



Research Brief

Developmental Math Academic Success



Department of Planning, Research, and Effectiveness
(<http://www.alamo.edu/spc>)

Achieving the Dream (AtD) Initiative

April 2012

"Achieving the Dream: Community Colleges Count" is a multi-year initiative funded by the Lumina Foundation for Education that addresses the challenge of providing low income students and students of color with opportunities for academic success. The AtD student outcome indicators are the following: (1) Successful completion of developmental (remedial) courses and progression to college-level courses; (2) Enrollment and successful completion of college-level "gatekeeper" courses; (3) Productive grades (C or higher) in all courses; (4) Semester to semester persistence; (5) Graduation; and (6) Transfer (a PAC-specific goal). All colleges of the Alamo Community College District participate in this initiative to cultivate and promote a culture of evidence, accountability, equity, and excellence in support of the student outcomes. Feedback? Questions? Contact Mecca Salahuddin, msalahuddin1@alamo.edu, (210) 486-2897.

What has been the impact of Developmental Math Success initiatives for students based on their ethnicity?

Introduction

At SPC, the Math department has increased the support services for students requiring developmental education. In 2006, the Math department began requiring developmental math students in Math 0300 – 0303 to co-enroll in a computer math lab for one hour per week per semester. The lab component is designed where students may practice homework problems with a tutor available. The intent of the computer math lab is to introduce the students to the Mathematics Tutoring Lab. Students can receive help in the Math Computer lab or in the Math paper/pencil lab. All regular developmental math classes - Math 0300, Math 0301, Math 0302, and Math 0303 courses - have the 1-hour required lab component. Math 0350, 0351, and 0352 are contextualized courses for Applied Science students; these courses all have a two-hour lab scheduled into each section's meeting pattern.

Methodology

Data were collected on students referred to developmental and College Level Math for Fall 2010. Figure 1 shows of the 1,422 students, 30.5% of the students were referred to Level 1 (MATH0300), 26.4% referred to Level 2 (MATH0301), 15.7% referred to Level 3 (MATH032) and 11.3% referred to Level 4 (MATH0303) of developmental math. Figure 1 also shows 4.8% of the students were referred to College Level Math.

Following are results based on course completion, successful completion, and enrollment and completion of college level courses, known as gatekeeper courses.

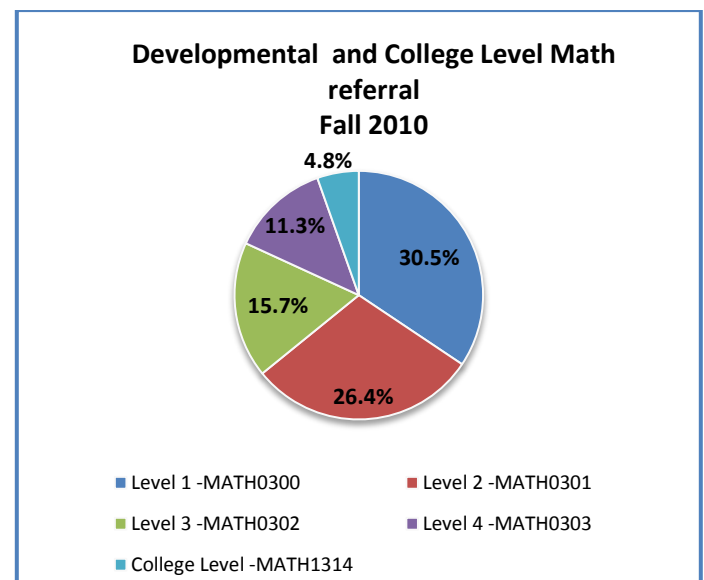


Figure 1: Percentage of Students Referred to Developmental and College Level Math

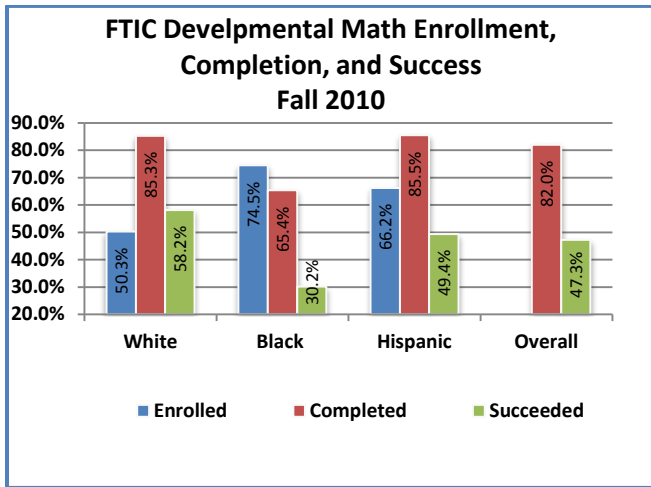
Results

1) Successful Course Completion

Successful course completion is defined as the percentage of students who complete the course with a grade of A, B, or C.

