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# BTC Reports

Vol 17 No 5 • June, 2011

THE NEWSLETTER OF THE NORTH CAROLINA BUDGET & TAX CENTER

North Carolina  
Budget & Tax Center

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## **DEVELOPMENTAL EDUCATION IN NORTH CAROLINA: Building the Skills to Complete Post-Secondary Training and Succeed at Work**

BY ALEXANDRA FORTER SIROTA, *Project Director*

### **Executive Summary**

- Developmental education at community colleges provides an opportunity for students to gain skills they need for successful completion of educational training and job placement. Developmental education is offered primarily through the North Carolina Community College System (NCCCS) to nearly 16,000 first-time credential seeking students who require further preparation in math, reading and writing before enrolling in college-level coursework.
- Developmental education, because of the time and resources it requires from students, has the potential to reduce post-secondary completion rates; a key outcome to achieve increased earnings and greater protection against unemployment.
- A quarter of North Carolina's developmental education student body is 25 years or older, and nearly half are low-income. The combination of academic and financial barriers, along with the greater likelihood of family demands for students who are low-income and older, makes the stakes high for completing developmental education quickly and effectively.
- Four evidence-based policy directions should be considered to improve the delivery of developmental education. These broad policy areas each have as their goal reducing the time required to move through developmental education requirements, engaging students in their broader educational and career goals in an ongoing way, ensuring that the financial costs are not a deterrent to student success, and investing in institutional innovation and performance to support student success.
- Adult workers who enroll in skills training and post-secondary education must be considered in the design and implementation of developmental education policies. Their success in attaining credentials or degrees will be critical to their ability to earn family-sustaining wages and support North Carolina's strong economy in the future.

## Overview

*In the coming decade, workers in North Carolina will increasingly need some type of credential or degree in order to find jobs in high-growth industries and earn family-sustaining wages. Research by the Georgetown Center on Education and the Workforce suggests that by 2018, nearly 6 out of 10 jobs in North Carolina will require some post-secondary education.<sup>1</sup>*

*For decades, community colleges have been a resource for North Carolina workers looking to get training and upgrade skills to meet the growing demands of industry. But not all students arrive prepared for the challenges of college-level coursework; some lack the basic reading, writing and math skills needed. Community colleges teach students these required skills through remediation and developmental education courses. Almost 60 percent of the national community college student body requires remediation in math, reading or writing, and community colleges report that 60 percent of students spend at least one year in this coursework.<sup>2</sup>*

*Developmental education at community colleges provides an opportunity for students to gain skills they need for successful completion of educational training and job placement. But creating programs that are cost-effective and lead to student success – particularly for adult students who may have family responsibilities and face financial barriers – has been a challenge for community colleges across the country and in North Carolina.*

*This BTC Reports will provide an overview of the current state of developmental education in North Carolina and examine how the North Carolina Community College System, with the help of state lawmakers, can improve the delivery of these courses so that more students follow their educational programs through to completion.*

## The Current State of Developmental Education in North Carolina

Developmental education is offered primarily through the North Carolina Community College System (NCCCS) to students. Nearly 16,000 first-time credential seeking students required further preparation in math, reading and writing before enrolling in college-level coursework in the Fall 2007 cohort.<sup>3</sup> While the University of North Carolina system does provide developmental education, only 4,525 UNC students enrolled in developmental education in Fall 2007, and the majority of them were recent high school graduates.<sup>4</sup>

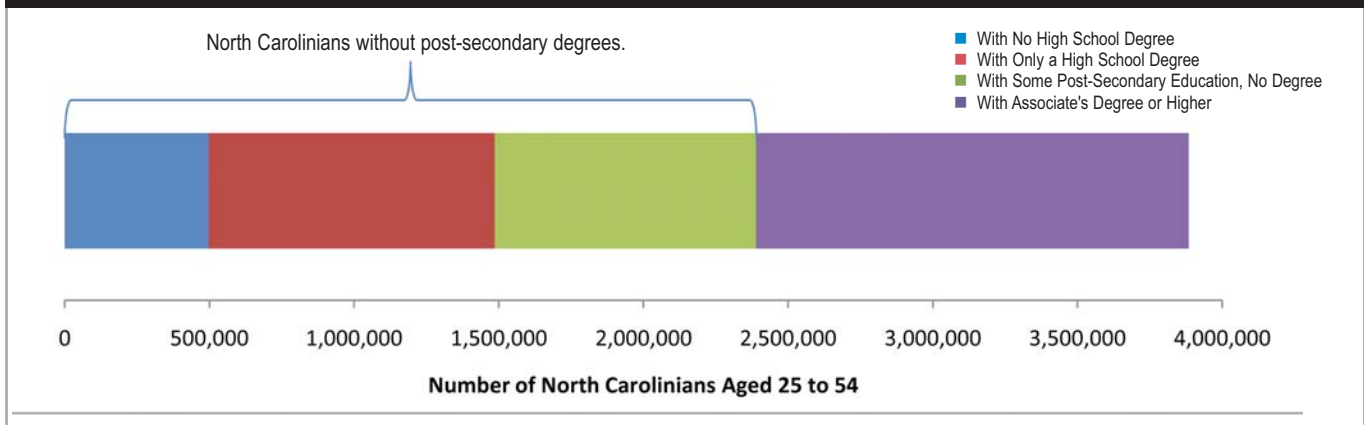
Developmental education is part of an education continuum that aims to prepare students for success in the classroom and in their careers. As such, community colleges can require

