

Brief:
**24/7 Online
Tutoring Analysis**

at Montgomery County Community College
(2019)

Brief: 24/7 Online Tutoring Analysis

at Montgomery County Community College (2019)

3 Key Takeaways

1. The 24/7 online tutoring initiative impacted more than 11% of students attending the College in the fall 2018 semester and led to more than 5,700 hours of additional academic support for students.
2. Students rated online tutoring favorably and participation in tutoring showed a statistically significant (positive) impact on fall-spring persistence.
3. Math was a major driver of online tutoring use – accounting for nearly half of all online tutoring sessions. Notably, math students who used online tutoring were less likely to have “F” grades than their non-using peers.

Topic(s) of Inquiry

Usage, satisfaction and academic success data for students using 24/7 online tutoring in the fall 2018 semester

Research Question(s)

For which courses/topics did students use 24/7 online tutoring? Which students used 24/7 online tutoring? How satisfied were students with 24/7 online tutoring? Was using 24/7 online tutoring associated with improved academic outcomes for students (relative to students who did not use 24/7 online tutoring)?

Background

In fall 2017 Montgomery County Community College piloted 24/7 online tutoring for students enrolled in a variety of STEM courses. Based on the success of the pilot, the College scaled the initiative and made 24/7 online tutoring available to all enrolled students in the fall 2018 semester. Given the investment in 24/7 online tutoring, the College is interested in understanding which students use 24/7 online tutoring, how students use 24/7 online tutoring, the extent to which students are satisfied with their 24/7 online tutoring experience, and the extent to which the use of 24/7 online tutoring may positively impact academic outcomes.

Data Parameters/Analysis

Student satisfaction data are derived from post-tutoring-session surveys administered via the 24/7 online tutoring platform. In the fall 2018 term, the survey response rate was 37%. For the comparison of student grades, the math course grades of students using 24/7 online tutoring for math were compared to the math grades of non-users during the fall 2018 semester. Math was selected as the subject area for the grade analysis given the high number of 24/7 online tutoring users across math sections. Only grades A-F were considered in the analysis. For the analysis of fall-spring retention rates, the persistence rates of 24/7 online tutoring users were compared to those of matched peers.

Note: Categorizations in tables 6-8 (e.g. “subjects” and “topics”) reflect the nomenclature of the 24/7 online tutoring platform. Subsequently, some subjects appear to be aggregated at a higher level than others, necessitating data from the tables be interpreted with care.

General Findings

During the fall 2018 semester, 1,233 unique students engaged in 9,362 sessions of tutoring. In total, students used more than 5,700 hours of online tutoring. On average, students waited 1 minute for a session and sessions lasted over half an hour (37 min.). Students generally rated their tutoring experience favorably – with a recommendation score of 98% and an average session rating of 4.6/5. Though comprising the majority of users, part-time students were underrepresented relative to their proportional composition of the student body. Notably, all minority student groups (per IPEDS definitions) were overrepresented (relative to FY 2018 data), as were female students.

Students who used 24/7 online tutoring *persisted at statistically significantly higher rates than their matched peers who did not use tutoring*. The difference in term-term persistence rates was 3.6%.

With regard to grades, students who used 24/7 online tutoring had higher math grades, on average, compared to their non-using peers – though the difference was not statistically significant. However, the distribution of math grades for students using 24/7 online tutoring was statistically significantly different from the distribution of math grades for non-users - with 24/7 online tutoring users having a smaller proportion of “F” grades and a greater proportion of “C” grades.

Tables 1-5. 24/7 Online Tutoring Student User Profile

FT/PT Status	%	Gender	%
Full-Time	42%	Female	67%
Part-Time	58%	Male	33%

IPEDS Race/Ethnicity	%
American Indian	0%
Asian	10%
Black or African American	18%
Hawaiian/Pacific Islander	1%
Hispanic	10%
Non-Resident Alien	2%
Two or More Races	4%
Unknown	5%
White	50%

Home Campus	%
Central Campus	75%
Virtual Campus	8%
West Campus	17%

Top 5 Programs by Student Use of 24/7 Online Tutoring	%
Liberal Studies	23%
Nursing	13%
Business Administration	12%
Computer Science	7%
Life Sciences	5%

Tables 6-8. 24/7 Online Tutoring Top Subjects, Topics, and Sections by Number of Tutoring Sessions

Subjects with 200 or more sessions		Topics with 100 or more sessions		Sections with 100 or more sessions	
Subject	Count	Topics	Count	Section	Count
Drop Off Essay Review	1413	Other	1193	2018FA_MAT162ONLN Precalculus II	507
Math - MAT 106	900	Writing Process	546	2018FA_CIS111BCC Comp Sci II: Object-Oriented	310
Math - MAT 162	574	Analyze Data	359	2018FA_CIS114JC Web Design and Development	186
Math - MAT 131	549	Trigonometric Functions	329	2018FA_PHY121M6C General Physics I	163
English - ENG 101	426	Motion, Forces, and Energy	294	2018FA_MAT106KC011 Math	156
Math - MAT 011	395	The Derivative	256	2018FA_MAT131CC Intro to St	150
Computer Science - CIS 111B - Java	379	Probability	226	2018FA_MAT142BC Calculus for Business, Soc Sci	128
Math - MAT 100	378	Interactions of Matter	217	2018FA_CIS112LC Comp Sci III: Data Struc-Algo	125
Physics - PHY 121	316	Mathematics of Finance	198	2018FA_MAT106HC Math Ap	124
Computer Science - CIS 111	315	Java – Classes	164	2018FA_CHE152JC Principles of Chemistry II	122
Math - MAT 161	313	Sets and Probability	162	2018FA_MAT131ONLN Intro to Statistics I	120
Math - MAT 190	250	Linear Equations and Inequalities	158	2018FA_MAT130ONLN Probability and Statistics	114
Math - MAT 130	215	Algebra	116	2018FA_MAT190JC Calc & Analy Geometry I	108
Math - MAT 142	213	The Integral	107	2018FA_MAT161IC Precalc	100
Chemistry - CHE 121	207	Functions	107		
		Quadratic Equations, Inequalities, and Functions	104		