The data in Graph 1 shows enrolled, completion, and successful course completion among first time in college (FTIC) students for Fall 2010 by ethnicity. The data indicates a higher percentage of Black students enrolled in the referred math course compared to Whites and Hispanics. However, the data shows higher completion rates among Whites and Hispanics. As for successful completion, Whites had greater successful

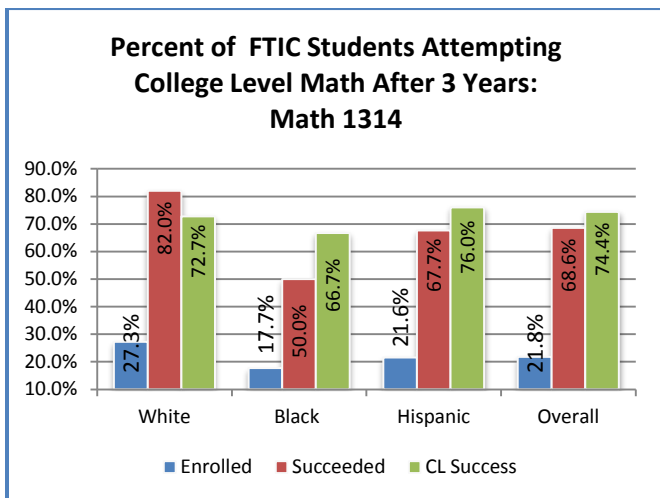
completion rates (58.2%) than Hispanics (49.4%) and Blacks (30.2%). Graph 1 also shows the overall completion (82.0%) and success (47.3%) rates for Developmental Math students.



Graph 1: FTIC students' enrollment, completion, and success rates in Developmental Math.

Graph 2 shows the percentage of students who within three years of enrolling and completing developmental math enrolled in college level math – Math 1314 for Fall 2010 by ethnicity.

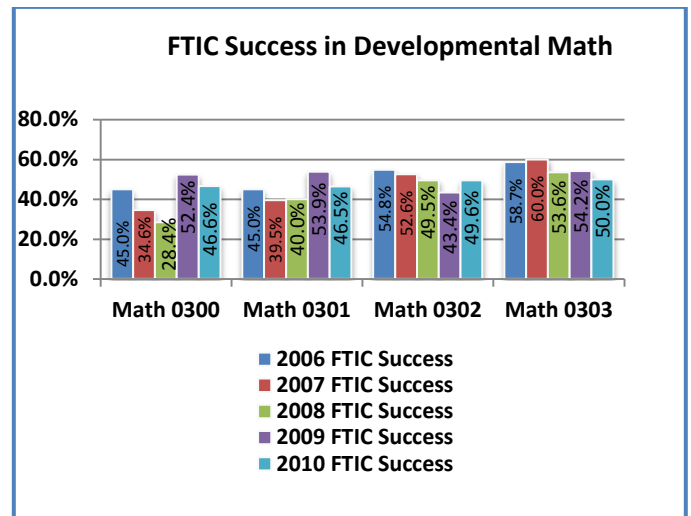
As shown, of the Fall 2010 students, 29.3% of White students progressed to college level math within three years compared to 17.7% for Blacks and 21.6% for Hispanics. For the student enrolling in College Level Math, 82% of White students were successful; this is higher than those students referred to College Level Math. However, for Black students, 50.0% of the students were successful compared to 66.7% of those students referred to College Level. For Hispanics, the rates were 67.7% of referred developmental students compared to 76.6% of College Level students.



Graph 2: The percentage of students completing Developmental Math who enrolled in College Level Math

2) Five Year Successful Course Completion of Developmental Math

Graph 3 indicates data for the last five years (2006-2010) of developmental education cohort of students. Results show a slight increase in success rates for students enrolling in MATH0300 (45.0% in Fall 2006 to 46.6% in Fall 2010) and MATH0301 (45.0% in Fall 2006 to 46.5% in Fall 2010). However, there was a decline for those students enrolled in MATH0302 (54.8% in Fall 2006 to 49.6% in Fall 2010) and MATH0303 (58.7% in Fall 2006 to 50.0% in Fall 2010).



Graph 3: Success Rates in Developmental Math by initial placement level.

3) Update on Math Initiatives

In addition to the tutoring math lab requirement, the SPC Math department has implemented additional initiatives to impact student success. These initiatives will consist of:

- a) non-course-based remedial Prep for Accuplacer Student Success (PASS) and
- b) course-based, modular accelerated developmental education. The College will offer "Ready, Set, Go!" for math students. This program offers a one-semester-hour class to remediate students whose initial placement scores are only slightly below the threshold for college-level placement. This is a new initiative at SPC, and no data are yet available.

Please visit the Achieve the Dream website for other Research Briefs

<http://www.alamo.edu/spc/achieve-the-dream/>