as the *fall 2016 cohort*.

Summary of Findings

1. The overall transfer placement rate (placement into ENGWR 300) was increased from 51.5% in fall 2016 to 81.9% in fall 2017 (*Table 1, page 2*).
2. This increase in placement was not detrimental to student success in ENGWR 300. The fall 2017 (MMAP) cohort had a 68.0% success rate, compared to a success rate of 67.9% for the Fall 2016 (comparison) cohort. (*Table 4, page 4*)
3. Disproportionate impact in transfer-level placement was reduced from fall 2016 to fall 2017 for African American and foster youth students. However, these groups remained disproportionately impacted in fall 2017. Additionally, the gap in transfer-level placement increased for Hispanic/Latino(a) students (*Table 3, page 3*).
4. In the fall 2017 cohort, African American, foster youth, and Hispanic/Latino(a) students were disproportionately impacted in terms of ENGWR 300 course success (*Table 6, page 5*).
5. In the fall 2017 cohort, students who placed with a 2.6-2.9 GPA had a lower success rate (58.9%) than students who placed with a 3.0-3.4 (70.9%) or 3.5-4.0 GPA (90.0%; *Table 7, page 6*).

Limitations

The increase in transfer-level placement may not be entirely attributed to MMAP model implementation. Students placing for fall 2016 were assessed with Compass, and students placing for fall 2017 were assessed with Accuplacer. Therefore, some of the change in placement may be attributed to changes in the assessment instrument – not just the MMAP rules alone.

Placement Summary

A summary of placement can be found in *Table 1*. The “fall 2016” column summarizes placements between December 8th, 2015 and the first day of classes for fall 2016. The “Fall 2017” column summarizes placements between December 8th, 2016 (the first day of MMAP implementation) and the start of classes for fall 2017. There was a 30.4% increase in transfer-level placement, such that the fall 2017 cohort had an 81.9% transfer-level placement rate, compared to 51.5% for the fall 2016 cohort.

Table 1. Placement Level Summary

Placement Level	Fall 2016	Fall 2017
ENGWR 42	14.6%	1.4%
ENGWR 58	10.6%	3.8%
ENGWR 101	23.3%	12.8%
ENGWR 300	51.5%	71.8%
ENGWR 300/480	0.0%	10.2%
Total Headcount	4088	4075

Transfer Level

Table 2 presents the transfer-level placement rate by demographic group. The column entitled “Total Number of Students Placed” provides a count of all the students receiving a placement (regardless of level). The column labelled “% Transfer” displays the percentage of students who placed into transfer-level out of the total number of students receiving a placement. African American, Asian, Pacific Islander, Native American, female, foster youth, veteran, and low income students had an above average increase in transfer-level placement.

Table 2. Transfer-Level Placement by Demographic Group

Demographic	Fall 2016		Fall 2017		Change
	% Transfer	Total Number of Students Placed	% Transfer	Total Number of Students Placed	
<i>Ethnicity</i>					
African American	37.8%	741	71.4%	734	33.6%
Asian	51.7%	838	87.4%	911	35.7%
Filipino	59.3%	226	84.9%	238	25.6%
Hispanic/Latino	49.4%	1213	77.9%	1145	28.5%
Native American	57.7%	52	89.9%	69	32.2%
Other Non-White		<10		<10	
Pacific Islander	40.6%	69	80.3%	76	39.7%
Unknown	53.8%	158	78.8%	113	25.0%
White	65.5%	783	90.3%	787	24.8%
<i>Gender</i>					
Female	51.9%	2060	83.3%	2005	31.4%
Male	51.0%	1933	80.8%	1999	29.8%
Unknown	53.7%	95	76.1%	71	22.4%
<i>Foster Youth</i>					
Foster Youth	32.9%	146	70.1%	144	37.3%
Not Foster Youth	52.2%	3942	82.4%	3931	30.2%

Veteran					
Not Veteran	51.4%	4011	81.7%	3999	30.3%
Veteran	57.1%	77	94.7%	76	37.6%
Low Income					
Low Income	45.7%	2286	79.8%	2241	34.1%
Not Low Income	58.9%	1802	84.6%	1834	25.6%
Total	51.5%	4088	81.9%	4075	30.4%

There was a reduction in disproportionate impact for African American and foster youth students. However, these groups remained disproportionately impacted in fall 2017 such that their transfer-level placement rates were still notably lower than the overall rate (*Table 3*). Disproportionate impact was calculated by first subtracting the overall transfer placement rate (81.9% in fall 2017) from the rate for each group. For groups below the average rate, this yielded a percentage point “gap”. The gap was then compared to a *margin of error* for each group which was calculated in compliance with the CCCCO recommendation mandated by AB 504. If the gap was larger than the margin of error, then a group was labelled as disproportionately impacted. Additionally, Hispanic/Latino students were disproportionately impacted in the fall 2017 cohort due to an increase in their transfer-level placement gap. Thus, although some equity gaps were reduced, disproportionate impact remained.

