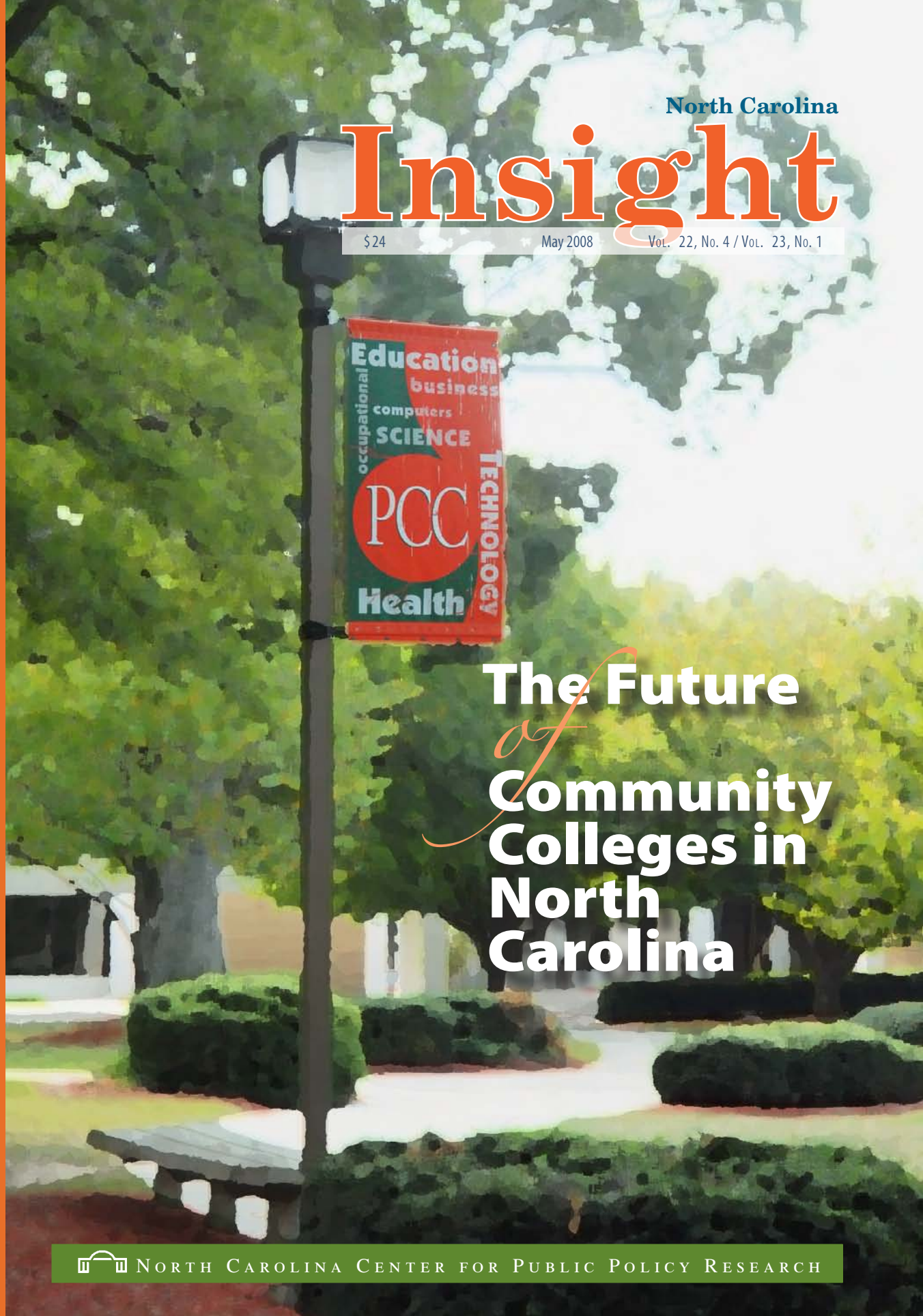

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The Future of Community Colleges in North Carolina

North Carolina Center for Public Policy Research

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The Future of Community Colleges in North Carolina

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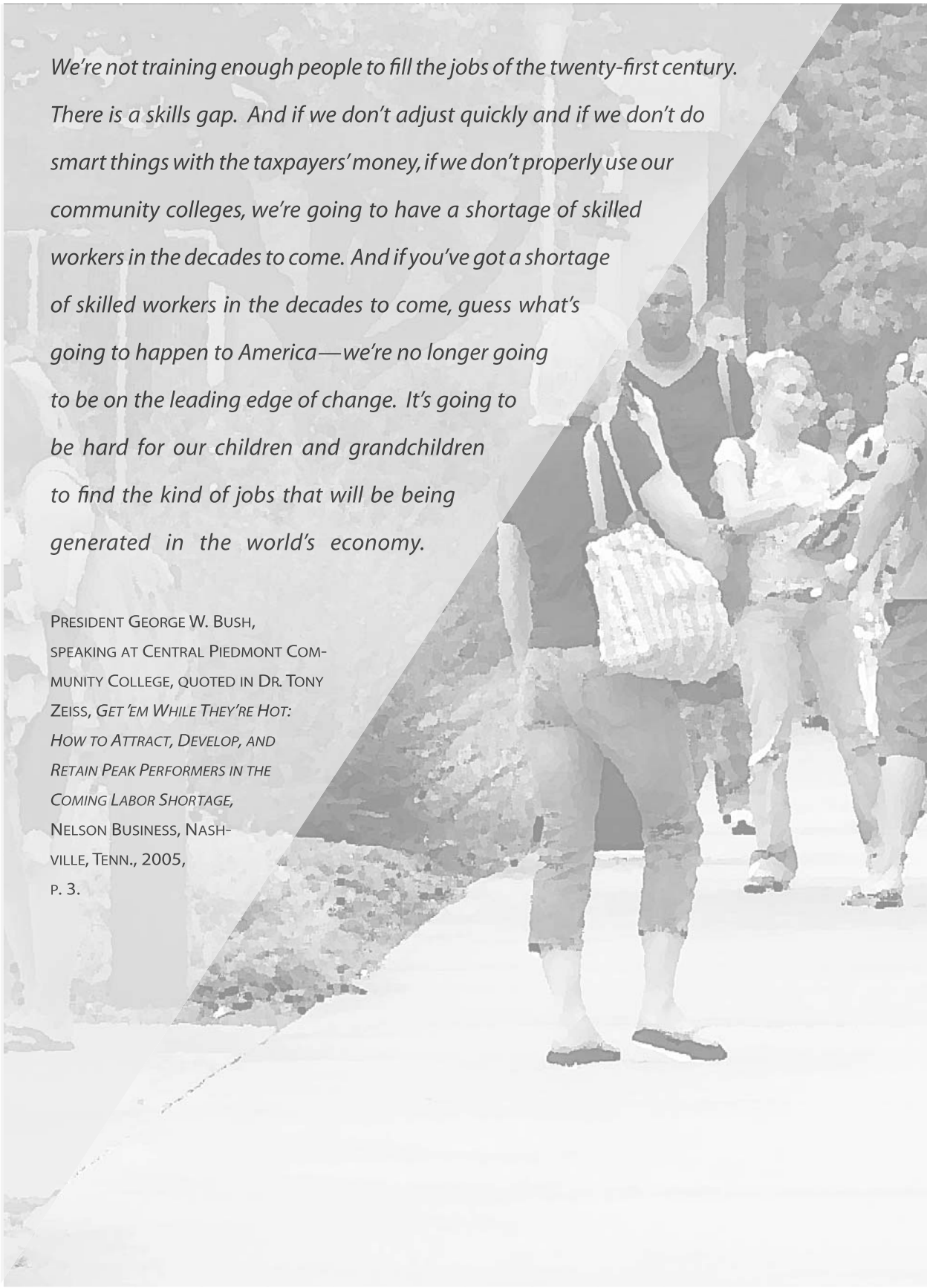
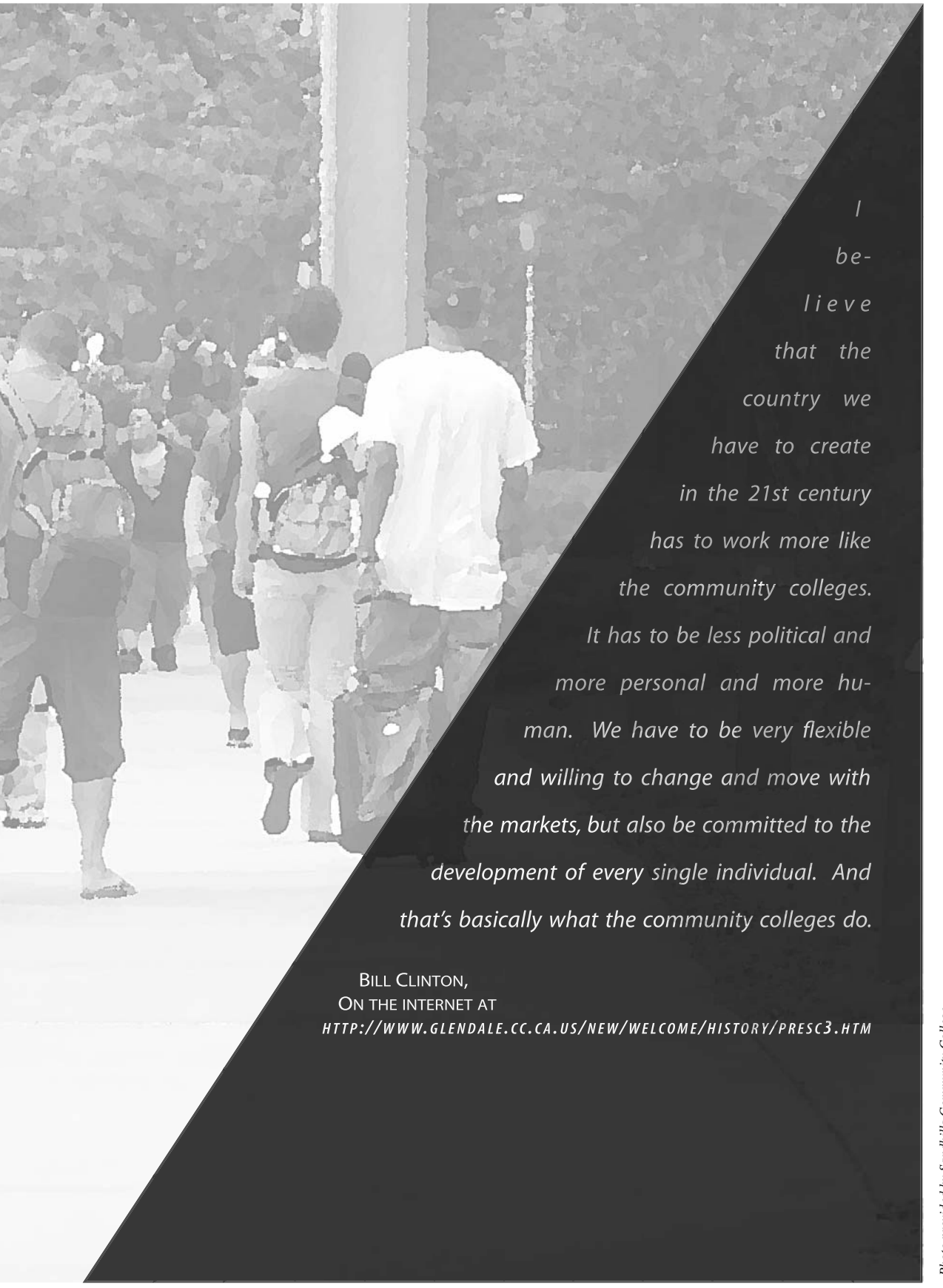
We're not training enough people to fill the jobs of the twenty-first century. There is a skills gap. And if we don't adjust quickly and if we don't do smart things with the taxpayers' money, if we don't properly use our community colleges, we're going to have a shortage of skilled workers in the decades to come. And if you've got a shortage of skilled workers in the decades to come, guess what's going to happen to America—we're no longer going to be on the leading edge of change. It's going to be hard for our children and grandchildren to find the kind of jobs that will be being generated in the world's economy.

President George W. Bush, speaking at Central Piedmont Community College, quoted in Dr. Tony Zeiss, *Get 'em While They're Hot: How to Attract, Develop, and Retain Peak Performers in the Coming Labor Shortage,* Nelson Business, Nashville, Tenn., 2005, p. 3.





I believe that the country we have to create in the 21st century has to work more like the community colleges. It has to be less political and more personal and more human. We have to be very flexible and willing to change and move with the markets, but also be committed to the development of every single individual. And that's basically what the community colleges do.

BILL CLINTON,
ON THE INTERNET AT
HTTP://WWW.GLENDALE.CC.CA.US/NEW/WELCOME/HISTORY/PRESC3.HTM

Photo provided by Sandhills Community College

Facing Brutal Facts:

North Carolina Community Colleges in the New Economic Landscape

by Scott Ralls

Photo provided by Craven Community College

Executive Summary

W. Dallas Herring, former Chairman of the State Board of Education, pioneered what would become the North Carolina Community College System in the 1960s, proclaiming, "We must take the people where they are and carry them as far as they can go." Despite the vast improvements in state education levels since he articulated his vision, Herring would lament the many citizens and state leaders who do not realize the value of higher education and the peril of educational inequality in a world where what you earn is based on what you learn.

Too frequently, we assume these job losses are due to unfair trading practices and low international wages, not fully realizing that job losses are not confined to traditionally low-wage production jobs. North Carolina's citizens must realize that skill-based technology often drives the new job inequality, suggesting that insufficient education levels should receive a portion of the blame. Indeed, growing wage differentials and trade practices distract us from what should be our greatest concern—the growing education gap between ourselves and our worldwide competitors. Thirty years ago, the U.S. had 30 percent of the world's population of college students. By 2006, that percentage was 14 percent and dropping fast, as the proportion of individuals pursuing college education is increasing in other nations. American educational progress has stalled and even may be in reverse for the first time in our nation's history, and North Carolina trails national education rates in many cases.

These conditions, among others, have given rise to North Carolina's recent economic policy discussions on the potential division into two North Carolinas: rural and urban, poor and rich. Such economic disparities are seen increasingly along racial lines in rural areas, where education varies with race. Ultimately, the negative correlation between educational achievement and poverty exacerbates the division of North Carolina.

When combined with the slowing of educational levels, the increasing economic disparities along racial and poverty lines evince the ever-increasing economic benefits of higher education. National Census data suggest that education is a key factor in eliminating racial economic gaps. As growth continues in careers requiring analytical and technological skills, and as the supply of college-educated workers continues to flag, wage premiums for college education increase rapidly. For men, median earnings of four-year college graduates were 19 percent higher than for high school graduates in 1975, and that gap grew to 63 percent in 2005. For women, median earnings of four-year college graduates were 37 percent higher than those of high school graduates in 1975, with the gap growing to 70 percent in 2005. Moreover, in 2003, only a third of all families headed by dropouts and one-half of families headed by high school graduates could

claim middle class income status. By 2012, North Carolina will see a 24 percent increase in the number of jobs requiring some postsecondary education.

