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Including HS GPA in the model improves the accuracy of predicting course outcomes, within placement groups, at all placement levels for both English and math.

Is High School GPA Useful for Math and/or English Placement at MCC?

In 2012, the author of a working paper on higher education¹ considered whether high school grade point average ("HS GPA") predicts college success, particularly as it relates to students' placement into college level coursework.

At MCC, data and analyses provided by the IR Office inform recommendations about how students are placed in English and math courses based on Accuplacer scores.

More recent research we've done looked into whether including HS GPA, earned credits at entry, and time since high school graduation in the model improves its accuracy. Table 1 shows the HS GPA of the first-time fall 2016 students who were utilized in analyses.

The key findings were that:

- Including HS GPA in the model improved the accuracy of predicting

course outcomes, within placement groups, at all placement levels for both English and math.

- Including whether students have any earned college credits at entry improved course outcome predictions, within placement groups, for English and math at most placement levels
- Time since high school graduation did not significantly improve the accuracy of course outcome predictions

Based on the above results, IR recommends using HS GPA, along with other predictive measures, to accurately place students, with an eye toward course success and minimizing time in developmental education courses.

Table 1. First-Time Fall 2016 Students' HS GPA

HS GPA Scale	Frequency	GPA		
		Average	Median	Min/Max
100-Point	74.4% (n=1934)	82.47	82.67	Min 63.2 Max 98
4-Point	17.0% (n=443)	2.453	2.49	Min 0.770 Max 4.000
5-Point	8.6% (n=224)	2.759	2.82	Min 1.000 Max 4.388

¹ Scott-Clayton, J. (2012). Do high-stakes placement exams predict college success? (CCRC Working Paper No. 41). New York, NY: Columbia University, Teachers College, Community College Research Center.

Changes in MCC's Student Population

Over the past six years, the percentage of minority (i.e., Black, Hispanic, American Indian, Pacific Islander / Native Hawaiian, Multirace) students has increased. In fall 2017, it was 38%.

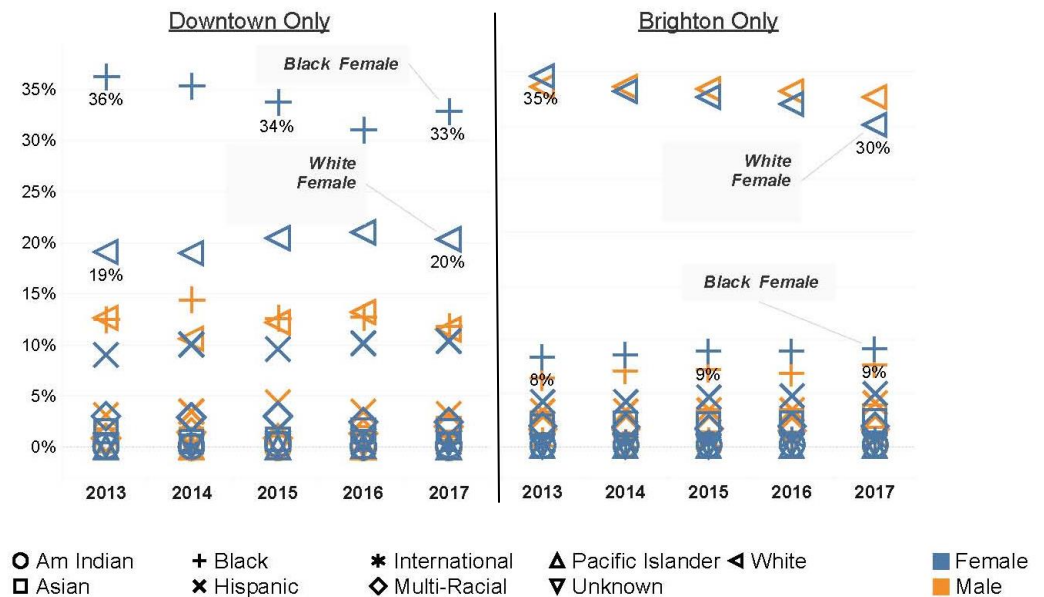
Figure 1 shows trends in race/ethnicity and sex at both the Brighton and Downtown campuses. As illustrated, the percentage of White females at Brighton decreased from 35% in fall 2013 to 30% in fall 2017. As a result, White males replaced White females as the largest group.

In fall 2017, the Damon City Campus was replaced by the New Downtown Campus on State Street.

Historically, the biggest population Downtown was female (approximately 70%), with Black females (approximately 33%) leading the group. As of fall 2017, the decline in minority population has stopped, while the White non-Hispanic group followed the negative trend.

White males replaced White females as the largest group at the Brighton campus.