### The Economic Impact of Post-secondary Education

Jobs that require post-secondary credentials are the ones more likely to deliver the security of middle-class status. Analysis shows that 1970s middle-class households without post-secondary education have moved to low-income status over the past forty years. Today, post-secondary education is one of the few paths to the middle class.

Post-secondary completion is the most effective guarantee of increased earnings and protection against unemployment for North Carolina families. Earnings for North Carolinians with higher educational attainment increase most significantly upon completion of a degree program. From 2007 to 2009, unemployment among North Carolinians without a high school degree increased from 9.2 percent to 20.8 percent, and among those with high-school diplomas only it went from 5.1 percent to 13.3 percent. Workers with college degrees, however, saw their unemployment rate lift only slightly from 2.4 percent to 5.1 percent.

**Fig. 1: More than half of North Carolina's working age adults will face barriers to the middle class without a post-secondary degree.**



SOURCE: Working Poor Families Project Data, 2011, Table 2.

students to take developmental education before enrollment in college coursework.

Students who apply to community colleges are encouraged but not required to take one of the following placement tests – ACCUPLACER or COMPASS – to assess their academic skills and determine if they need developmental education.<sup>5</sup> All community college campuses use a standard cut score, set by the State Board of Community Colleges, to determine whether a student will require developmental coursework before enrollment in college coursework.<sup>6</sup> However, community college campuses have the flexibility within that standard to decide at what level of developmental math, reading or writing to place a student.

Competencies for developmental education courses in math, reading, writing, and integrated reading and writing were developed in 1994 and revised again in early 2000. These competencies highlight the skills required for the student to be successful in expository writing and entry-level math.<sup>7</sup> Importantly, the NCCCS provides a uniform expectation across college campuses of what students will learn in developmental education so that all students have access to similar educational opportunities.

Campuses have flexibility to determine which developmental education courses they will offer each semester; not all campuses offer all developmental education course levels in all areas each semester, due to funding constraints and the availability of faculty and technology resources. The state does not provide funds for community colleges to offer developmental education in the summer semester.

Developmental education is recognized as critical to student success. Two of the nine Critical Success Factors in the NCCCS's accountability formula refer to developmental education.<sup>8</sup> The measures assess passing rates in developmental education and success rates of developmental education students in subsequent college level courses. In 2009, the last year for which data are available, 48 of 58 community college campuses met the state's standard of 75% of students who enrolled in developmental education course, passed. All but one college campus met the state standard of an average success rate of 89 percent for developmental education students succeeding in subsequent college level courses.<sup>9</sup> In light of the national figures, these aggregate numbers are impressive.

Efforts are underway in North Carolina under the leadership of the NCCCS to reform the delivery of developmental education to better meet the future demands for a workforce with post-secondary credentials. This effort will necessarily require a significant focus on working-age North Carolinians, ages 25 to 54, to meet the demand for the higher college attainment rates. As of 2009, 1 in 4 North Carolinians of working age had only a high-school degree and slightly more than 1 in 10 North Carolinians had no high school degree (See Figure 1. North Carolinians, 25 to 54, and their Educational Attainment).<sup>10</sup>

## Demographics of Students in Developmental Education

Community-college students of color were also much more likely to require developmental education, with 65 percent of American Indians and 67 percent of African Americans enrolling in some type of developmental education. In addition, 42 percent of students enrolling in developmental education are Pell recipients, which indicates they have financial need.<sup>11</sup> A quarter of North Carolina's developmental education student body is 25 years or older, in line with other states. Forty-four percent of students 25 and older enroll in developmental education.<sup>12</sup>

The combination of academic and financial barriers, along with the greater likelihood of family demands for students who are low-income and older, makes the stakes high for completing developmental education quickly and effectively. (See Figure 2: Developmental Education Students by Age and Income Status) These challenges can be even more difficult to overcome if school policies do not support equal access and allow for educational programs to be tailored to the unique needs of older and low-income students. While addressing the issues of younger students' preparation through high school is important, it will not address the needs of older students who face immediate barriers to success in school and work.

