

# RESEARCH BRIEF

No. 85-17

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## Comparing Developmental Math Success Rates: Fall 2011 through Fall 2016 Cohorts

### Background: Developmental Math Redesign

Starting in Fall 2011, Northern Virginia Community College (NOVA) offered a redesigned developmental math curriculum. In mid-Fall of the same year, a new statewide test for developmental math placement was introduced, the Virginia Placement Test for Math (VPT-Math). Fall 2012 was the first fall semester in which most students were placed using the VPT-Math. Furthermore, in Spring 2012 a once again revised developmental math curriculum format was adopted.

This Research Brief presents success rates in developmental math before and after the curriculum and placement test changes. Additional information includes the portion of the students who enrolled in developmental math out of those whose test score placed them into developmental math.

### Key Findings

- Less than two-thirds of students who were placed in developmental math subsequently enrolled in developmental math in their first semester at NOVA for the Fall 2013 through Fall 2016 cohorts of GPS students (see section I).
- Success in developmental math *decreased* substantially after the implementation of the redesign:
  - The one-semester success rate of all NOVA students enrolled in dev. math in Fall 2009 was 50 percent (see section II).
  - The one-year success rate of students who were first-time to NOVA in Fall 2016 was 34 percent (see section III).
- Giving students an additional year to complete the developmental math course(s) they began in their first term only increased success rates by about 6 percentage points.
  - Comparing the Fall 2014 and Fall 2015 cohorts, the one-year success rate was 35 percent (see Figure 3) and the two-year success rate was 41 percent (see Figure 4).

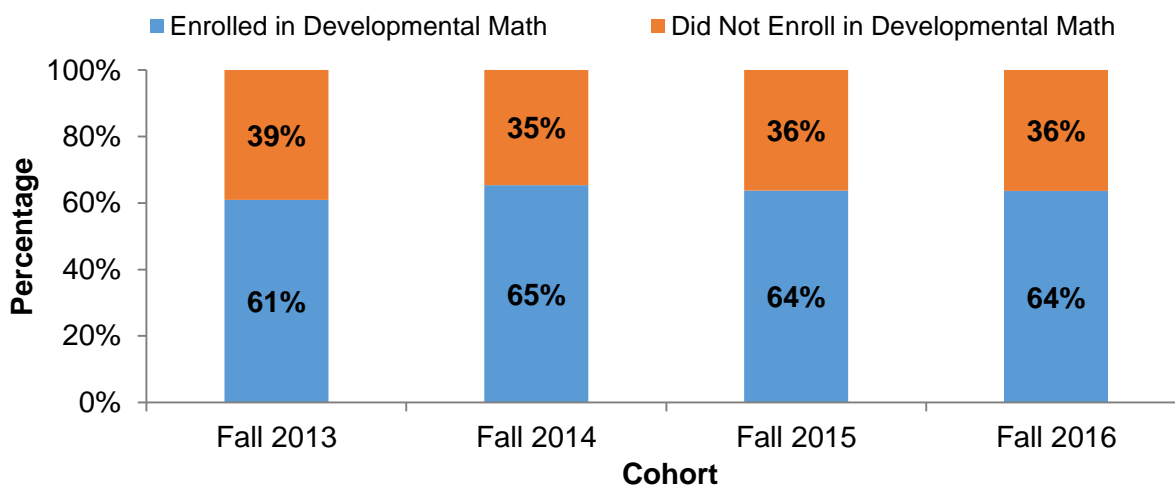
**I. Enrollment in Developmental Math, If Placed:  
Fall 2013 through Fall 2016 GPS Student Cohorts**

As seen in Table 1, less than two-thirds (61 to 65 percent) of GPS students who were placed in developmental math subsequently enrolled in developmental math in their first semester at NOVA.<sup>1</sup>

**Table 1. First Semester Enrollment in Developmental Math of Placed GPS Students:  
Fall 2013 through Fall 2016 Cohorts**

Status	Fall 2013 Cohort		Fall 2014 Cohort		Fall 2015 Cohort		Fall 2016 Cohort	
	#	%	#	%	#	%	#	%
Enrolled in Dev. Math	970	60.9	1,337	65.4	1,331	63.7	1,301	63.6
Did Not Enroll in Dev. Math	624	39.1	706	34.6	759	36.3	746	36.4
<b>Total Placed in Dev. Math</b>	<b>1,594</b>	<b>100.0</b>	<b>2,043</b>	<b>100.0</b>	<b>2,090</b>	<b>100.0</b>	<b>2,047</b>	<b>100.0</b>