Figure 1. Enrollment by Sex and Race/Ethnicity



Flexible Pace Math Course Outcomes

Since spring 2015, students have had the option of taking MTH098 (Elementary Algebra) and MTH104 (Intermediate Algebra) in either a traditional or flexible pace format. A mathematics course designated as “flex-paced” is a self-directed course in which learning material is delivered via computer using online software with videos and interactive assignments. Students are required to attend class, complete a certain number of modules, and take proctored exams throughout the semester.

The IR office was asked to determine if there was a difference in the C-or-Better

rates in the subsequent MTH104 (Intermediate Algebra) and MTH165 (College Algebra) courses, respectively, for students in flex sections versus lecture sections. The populations we looked at were students from spring 2015 through summer 2017 who: (1) took MTH098 then MTH104, or (2) MTH104 then MTH165.

As shown in Table 2, the MTH098 flex pace students showed a statistically significantly higher C-or-Better rate in their MTH104 course, regardless of the MTH104 course format (i.e., flex, lecture, online).

In flex-paced courses, learning material is delivered via computer using online software with videos and interactive assignments.

Table 2. C-or-Better Rates in Courses Subsequent to MTH098 and MTH104

Starting Course & Format	Subsequent Course - All Formats (i.e., Lecture, Flex, Online)	C-or-Better Rate in Subsequent Course	Statistically Significant Difference in C-or-Better Rate?
MTH098 Flex	MTH104	56.3% (n=323)	Yes*
MTH098 Lecture	MTH104	47.1% (n=937)	
MTH104 Flex	MTH165	52.2% (n=204)	No
MTH104 Lecture	MTH165	54.4% (n=994)	

*p<.05

We then utilized the same population to calculate the number of terms (i.e., fall, intersession, spring, summer) it took students to progress from MTH098 through MTH104 through MTH165. Specifically, we looked at the students who took MTH165 and traced them

back to see how long it took them to get there from MTH098.

As shown in Table 3, the pathway through MTH165 was shorter if students took a flexible pace course along the way.

Students who took either flex pace MTH098 or flex pace MTH104 got to -- and through -- MTH165 at a faster rate.

Table 3. Pathway from MTH098 through MTH104 through MTH165

Format of MTH098 & MTH104	Average # of Terms to Progress Through MTH165	Statistically Significant Difference in the # of Terms?	Magnitude of Difference (Effect Size)
Lecture	3.73 (n=913)	Yes ****	Medium (0.36)
At least One Flex Course	2.99 (n=157)		

“What Happened to the Class of 2016?” Report

The “What Happened to the Class of 2016?” book and brochure are [posted on the IR website](#). Hard copies have been distributed to MCC faculty and staff as well as our off-campus constituents (e.g., local college presidents, high school counselors).

During the 2015-2016 academic year, MCC awarded 2,166 associate degrees and 220 certificates to 2,353 students.

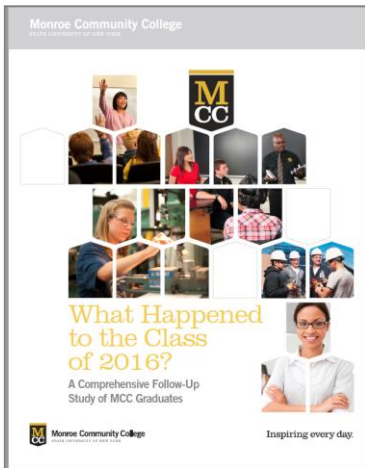
The information in the report is based on data from the Graduate Follow-Up Survey, the National Student Clearinghouse, AlumniFinder, and various MCC departments and programs. This allowed us to collect outcomes data on 1,737 (73%) of our graduates.

Some of the highlights from the report include:

- 2,386 students graduated as part of the Class of 2016.
- 1,529 (64 percent) of graduates had been in a transfer (A.A. or A.S.) program.

- 637 (27 percent) of graduates had been in a career (A.A.S.) program.
- 220 (9 percent) of graduates had been in a certificate program.
- 72 percent of the graduates are employed and/or continuing their education.
- Local employers continue to hire the majority of our graduates who enter the workforce. Of the career and certificate program graduates who secured full-time employment, 90 percent are employed in Monroe or an adjacent county.
- 69 percent of the graduates who transferred are attending SUNY or CUNY institutions.

The “What Happened to the Class of 2017?” book and brochure will be available in fall 2018.



72 percent of the Class of 2016 graduates are employed and/or continuing their education.

For more information about the Institutional Research (IR) Office, you can visit [our pages](#) on the MCC website or contact an IR staff member:

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<http://www.monroecc.edu/depts/research/>