Those who are less educated in North Carolina are disproportionately more affected by layoffs. More than 20 percent of North Carolina workers displaced between January 1999 and June 2001 had less than a high school education and 59 percent had completed only high school, while only 18 percent had some college or had completed college. Ultimately, college-educated workers' elevated earning potential shields them from layoffs, downsizing, and the lack of benefits. Unless our state's educational leaders confront these new economic and educational realities, our next 50 years are not likely to see the same level of progress and prosperity as Herring did over the past 50.

In his seminal book, ***Good To Great****, Jim Collins, a former faculty member at the Stanford University Graduate School of Business, suggests that a dominant characteristic of great companies is their willingness to confront the* ***brutal facts*** *of reality. A fact that all North Carolinians face today is that we compete in a world market that is much more competitive than it was just 10 years ago. We also face the likelihood that progress over the next 50 years will greatly depend on our state's ability to confront new educational realities in this rapidly changing economic context. The four brutal facts that must first be recognized before we can introduce innovations to our educational system and modify our perspective of community colleges' role in our economic future are the following:*

Brutal Fact #1:

The Emerging "Nontraditional" Student and the Vanishing African American Male Student: *Nationally, only 20 percent of undergraduate students conform to the traditional stereotype of a recent high school graduate enrolled as a full-time residential student. More "nontraditional" students are the new norm, including students who are older, work full-time, take classes part-time, or have children. The 72 percent national increase in undergraduate students over the past 35 years has been caused primarily by an influx of nontraditional students, with community colleges chosen as their most common educational path. The more nontraditional a student, the more likely they are to attend a community college, with 64 percent of highly nontraditional students attending a community college.*

At the same time that nontraditional community college undergraduates are filtering into postsecondary ranks, African American males are vanishing. In the 2006–07 academic year, there were only 16,885 African American male community college degree students in North Carolina, and the number of African American male community college graduates has declined each of the past three years while the benefits of education are rapidly growing. In order to combat the division into two North Carolinas, our state must address this predicament.

Brutal Fact #2:

Facing the Consequences of North Carolina's Community College Completion Rates and the Costs of Remediation: *Increasing postsecondary enrollment is necessary but not sufficient to the task of fending off two North Carolinas and bolstering the economy; the state must also retain those enrolled students. In order to understand the brutal fact of low completion rates in community colleges, one must first understand that "community colleges often serve students who have the fewest options and the greatest challenges"—61 percent of U.S. community college students are part-time, 57 percent work more than 20 hours per week, 34 percent spend 11 or more hours per week caring for dependents, and 21 percent spend between six and 20 hours per week commuting to and from class.*

Among nontraditional community college students nationwide, 46 percent leave in their first year (48 percent in North Carolina) compared with 23 percent of traditional students. Of those classified as "highly nontraditional," 62 percent leave within three years without obtaining a degree, compared to 19 percent of the minority of "traditional" community college students. Overall, non-traditional students with at least two risk factors complete their programs at a rate of less than 15 percent, compared to 57 percent of traditional students.

Nationwide, community college completion rates improve while North Carolina's worsen, a condition brought on by five primary factors: the lack of intent to earn a degree, work recruitment prior to graduation, financial pressures, inability to qualify for financial aid, and a lack of academic preparedness. With regard to financial pressures, data from the American Council on Education indicate that while they are the most likely to benefit, community college students are the least likely to apply for financial aid, with 37 percent of all students and 22 percent of the lowest-income students not applying for any form of aid in 2003–04.

The lack of academic preparedness is of great concern in that taxpayers often end up "paying double" for high school graduates to take remedial courses before working on college credits. Since 1999–2000, the percentage of North Carolina community college students requiring remediation has ranged from 48.6 percent to 54.3 percent.

Brutal Fact #3:

North Carolina's Looming Work Force Shortage, the Emerging Role of Immigrants, and the Consequences of Low College-Going Rates: *Between 2006 and 2016, North Carolina's population is predicted to increase by 15 percent, compared to an overall U.S. growth rate of 9 percent. Demographic trends suggest that this significant growth will heighten work force shortages rather than alleviate them.*

So where will we find the workers to provide the necessary health care and other services for a booming retirement population? During the 1990s, 13.65 million new immigrants arrived

in the U.S. During this period, no state has seen a greater percentage influx in foreign immigration than North Carolina, with a 273 percent increase in our foreign-born population. During the 1990s, our Asian population increased by 128 percent and our Hispanic/Latino population increased by 394 percent. With the significant increase in foreign immigration to North Carolina, and the beginnings of labor shortages in a number of occupational areas, the foreign-born immigrant population has assumed an increasingly prominent role in the North Carolina work force.

An obviously troubling aspect of the rapid growth in immigration has been illegal immigration to the United States. Between 2000 and 2005, an estimated 4.1 million new immigrants arrived in the U.S., accounting for 86 percent of the net increase in employed persons, which is the highest share in U.S. recorded history. The rapid growth in illegal immigration has charged the current national political landscape perhaps more than any other single issue. For example, the U.S. Senate voted down the ***Secure Borders, Economic Opportunity and Immigration Reform Act of 2007,*** *despite a strong endorsement from Republican President George W. Bush and leaders in both major political parties. It is an issue that is particularly emotional in states like North Carolina, which have simultaneously dealt with significant job losses due to foreign competition and the rapid influx of new foreign-born workers.*

In December 2007, North Carolina community colleges found themselves in an unusual place—at the center of the national immigration debate and on the front page of many newspapers across the state. The issue at hand was a legal interpretation by the attorney for the N.C. Community College System that local campuses did not have the authority to deny admission to students based on their immigration status. Previously, 22 of the system's 58 colleges had adopted local policies to bar undocumented applicants, while admission policies at the other 36 community colleges only distinguished between in-state and out-of-state residents. At those campuses, undocumented immigrants could be admitted under the same guidelines as international and other out-of-state residents, paying out-of-state tuition rates that exceed actual state costs.

Previously, in the 2005–06 legislative session, the General Assembly had considered a proposal (House Bill 1183) that would have provided in-state college tuition rates to immigrant graduates of North Carolina high schools who expressed intent to become U.S. citizens, but whose parents entered North Carolina illegally. Ten states have already passed such legislation.

Admission of undocumented immigrants is obviously a legal issue, and for many North Carolinians it is understandably an emotional one, as many native residents see inequity in offering jobs and services, while long-time taxpaying citizens see record numbers of pink

slips. But as Governor Mike Easley has recently pointed out, it is also a "business issue" that creates a brutal economic dilemma with respect to our educational investments.

On the one hand, in addition to the law-and-order argument, those who oppose the admission of illegal immigrants to community colleges can ask a number of valid questions from strictly an economic perspective. When there are so many community college resource needs, why should we utilize our limited resources to educate illegal immigrants? When we already face classroom space limitations and waiting lists for some programs, how can we risk limiting opportunity to North Carolinian citizens? Finally, given the community college work force development mission, why invest resources in individuals not legally eligible to participate in North Carolina's work force?

On the other hand, there exists our brutal economic dilemma. Given current demographic trends, immigration policies, and enforcement of policies under current law, new immigrants to our state—including undocumented immigrants—are part of our current work force. Absent a significant change in immigration policy, they will play an increasing role in our future work force. Consequently, our state faces a challenging question on a macro-level similar to one posed to a business leader who, given the mobility of current workers, was asked the question, "What if I train them and they leave?" His response: "What if they are not trained and they stay?"

Brutal Fact #4:

Balancing Rising Enrollments, Lagging Faculty Salaries, and Inadequate Equipment Funds with Expanding Needs for Graduates: *Increased enrollment pressures community colleges' resources at a difficult time. North Carolina's community colleges cannot remain competitive with either other community colleges nationally or with other postsecondary institutions in our state with regard to teacher salaries and equipment. Increasing community college faculty salaries to national averages would require $77.3 million between 2007 and 2010, while the necessary equipment replacements would cost more than $47 million. Without the necessary funding increases, the work force and economic development consequences of uncompetitive salaries and outdated equipment manifest themselves in the elimination of high-cost vocational and technical programs that could provide well-paying jobs. In addition, community colleges should not just be keeping pace with today, but also should be preparing for tomorrow, such as in developing programs to address North Carolina's current nursing shortages.*

In order to ensure that our next 50 years are as productive and beneficial as our last 50, North Carolina's leaders must not only recognize these brutal facts, but also act to enable community colleges to provide the access and opportunity capable of bridging the education and economic gaps that threaten to divide our state.

"We must take the people where they are and carry them as far as they can go."[1] When W. Dallas Herring, former Chairman of the State Board of Education, spoke these words in 1964, outlining the "open door" foundation for what would become the N.C. Community College System, he surely could not have predicted their impact.

Would he have imagined that the N.C. Community College System one day would become one of the most accessible and comprehensive systems of higher education in the world, reaching one out of every six adult citizens in a state with a population of more than eight million people? Would North Carolina's champion of vocational education imagine that his state would one day rank fifth among the states in the number of vocational and technical degrees awarded annually as it does today?[2] Most importantly, would the state's leading advocate for educational access imagine that North Carolina citizens' average earnings, which were approximately 75 percent of the national average when he outlined his philosophy of "total education," would grow to almost 90 percent of the national average by the year 2007?

Ever the visionary and leader until the time of his death in early 2007, Herring would likely want us to spend little time celebrating how far we have come. He would rather we keep our eyes to the future—an economic future that for too many North Carolinians is as uncertain today as it was in the 1950s and 1960s. He would be concerned that in a world economy where increasingly what you earn is based on what you learn, too many North Carolinians still fail to fully appreciate the value of higher education.

The New Economic Landscape

When Herring joined Governor Luther Hodges (1954–61) to pioneer the introduction of Industrial Education Centers across the state in 1957, and then encouraged Governor Terry Sanford (1961–65) to transform those centers into the system of community colleges in 1963, he did so in great part not only to give the majority of North Carolinians access to the broad benefits of higher education, but specifically to give them greater access to a brighter economic future. The efforts of these three leaders enabled North Carolina to become one of the first southern states to be engaged in the broader national economy, at that time dominated by a burgeoning manufacturing sector. As a result, per capita income for North Carolinians quickly gained ground on the national average, causing other states to look to our success in an effort to replicate our economic progress.

Now 50 years later, with tremendous recent advances in technology, this story is being played out on a global scale at a phenomenal pace. Within the past decade, approximately 2.7 billion people from China, India, and the former Soviet Union bloc have joined the global economy, raising the bar for American workers and effectively doubling the world's capitalist work force.[3] In his book, *The World Is Flat*, Thomas Friedman quotes a common saying among Microsoft workers, "In China when you are one in a million—there are 1,300 other people just like you."[4]

As new members join the work force, so do new consumers, internationalizing the marketplace. Within the next decade, nearly 80 percent of the world's middle-class consumers will live outside of the currently industrialized countries. China alone will have 595 million middle-class consumers and 85 million upper-middle-income consumers.[5]

Dr. Scott Ralls was the President of Craven Community College in New Bern, N.C., when he wrote this article. He became President of the N.C. Community College System on May 1, 2008.

With more economic "room to grow," the economies of the new world are expanding at a much faster clip than the traditionally industrialized economies, including that of the U.S. China doubled its *per capita* Gross Domestic Product (a national productivity statistic based on economic output) starting in 1978 and then doubled it again by 1996, while it took the U.S. 47 years to double its Gross Domestic Product (a measure of total economic output) beginning in 1839.[6]

Over the past quarter of a century, China's Gross Domestic Product has grown on average by 9.6 percent a year, compared to 5.7 percent in India, and just 3 percent in the U.S. It is estimated that the Chinese economy will surpass the United States economy in 2030 and that India and China together that year will account for 28 percent of world economic output—up from just 18 percent in 2001.[7]

The pressure placed on economies such as North Carolina's by the new global marketplace is well-recognized in a state that has lost more than 100,000 manufacturing jobs since 1995 and experienced more than 2,500 plant closings.[8] The culprits often blamed for our decline are the low-wage workers in the new global economy that enable a company to hire nine manufacturing workers in Mexico for the cost of one American manufacturing worker, or eight professional engineers in India for the cost of hiring one American engineer.[9] The results have not only devastated North Carolina citizens and families through the loss of jobs and anticipated futures, but have laid waste to our traditional industries such as textiles, tobacco, and furniture.

Dr. Dallas Herring, chair of the North Carolina State Board of Education for 20 years, passed away on January 5, 2007. "There is no question of his place in history as the father of the North Carolina Community College System," said Gov. James Holshouser (1973–77). Herring and Gov. Terry Sanford had plotted the locations of all the community colleges across North Carolina, sitting down together on the floor of the Governor's mansion with a map of our state.

Photo provided by Nelson Best, James Sprunt Community College

"The only valid philosophy for North Carolina is the philosophy of total education; a belief in the incomparable worth of all human beings, whose claims upon the state are equal before the law and equal before the bar of public opinion; whose talents (however great or however limited or however different from the traditional) the state needs and must develop to the fullest possible degree. That is why the doors to the institutions in North Carolina's system of community colleges must never be closed to anyone of suitable age who can learn what they teach. We must take the people where they are and carry them as far as they can go within the assigned function of the system."

—Dr. Dallas Herring, at the Orientation Conference for Community Colleges, Technical Institutes, and Industrial Education Centers in Raleigh, N.C., held June 7–8, 1964.

Too frequently, we assume these job losses are due to unfair trading practices and low international wages, not fully realizing that job losses are not confined only to industries traditionally associated with low-wage production jobs. While North Carolina lost 30.8 percent of its textile jobs, 26 percent of its apparel jobs, and 12.4 percent of its furniture jobs in just the three-year period between 2002 and 2005, it also lost 16.1 percent of its computer and electronics production jobs.[10]

The U.S. is today a net importer of high technology goods and faces dramatically new competitive challenges in previously assumed "untouchable" areas such as medical care. In fact, it is the impact of technology and its implementation throughout the world that is driving globalization, not the other way around. As Federal Reserve Board Chairman Ben Bernanke stated, "The influence of globalization on inequality has been moderate and almost surely less important than the effect of skill-biased technological change."[11]

The Education Gap

As Bernanke suggests, it is the global impact of technology that is placing a premium on education and training as the gateway to economic prosperity, and it is the impact of technology and the growing disparity in education rates that is raising U.S. wage inequality to record levels. Perhaps most disconcerting, the focus on international wage differentials and trade practices has diverted our attention from what should be our greatest concern, a growing education gap, as our new worldwide competitors are reaching educational levels commensurate with our current work force and are on target to surpass those of our future work force.

Crystal Hickey: Early College Engineering Student

In 2006, Crystal Hickey was a middle school student in New Bern, North Carolina. One year later, as a ninth grader, she became one of North Carolina's newest kinds of college students enrolled in Craven Early College on the New Bern campus of Craven Community College.

Photo provided by Craven Community College

As an Early College student who selected an engineering education pathway, Crystal enrolled in an Introduction to Engineering class, taught by Dr. Bill Fortney, a faculty member from N.C. State University's College of Engineering based at Craven Community College as part of the Undergraduate Engineering Education Partnership. In addition to being one of only a few Early College high school students enrolled in the class, Crystal was the only female in the class of approximately 30 potential future engineers.

"It wasn't too bad after we got started," she said. "I did feel a little different at first, but after a while, I felt the same as I do in my regular classes."