**Figure 1. First Semester Enrollment in Developmental Math of Placed GPS Students:  
Fall 2013 through Fall 2016 Cohorts**



**II. One-Semester Success Rates in Developmental Math:  
Fall 2008 through Fall 2010**

Table 2 (next page) shows the one-semester success rates of all NOVA students (not just first-time students) enrolled in developmental math courses in Fall 2008 through Fall 2010. Around half of students enrolled in developmental math were successful. Totals are duplicated, meaning any student enrolled in more than one course was counted separately for each course taken.

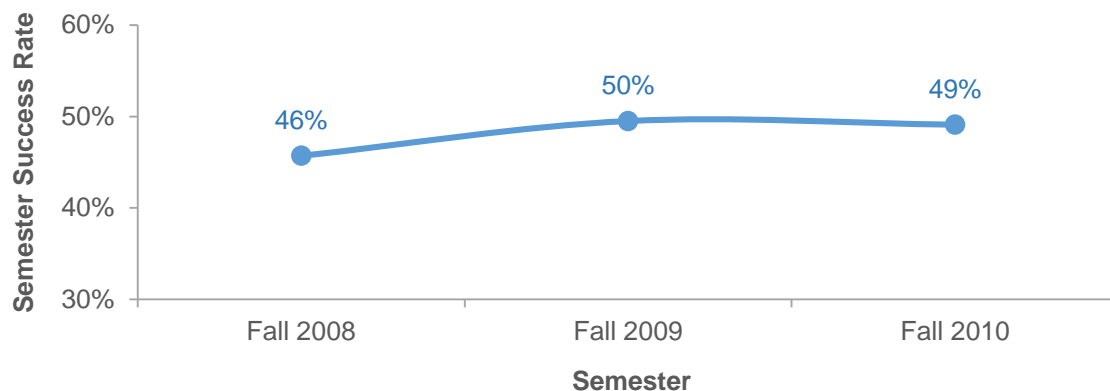
<sup>1</sup> NOVA's GPS for Success population: first-time to college (FTIC) students between the ages of 17 and 24, excluding transient students and students who are members of the College Pathway Initiatives.

**Table 2. One-Semester Success Rates in Developmental Math:  
Fall 2008 through Fall 2010**

Fall 2008			Fall 2009			Fall 2010		
Total Enrolled	Successful		Total Enrolled	Successful		Total Enrolled	Successful	
	#	%		#	%		#	%
3,959	1,810	45.7	4,529	2,241	49.5	4,765	2,339	49.1

Notes: Totals are duplicated, meaning any student enrolled in more than one course was counted for each course taken. Data is for any student enrolled in developmental math, not just first-time students.

**Figure 2. One-Semester Success Rates in Developmental Math Courses:  
Fall 2008 through Fall 2010**



Notes: Totals are duplicated, meaning any student enrolled in more than one course was counted for each course taken. Data is for any student enrolled in developmental math, not just first-time students.

**III. One-Year Success Rates in Developmental Math:  
Fall 2014 through Fall 2016 FTTN Cohorts**

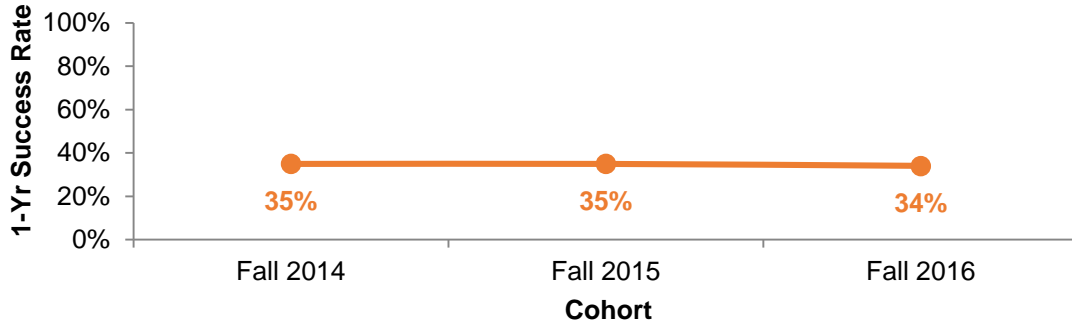
In this section, one-year success rates are presented for first-time to NOVA (FTTN) who enrolled in a developmental math course during their first term.<sup>2</sup> The one-year success rate decreased slightly from 35 percent in Fall 2014 to 34 percent in Fall 2016.

