

The Limited Impact of Basic Skills Failure on Student Progress

Jenny Zhu
Nate Dickmeyer
Institutional Research & Assessment
April 27, 2010

Why do students leave college? There is much talk about the challenge of developmental math and the apparent roadblock that it represents, but how many students actually leave after really trying to complete their basic skills requirements? This research demonstrates that the number is lower than we often think.

Summary

Half of all dropouts from the fall 2003 cohort of new students either initially tested out of basic skills or had passed all developmental requirements by the time they left. Only a small number of those in the remaining dropout population had really tried to complete their developmental requirements before leaving. In this study we show that only twelve percent of dropouts (six percent of the students in the cohort) tried at least twice to get through each of their required developmental streams: reading, writing (including ESL) and/or math.¹ Nevertheless, we also show that about one-third of all dropouts left immediately after an unsuccessful experience in at least one developmental course.

These three statistics, 12% of dropouts tried and failed, 32% left immediately after failing to pass a developmental course and 50% left with developmental education already behind them, suggest that pressures outside of developmental education, and probably outside of LaGuardia, are more responsible for causing students to leave than developmental education itself, and, when confronted with developmental coursework, it is a lack of student resilience (not trying) that is at the root of student separation from college. These statistics throw into question whether advances in developmental education pedagogy alone, without additional attention to student resilience, can improve retention significantly.

Definitions

Cohort: All degree students new to the college in fall 2003, including first-time students and new transfers, were included in the cohort. Students who began in certificate programs were excluded.

Successful: Students who either were exempt from taking or who scored a passing grade on all three developmental tests at any time during their attendance from fall 2003 through fall 2009 at LaGuardia were called successful.

Tried and Failed: Students who had not passed or been exempted from all three developmental tests by the end of fall 2009 were classified as “failed.” To have “tried” a student had to have completed, and not received any W grade, at least two courses in all of the

¹ A student was counted as “trying” if he or she took and completed, even if he or she failed, at least two developmental skills courses in all areas where he or she was required to do so.

developmental areas for which he or she had not been exempted or passed on initial tests. We included USIP courses. Thus, a student who had tested into developmental English 099 and who took that course twice and received F's both times and never passed the English ACT test was included in the "Tried and Failed" category. A student who placed into English 099 and Math 095 and who took English 099 and passed the course and the test and then took a USIP Math 095 course and passed and then took a Math 096 course and passed, but failed all subsequent MATH ACT tests would also count as "Tried and Failed."

Not Trying: Students who were required to take developmental courses but who did not complete at least two developmental courses in their required streams were classed as "Not Trying." For example, a student who tested into Math 096 and took the course once and received an F and then enrolled a second time, but dropped the course would be classed as "not trying."

Graduated: Only successful (in terms of passing all developmental requirements) students graduated.

Transferred: These are students who did not graduate and who are not still attending and who are listed as attending another institution in the reports we receive from the Clearinghouse.

Still Attending: Students from the cohort who had not graduated and who enrolled in either (or both) spring 2009 or fall 2009 were counted as still attending.

Dropped Out: Students from the cohort who had not graduated, transferred or were still attending were classified as dropped out.

Failed Courses: Course enrollments in the last semester of attendance before dropping out where students received a W or other non-passing grade (like a letter grade below D-) were counted as Failed Courses. If a student had more than one failed course in his or her last semester, all such enrollments were counted.

Details (Tables and Charts)

From table 1 we note the following:

- 6% of the fall 2003 cohort actually tried to pass developmental coursework and failed and then dropped out.
- 24% of the cohort completed all developmental requirements and dropped out.
- 26% graduated.
- 16% were successful with their developmental work and transferred before graduation.
- Only 1% of the cohort tried and failed and then either transferred or remained enrolled.
- 18% did not try to pass their developmental requirements before dropping out.

Current Status of Fall 2003 New Degree-Seeking Students *		
Status	# of Students	%
Graduated	779	26%
Successful and Dropped out	719	24%
Successful and Still Enrolled	83	3%
Successful and Transferred	493	16%
Tried and Failed and Dropped Out	174	6%
Tried and Failed and Still Enrolled	7	0%
Tried and Failed and Transferred	29	1%
Not Trying and Dropped Out	553	18%
Not Trying and Still Enrolled	13	0%
Not Trying and Transferred	142	5%
Total	2,992	100%
* Excluding certificate students		

Table 1

Figure 1 gives a graphical interpretation of table 1. The length of the line through the middle represents all 2,992 students in the cohort. The width of the boxes above and below the line gives the relative sizes of each of the ten groups. Graduated and transferred students are shown moving up. Dropping out students are shown moving down. Continuing students are shown moving down-right. Transferred, dropping out and continuing students are each divided into three groups: successful, tried and failed, and not trying.