Craven Early College is one of 67 Learn and Earn Early College high schools either operating on North Carolina community college or university campuses, or in planning stages,

India and China each add more college graduates to their work forces annually than do Europe and the United States combined.[12] China now has 17 million university and advanced vocational students, 60 percent majoring in science and engineering, representing a threefold increase in the past five years.[13] This year, China will produce 325,000 engineers, more than five times as many as the U.S.[14] More engineers graduate each year in a single Indian state, Andhra Pradesh, than in the entire United States.[15]

Thirty years ago, the U.S. had 30 percent of the world's population of college students. By 2006, that percentage was 14 percent and dropping fast, as the proportion of individuals pursuing college education is increasing in other nations, but has stalled in the U.S.[16] Since 1980, the share of U.S. workers with at least some college grew by 20 percentage points to 58 percent. Demographers say that rate will slow considerably to only a 3 to 4 percent increase over the next 20 years, primarily due to the fact that the proportion of the native-born work force will not grow at all through 2020.[17] The 2006 college continuation rate for high school graduates was essentially the same rate as in 1996.[18]

Education's purpose is to replace an empty mind with an open one.

–Malcolm S. Forbes

Alarmingly, not only is American educational progress stalling, but it may be in reverse for the first time in history. A recent report from the National Collaborative for Higher Education Policy, a joint venture of the Education Commission of the States, the National Center for Public Policy and Higher Education, and the National Center for Higher Education Management Systems, states, "If current national trends continue, the proportion of American workers with high school diplomas and college degrees is expected to decline over the next 15 years, making today's young Americans the first generation to be on track to have lower educational attainment than the previous generation."[19] While the U.S. continues to rank among the world's

providing high-school-age students a jump start in completing their high school education and two years of college credit in only one additional year. Students at Craven Early College select one of six pathways—Engineering, Advanced Manufacturing, Information Technology, Health Careers, Education, or Associate in Science—with technology-rich classrooms and instruction facilitated by student laptops that have been funded in part by B/S/H Home Appliances Corporation and the Harold H. Bates Foundation.

"I first started thinking about engineering in 8th grade because I've always been good in math," says Crystal. "But when I started taking the Introduction to Engineering class, I knew it was what I wanted to do." Although still only in 10th grade, most of Crystal's future career deliberations now center on what type of engineer she wants to be.

Championed by Governor Mike Easley and supported by the Bill and Melinda Gates Foundation, public Early College high schools are small by design, emphasize the three R's of rigor, relevance, and relationships, and often favor first-generation college students in their outreach and admissions. Crystal Hickey is one of those first-generation college students who has benefited from this targeted attention. "One of the best things for me about Early College has been the opportunity to take more math classes earlier and in different sequences," notes Crystal, who is also on schedule to have completed college level classes in pre-calculus, physical education, computer programming, introduction to engineering, psychology, and sociology prior to beginning the 11th grade. "We may not have sports or a prom, but we are getting a lot in place of it. We are getting an early start."

Table 1. Loss Rate per 100 Ninth Graders at Each Educational Transition Point, Ranked by College Students Who Graduate Within 150 Percent of Program Time, 2004

Rank	State	Students who do not graduate from high school	High school graduates who do not go on to college immediately	College students who do not graduate within 150% of program time*	College students who graduate within 150% of program time*
1	South Dakota	18	25	28	28
2	Iowa	16	32	25	27
(tie)	Minnesota	16	29	27	27
(tie)	New Jersey	9	34	30	27
(tie)	Pennsylvania	22	32	19	27
6	Massachusetts	25	27	21	26
7	North Dakota	15	27	32	25
(tie)	Wyoming	25	31	19	25
(tie)	Nebraska	16	34	25	25
(tie)	New Hampshire	24	34	17	25
11	Connecticut	24	30	22	24
(tie)	Wisconsin	22	32	22	24
13	Virginia	27	31	20	22
(tie)	Kansas	23	30	25	22
(tie)	Vermont	17	47	14	22
(tie)	Indiana	30	29	20	22
17	Colorado	27	31	22	20
(tie)	Delaware	35	30	15	20
(tie)	Rhode Island	28	32	20	20
(tie)	New York	38	20	22	20
(tie)	Maine	23	39	18	20
(tie)	Illinois	24	34	22	20
(tie)	Missouri	23	36	21	20
24	Ohio	24	36	21	19
(tie)	Maryland	26	30	24	19
(tie)	Montana	21	33	27	19
(tie)	**North Carolina**	**36**	**23**	**23**	**19**
	United States	**30**	**31**	**20**	**18**
28	Michigan	31	28	23	18
29	California	29	40	14	17
(tie)	Utah	15	48	20	17
(tie)	Tennessee	37	24	22	17
32	Washington	30	40	14	16
(tie)	West Virginia	27	34	23	16
(tie)	Idaho	20	42	22	16
35	Oklahoma	26	35	24	15

Table 1. Loss Rate per 100 Ninth Graders at Each Educational Transition Point, Ranked by College Students Who Graduate Within 150 Percent of Program Time, 2004, *continued*

Rank	State	Students who do not graduate from high school	High school graduates who do not go on to college immediately	College students who do not graduate within 150% of program time*	College students who graduate within 150% of program time*
(tie)	Arizona	36	34	15	15
(tie)	Arkansas	25	33	27	15
(tie)	South Carolina	48	17	20	15
(tie)	Oregon	28	39	18	15
(tie)	Florida	45	26	15	15
41	Louisiana	31	31	23	14
(tie)	Georgia	46	19	20	14
(tie)	Alabama	40	24	23	14
44	Texas	32	33	22	13
(tie)	Hawaii	35	31	21	13
46	Kentucky	35	28	25	12
(tie)	New Mexico	38	24	26	12
48	Mississippi	40	24	25	11
49	Nevada	49	23	18	10
50	Alaska	38	34	22	6

* 150 percent time refers to college enrollees completing an associate's degree within three years or a bachelor's degree within six years.

Note: This table shows the proportion of students lost at each transition point. Some states lose more students in high school; others are not effective in getting high school graduates to attend college; still others have low levels of college completion. The numbers in the far right column show, out of every 100 ninth graders, how many earn an associate's degree within three years of entering college or a bachelor's degree within six years of entering college. Numbers may not add to 100 due to rounding.

Source: Data analysis provided by National Center for Higher Education Management Systems (NCHEMS). For more detailed data, go to *http://www.higheredinfo.org/dbrowser/index.php?measure=72*, as shown in Gordon K. Davies, *Setting a Public Agenda for Higher Education in the States,* The National Collaborative for Higher Education Policy, Dec. 2006, p. 5.

best in the educational attainment of older adults, we have dropped to a tie for seventh in the educational attainment of younger adults aged 25 to 34. Along with Germany, we are the only nation among the 27 tracked by the Organisation of Economic Co-operation and Development (OECD) to show lower educational attainment levels for younger as opposed to older segments of the population.[20] These disturbing trends in national educational attainment are projected to manifest in declining economic prosperity, as the National Center for Public Policy and Higher Education estimates a potential loss of $395 in annual U.S. per capita income between 2000 and 2020—a decrease of 2 percent compared to a prior 41 percent increase over the previous 20-year period.[21]

These trends also are reflected in high school graduation rates, as 2004 data from the National Center for Higher Education Management Systems indicates that 36 percent of North Carolina students that started the ninth grade did not graduate from high

Table 2. Ranking of States by Percentage of Population with Less than a High School Diploma, 2006

	State	Percent of population with less than a high school diploma or equivalent	Average income of poorest 20% of population
1	Texas	22	$11,303
2	Arkansas	21	$9,920
(tie)	Louisiana	21	$9,668
4	California	19	$12,800
(tie)	**North Carolina**	**19**	**$10,441**
(tie)	Rhode Island	19	$12,038
(tie)	West Virginia	19	$9,924
8	Alabama	18	$10,000
(tie)	Kentucky	18	$10,000
10	Mississippi	17	$9,684
(tie)	New Mexico	17	$10,316
(tie)	Tennessee	17	$10,240
13	Arizona	16	$12,000
(tie)	South Carolina	16	$10,399
15	Georgia	15	$13,387
(tie)	New York	15	$11,005
(tie)	Oklahoma	15	$11,828
18	Delaware	14	$15,356
(tie)	Florida	14	$12,000
(tie)	Nevada	14	$15,000
(tie)	Pennsylvania	14	$13,179
22	Illinois	13	$12,500
(tie)	Indiana	13	$13,374
(tie)	Maine	13	$11,000
(tie)	Maryland	13	$15,000
(tie)	Massachusetts	13	$13,600
(tie)	Oregon	13	$11,720

school, compared to the national average of 30 percent. Twenty-three percent of North Carolina's 2004 high school graduates did not immediately go to college, better than the national comparison of 31 percent. However, only 19 percent of North Carolina college students graduate within 150 percent of program time (i.e., three years for an associate's degree, six years for a bachelor's degree), just slightly better than the 18 percent national average.[22] For more information on loss rates per 100 ninth graders (see Table 1); for percentage of population with less than a high school degree (see Table 2).

Table 2. Ranking of States by Percentage of Population with Less than a High School Diploma, 2006, *continued*

	State	Percent of population with less than a high school diploma or equivalent	Average income of poorest 20% of population
(tie)	South Dakota	13	$11,000
29	Colorado	12	$14,400
(tie)	Hawaii	12	$14,284
(tie)	Idaho	12	$14,000
(tie)	Michigan	12	$12,156
(tie)	Missouri	12	$12,799
(tie)	New Jersey	12	$15,536
(tie)	Ohio	12	$12,319
(tie)	Virginia	12	$14,400
37	Connecticut	11	$14,241
(tie)	North Dakota	11	$12,111
(tie)	Wisconsin	11	$14,000
40	Alaska	10	$15,003
(tie)	Iowa	10	$13,500
(tie)	Kansas	10	$12,848
(tie)	Washington	10	$12,210
44	Nebraska	9	$13,409
(tie)	New Hampshire	9	$17,030
(tie)	Utah	9	$15,382
(tie)	Vermont	9	$13,250
48	Minnesota	8	$16,728
(tie)	Montana	8	$10,000
(tie)	Wyoming	8	$12,950

Source: Measuring Up 2006: The State Report Card on Higher Education – N.C., The National Center for Public Policy and Higher Education, San Jose, Cal., 2006 On the Internet at *http://measuringup.highereducation.org/compare/state_addcomparison.cfm*

If a man empties his purse into his head, no man can take it away from him. An investment in knowledge always pays the best interest.

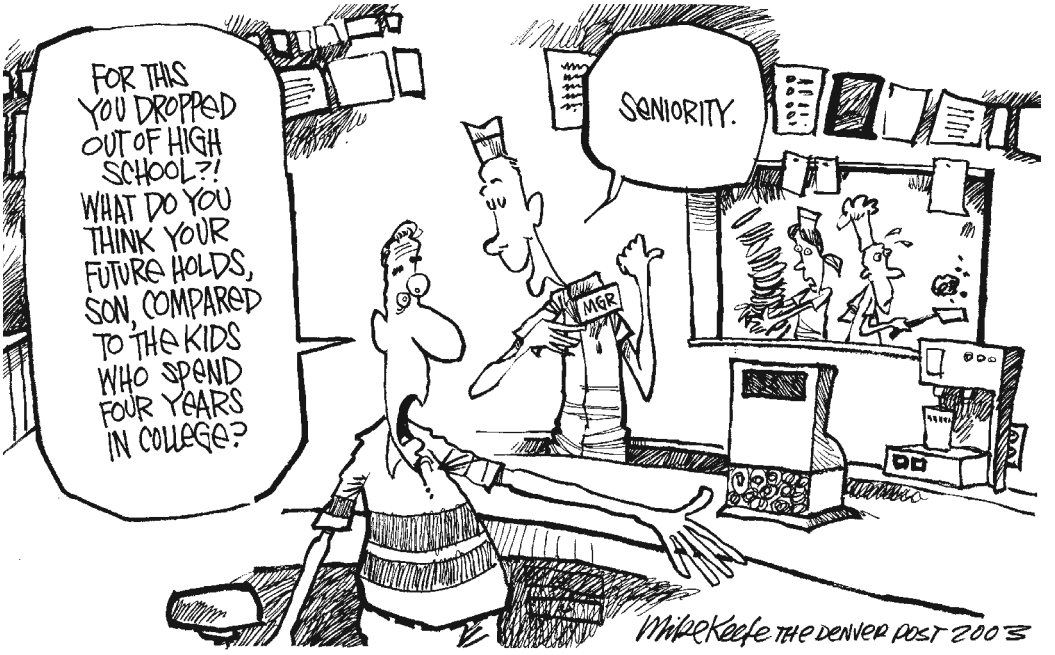
–Benjamin Franklin

Nationally, the U.S. has fallen to fifth among developed nations in the percentage of 18 to 24-year-olds enrolled in college and ranks in the bottom half of developed nations—16th out of 27—in the proportion of students who complete college certificate or degree programs.[23] In North Carolina, 80.2 percent of our citizens have a high school degree or higher, which in spite of our significant educational progress over the past 20 years, still trails the Southern average (82.2 percent) and the national average (84.2 percent). Likewise, the percentage of citizens with a bachelor's degree or higher, at 21.1 percent, trails both the Southern average (23.1 percent) and the

Table 3. Ranking of Countries by Percentage of Adults with an Associate's Degree or Higher, 2004

Older Adults (Ages 45–54)		Younger Adults (Ages 25–34)	
Canada	41	Canada	53
United States	**41**	Japan	52
Denmark	33	Korea	49
Sweden	33	Sweden	42
Japan	33	Belgium	41
Finland	32	Ireland	40
Australia	31	Norway	39
Norway	29	**United States**	**39**
Netherlands	29	Spain	38
Switzerland	28	France	38
United Kingdom	27	Finland	38
Germany	26	Australia	36
New Zealand	26	Denmark	35
Belgium	25	United Kingdom	35
Iceland	25	Netherlands	34
Ireland	22	Iceland	31
Luxembourg	21	Luxembourg	31
Spain	19	Switzerland	30
Greece	19	New Zealand	28
France	18	Greece	25
Austria	18	Poland	23
Korea	16	Germany	23
Hungary	16	Austria	20
Mexico	15	Mexico	19
Slovak Republic	13	Hungary	19
Czech Republic	12	Portugal	19
Poland	12	Italy	15
Italy	11	Slovak Republic	13
Portugal	10	Czech Republic	13
Turkey	9	Turkey	9

Source: Education at a Glance, Organisation for Economic Co-operation and Development, 2006, as shown in Gordon K. Davies, S*etting a Public Agenda for Higher Education in the States*, The National Collaborative for Higher Education Policy, Dec. 2006, p. 3.



