

Analysis of Math Center Attendance Compared with Course Success CRC Research Office

Methodology

During the fall 2008 semester, the CRC Research Office conducted a pilot study on whether or not attendance in the Math Center had an effect upon average course success rates in the Mathematics Courses in which the student was enrolled.

The CRC Research Office queried the SARS Track database to identify students who had used their student ID card in the Math Center for the 2007-08 academic year and linked those students to their enrollment in Math course(s). The average course success rate in each Math course was calculated for both cohorts – students who had used the Math Center and student who had not used the Center. All students who had dropped their Math courses before the drop deadline were excluded from the analysis. The Math Center courses (Math 81-83), and courses for which a small number or a very small percent of students used the Math Center, were also eliminated from the analysis. This included many of the transferable math courses including Math 299, Math 300, Math 310, Math 315, Math 344, Math 410, Math 420, and Math 480. No non-transferable courses were removed from the analysis.

Overview of Results

Approximately 9% (538 out of 6163) of the enrollments in the courses included in the study utilized the Math Center. The number of times that students utilized the services was quite frequent. On average, students utilized the Math Center 25 times during the academic year. Some of this can be attributed to certain courses requiring mandatory attendance in the Center.

Although in the aggregate students who took advantage of the Math Center had slightly higher average course success rates than those who did not avail themselves of the service (51.7% compared with 50%), the **variation among the individual courses within the department** was surprising. In more than one case, students who had utilized the Math Center had **lower** average course success rates compared to students who did not use the service – something that may warrant further investigation. However the analysis did reveal particular courses for which student performance was higher for students who had used the Math Center, including Math 20, Math 30, Math 370, and Math 400. The percentage of students using the Math Center also varied, although there was no discernable pattern in this variation.

Caveats

The study did not collect the total time that the student used the Math Center. In addition, it was impossible to accurately determine how much time in the Center was spent by the student on the actual discipline-specific work and what was spent on other pursuits within the Center.

The following summarizes the comparative success rates for the courses in the study. As indicated above, some courses were omitted due to the low number or low percentage of students who utilized the Math Center.

Math

Aggregate Course Success Rate

Enrollments that did not use Math Center	51.5%
Enrollments that used Math Center	59.6%

Analysis by Course-level (selected courses)

Developmental Math (Below 100-level)

Math 20 (usage rate: 14.3%)

Did not use Math Center	46.6% (N=311)
Used Math Center	55.8% (N=52)

Math 21 (usage rate: 10.7%)

Did not use Math Center	65.5% (N=191)
Used Math Center	60.9% (N=23)

Math 22 (usage rate: 5.7%)

Did not use Math Center	58.0% (N=226)
Used Math Center	61.5% (N=13)

College-Level Math (100-level)

Math 101 (usage rate: 8.5%)

Did not use Math Center	60.4% (N=379)
Used Math Center	55.8% (N=35)

Math 102 (usage rate: 8.4%)

Did not use Math Center	51.6% (N=570)
Used Math Center	42.3% (N=52)

Math 105 (usage rate: 6.9%)

Did not use Math Center	40.3% (N=67)
Used Math Center	60.0% (N=5)

Transfer-level Math (300 and 400-level)

Math 343 (usage rate: 8.6%)

Did not use Math Center	66.2% (N=139)
Used Math Center	61.5% (N=13)

Math 350 (usage rate: 7.5%)

Did not use Math Center	52.7% (N=74)
Used Math Center	50.0% (N=6)

Math 370 (usage rate: 8.6%)

Did not use Math Center	57.8% (N=180)
Used Math Center	64.7% (N=17)

Math 400 (usage rate: 4.7%)

Did not use Math Center	55.2% (N=181)
Used Math Center	11.1% (N=9)

Math 401 (usage rate: 7.6%)

Did not use Math Center	41.0% (N=122)
Used Math Center	50.0% (N=10)

Math 402 (usage rate: 10.2%)

Did not use Math Center	62.3% (N=53)
Used Math Center	83.3% (N=6)