Distribution of Fall 2003 New Student Cohort in Fall 2009 by Outcome and Developmental Success/Effort

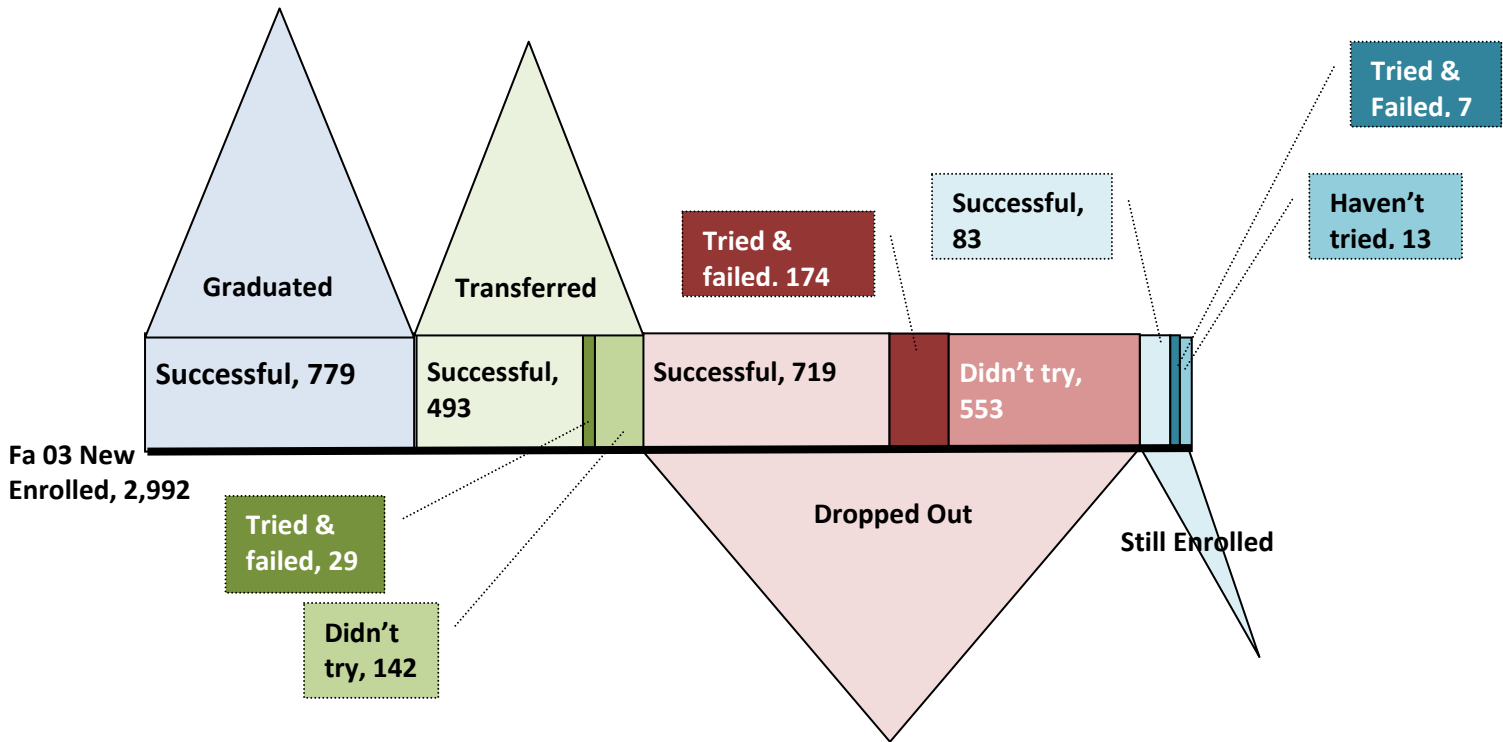


Figure 1

Table 2 shows the remaining developmental needs of students who dropped out after “trying.” More than half still required some math, while nearly three-quarters required further developmental writing work. Figure 2 shows the table graphically. Of those students who tried, failed and dropped out, writing seems a larger barrier.