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national average (25.2 percent).[24] Today, only 39 percent of North Carolina's young adult work force has an associate's degree or higher, much lower than countries such as Korea (49 percent) and Canada (53 percent) (see Table 3).[25] Almost two-thirds of North Carolina's work force between the ages of 25 and 54 lack a college credential of any type.[26]

Bernanke, the chair of the Federal Reserve Board, has suggested that disparities in education and training are "likely the single greatest source of the long-term increase in inequality."[27] Between 1973 and 2005, real hourly wages of those in the 90th percentile of income—where the vast majority of workers possess college degrees—rose by 30 percent or more. In contrast, workers at the 50th percentile—workers less likely to possess a college degree—saw their real hourly wages increase by only 5 to 10 percent.[28]

The Two North Carolinas

Much of the recent economic policy discussion in North Carolina has focused concern on the potential division into two North Carolinas—one rural and the other urban, one poor and the other rich. However, the urban population is growing much faster, and economic opportunity is much more limited in the rural counties. Most notably, 13 rural counties had unemployment rates of 8 percent or greater in 2005 (compared to the state's overall rate of 5.9 percent).[29] Urban areas accounted for 74 percent of North Carolina jobs in 2007, and they are expected to create 81 percent of the 700,000 projected new jobs in North Carolina by 2017.[30]

Despite its overall economic progress, North Carolina still has one of the highest proportions of low-income working families (defined as income less than $37,620 for a family of four) in the nation, ahead of only 14 other states and trailing all other South Atlantic states except South Carolina. The number of low-income working families in the state grew by 8.6 percent between 2000 and 2003, as layoff notices stacked up with the decline of North Carolina's manufacturing sector.[31] (For more information about low-income families that work, see Table 4; for working poor families in North Carolina, see Table 5.)

Table 4. Percent of Low-Income Families That Work, 2004

Rank	State	Percent	Number
	U.S. Total	**70%**	**9,497,256**
1	Utah	83	96,190
2	Iowa	80	94,772
3	South Dakota	79	27,480
4	North Dakota	78	20,405
(tie)	Idaho	78	65,270
(tie)	Kansas	78	88,982
7	Nebraska	77	56,732
8	Wyoming	76	17,031
9	Florida	74	580,097
(tie)	Arizona	74	232,268
11	Texas	73	988,395
(tie)	Montana	73	37,471
(tie)	Minnesota	73	114,493
(tie)	Missouri	73	197,133
(tie)	New Mexico	73	89,722
(tie)	Indiana	73	198,055
17	Vermont	72	15,268
(tie)	California	72	1,207,154
(tie)	Nevada	72	82,723
20	Illinois	71	359,764
(tie)	Oregon	71	121,457
(tie)	Wisconsin	71	146,460
(tie)	**North Carolina**	**71**	**338,291**
(tie)	Colorado	71	134,860
(tie)	Delaware	71	23,326
26	New Jersey	70	171,998
(tie)	Hawaii	70	29,463
(tie)	Maryland	70	113,220
(tie)	Arkansas	70	129,476
30	South Carolina	69	160,260
(tie)	Georgia	69	326,127
(tie)	Michigan	69	299,336

Table 4. Percent of Low-Income Families That Work, 2004, *continued*

Rank	State	Percent	Number
(tie)	Virginia	69%	198,010
34	Oklahoma	68	133,747
(tie)	Tennessee	68	207,879
36	Alabama	67	170,561
(tie)	Washington	67	179,241
38	Louisiana	66	195,391
(tie)	Ohio	66	349,698
(tie)	New York	66	559,688
(tie)	Pennsylvania	66	329,443
(tie)	Alaska	66	14,001
43	Mississippi	63	129,457
44	West Virginia	62	61,484
45	Massachusetts	61	112,713
(tie)	Kentucky	61	145,595
(tie)	New Hampshire	61	20,671
(tie)	Connecticut	61	58,665
49	Maine	56	30,776
50	Rhode Island	54	23,886
51	District of Columbia	47	12,671

Definitions:

Low-Income: A family income below 200% of poverty. In 2005, the poverty threshold was $19,971 for a family of four and thus the low-income threshold was $39,942.

Family: A family in this analysis is a married-couple or single parent family with at least one child under age 18 present in the household.

Working family: A family is defined as working if all family members age 15 and over either have a combined work effort of 39 weeks or more in the prior 12 months OR all family members age 15 and over have a combined work effort of 26 to 39 weeks in the prior 12 months and one currently unemployed parent looked for work in the prior four weeks.

Note: Percents are rounded to whole numbers because the standard errors are generally greater than one percentage point.

Source: 2004 American Community Survey microdata, U.S. Census Bureau, Washington, D.C., as shown in *Working Families in Poverty, 2004*, The Working Poor Families Project, Bethesda, Md. On the Internet at *http://www.workingpoorfamilies.org/xls/Conditions%20of%20Low Income%20Working%20Families.xls*

The gap in the "two North Carolinas" can increasingly be seen along racial lines in rural areas, where 25 percent of Hispanic citizens and 23 percent of black citizens live below the poverty level.[32] Almost half of all low-income working families had at least one minority parent, and minority working families in North Carolina were twice as likely to be poor as white working families.[33] Also in North Carolina, as in other areas of the nation, significant educational discrepancies exist by race, with only 76.5 percent of African American North Carolinians holding a high school degree or higher and 18.5 percent with a bachelor's degree or higher. For Hispanics, only 46.8 percent have completed a high school degree or higher and only 8 percent have a bachelor's degree or higher.[34]

Far too many minority North Carolina youth are currently not achieving academically at high enough rates to garner the benefits of higher education. While 74.8 percent of North Carolina public school students passed End-of-Course (EOC) tests, only 43 percent of black students passed.[35] Today, while African American students comprise 31 percent of students in all North Carolina public high schools, they comprise 79 percent of students in low-performing public high schools.[36] According to 2003 statistics from the Population Reference Bureau, 72 percent of young North Carolina black citizens between the ages of 18 and 24 and 96 percent of Hispanics of that age are not enrolled in post-secondary education.[37]

Consequently, the negative correlations between educational achievement and poverty are exacerbating the division of North Carolina not only along rural and urban geographic lines, but also along racial lines. The overall median income for a black family in the U.S. is only 61 percent that of a white family, a gap that has changed little in 30 years because only 18 percent of black adults over the age of 25 have a bachelor's degree. Today in North Carolina, 31 percent of low-income working families have never finished high school or completed a General Educational Development (GED) test, ranking 38th in the U.S., and 55 percent of North Carolina's low-income working families include no adults with a college degree.[38]

Training is everything. The peach was once a bitter almond: cauliflower is nothing but cabbage with a college education.

–Pudd'nhead Wilson, by Mark Twain, 1894

The Benefits of Higher Education

As higher education attainment slows in North Carolina and around the nation, and as differences grow greater along racial and poverty lines, the economic benefit of higher education grows greater and becomes clearer. Census data from the year 2006 clearly suggest that education is the key factor in eliminating racial economic gaps, as Hispanic adults with a four-year college degree had a median full-time, year-round working income ($42,125) that is 80 percent of whites with a similar degree ($52,193).[39] Across the 50 states, the statistical relationship between educational attainment and income has strengthened consistently between 1989 and 2006.[40]

In the new economy dominated by information and service jobs, 90 percent of the fastest growing jobs will require some postsecondary education.[41] There are anticipated to be four million new job openings in health care, education, and computer and mathematical sciences that will require higher education credentials. Jobs that require only on-the-job training are predicted to see the greatest nationwide future decline.[42] North Carolina projections suggest the next decade will be dominated by the growth of both "new middle jobs" requiring greater numbers of associate's degree graduates and diploma and certificate holders with higher technological skill, as well as low-wage service jobs that have few if any educational requirements but also increasingly fail to support family self-sufficiency.[43]

Job growth in careers requiring analytical skills and technology familiarization, combined with a lack of supply in college-educated workers, is resulting in fast-growing wage premiums for college education. For men, median earnings of four-year

Table 5. Working Poor Families in North Carolina, 2005

	State Percent	State Rank	U.S. Percent
Low-Income* Working Families	33%	37	29%
Low-Income Minority Working Families	50	39	42
Low-Income Working Families with No High School Degree/GED	31	38	33
Percent of Low-Income Families That Work	72	20	71
Adults 18–64 with No High School Degree/GED	16	37	14
Adults 18–64 with Some Postsecondary or Higher Education	55	32	57
Jobs in Occupations Paying Below Poverty	24	28	21

* Low-Income is defined as a family income below 200% of poverty. In 2005, the poverty threshold was $19,971 for a family of four and thus the low-income threshold was $39,942.

Source: 2005 American Community Survey microdata, U.S. Census Bureau, Washington, D.C., 2005, as shown in *Working Families in Poverty*, The Working Poor Families Project, Bethesda, Md. On the Internet at *http://www.workingpoorfamilies.org/xls/Conditions%20of%20LowIncome%20Working%20Families.xls* and Occupational Employment Statistics, Bureau of Labor Statistics, Washington, D.C., 2005, as shown in Indicators and Data, The Working Poor Families Project, Bethesda, Md. Accessed Nov. 28, 2007 on the Internet at *http://www.workingpoorfamilies.org/indicators.html#*

college graduates were 19 percent higher than for high school graduates in 1975, and that gap grew to 63 percent in 2005. For women, median earnings of four-year college graduates were 37 percent higher than those of high school graduates in 1975, with the gap growing to 70 percent in 2005. The earnings gap for men with some college education has also increased over time to 20 percent in 2005, and for women has fluctuated between 14 percent and 23 percent since 1985.[44]

Reaching middle class status today without a college education is becoming increasingly challenging. In 1967, nearly half of all families headed by high school dropouts and nearly 70 percent of high school graduates reached middle class status. By 2003, only a third of all families headed by dropouts and one-half of families headed by high school graduates could claim middle class income status.[45]

As college-educated workers have much greater earnings potential in today's economy, they are also more shielded from the harsh realities of layoffs, downsizing, and the lack of benefits. Eighty percent of adults with an associate's degree or technical certificate are employed, compared to only 46 percent of high school dropouts.[46] In 2006, the U.S. average unemployment rate was 4.4 percent. For high school dropouts, the average unemployment rate was twice as high at 8.8 percent. For those with some college or an associate's degree, the unemployment rate was 4.2 percent and for those with a bachelor's degree or higher, the unemployment rate was only 2.3 percent.[47]

Approximately 95 percent of employees with a college degree have employer-provided health care coverage, compared to 77 percent of high school graduates and 67 percent of dropouts. Almost 90 percent of college degree holders have employer-provided pension plans compared to 81 percent of high school graduates and 53 percent of dropouts.[48]

In North Carolina, our statistics reflect the national trends which reward those with greater education and harshly punish those who fail to go beyond high school. By 2012, North Carolina will see a 24 percent increase in the number of jobs requiring some postsecondary education.[49] A college graduate with a bachelor's degree in North Carolina today makes $18,000 more per year than a high school dropout, while a graduate with an associate's degree makes $11,900 more.[50] Those who are less educated in North Carolina are disproportionately more affected by layoffs. More than 20 percent of North Carolina workers displaced between January 1999 and June 2001 had less than a high school education, 59 percent had completed only high school, while only 18 percent had some college or had completed college.[51] Estimates suggest dropouts cost North Carolina as much each year after they leave school as they do when they are in school, with lost revenues from taxes and fees, increased Medicaid costs, and increased incarceration costs resulting in $4,437 in state public costs per high school dropout, compared to $4,887 in per pupil state spending.[52]

In his seminal book, *Good To Great,* Jim Collins, a former faculty member at the Stanford University Graduate School of Business, suggests that a dominant characteristic of great companies is their willingness to confront the ***brutal facts*** of reality.[53] A fact that all North Carolinians face today is that we compete in a world market that is much more competitive than it was just 10 years ago. We also face the likelihood that progress over the next 50 years will greatly depend on our state's ability to confront new educational realities in this rapidly changing economic context.

Federal Reserve Chair Ben Bernanke has stated, it is those "policies that boost our national investment in education and training [that] can help reduce inequality while expanding economic opportunity."[54] The 2006 Spellings Commission on Higher Education (named for U.S. Secretary of Education Margaret Spellings) aptly summarized the growing connection between educational attainment and economic prosperity: "In tomorrow's world a nation's wealth will derive from its capacity to educate, attract, and retain citizens who are able to work smarter and learn faster—making educational achievement ever more important both for individuals and for society at large."[55]

The first step for our state to realize another 50 years of future economic prosperity is to break our natural assumption that the educational trajectory prompted by our educational leadership of past generations will be sufficient to coast us into a future economic promised land. New innovations will be required in our current educational systems, including an increased recognition of the importance of community colleges in having an impact on broad-based education achievement and statewide prosperity. It also requires us to confront brutal facts regarding North Carolina's future work force, the demographics of our current student bodies, and the resource challenges of educating tomorrow's world-class work force.

Brutal Fact #1: The Emerging "Nontraditional" Student and the Vanishing African American Male Student

Close your eyes and picture the "typical North Carolina college student," and chances are your image may be of a fresh-faced recent high school graduate strolling in front of an ivy-covered lecture hall on a sun-kissed fall afternoon. That image can certainly still be found. However, full-time residential college students represent less than 20 percent of the undergraduate population. Increasingly, the face of college students is becoming older with significant outside responsibilities.

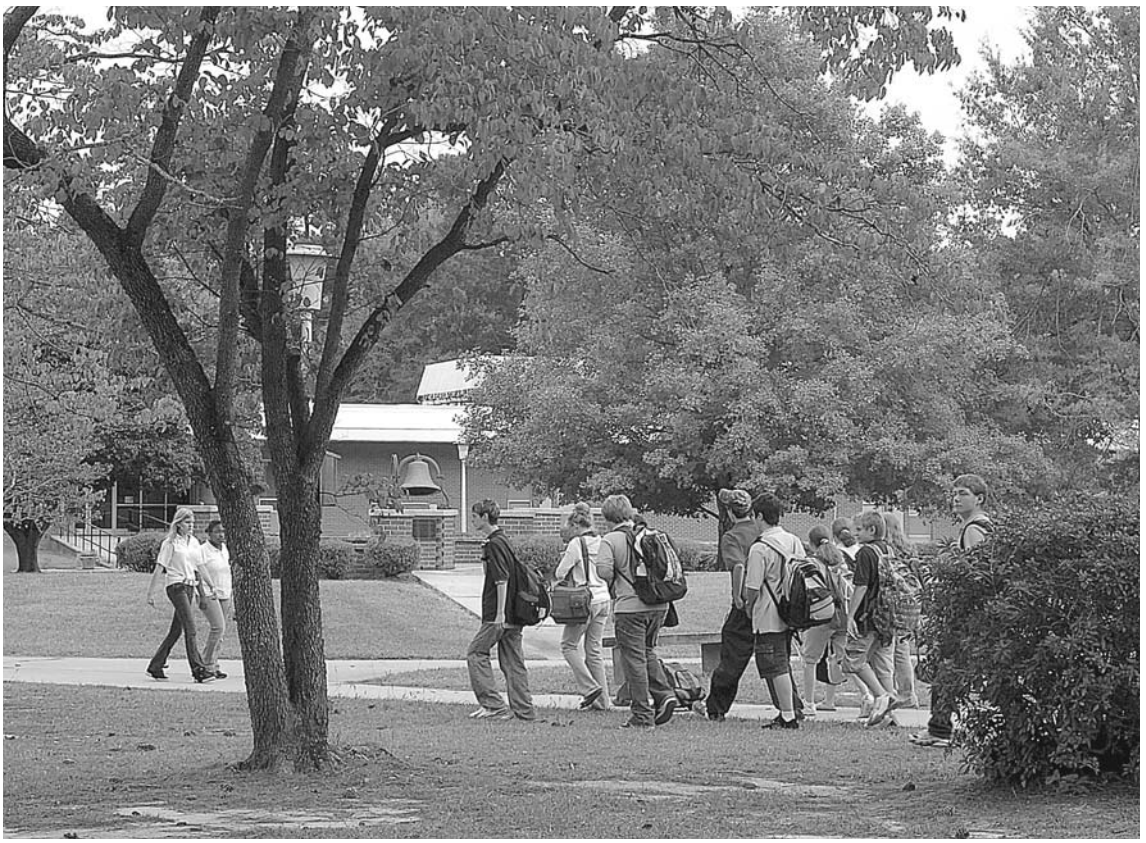
"While many Americans still envision the typical undergraduate as an 18 to 22-year-old with a recently acquired high school diploma attending classes at a four-year institution, the facts are more complex," states the report by the Spellings Commission on Higher Education.[56] Nearly 40 percent of all college students in the U.S. today are self-supporting adults above the age of 24. Almost half attend college part-time, more than one-third work full-time, and 27 percent of college students in the U.S. are parents.[57]

As a group, these students are typically defined as nontraditional, as determined by one or more of the following characteristics: They delayed college enrollment after high school, they attend college part-time for at least part of the academic year, they work full-time, they are considered financially independent, they have dependents other than a spouse, they are a single parent, and/or they possess a GED instead of a high school diploma.[58] While "nontraditional," they represent the norm for today's college students with 73 percent meeting the criteria for being at least "minimal nontraditional" (possessing at least one of the defining criteria). In 2000, there were actually more "highly nontraditional" college students (possessing four or more of the criteria) than traditional college students (none of the criteria) (28 percent vs. 27 percent).[59]

The world is full of mostly invisible things,
And there is no way but putting the mind's eye,
Or its nose, in a book, to find them out,
Things like the square root of Everest
Or how many times Byron goes into Texas,
Or whether the law of the excluded middle
Applies west of the Rockies. For these
And the like reasons, you have to go to school
And study books and listen to what you are told,
And sometimes try to remember.