## Outcomes and Obstacles for Students in Developmental Education

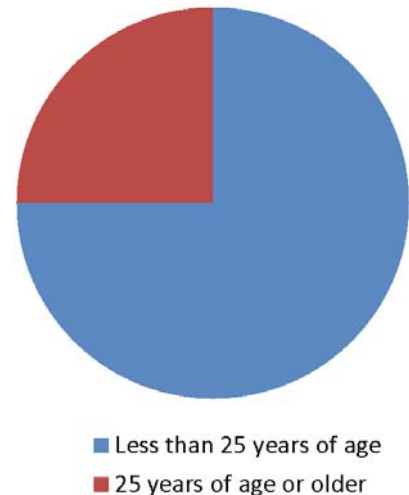
More than half (56 percent) of first-time, credential-seeking students enrolling in the NC Community College System in the Fall of 2007 enrolled in developmental education.<sup>13</sup> Of those, 30 percent placed into developmental English, 22 percent into developmental reading and nearly half into developmental math. This greater demand for developmental math coincides with findings nationally.

Most students placed in developmental math enter at the most basic competency level, Developmental Math 050-060, while a greater number of students get placed in higher levels of developmental English and reading.

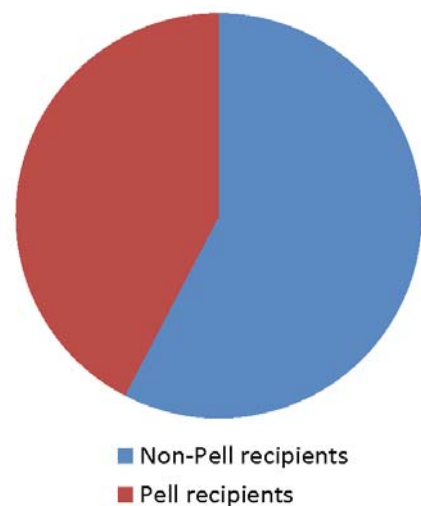
The outcome data demonstrate that where a student is placed within the continuum of courses impacts significantly the student's likelihood of staying beyond his first year and graduating or remaining enrolled. Figure 4 shows the first-year retention and three-year graduation rates and graduation or enrollment rates for students who place into the lowest competency and highest competency of math, reading, and writing. Students placed into Math 050 or Math 060, the lowest competency of math skills, are less likely to graduate and much less likely to stay after their first year. This difference is greater than the difference

**Fig. 2: Developmental Education Status by Age and Income**

**NEARLY 1 IN 4 ENROLLED STUDENTS IN DEVELOPMENTAL EDUCATION IS 25 YEARS OLD OR OLDER.**



**NEARLY HALF OF ENROLLED STUDENTS IN DEVELOPMENTAL EDUCATION ARE PELL GRANT RECIPIENTS.**



SOURCE: Special Data Request to NCCCS, Dec. 2010.

**Fig. 3: Student Outcomes by Placement in Various Developmental Education Levels**

	First Year Retention Rate (%)	After 3 years, graduation rate (%)	After 3 years, graduation or enrollment rate (%)
Math 050-060	57	9	39
Math 070	62	12	43
Math 080-090	69	13	47
No Developmental Math	47	21	40
English 060-070	51	6	38
English 080	58	5	36
English 090	62	10	43
No Developmental English	51	19	41
Reading 070	53	3	35
Reading 080	58	5	38
Reading 090	60	8	41
No Developmental Reading	52	19	41

seen between those placed in the lowest competency of English and reading and the highest.

National research has consistently found that enrollment in developmental education often requires an investment of time and resources that can lead students to abandon their ultimate education or training goals. Data from the Achieving the Dream pilot program, a national pilot of community-college reforms designed to improve post-secondary completion rates, tracked

progress of students through developmental education—including at the time of analysis four campuses in urban and rural North Carolina—found that only half of students finish the development education course to which they are first referred.<sup>14</sup> A significant number of students nationwide and in North Carolina fail to complete their developmental program and fail to enter into other courses, thus thwarting their efforts to get credentials and degrees that will help them get to and stay in the middle class.