Table 3. Percentage Point Gap in Transfer-Level Placement by Group

Demographic	Fall 2016	Fall 2017
Ethnicity		
African American	-13.7%	-10.5%
Asian	0.2%	5.4%
Filipino	7.8%	2.9%
Hispanic/Latino	-2.1%	-4.0%
Native American	6.2%	7.9%
Other Non-White		
Pacific Islander	-10.9%	-1.7%
Unknown	2.3%	-3.2%
White	14.0%	8.4%
Gender		
Female	0.4%	1.4%
Male	-0.6%	-1.1%
Unknown	2.2%	-5.9%
Foster Youth		
Foster Youth	-18.6%	-11.8%
Not Foster Youth	0.7%	0.4%
Veteran		
Not Veteran	-0.1%	-0.2%
Veteran	5.6%	12.8%
Low Income		
Low Income	-5.8%	-2.2%

Not Low Income	7.4%	2.6%
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Student Success Summary

Table 4 displays the overall success rate by demographic and cohort (fall 2016/fall 2017). The fall 2016 cohort – composed of students taking ENGWR 300 for the first time who had placed (via MMAP/Accuplacer) between December 8th 2015 and the start of the Fall 2016 term – had a 67.9% success rate compared to a 68% success rate for the fall 2017 cohort. Thus, students placed with the MMAP system and Accuplacer had a slightly higher success rate than students placed in fall 2016 with a test alone. The higher rate of transfer-level placement in fall 2017 was therefore not detrimental to the overall course success. Moreover, the grade distribution for the fall 2017 cohort was similar to that of the fall 2016 cohort – with the Fall 2017 cohort receiving more “B” grades and less “C” grades (Table 5).

Table 4. ENGWR 300 Success Rate by Demographic Group and Cohort

Demographic	Fall 2016 Cohort		Fall 2017 Cohort		Change
	% Successful	Total Number of Students	% Successful	Total Number of Students	
Ethnicity					
African American	59.2%	49	47.7%	65	-11.5%
Asian	73.9%	119	77.3%	216	3.4%
Filipino	70.3%	37	72.4%	58	2.1%
Hispanic/Latino	63.1%	225	60.0%	300	-3.1%
Multi-Race	75.4%	57	68.7%	67	-6.8%
Native American		<10		<10	
Pacific Islander		<10		<10	
Unknown		<10		<10	
White	72.3%	177	75.7%	218	3.4%
Gender					
Female	74.6%	343	69.3%	476	-5.3%
Male	61.5%	322	66.6%	455	5.1%
Unknown	50.0%	14		<10	
Age					
24 or Younger	68.7%	629	67.7%	868	-0.9%
25 or Older	58.0%	50	70.8%	72	12.8%
Foster					
Foster Youth	47.1%	17	43.5%	23	-3.6%
Not Foster Youth	68.4%	662	68.6%	917	0.2%
Veteran					
Not Veteran	68.3%	668	67.9%	925	-0.4%
Veteran	45.5%	11	73.3%	15	27.9%
Low Income					
Low Income	63.4%	306	63.1%	452	-0.3%
Not Low Income	71.6%	373	72.5%	488	1.0%

Total	67.9%	679	68.0%	940	0.1%
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Table 5. ENGWR 300 Grade by Cohort

Official Grade	Fall 2016	Fall 2017	Change
A	21.6%	21.8%	0.2%
B	25.3%	28.8%	3.5%
C	20.9%	17.3%	-3.6%
D	6.0%	5.1%	-0.9%
F	10.5%	10.3%	-0.1%
I	0.3%	0.4%	0.1%
W	15.3%	16.2%	0.9%
Enrollment	679	940	261

Despite the equivalent success rates, several student groups were disproportionately impacted in the fall 2017 cohort. Disproportionate impact was again calculated using the CCCCO recommended method. African American, Hispanic/Latino(a), foster youth, and low income students were disproportionately impacted in the Fall 2017 cohort (*Table 6*).

Table 6. Percentage Point Gap in Success Rate by Group

Demographic	Fall 2016	Fall 2017
Ethnicity		
African American	-8.7%	-20.3%
Asian	6.1%	9.3%
Filipino	2.4%	4.4%
Hispanic/Latino	-4.8%	-8.0%
Multi-Race	7.5%	0.7%
Native American		
Pacific Islander		
Unknown		
White	4.4%	7.7%
Gender		
Female	6.7%	1.3%
Male	-6.4%	-1.4%
Unknown	-17.9%	
Age		
24 or Younger	0.8%	-0.2%
25 or Older	-9.9%	2.9%
Foster		
Foster Youth	-20.8%	-24.5%
Not Foster Youth	0.5%	0.6%

Veteran			
Not Veteran	0.4%	-0.1%	
Veteran	-22.4%	5.4%	
Low Income			
Low Income	-4.5%	-4.9%	
Not Low Income	3.7%	4.6%	

Finally, the success rate was disaggregated by GPA range for the fall 2017 cohort. *Table 7* displays the success rate by GPA range. Note that students with 1.0 to 2.5 GPA placed into ENGWR 300 via Accuplacer. Students just above the GPA cut-off (2.6-2.9) had a lower success rate (58.9%) compared to students in the 3.0-3.4 (70.9%) and 3.5-4.0 (90.0%) ranges. Additionally, students in the 2.6-2.9 GPA range had less successful grades – more D’s, F’s, and W’s grades. They also had more C grades than students in the 3.0-4.0 range (*Table 8*).

Table 7. ENGWR 300 Success Rate by GPA Range for the Fall 2017 Cohort

GPA Range	Success Rate	Headcount
1.0-1.4	60.0%	10
1.5-1.9	33.3%	33
2.0-2.5	56.6%	106
2.6-2.9	58.9%	265
3.0-3.4	70.9%	344
3.5-4.0	90.0%	170
No GPA	75.0%	12
Total	68.0%	940

Table 8. Grade Distribution by GPA Range for the Fall 2017 Cohort

Grade	3.0-4.0	2.6-2.9	Difference
A	29.4%	14.3%	-15.0%
B	32.7%	23.4%	-9.3%
C	15.2%	21.1%	6.0%
D	3.5%	8.7%	5.2%
F	6.8%	13.2%	6.4%
I	0.4%	0.8%	0.4%
W	12.1%	18.5%	6.4%