–Howard Nemerov

To David, About His Education



Meagan Chapman: Nursing Student

Meagan Chapman knows about dealing with stress, ever since 1:30 in the morning on January 3, 1999. That was the time and day she arrived at Marine Corps boot camp in Parris Island, South Carolina, after graduating from high school in Vermont and deferring her acceptance to a four-year college in Massachusetts.

"I really just wanted a break to do something different," she says. "My father told me, 'They will eat you alive down there.' For me, it was really just mind over matter. I cannot be told 'you cannot do something.'" Eventually, she was an honors graduate from Military Occupational Specialty School, and an ammunitions specialist stationed at Camp Lejeune.

Today, Meagan is dealing with the stress of being a nontraditional community college student in one of the most challenging of all community college programs—nursing. She is also a mom of three children ages two, four, and six, and her husband, a Marine C-130 airplane loadmaster based at Cherry Point, is deployed to Iraq. "Sometimes he teases me that I am under more stress here than he is in Iraq," she says.

But with the help of her mother, who temporarily relocated to Havelock to assist with the children, and her own hard work and determination, Meagan is thriving. She was recently selected to serve as a college ambassador and made the Dean's List. "That really psyched me up that I can do this, and I appreciate it more now than I would if I were younger. Everything means so much more the older you get."

Still, the work is very challenging. "Nursing school is awesome. It is very hard work, but I wouldn't expect anything less." She says, "It shouldn't be easy. You are dealing with people's lives."

Photo provided by Craven Community College

The drive and determination she learned as a Marine is clear in her approach to nursing school. "This is the only thing I want to be. I want to help patients. I want to soothe, to give people that caring touch where they know that I care. I want to be a nurse."

"Failure is no option," she states emphatically. "I've said that ever since that first day at Parris Island, I really strive to be the best I can. It's been that way for me ever since boot camp. I am going to be a nurse."

Understanding the brutal fact of "nontraditional" students and the challenges they face includes understanding the fact that "community colleges often serve students who have the fewest options and the greatest challenges"—61 percent of community college students in the U.S. are part-time, 57 percent work more than 20 hours per week, 34 percent spend 11 or more hours per week caring for dependents, and 21 percent spend between six and 20 hours per week commuting to and from class.[60] Such is the challenging life for the lion's share of community college students in the U.S., 89 percent of whom can be classified as nontraditional.

In 1999, there were 72 percent more undergraduate college students in the U.S. than in 1970, predominantly represented by the nontraditional students with community colleges increasingly serving as their gateway to higher education and future opportunity. At both community colleges and for-profit higher education institutions in 1999, 89 percent of the students were at least minimally nontraditional, compared to 58 percent at four-year public institutions and 50 percent at private four-year colleges. The more nontraditional a student, the more likely they are to attend a community college, with 64 percent of highly nontraditional students attending a community college.[61]

In the U.S. today, there are 11.6 million community college students attending nearly 1,200 institutions. Between 1984 and 1996, the number of adults with associate's degrees nearly doubled from 3.4 percent to 6.1 percent, and the number of adults with vocational certificates more than doubled from 1.8 percent to 4.2 percent. Meanwhile the growth in individuals with bachelor's degrees grew by 33 percent during the same period.[62] The trends toward community colleges are if anything increasing as there was a shift of greater than 5 percent or 89,000 college freshmen from four-year to two-year colleges between 2001 and 2006.[63] Community college students today represent 46 percent of all of the nation's undergraduates, including 45 percent of first-time freshmen.[64]

This national figure includes a significant number of undergraduate degree students at North Carolina's 58 community colleges and they make up a large percentage of the one in six adults in our state that take part in a community college education program each year. Approximately 84 percent of all college students in North Carolina attend a public university or community college, with 48 percent of college students enrolled in a community college and 36 percent enrolled in a public university.[65] The remainder attends one of North Carolina's 36 private colleges or universities or for-profit institutions.

If a college education is increasingly the gateway to prosperity, as statistics suggest, and if it is to be an option for many in our state, then the vital role of community colleges in providing higher education access cannot be ignored. "Community colleges

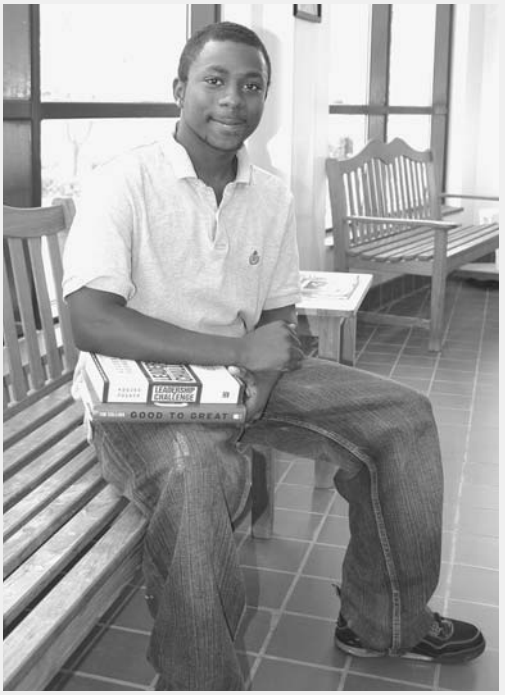


Photo provided by Craven Community College

Marcus Powell: Former High School Dropout

Marcus Powell has endured. Once a three-time dropout, he is now a Dean's list student and college ambassador at Craven Community College.

He first dropped out as a freshman at New Bern High School. "I liked to learn and going to school, but I just didn't have any concept of the value of education. I was doing everything I shouldn't be doing at that age, and I really did not understand that those decisions could affect my life."

Wanting to make money, Marcus began working as a bag boy at the local Winn-Dixie and enrolled in the Basic Skills program at Craven Community College to obtain his GED. "That would have worked out," he says, "but transportation became the issue—riding a bike, having to catch rides—in high school, I could ride the bus."

Eventually, he went back to New Bern High School as an 18-year-old freshman, but when an injury significantly limited his mobility, it zapped his motivation again, and he dropped out of the education scene for a third time. Eventually, he ended up at the neighborhood Community Resource Center located in a house once occupied by a local drug dealer, where the services provided include occasional community college classes. There, a counselor talked to him about the Job Corps, a message he was receptive to since his mother was a Job Corps graduate. Within a week, he was on a plane to Washington, D.C. to a Job Corps program. "It was the best experience I could ever have," he says. "I would not trade it for anything in the world. It really opened my eyes."

He returned to New Bern with a GED and an accounting diploma, but found himself in a public housing apartment and working as many as three jobs at one time. After a period of time, he met the sister of his girlfriend who was a graduate of Lenoir Community College, and he marveled at the success she seemed to have found in life. After talking about it, both he and his girlfriend enrolled at Craven Community College.

The developmental courses were his lifeline, and he particularly appreciated the learning communities that prompted a unique engagement with his studies. Learning communities encourage students to approach learning from a "shared rather than isolated" experience. Students enroll together as a group in several courses threaded by a common theme. Instructors function as a team and ensure that the content in one course is related to the content in another and help students make connections throughout. Students in a learning community collaborate in small groups or teams to solve problems, study, or develop class projects.

"I missed a lot in high school," Marcus says. "I had to make up for things and catch up to where I needed to be."

With the taste of academic success now under his belt, Marcus envisions transferring to a university in the University of North Carolina system. "Looking forward is so much different for me now," he says. "I am now on a positive track. I can see myself on Wall Street one day, or maybe a lawyer, but I definitely see myself as very educated and helping others. I see myself making an impact on this country and the world. It is becoming more and more true every day, and last year I made the Dean's List. I am very blessed, grateful, and thankful."

are doing what other educational institutions aren't doing: preparing people, often those with mediocre basic schooling, to get well paying, middle class jobs," note *Wall Street Journal* reporters Bob Davis and David Wessel in their book, *Prosperity*.[66]

A complete picture of current higher education requires a true understanding of the dominating presence of nontraditional students. It further requires a greater understanding of the role of community colleges in providing higher education access for all and the critical position of community colleges in addressing the issue of the two North Carolinas. Community colleges today serve 47 percent of the nation's African American undergraduates, 56 percent of Hispanics and Latinos, and 57 percent of Native Americans, and 29 percent of community college students have annual household incomes less than $20,000.[67]

They're closing down the textile mill,
across the railroad tracks,
Foreman says these jobs are going boys,
and they ain't coming back,
To your hometown.

—Bruce Springsteen
"My Hometown"

However, at a time when community colleges are the gateway to higher education and economic opportunity for almost all segments of our population, addressing the issue of the "two North Carolinas" requires addressing a brutal fact regarding a segment of our student population that appears to be vanishing—African American males. In the 2006–07 academic year, there were only 16,885 African American male community college degree students in North Carolina, and the number of African American male community college graduates has declined each of the past three years while the benefits of education are rapidly growing. While males in the N.C. Community College System comprise approximately 40 percent of the overall student body, only 29 percent of the African American student population at North Carolina community colleges is male.[68]

These statistics are reflected in recent national data that suggests disturbing race-specific declines in higher education achievement. During the 10-year period between 1995 and 2005, the percentage of young African American males with high school diplomas in the U.S. between the ages of 25 and 29 declined from 88.4 percent to 86.6 percent.[69] College continuation rates for African American high school graduates peaked in 1998 at 62.1 percent and have trended downward since. In 2006, the African American college continuation rate was further behind that of the general population (-10.8 percent) than it was in 1960 (-9.1 percent), the same year that four N.C. A&T State University students helped catalyze the civil rights movement with the Greensboro sit-ins.[70]

Young African American males have both unemployment rates and poverty rates that are double that of young white males.[71] In 2005, 72 percent of young African Americans in North Carolina between the ages of 18 and 24 were not enrolled in college.[72] During the same year, 10.1 percent of all young African American men across the nation were in prison, an amount that was 3.6 percent higher than the percentage of young Hispanic men and nearly seven times higher than that of young white men (1.5 percent).[73] At the end of 2007, there were 4,000 more African American males incarcerated in North Carolina prisons than had enrolled in North Carolina community college degree, diploma, and certificate programs for the entire 2006–07 academic year. African American males accounted for 55 percent of the North Carolina prison population at the end of 2007, but only 8 percent of the curriculum degree students at North Carolina community colleges in 2006–07.

An African American male born in the U.S. today has a one in four chance of spending some time in prison, and on any given day it is estimated that one out of three young African American males is under some form of criminal justice control.[74] However, only 5 percent of African American males who graduated from high school and attended some college were incarcerated in 2000.[75] Today in North Carolina, young African American males in their prime college-going years below the age of 29 comprise 20 percent of the North Carolina prison population, account for 16 per-

cent of all North Carolina probationers and 17 percent of all North Carolinians out of prison on parole. Truly addressing the "two North Carolinas" requires understanding the new face of older, nontraditional college students, while facing the brutal facts and reversing the trend of the vanishing African American male from North Carolina community colleges and other segments of higher education.

Brutal Fact #2: Facing the Consequences of North Carolina's Community College Completion Rates and the Costs of Remediation

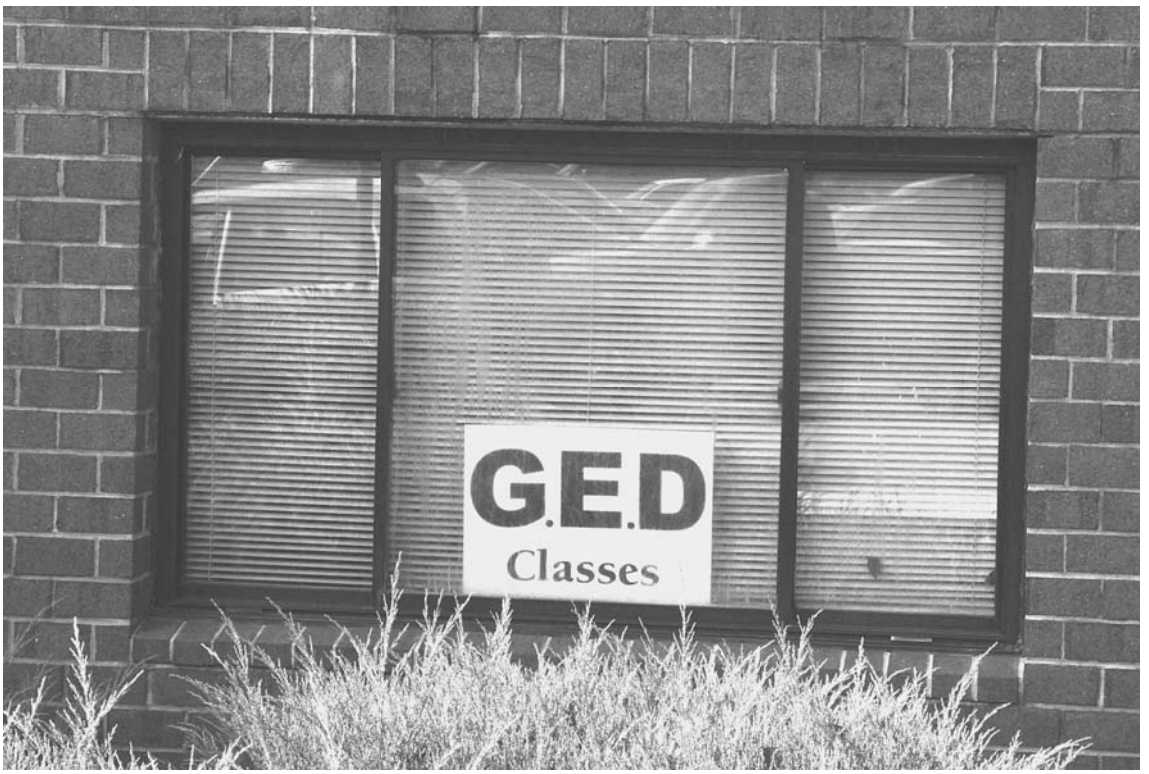
Enrolling more students in community colleges and other forms of higher education will neither be a sufficient step to address our future work force needs nor will it be enough to further our economic prosperity. Equally if not more important will be finding ways to help students complete a degree. While the U.S. ranks among the top five developed nations in the proportion of young people who *attend* college, it ranks only 16th in the proportion that *complete* college.[76] Approximately 78 percent of first-time, full-time community college students in the U.S. do not complete a degree within three years, not including the much larger number of students attending college part-time.[77] In North Carolina, only 48 percent of first-year community college students return for their second year, a much lower percentage than their university counterparts (80 percent).[78]