In North Carolina, the data available for the Fall 2007 cohort suggest that students in developmental education take longer to achieve educational outcomes compared to their non-developmental education peers. For example, after three years, only 11 percent of students enrolled in developmental education had graduated, while 23 percent had graduated among those not enrolled in developmental education. However, looking at those who do successfully completed developmental education, 41 percent either graduated or remained enrolled after three years – the same percentage as students who never enrolled in developmental education. Skill gaps persist, however, upon enrollment into college-level coursework as is evidenced by the lower likelihood students who had enrolled in developmental education will receive a C or better in an English or math course.

## **Policy Recommendations for Improving Developmental Education**

It has been clear for some time that changes to the delivery and orientation of developmental education is needed in North Carolina. In 2009, the NCCCS formed a Developmental Education State Policy Committee, which has developed a plan and timeline for implementing changes to developmental education.

There are four main policy recommendations that research suggests have the greatest promise for improving student outcomes in the classroom and workplace. These policies have as their goals reducing the time required to move through developmental education requirements, engaging students in their broader educational and career goals in an ongoing way, ensuring that the financial costs are not a deterrent to student success, and investing in institutional innovation and performance to support student success.

One promising policy to reduce the time required to move through developmental education requirements is either breaking down full-length courses in each area into modules to allow students to master specific skills or offering condensed or fast-track courses in half semesters.<sup>15</sup> Such an approach to building competencies would provide students an

## N.C. Community College Campuses Provide Important Models

NORTH CAROLINA HAS BEEN a national leader on various initiatives aimed at improving student outcomes at community colleges, including in the area of developmental education.

Guilford Technical Community College has developed some particularly effective policies to support student success. Guilford Tech used data to drive its identification of effective potential targeted policy improvements. The key finding of their analysis, similar to what is apparent statewide, is that students in the lowest levels of developmental education struggle with basic literacy and numeracy skills. The result was the development of a greater alignment of basic adult education with developmental education courses to facilitate access to financial resources from adult basic education sources.<sup>20</sup>

But many other states are developing best practices that can inform policy improvements in North Carolina. Virginia has been recognized for significant state-level efforts to improve its developmental education system to achieve better educational outcomes. In 2008, the system established a developmental education task force to review the existing data on student outcomes and develop proposals for reforming policies as they relate to ensuring students have mastered the skills necessary to be successful. Among the innovations the Virginia system is testing are modularized math courses to allow students to accelerate the developmental education coursework and college-skills courses such as financial education, career development and mentoring and study skills training.<sup>21</sup>

## The System Already Has Plans

THE NC COMMUNITY COLLEGE SYSTEM has been working for more than two years to develop plans for reform of developmental education. As a national leader in various efforts to support student success and post-secondary completion and as an early partner in the Achieving the Dream pilot programs, the system has committed to improving outcomes for students who require additional preparation to succeed in college level coursework.

North Carolina has been engaged in the national Developmental Education Initiative sponsored by MDC, Inc, a non-profit organization

whose mission is to close the gap between people and opportunity, and Achieving the Dream and worked with various other reform efforts including the Breaking Through initiative led by Jobs for the Future.

Through these efforts, the community college system has prioritized the following: 1) collaborative efforts with the Department of Public Instruction and UNC system to reduce the need for developmental education among recent high school graduates, 2) assessment and placement that takes into account the unique needs of the student, 3) development of metrics of success that can feed into the state's existing

performance funding and accountability measures, and 4) redesign of developmental education courses to allow for tailored skill-building for each student. The first stage of rolling out concrete policies will begin in Fall 2011.

The goal of this system-wide effort is to leverage the existing experience and best practices from within North Carolina and establish policies and procedures that can support greater success for all students enrolled in developmental education. It will be important as this effort moves forward that the needs of adult learners are considered in the design of policy and programs.

opportunity to focus their learning in shorter time periods and to better orient their programs to their individual needs. As implemented in other states, including Virginia, such an approach is usually delivered through self-directed learning on computers but can also be led by instructors. Evidence has shown promising improvements in students' achievement with these more tailored, skill-specific contact hours. Such an approach requires an additional layer of assessment so that students can be properly placed within a continuum of skills. This can substantially shorten the time it takes to master skills within the developmental curriculum since students receive more tailored instruction to their individual needs.