Breakdown of Tried and Failed and Dropped out Students		
Status	# of Students	%
Need Math Only	42	24%
Need Reading Only	4	2%
Need Writing Only	50	29%
Need Math and Reading	4	2%
Need Math and Writing	38	22%
Need Reading and Writing	10	6%
Need all Three	26	15%
Total	174	100%
Notes (overlap groups):		
Need some math	110	63%
Need some writing	124	71%

Table 2

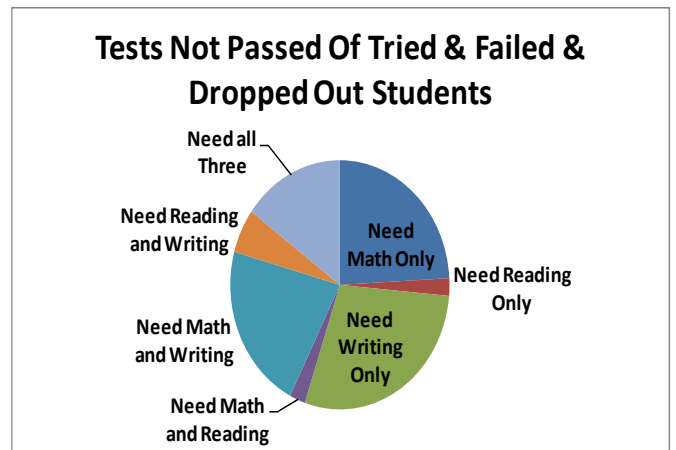


Figure 2

Table 3 shows the top ten courses that students failed just before dropping out. Besides developmental English and Math, large numbers of students failed other large-enrollment, credit-level pre-requisite courses (often called “Gateway” courses) just before dropping out. This shows that 190 of the 1,446 students who dropped out from this cohort had just failed MAT 096, while another 78 had just failed MAT 095. Better math instruction or tutoring may decrease this number, but the impact on the overall drop-out numbers for such improvements does not appear to be significant. A 25% decrease in math failure for these students might decrease our overall drop-out rate by nearly two percentage points, but only if passing math alone would have kept those students from dropping out.

Table 4 shows the distribution of failed courses just before dropping out by course level. The largest number of enrollments in such courses was at the 100 level, not the developmental level.

Breakdown of Failed Courses of Dropped Out Students in Their Last Semester (Top Ten)			
Discipline	Course	Count of Students	% of Total Courses Failed
MAT	096	190	9.2%
ENG	101	128	6.2%
ENG	099	119	5.8%
SSS	100	96	4.7%
MAT	095	78	3.8%
HUC	101	71	3.5%
MAT	120	68	3.3%
ENG	102	59	2.9%
ENZ	099	51	2.5%
CSE	099	44	2.1%

Table 3

Level of Failed Courses Taken in Final Semester by Students from Fall 2003 Cohort Who Dropped Out		
	Number of Failed Courses	% of All Failed Courses
Non-Developmental 000 Level	58	2.8%
Developmental	620	30.2%
100 Level	1,173	57.1%
200 Level	205	10.0%
Total	2,056	100.0%

Table 4

Table 5 groups the developmental failed course enrollments by area. The unduplicated number of students, shown in table 6, who failed any developmental course just before dropping out was 460 or 32% of all drop outs. Math alone was the major type of block, although the combinations of writing/ESL with other areas were failed in the last semester by more students than were math and math plus other areas. Only one-third of those leaving after failing a developmental course were leaving after a second try.

Developmental Failed Courses of Dropped Out Students in Last Semester by Area		
Developmental Course Areas	Failed Course Enrollments	% of all Failed Course Enrollments of Drop Outs
MAT OXX	268	13.0%
EN- OXX	209	10.2%
CSE OXX	72	3.5%
ES- OXX	71	3.5%
Total	620	30.2%

Table 5

Breakdown of Failed Basic Skill Courses of Dropped Out Students in Their Last Semester	
Failed Basic Skill Course(s)	Count of Students
Math only	164
Reading only	16
Writing only	110
ESL only	43
Math and Reading	5
Reading and Writing (including ESL)	34
Math and Writing (including ESL)	73
All	15
Total	460

Table 6

Summary of Statistics

- 12% of students who drop out have attempted to pass out of basic skills by completing at least two courses in all of their required developmental areas. This represents 6% of the total cohort.
- 50% of students who drop out had completed all basic skills requirements.
- 32% of all dropouts failed to pass a developmental course in their last semester.
- 74% of early transfer students have completed their basic skills requirements.
- Only 3% of the cohort (6% of dropouts) had tried to pass their developmental requirements and still had not passed math.

Conclusion

Students are not dropping out in significant numbers because of a failure of developmental education pedagogy. They are dropping out without trying or dropping out for other reasons.