Among nontraditional community college students nationwide, 46 percent leave in their first year, compared with 23 percent of traditional students. Of those classified as "highly nontraditional," 62 percent leave within three years without obtaining a degree, compared to 19 percent of "traditional" community college students.[79] Overall, non-traditional students with at least two risk factors complete their programs at a rate of less than 15 percent, compared to 57 percent of traditional students.[80]

A brutal fact facing North Carolina is that while community college completion rates in other parts of the nation may be improving, North Carolina's have declined in recent years. In the U.S., 43 percent of full-time freshmen who enrolled to earn an associate's degree or certificate in 2000 had graduated within three years, were still enrolled, or had transferred to another college—up three percentage points compared to those entering in 1995. However, North Carolina community college students during the same period had a seven point decline to 23 percent.[81]

Nationally, approximately two-thirds of working college students above the age of 24—a majority of community college students—classify themselves as "employees" first and "students" second. In other words, they view themselves more as "employees who study" than as "students who work." Of these students who classify themselves as "employees who study," almost three-quarters work full-time (87 percent) or attend school part-time (76 percent), and roughly two-thirds do both (68 percent). Compared to those who see themselves as students first, they are more likely to be over the age of 30, married with children, and pursuing associate's degrees at community colleges in computer science, business, vocational, and technical fields.[82]

Not surprisingly, two-thirds of students who consider themselves as employees who study (68 percent) carried a substantial risk of not completing their college program because they worked full-time and only attended college part-time. Six years after beginning their college programs, 62 percent of "employees who study" had not completed a degree or certificate compared to 39 percent of "students who work."[83]



The national Community College Survey of Student Engagement in 2006 provides insight into the reasons American community college students typically withdraw and points to potential efforts that may promote greater completion rates. First, it sheds greater understanding on the "completion" issue, lessening its "brutality" by clearly indicating that many community college students do not attend college with the intent of completing a degree. According to the survey, the number one reason community college students withdraw early is to transfer to a four-year college or university (49 percent based on likely or very-likely responses).[84] In doing so, they are able to begin progress towards their eventual goal of a bachelor's degree through community colleges—where tuitions are much lower and locations are more convenient—without actually completing an associate's degree.

But anyhow, degrees is good things because they livils all ranks.

–Mr. Dooley in Peace and in War, By Finley Peter Dunne

Only 58 percent of community college students enroll with a primary goal of completing an associate's degree, while 41 percent have a primary goal of obtaining or updating job-related skills. Of those not pursuing an associate's degree, 21 percent say it is a secondary goal while 21 percent say it is not a goal at all.[85] Working adult students who characterize themselves as "employees who study," are the most likely not to complete a degree and are also much more likely to report having no degree goal relative to those students who classify themselves as "students who work."[86]

Many students enrolled in technical programs often find that they are recruited to work prior to degree completion by employers desperate for even moderately trained employees. Not surprisingly, economic studies indicate financial gains to students for taking community college courses, even if a degree or certificate is not achieved. Research suggests that completion of even one three-credit community college course can increase average earnings by 0.5 to 1.1 percent.[87]

Still, the economic returns are greatest for associate's degree completers who on average will earn approximately $6,500 more per year than a comparatively similar individual with only a high school degree, arguing for attention to the factors other than student intent that lead to low community college completion rates.[88] Of these factors, the next most commonly reported is lack of money (45 percent). Even though North Carolina community college tuition ranks as the third lowest in the nation, the percentage of average family income needed to pay for attending a North Carolina community college, after financial aid, is 23 percent.[89] This is an increase from 18 percent of average family income in 1992, with North Carolina community college resident tuition increasing by 125.7 percent in the past 10 years with an additional 6.3 percent increase for the 2007–08 academic year. (For more on tuition increases, see Table 6.)

Financial pressures can often be overwhelming, even for the most academically prepared low-income community college students. Low-income students performing in the top 25 percent on standardized tests attend college at approximately the same rate as high-income high school graduates performing at the bottom 25 percent on the same tests.[90] Given current completion statistics, it can be expected that only 90,000 of the approximately 800,000 eighth-graders from the lowest socioeconomic level in the United States will earn a college degree by 2014, eight years after their expected high school graduation.[91] For the 40 percent of North Carolinians earning the lowest incomes, full-time attendance in community college requires 34 percent of their income, compared to 39 percent of total income for those enrolled at North Carolina universities (when accounting for the combined costs of tuition, room and board, minus any financial aid received).[92]

Nontraditional students with children must pay the added costs of child care. For a two-child family with an infant and a four-year-old, child care costs an average of $9,000 in North Carolina's rural counties and $13,000 in North Carolina's urban areas. For a two-parent family earning a median income, these costs require 19 percent of total income in North Carolina's rural counties and 20 percent in North Carolina's urban counties. For single mothers earning a median income, similar child care costs

Table 6. N.C. Community College System Tuition Increases, 1997–2007

Academic Year	In-State Students				Out-of-State Students			
	Tuition Per Credit Hour	Percent Increase	Maximum Tuition Per Semester	Percent Increase	Tuition Per Credit Hour	Percent Increase	Maximum Tuition Per Semester	Percent Increase
1997–1998	$20	NA	$280	NA	$163	NA	$2,282	NA
1998–1999	$20	0%	$280	0%	$163	0%	$2,282	0%
1999–2000	$27	34%	$375	34%	$170	4%	$2,377	4%
2000–2001	$28	3%	$440	18%	$170	0%	$2,716	14%
2001–2002	$31	13%	$496	13%	$173	2%	$2,772	2%
2002–2003	$34	11%	$548	11%	$191	10%	$3,052	10%
2003–2004	$36	4%	$568	37%	$197	3%	$3,152	3%
2004–2005	$38	7%	$608	7%	$211	7%	$3,376	7%
2005–2006	$40	4%	$632	4%	$220	4%	$3,512	4%
2006–2007	$40	0%	$632	0%	$220	0%	$3,512	0%

Source: A Matter of Facts: The North Carolina Community College System Fact Book 1998–2007, North Carolina Community College System, Raleigh, N.C., 1998–2007. On the Internet at *http://www.ncccs.cc.nc.us/Publications/archivedFactBooks.htm* and *http://www.ncccs.cc.nc.us/Publications/docs/Publications/fb2007.pdf*

require an average of 59 percent of annual income in urban counties and 54 percent in North Carolina's rural counties.[93]

Given these financial pressures, it should come as no surprise that the third and fourth most common reasons community college students give for withdrawing is the pressure of working full-time and caring for dependents.[94] Two-thirds of the community college students who classify themselves as "employees who study," face significant risk of non-completion because they work full-time while attending classes only part-time.

The N.C. General Assembly has taken significant steps to counter recent tuition increases with increases in financial aid, and the scholarship funding through the N.C. Lottery may provide additional benefits. This reflects a national trend of states to combine tuition increases with increases in state-financed college grant aid programs that have grown from $2.9 billion in 1994–95 to more than $5.7 billion in 2003–04. Much of the increase in state-based aid nationally, however, has been in the form of non-need-based aid—growing at a rate of 300 percent during this period, compared to only a 70 percent increase in need-based aid—meaning that a decreasing percentage of state aid nationally is awarded to low-income students.[95]

It is important not to underestimate the importance of financial aid to the impact on community college completion rates. Only 48 percent of North Carolina community college students return for their second year,[96] but national research indicates that $1,200 in financial aid increases the likelihood that a community college student will return for his/her second year by approximately 13 percent.[97]

Data from the National Center for Education Statistics, however, indicate that while they are the most likely to benefit, community college students are among the least likely to apply for financial aid, with 37 percent of students not applying for any form of aid in 2003–04. Approximately 22 percent of the lowest-income community college students did not apply for aid in 2003–04.[98] Nationally, 66 percent of full-time, first-time community college freshmen seeking degrees or certificates received a financial aid grant, took out a student loan, or both. In North Carolina, only 59 percent of community college full-time, first-time freshmen had a grant, loan, or both.[99] (For more information on college completion, see Table 7 and Sam Watts, "Financial Aid for Community College Students" on p. 183.)

As more community college students become part-time, particularly the large numbers of those who see themselves as "employees who study," their eligibility for different aid programs is diminished. In Berker, Horn and Carroll's 2003 study of nontraditional college students, only 59 percent of "employees who study" applied for any form of financial aid, compared to 78 percent of "students who work" and only 48 percent received any form of financial aid. On top of that, community college students who classify themselves as "employees who study" were much less likely to receive any financial aid (39 percent) than those who classify themselves as "employees who study" at 4-year colleges (54 percent) and private for-profit organizations (83 percent).

The fifth most frequent reason given by community college students for not completing their degrees—a lack of academic preparedness[100]—is perhaps the most brutal fact of all because it has such a great impact on student success and is so difficult to remedy. Only 37 percent of North Carolina's high school graduates are college-ready, meaning they take challenging classes, are proficient readers, and graduate with a high school diploma in four years.[101] Nationwide, almost one-third of all college freshmen enroll in remedial courses—approximately 42 percent of first-year community

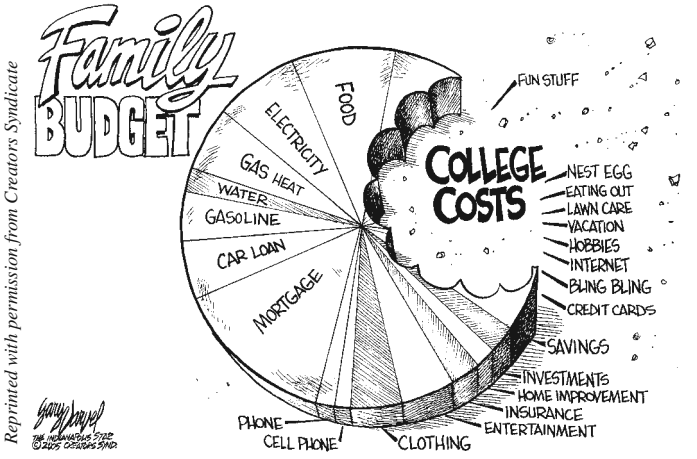


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Table 7. College Completion, 2003: Total Number of Certificates/Degrees Completed per 100 Students Enrolled

Country	Number
Japan	26
Portugal	25
United Kingdom	24
Australia	23
Switzerland	23
Denmark	23
Ireland	21
New Zealand	21
France	20
Iceland	19
Korea	18
Belgium	18
Sweden	18
Slovak Republic	18
Poland	17
United States	**17**
Spain	17
Netherlands	16
Hungary	16
Czech Republic	15
Mexico	14
Norway	14
Finland	13
Turkey	13
Austria	13
Germany	13
Italy	12

Source: Measuring Up 2006: The National Report Card on Higher Education, National Center for Public Policy and Higher Education, San Jose, Cal., 2006, based on data from the Organisation for Economic Co-operation and Development, as shown in Gordon K. Davies, *Setting a Public Agenda for Higher Education in the States, The National Collaborative for Higher Education Policy,* Dec. 2006, p. 2.

college students, and 20 percent of first-year students at four-year institutions.[102] Since 1999–2000, the percentage of North Carolina community college students requiring remediation has ranged from 48.6 percent to 54.3 percent.[103]

The leading predictor of whether a student will drop out of college is the need for remedial reading education. Seventy-six percent of students who require remediation in reading fail to earn an associate's or bachelor's degree. Similarly, 63 percent of those who require remedial math courses fail to earn an associate's or bachelor's degree. By contrast, 65 percent of students who do not require any remediation courses complete either an associate's or bachelor's degree.[104]

The U.S. loses an estimated $3.7 billion per year because students do not learn basic skills in high school and require remediation before beginning college. This includes $1.4 billion in direct remediation costs and almost $2.3 billion lost to the U.S. economy because remedial reading students are more likely to drop out of college rather than earning a degree, thus reducing their earning ability.[105] If there was no need for community college remediation courses, North Carolina would see an estimated total economic benefit of $97,412,037. This includes $27,632,861 in annual remediation costs and $69,779,176 in additional annual earnings for students who would complete degrees if they were more academically prepared when entering college.[106]

Good education teaches students to become both producers of knowledge and discerning consumers of what other people claim to know.

–Parker J. Palmer, *The Courage to Teach*

Before many North Carolina citizens can learn to run educationally, they must first be able to walk, and ultimately community colleges are at the inevitable frontlines in not only providing the work force skills of tomorrow, but also the basic skills that should have been acquired yesterday. In doing so, community colleges every day face the brutal facts of the enormity in academic gaps for some students to attain their ultimate goal of degree or certificate completion. In addition, North Carolina community colleges find it extremely difficult at current funding levels to provide both remedial level education along with the college-level training and education required by 21st century North Carolina work places. But in spite of these facts, North Carolina community colleges cannot walk away from providing high school-level remediation without also walking away from their central "open-door" mission to take people where they are and carry them as far as they can go.