Another promising policy to ensure that students remain engaged in their broader educational and career goals is to allow and facilitate developmental education competencies within the context of career training. Such contextualized learning allows students to acquire foundational skills while learning the concrete applications of such knowledge to their academic field or career areas of interest.<sup>16</sup> One particular formalized model of contextualized learning has been developed in relation to basic skills programs. These so-called bridge programs represent an opportunity to ensure that students do not become discouraged in their developmental education courses and continue to progress in a timely fashion toward their career goals. The clearest evidence supporting this policy comes from Washington's I-BEST program, which provides students in adult basic education with contextualized learning opportunities. These students were more likely to "advance into credit-bearing courses, persist in college, earn credits that counted towards a credential, earn occupational certificates and make learning gains on basic skills test than students not participating in the program."<sup>17</sup>

Ensuring public investment in developmental education is adequate and recognizes that unique needs of the students served is another policy to prioritize. The current funding formula in North Carolina funds developmental education at the same level as other courses providing credit, an important first step.<sup>18</sup> However, further analysis is needed to assess whether the costs associated with developmental education are higher than other programs. Fully funding these courses and ensuring that institutions can offer them on a year-round basis is critical for students to build their skills and move into career training. But instructional support alone is not sufficient to guarantee success in developmental education. Evidence has found that student supports—academic tutoring, career mentoring and access to child care and transportation support—play a critical role in persistence and completion particularly for older adults who must balance the demands of family, work and school.<sup>19</sup>

Finally, it is important that students in developmental education have access to financial tools and student supports to ensure these courses do not represent a significant strain on these students, who are disproportionately low-income. Currently, students enrolled in developmental education can use state financial aid to support enrollment in these courses. Maintaining this funding source is important especially as these students are likely to require a longer time enrolled in coursework to complete educational programs. Proposed cuts in the legislative budget proposal to funding for institutional and student supports will disproportionately impact students enrolled in developmental education harming their ability to complete their education programs. These cuts include elimination of child care subsidies for parents enrolled in post-secondary education, a reduction in funds available to community colleges to support academic counselors, career counselors, mentorship programs and other academic and non-academic student supports.

## Conclusion

**D**emand for a workforce with more skills training and education is necessarily driving the need for reform of developmental education in North Carolina. It is unfortunate that movement toward this critical economic goal is building just as the state faces its third year of fiscal challenges, which the legislature is responding to by cutting investments rather than seeking new revenue sources. The results will hopefully not impact the important efforts underway in the community college system to ensure that students are successful at achieving the goals of their educational programs.

Private foundations that have heretofore seeded developmental education initiatives should not be left alone to support greater scale. The state of North Carolina has a stake in the outcomes that community colleges are able to achieve and thus should be investing in innovation and reform. It is equally important that policymakers and the system be guided by the goal of ensuring that reform and innovation are accessible to all and capable of serving those with the greatest barriers to success. Adult workers who enroll in skills training and post-secondary education must be considered in the design and implementation of policies and programs. Their success in attaining credentials or degrees will be critical to their ability to earn family-sustaining wages and support North Carolina's strong economy in the future.

- 1 Carnevale, Andrew, et al.
- 2 Parsad and Lewis. 2003. Remedial Education at Degree Granting Postsecondary Institutions in Fall 2000. (NCES 2004010). National Center for Education Statistics: U.S. Department of Education, Washington DC.
- 3 Data on developmental education comes from Special Data Request to NCCCS December 2010 and reflects the Fall 2007 cohort of first-time credential seeking students. Data includes only those students who enroll in developmental education.
- 4 UNC General Administration, February 12, 2009. The University of North Carolina Remedial/ Developmental Education Report.
- 5 These two tests are correlated so that results on either can be transferred if a student moves to another campus using the other placement test.
- 6 There are now 7 N.C. Community College campuses participating in the Achieving the Dream program.
- 7 North Carolina Association for Developmental Education, Developmental Education Course Competencies. Accessed at: <http://cfcc.edu/ncade/Dev-Comp.htm#ReadingComp>
- 8 Critical Success Factors is the annual performance data collected by the NC Community College system as mandated by the N.C. General Assembly since 1989. Critical Success Factors are the metrics by which the system is held accountable to system-wide goals and funded based on performance.
- 9 N.C. Community College System, 2009. Critical Success Factors.
- 10 Working Poor Families Project, 2011. Data from American Community Survey, 2009 analyzed by Population Reference Bureau.
- 11 Pell Grant recipients are students who have demonstrated exceptional financial need as derived from a calculation of the cost of attendance and expected family contribution to higher education.
- 12 Working Poor Families Project, Developmental Education State Reports
- 13 Data on Developmental Education is for the Fall 2007 cohort and was provided through a special data request to the N.C. Community College System in December 2010. There is not data available of the total student population that took the test just at enrollment.
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