**Table 3. One-Year Success Rates in Developmental Math:  
Fall 2014 through Fall 2016 FTTN Cohorts**

Fall 2014 Cohort			Fall 2015 Cohort			Fall 2016 Cohort		
Total Enrolled	Successful		Total Enrolled	Successful		Total Enrolled	Successful	
	#	%		#	%		#	%
2,311	804	34.8	2,190	774	35.3	2,020	676	33.5

<sup>2</sup> Success in developmental math is defined as a student receiving a grade of "S" (Satisfactory) within one academic year. Students who met this definition of success may not have completed their entire developmental math sequence, as some students are required to take more than one developmental math course. Students who enrolled in more than one developmental math course in their first term were counted as successful if they succeeded in at least one of those courses.

**Figure 3. One-Year Developmental Math Success Rate of FTTN Students:  
Fall 2014 through Fall 2016 Cohorts**



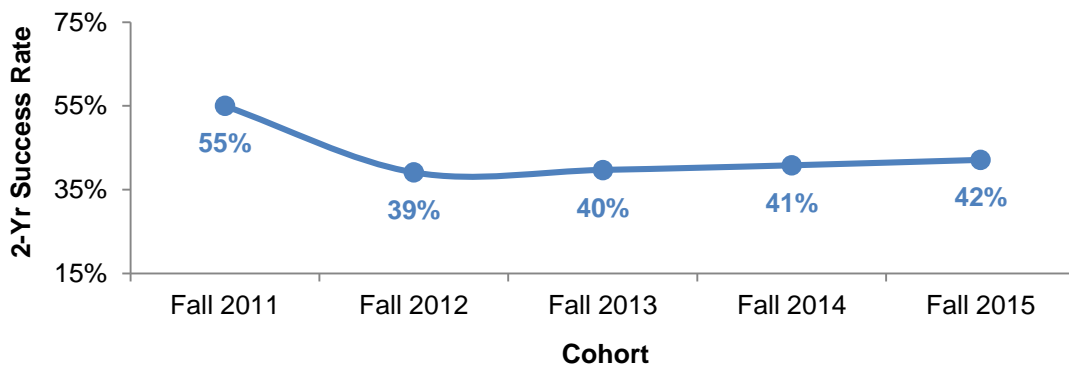
**IV. Two-Year Success Rates in Developmental Math:  
Fall 2011 through Fall 2015 FTTN Cohorts**

In this section, two-year success rates are presented for FTTN students in the Fall 2011 through Fall 2015 cohorts who enrolled in a developmental math course during their first term.<sup>3</sup> As stated on page 1, the developmental math curriculum was redesigned in Fall 2011 and Spring 2012. The Fall 2012 cohort was the first fall cohort to be affected by the introduction of the VPT-math. The two-year success rate decreased from 55 percent in Fall 2011 to 42 percent in Fall 2015.

**Table 4. Two-Year Success Rates in Developmental Math:  
Fall 2011 through Fall 2015 FTTN Cohorts**

Fall 2011 Cohort			Fall 2012 Cohort			Fall 2013 Cohort			Fall 2014 Cohort			Fall 2015 Cohort		
Total Enrolled	Successful		Total Enrolled	Successful		Total Enrolled	Successful		Total Enrolled	Successful		Total Enrolled	Successful	
	#	%		#	%		#	%		#	%		#	%
2,125	1,168	55.0	1,792	701	39.1	1,762	700	39.7	2,311	944	40.8	2,190	922	42.1

**Figure 4. Two-Year Success Rates in Developmental Math of FTTN Students:  
Fall 2011 through Fall 2015 Cohorts**



<sup>3</sup> Success in developmental math is defined as a student receiving a grade of "S" (Satisfactory) within two academic years. Students who met this definition of success may not have completed their entire developmental math sequence, as some students are required to take more than one developmental math course. Students who enrolled in more than one developmental math course in their first term were counted as successful if they succeeded in at least one of those courses.