Brutal Fact #3: North Carolina's Looming Work Force Shortage, the Emerging Role of Immigrants, and the Consequences of Low College-Going Rates

Even in the face of record job layoffs, North Carolina increasingly will find a shortage of educated workers in the future. While the U.S. civilian labor force grew at an annual rate of 1.6 percent between 1950 and 2000, it is projected to grow at a 0.6 percent rate between 2000 and 2050.[107] The share of new workers with at least some college education increased by 20 percent between 1980 and 2000, but the increase is predicted only to be 3 percent between 2000 and 2020. Without some change in recent trends, economists predict that by 2012 our nation will see a shortage of 10 million workers with a bachelor's degree or higher and a shortage of seven million workers with an associate's degree or higher. By contrast, a surplus of three million people with a high school education is predicted.[108]

Approximately 25 percent of the new jobs created in North Carolina and nationwide over the next 10 years will require at least a four-year college degree. Meanwhile, 13.1 percent of new jobs in North Carolina will require an associate's degree, compared to 11.1 percent of new jobs nationally. This will result in approximately 90,000 net new jobs for the state associate's degree holders by 2017. To meet this demand,

preliminary estimates by the N.C. Commission on Workforce Development indicate that the N.C. Community College System will need to generate 19,000 more program completers each year to meet the projected need of workers requiring associate's degrees and occupational diplomas and certificates over the next decade.[109]

North Carolina's recently dislocated workers will likely fill only a small portion of the gaps in projected long-term labor force shortages because of their ages. Of North Carolina's recently displaced workers, 41.6 percent were between the ages of 30 and 44; 23.1 percent between ages 45 and 55; and 13.1 percent were over 55.[110] The significant growth of the North Carolina population is well documented. And, in 2006, North Carolina once again topped the United Van Lines survey as a destination for those wishing to move. In recent years, we have grown by 184,000 people, approximately the size of Winston-Salem, and bypassed New Jersey to become the nation's 10th largest state.[111] Between 2006 and 2016, North Carolina's population is predicted to increase by 15 percent, compared to an overall U.S. growth of 9 percent. The U.S. Census Bureau estimates that by 2030, the North Carolina population will reach 12.3 million people, making us the sixth largest state in the nation, passing Georgia, Michigan, and Ohio.[112]

Demographic trends suggest that this significant growth will heighten work force shortages rather than alleviate them. Between 1990 and 2000, while the total North Carolina population grew by 21.4 percent to 8,049,313 people, the population aged 18 to 34 grew only 4.9 percent, while the age group 55 to 64 grew by 23.3 percent and the age group 65 and over grew by 20.5 percent.[113] As the North Carolina population is expected to grow by 15 percent between 2006 and 2016, this growth is projected to be skewed towards the older side of the age demographic, further exacerbating work force pressures in years to come. The projected growth rate for young people aged 0 to 9 by 2012 is 12.7 percent and for those aged 10 to 17 is 13.7 percent. By contrast, the growth rate for those aged 45 to 54 is 22.9 percent and those aged 55 to 64 is 47.4 percent.[114]

So where will we find the workers to provide the necessary health care and other services for a booming retirement population? Who will build the houses, highways, and work places? Who will work in the advanced manufacturing facilities that we will need to generate wealth? Many of those potential new workers and their children have been flooding into North Carolina in unprecedented numbers over the past 10 years, and their faces look nothing like the cast of characters from *The Andy Griffith Show*. Immigrants currently account for 6.7 percent of North Carolina's population, compared to less than 1 percent of our population in 1960. Approximately 60 percent of North Carolina immigrants are from Mexico or other areas of Latin America, 19 percent are from Asia, 16 percent from Europe and Canada, and 6 percent from Africa.[115]

During the 1990s, 13.65 million new immigrants arrived in the U.S. They accounted for 41 percent of U.S. population growth and approximately 47 percent of the work force growth, with immigrant males accounting for about two-thirds of the increase in the U.S. male labor force.[116] During this period, no state has seen a greater percentage influx in foreign immigration than North Carolina, with a 273 percent increase in our foreign-born population.[117] Our Asian population increased by 128 percent and our Hispanic/Latino population increased by 394 percent, resulting in the designation of North Carolina as one of 15 Hispanic magnet states in the 2000 census.[118]

With the significant increase in foreign immigration to North Carolina, and the beginning of labor shortages in a number of occupational areas, the foreign-born immigrant population has assumed an increasingly prominent role in the North Carolina work force. Immigrants comprise 7 percent of the North Carolina work force, including very significant percentages of current workers in North Carolina's construction (28.3 percent), agriculture (26.5 percent), hospitality and leisure (16.8 percent), and

Jeaneth Hernandez: Entrepreneur

Jeaneth Hernandez already knows about economic success. She is the sole owner of Aileron Aviation Industries, a small government contracting business that provides aircraft parts to the military. A native of El Salvador, she learned about the business as an 18-year-old when she began working for a military contractor in New York. In 2001, she had started her own business and moved it to North Carolina when her husband was deployed to Marine Corps Air Station Cherry Point in Havelock.

In addition to being a business owner, she is the mother of three girls between the ages of one and 13, and her husband, a Marine aviator, is deployed to Iraq. "I tell people he is vacationing at a 5-star resort at Camp Fallujah."

With a goal of starting her own manufacturing company, Jeaneth enrolled in the machining technology program at Craven Community College. She currently contracts her manufacturing to companies as far away as California. Having her own machine shop would allow her to dramatically cut down on delivery time, and she says, "Manufacturing is where the money is."

On top of that, however, it is important to Jeaneth to gain her associate's degree. "I want to earn the degree. It's very important to me," she says. "Some may say it doesn't matter since I own my own business, but to me it is more important than just having the skill. Having the degree says that I am a machinist, and I know what I am doing. I can take a piece of metal and machine it to exact specifications."

When her husband returns from Iraq, Jeaneth and her family will likely move to a new military duty station, but they intend for the business to stay in North Carolina where they plan to return after her husband leaves the Marines. "I love North Carolina," she says. "It's more quiet, and when you reach a certain age, you appreciate that."

With so many manufacturing companies moving offshore in recent years, it seems ironic that Jeaneth plans to keep her company in North Carolina. "I wouldn't ever think of moving my company because of the cost of production," she says. "I love it here and I would never want to take my business from here just to make a little more money. I already have too many good people working for me here, and they deserve to be employed."

Photo provided by Craven Community College

manufacturing (14.7 percent) industries.[119] Dr. James Johnson, a professor of management at UNC-Chapel Hill's Kenan Flagler Business School, estimates that if Hispanic/Latino workers were withdrawn from North Carolina's construction work force, the 2004 impact alone would have been a loss of $10 billion in the state's construction level. This includes $2.7 billion in revenues for companies that supply construction materials and supplies; a loss of $149 million to companies renting buildings, machinery, and equipment; and as many as 27,000 houses which would not have been built across the state.[120]

Current demographic trends suggest that immigrants are likely to play an increasingly prominent role in the future U.S. work force. Baby Boomers who comprise 60 percent of the current U.S. work force between the prime working ages of 25 and 54 are rapidly beginning to depart the active work force.[121] By 2020, there will be an estimated 40 million American college-educated Baby Boomers between the ages of 55 and 75.[122] If current demographic and economic trends continue, their numbers are likely to be replaced at least in part through the inclusion of the relatively younger immigrant population. Of the 7.8 million new immigrants living in the U.S. between January and April of 2005, 81 percent were of working age, with 50 percent under the age of 30 and two-thirds under the age of 35.[123] The potential demographic destiny of North Carolina's future work force will initially reveal itself in our public schools, where between 2004 and 2018 the percentage of Hispanic high school students is expected to increase from 3 to 33 percent.[124] Of the growth in public school enrollment between 2000 and 2004, Hispanic students accounted for 57 percent of the total.[125]

Perhaps the most disturbing potential impact on our future economic competitiveness is our growing reliance on immigrants to fill significant gaps in our science and engineering work force. In 2003, foreign-born individuals accounted for 25 percent of the total college-educated population in the U.S. science and engineering work

force. In addition, they encompassed 40 percent of all doctorate degree holders among U.S. scientists and engineers, including a majority in computer science (57 percent), electrical engineering (57 percent), civil engineering (54 percent), and mechanical engineering (52 percent).[126] Foreign-born immigrants played a prominent role in the rapid growth in the U.S. high-tech sector during the late 1990s. During that period, Chinese and Indian engineers were responsible for directing approximately 25 percent of the Silicon Valley high tech companies, accounting for approximately 17 percent of total sales and 14 percent of total jobs in America's leading technology hotbed.[127] The children of immigrants are likely to prove an important asset to the future U.S. technology economy, as National Science Foundation research indicates that 60 percent of the top science students and 65 percent of the top mathematics students in the U.S. are children of recent immigrants.[128]

"The children of immigrants are likely to prove an important asset to the future U.S. technology economy, as National Science Foundation research indicates that 60 percent of the top science students and 65 percent of the top mathematics students in the U.S. are children of recent immigrants."

An obviously troubling aspect of the rapid growth in immigration has been the growth in illegal immigration to the United States. Between 2000 and 2005, an estimated 4.1 million new immigrants arrived in the U.S., accounting for 86 percent of the net increase in employed persons, which is the highest share in U.S. recorded history. Of those 4.1 million people, between 1.4 million and 2.7 million were estimated to be illegal, meaning that illegal immigrants may have accounted for as much as 56 percent of the net employment increase in the U.S. between 2000 and 2005.[129]

The rapid growth in illegal immigration has charged the current national political landscape perhaps more than any other single issue. For proof, one need only look to the defeat in the U.S. Senate of the *Secure Borders, Economic Opportunity and Immigration Reform Act of 2007* (U.S. Senate Bill 1639) in the summer of 2007, despite a strong endorsement from Republican President George W. Bush and leaders in both major political parties. It is an issue that is particularly emotional in states like North Carolina, which have simultaneously dealt with significant job losses due to foreign competition and the rapid influx of new foreign-born workers.

Related to the controversy, in December 2007, North Carolina community colleges found themselves in an unusual place—at the center of the national immigration debate and on the front page of many newspapers across the state. The issue at hand was a legal opinion by the attorney for the N.C. Community College System that local campuses did not have the authority to deny admission to students based on their immigration status. Previously, 22 of the system's 58 colleges had adopted local policies to bar undocumented applicants, while admission policies at the other 36 community colleges only distinguished between in-state and out-of-state residents. At those campuses, undocumented immigrants could be admitted under the same guidelines as international and other out-of-state residents, paying *out-of-state* tuition rates. These out-of-state rates exceed actual state costs.

The public debate over illegal immigration and student admissions intensified soon after when the University of North Carolina Tomorrow Commission, a 25-member statewide panel charged to determine how the 16-campus university system can best meet the needs of North Carolina over the next 20 years, released its final report. Included among its 194 suggested strategies was a recommendation to examine "whether and under what circumstances, if any, undocumented students who graduate from North Carolina public schools should be charged *in-state* tuition [emphasis added]."[130]

Previously, in the 2005–06 legislative session, the General Assembly had considered a proposal (House Bill 1183) that would have provided *in-state* college tuition rates to immigrant graduates of North Carolina high schools who expressed intent

to become U.S. citizens, but whose parents entered North Carolina illegally. Ten states have already passed such legislation (California, Illinois, Kansas, Nebraska, New Mexico, New York, Oklahoma, Texas, Utah, and Washington). These laws typically require that undocumented students meet the criteria of attending a state high school for two to four years, completing a high school diploma or General Equivalency Degree in the state, enrolling in a public postsecondary institution, and filing an affidavit stating intent to legalize their status and become a permanent U.S. resident.[131]

Since 2004, North Carolina has been one of six additional states to consider related proposals (along with Connecticut, Missouri, New Jersey, Oregon, and Rhode Island), but political pressure here was intense, despite support from former four-term N.C. Governor Jim Hunt and Hispanic/Latino advocacy groups such as El Pueblo.[132] In addition, the legality of similar laws in other states has recently been questioned due to Section 505 of the federal Illegal Immigration Reform and Immigrant Responsibility Act. The federal law states that unauthorized immigrants "shall not be eligible on the basis of residence within a State for any postsecondary education benefit unless a citizen or national of the United States is eligible for such a benefit without regard to whether the citizen or national is such a resident."[133]

Admission of undocumented immigrants is obviously a legal issue, and for many North Carolinians it is understandably an emotional one, as many native residents see inequity in offering jobs and services while long-time taxpaying citizens see record numbers of pink slips. But as Governor Mike Easley pointed out in December 2007, it is also a "business issue" that creates a brutal economic dilemma with respect to our educational investments. On the one hand, in addition to the law-and-order argument, those who oppose the admission of illegal immigrants to community colleges can ask a number of valid questions from strictly an economic perspective. When there are so many community college resource needs, why should we utilize our limited resources to educate illegal immigrants? When we already face classroom space limitations and waiting lists for some programs, how can we risk limiting opportunity to North Carolinian citizens? Finally, given the community college work force development mission, why invest resources in individuals not legally eligible to participate in North Carolina's work force?

On the other hand, there exists our brutal economic dilemma. Given current demographic trends, immigration policies, and enforcement of policies under current law, new immigrants to our state—including undocumented immigrants—are part of our current work force. Absent a significant change in immigration policy, they will play an increasing role in our future work force. Consequently, our state faces a challenging question on a macro-level similar to one posed to a business leader who, given the mobility of current workers, asked the question, "What if I train them and they leave?" The response: "What if they are not trained and they stay?"

Brutal Fact #4: Balancing Rising Enrollments, Lagging Faculty Salaries, and Inadequate Equipment Funds with Expanding Needs for Graduates

When House legislative leaders in the North Carolina rolled out their initial budget proposals in 2007, community college leaders were dismayed to learn that community colleges were proposed to receive less than the 8 percent share of recurring education funds to which we had reluctantly become accustomed. With community colleges having 48 percent of all undergraduate college students in the state and after years of trying to do more with less, would this not be a year when we could finally gain some ground on so many pressing needs?

For some in the N.C. House, the community college reaction was frustrating. Why the great disappointment when the General Assembly had been pouring enrollment growth and construction money into the system during recent years to support record student growth numbers, when some states such as California were cutting back community college funding to address other needs? Both reactions are understandable given the significant pressure created by a resource squeeze, one where the pressure gauge is being turned tighter and tighter by the simultaneous requirements of both keeping pace and doing more.

During the past six years, new students have poured into North Carolina community colleges at record levels, which is a promising trend to address the work force shortage that North Carolina will soon face, but which has placed significant financial pressures on community colleges. Enrollment growth at North Carolina community colleges on a full-time equivalent (FTE) basis has swelled from 144,283 students during academic year 1999–2000 to 193,027 in academic year 2006–07, a 33 percent increase[134] (see Table 8). An additional 38 percent increase is expected between 2004 and 2014, with the greatest growth expected in work force continuing education programs (44.2 percent), followed by basic skills and literacy programs (40.32 percent), and curriculum degree programs (36.64 percent)[135] (see Table 9).

Meeting these significant enrollment demands has come at the cost of advancing the statewide community college infrastructure, as legislators have supported community colleges well but struggled to provide the additional resources to support the level of education and training required by 21st century work places. Other states have faced similar funding challenges in the past five years to meet rapidly growing community college demand. Funding in the Southern Regional Education Board states declined by $421 per student, or 6.7 percent; funding per North Carolina community

college student declined by $419 per student, or 8.4 percent. In 2005–06, the North Carolina community college appropriation per student ($4,032) climbed above the 2000–01 level ($3,931 per student) for the first time, not accounting for the impact of inflation.[136] This is exacerbated by the fact that community colleges have regularly been required to revert 1 to 2 percent of their annual budgets back to the state to cover tuition and registration fee costs of students whose payments are "waived," such as seniors aged 65 and over and public service employees.

As a result, community colleges have struggled to keep pace with current demands in areas such as equipment and salaries. This challenge is perhaps best exemplified by the salary challenge where community college faculty have been mired at pay levels that are among the bottom five states, at the same time that salaries for public school teachers have approached the national average and universities pay professors at a level that places them in the top 13 states.[137] North Carolina legislators recognized the urgency of this situation in 2003 stating that, "It is imperative that the State move community college faculty and professional staff salaries to the national average," and they have taken initial steps to move down this path.[138] In 1999–2000, the average full-time community college faculty salary in North Carolina was $34,527, increasing by 16 percent to $40,989 in 2005–06. However, the average community college faculty salary nationally for 2005–06 was $55,405, placing North Carolina faculty pay at 46th in the nation[139] (see Table 10).

Aspiring even to be average in community college pay will require an enormous North Carolina resource commitment, similar to the recent commitment to bring public school teachers to the national average. The cost of moving up 21 places to 25th in the nation is an estimated $77.3 million over the period 2007–10. In attacking this most important of community college funding issues, it is important to understand that the issue of keeping pace with salaries is not about keeping up appearances in national comparisons, but the real pressure of attracting and retaining qualified instructors to educate and train North Carolina's future work force. As a community

(continues on page 51)

Table 8. Annual FULL-TIME Enrollment, N.C. Community College System, 1962–2007

Year	Curriculum Students	Continuing Education Students	Total Students
1962–63*	n/a	n/a	4,321
1963–64*	n/a	n/a	8,580
1964–65*	n/a	n/a	12,800
1965–66*	n/a	n/a	24,934
1969–70*	n/a	n/a	47,857
1973–74*	n/a	n/a	79,500
1977–78	65,771	49,087	114,858
1978–79	68,547	56,628	125,175
1979–80	70,303	52,188	122,491
1980–81	74,178	52,248	126,426
1990–91	86,050	51,879	137,929
1991–92	92,313	46,200	138,513
1992–93	94,593	43,336	137,929
1993–94	91,641	38,236	129,877
1994–95	90,223	37,539	127,762
1995–96	89,381	37,550	126,931
1996–97	89,565	38,487	128,052
1997–98	104,751	38,583	143,334
1998–99	112,675	41,807	154,482
1999–00	115,996	42,403	158,399
2000–01	120,040	40,708	160,748
2001–02	132,913	43,830	176,743
2002–03	141,998	43,492	185,490
2003–04	148,441	44,252	192,693
2004–05	148,523	45,712	194,235
2005–06	148,736	47,475	196,211
2006–07	149,607	49,153	198,760

Note: **Curriculum programs** are made up of credit courses leading to certificates, diplomas, or associate degrees, which range in length from one semester to two years. **Continuing education programs** are made up of non-credit courses that may be occupational, academic, or avocational in nature. In an unduplicated headcount, more than 800,000 curriculum and non-curriculum students are currently enrolled either full- or part-time.

Source: Keith Brown, associate vice president of planning, accountability, research and evaluation for the North Carolina Community College System, Raleigh, N.C.

* *Alternative Source:* Jon Lee Wiggs, *The Community College System in North Carolina: A Silver Anniversary History*, 1963–1988, University Graphics, North Carolina State University, Raleigh, N.C., 1989, pp. 31, 49, 107, 149, 244, and 316.

Table 9. Postsecondary Enrollment by State, Fall 2005

State	Public 4-year	Public 2-year	Private 4-year	Private 2-year	Under-graduate	Grad-uate	Profes-sional	Total
Alabama	149,752	78,401	27,526	710	219,253	32,733	4,403	256,389
Alaska	27,765	1,101	1,365	0	27,903	2,328	0	30,231
Arizona	120,020	200,845	211,287	13,445	456,881	85,386	3,330	545,597
Arkansas	80,346	47,771	14,528	627	129,484	11,909	1,879	143,272
California	609,397	1,398,758	353,786	37,892	2,135,461	230,555	33,817	2,399,833
Colorado	154,706	79,803	58,930	9,233	249,616	48,810	4,246	302,672
Connecticut	65,478	46,227	60,387	2,583	141,332	29,934	3,409	174,675
Delaware	24,704	13,978	12,751	179	43,382	7,158	1,072	51,612
District of Columbia	5,595	0	99,302	0	62,888	32,017	9,992	104,897
Florida	371,553	277,446	203,001	20,662	764,577	92,352	15,733	872,662
Georgia	197,418	144,594	79,669	4,969	372,269	46,000	8,381	426,650
Hawaii	27,827	22,330	15,749	1,177	57,843	8,595	645	67,083
Idaho	48,289	12,014	16,893	512	70,335	6,810	563	77,708
Illinois	202,325	352,824	272,200	5,618	692,401	122,545	18,021	832,967
Indiana	207,329	59,969	83,019	10,936	312,058	42,605	6,590	361,253
Iowa	66,789	82,118	77,321	1,494	203,453	17,202	7,067	227,722
Kansas	96,057	74,262	19,757	1,676	168,065	21,208	2,479	191,752
Kentucky	116,910	84,669	38,597	4,793	215,536	24,887	4,546	244,969
Louisiana	147,529	33,514	12,733	3,937	172,908	20,392	4,413	197,713
Maine	35,084	12,435	16,945	1,087	57,622	7,109	820	65,551
Maryland	136,827	119,246	54,417	3,661	252,964	56,804	4,383	314,151
Massachusetts	104,086	84,209	251,730	3,291	331,242	96,417	15,657	443,316
Michigan	290,001	215,585	118,378	2,787	536,745	76,762	13,244	626,751
Minnesota	130,529	110,324	115,510	5,338	283,616	70,233	7,852	361,701
Mississippi	69,598	66,298	12,732	1,829	133,642	14,227	2,588	150,457
Missouri	130,980	86,742	148,291	8,432	304,992	57,545	11,908	374,445

Table 9. Postsecondary Enrollment by State, Fall 2005, *continued*

State	Public 4-year	Public 2-year	Private 4-year	Private 2-year	Under-graduate	Grad-uate	Profes-sional	Total
Montana	33,863	9,134	4,368	485	43,403	3,920	527	47,850
Nebraska	52,961	40,220	27,447	608	103,581	14,009	3,646	121,236
Nevada	83,672	16,371	7,734	2,928	99,548	10,169	988	110,705
New Hampshire	27,257	13,750	27,470	1,416	59,081	10,076	736	69,893
New Jersey	152,430	151,885	74,200	1,243	321,118	52,571	6,069	379,758
New Mexico	56,839	64,137	9,840	521	115,048	15,271	1,018	131,337
New York	354,914	271,308	493,245	32,614	921,458	199,882	30,741	1,152,081
North Carolina	**196,248**	**200,507**	**86,091**	**1,546**	**426,106**	**50,360**	**7,926**	**484,392**
North Dakota	33,603	9,205	4,797	1,784	44,153	4,433	803	49,389
Ohio	279,039	173,962	142,155	21,194	529,891	73,207	13,252	616,350
Oklahoma	113,608	65,617	26,181	2,647	183,568	19,915	4,570	208,053
Oregon	83,239	80,513	33,436	2,845	174,100	21,374	4,559	200,033
Pennsylvania	256,194	124,077	277,146	34,923	574,319	98,722	19,299	692,340
Rhode Island	23,966	16,042	40,828	546	70,518	9,352	1,512	81,382
South Carolina	95,803	78,883	33,819	1,939	185,252	21,808	3,384	210,444
South Dakota	32,063	5,485	10,682	538	43,206	4,936	626	48,768
Tennessee	125,565	74,829	71,549	11,127	243,912	33,237	5,921	283,070
Texas	537,844	543,491	139,782	19,590	1,093,491	126,796	20,420	1,240,707
Utah	113,164	35,796	47,712	4,019	182,892	16,360	1,439	200,691
Vermont	18,575	5,515	15,147	678	34,161	4,785	969	39,915
Virginia	194,228	154,967	82,535	7,436	373,041	56,304	9,821	439,166
Washington	106,333	190,423	50,874	852	315,154	28,458	4,870	348,482
West Virginia	67,341	17,807	12,193	2,206	86,803	10,747	1,997	99,547
Wisconsin	153,571	115,357	65,665	665	296,743	34,059	4,456	335,258
Wyoming	13,126	19,485	115	2,608	31,684	3,213	437	35,334
U.S.		**6,184,229**	**4,161,815**	**303,826**	**14,963,964**		**337,024**	**17,487,475**

Source: "The Nation," *The Chronicle of Higher Education Almanac Issue 2007–08*, Vol. LIV, No. 1, Washington, D.C., Aug. 31, 2007, p. 10.

Table 10. Average Pay of Full-Time Faculty Members, 2005–06

State	Public Universities	Other Public 4-Year	Public 2-year	Private Universities	Other Private 4-year
Alabama	$70,997	$56,309	$47,094	n/a	$50,708
Alaska	$62,188	$58,439	$69,531	n/a	$47,154
Arizona	$78,879	$60,215	$62,495	n/a	$56,170
Arkansas	$68,187	$51,343	$40,094	n/a	$49,216
California	$104,391	$76,143	$72,402	$104,763	$74,172
Colorado	$75,782	$55,839	$44,013	$73,338	$63,431
Connecticut	$89,268	$69,711	$62,198	$114,129	$72,112
Delaware	$82,710	$62,494	$61,199	n/a	$72,557
District of Columbia	n/a	$68,037	n/a	$82,414	$64,516
Florida	$76,911	$64,186	$49,933	$79,475	$58,199
Georgia	$76,942	$60,363	$42,991	$105,755	$53,059
Hawaii	$72,846	$55,501	$55,318	n/a	$62,541
Idaho	$59,151	$50,314	$46,269	n/a	$45,324
Illinois	$73,710	$61,397	$60,270	$95,021	$59,371
Indiana	$72,000	$56,132	$41,809	$90,331	$55,150
Iowa	$73,669	$61,382	$44,943	$67,234	$51,579
Kansas	$69,719	$53,920	$45,215	n/a	$42,344
Kentucky	$71,458	$55,038	$46,462	n/a	$49,509
Louisiana	$67,042	$51,834	$41,040	$70,517	$49,749
Maine	$63,119	$55,032	$49,412	n/a	$68,105
Maryland	$86,055	$61,511	$59,168	$91,401	$61,834
Massachusetts	$83,657	$67,222	$52,737	$102,208	$72,949
Michigan	$86,674	$62,598	$69,814	$63,275	$57,602
Minnesota	$90,410	$61,958	$57,718	n/a	$59,673
Mississippi	$58,663	$50,631	$43,596	n/a	$46,557
Missouri	$69,399	$56,966	$49,650	$83,397	$49,125
Montana	$57,448	$47,538	$39,199	n/a	$43,808

Table 10. Average Pay of Full-Time Faculty Members, 2005–06, *continued*

State	Public Universities	Other Public 4-Year	Public 2-year	Private Universities	Other Private 4-year
Nebraska	$75,506	$57,098	$44,472	$62,715	$47,111
Nevada	$77,908	$68,439	$60,872	n/a	$61,679
New Hampshire	$79,727	$63,645	$44,249	n/a	$70,484
New Jersey	$89,741	$78,219	$65,320	$104,949	$68,279
New Mexico	$65,618	$50,156	$43,945	n/a	$62,199
New York	$81,754	$68,309	$61,314	$95,878	$68,636
North Carolina	**$80,784**	**$60,833**	**$40,989**	**$92,670**	**$50,484**
North Dakota	$54,446	$43,780	$38,853	n/a	$41,993
Ohio	$70,900	$61,272	$53,139	$90,084	$57,366
Oklahoma	$66,219	$50,227	$43,243	$72,252	$45,872
Oregon	$64,158	$53,038	$53,636	n/a	$60,945
Pennsylvania	$81,912	$65,443	$55,508	$100,993	$64,488
Rhode Island	$75,570	$60,173	$55,184	n/a	$80,879
South Carolina	$72,900	$56,001	$43,594	n/a	$51,156
South Dakota	$55,484	$53,261	$41,164	n/a	$45,053
Tennessee	$70,359	$56,701	$45,379	$91,628	$49,208
Texas	$76,550	$59,208	$49,278	$78,525	$56,749
Utah	$67,372	$51,416	$43,899	$82,410	$57,733
Vermont	$65,630	$47,920	n/a	n/a	$67,112
Virginia	$80,432	$66,658	$48,659	n/a	$57,682
Washington	$90,807	$59,646	$48,739	n/a	$61,239
West Virginia	$63,444	$50,253	$42,004	n/a	$43,196
Wisconsin	$85,082	$56,977	$64,609	$72,622	$52,008
Wyoming	$64,563	n/a	$46,630	n/a	n/a
U.S.	**$76,388**	**$62,511**	**$55,405**	**$93,400**	**$61,322**

Source: "The Nation," *The Chronicle of Higher Education Almanac Issue 2007–08*, Vol. LIV, No. 1, Washington, D.C., Aug. 31, 2007, p. 8.

Chris Hudson: Former Textile Worker

Chris Hudson is riding the wave of North Carolina's economic transformation. A recently laid-off textile worker, he is now a Craven Community College student preparing for North Carolina's most-in-demand occupation—nursing.

"I literally started out sweeping floors 17 years ago at the Amital Spinning Corporation before working my way up to a mechanic/operator," says Hudson. With training from a community college course, Hudson eventually became a member of the salaried management team before the facility shut down in 2006.

"I started to see the writing on the wall when I could see that certain machines weren't running, and product lines were not being produced, and at that point I started thinking," says Hudson. A volunteer Emergency Medical Technician since 1990 in the rural Craven County town of Vanceboro, Hudson began contemplating a new career in health care. Financial assistance through the Workforce Investment Act's dislocated worker program provided a pathway.

"Learning the critical thinking skills of a nurse has been the biggest challenge," he says. "But now I am really beginning to fall into it. As a nurse, you have to see a bigger picture of the scope of patient care."

"I love emergency medicine, so I will probably work in an emergency department, probably a critical care setting," says Hudson, who says his future would have been bleak without the opportunity provided by the community college. "I probably would be making 8 or 9 dollars an hour—it would have been devastating."

"You can't compete with people who make a quarter an hour," notes Hudson, who says the shutdown at his textile company was in part due to the impact of Chinese imports.

"Everywhere I look now at Craven Community College, I see former co-workers in different classes," he says. "I am really proud of these folks, many of whom did not have a high school diploma when they came here. For two years, they are making a financial sacrifice to get their education, but they really understand the value of education. We all know that we are taking advantage of an opportunity of a lifetime."

Photo provided by Craven Community College

(continued from page 44)
college president, I have been confronted by the laughter of potential candidates who have scoffed at proposed salary offers, and the anxieties of current faculty who openly struggle with supporting a family on a community college instructor's salary.

Equipment needs are the second area where resources are not sufficient to meet the work force development challenges of today, much less tomorrow. These resource constraints force colleges to choose between purchasing expensive industrial and/or laboratory equipment, or remaining up-to-date with classroom-based information technology and other instructional equipment costs. Today's equipment replacements are estimated by the N.C. Community College System to cost over $47 million. With an annual equipment appropriation per student at only $214, the current level of investment will certainly not take North Carolina's community college students into the world of 21st century technology.

The work force and economic development consequences of not keeping pace in salaries and equipment clearly play out in the community college challenge of maintaining high-cost vocational and technical programs—programs that have been traditionally male-dominated and that struggle to maintain enrollments in increasingly female-dominated college student bodies, in spite of the lucrative potential job opportunities for graduates. Since 2002, 98 hands-on vocational/technical programs were eliminated among the 58 North Carolina community colleges—26 in construction technologies, 17 in engineering technologies, 45 in industrial technologies, and 10 in transport systems technologies. With declining vocational student populations, significant shortages in equipment funding, and the difficult challenge of attracting qualified technical instructors at current faculty salary rates, community colleges by necessity shift resources away from low-enrollment, resource-intensive areas. The consequence, however, is the exacerbation of work force shortages for skilled technicians.

"The pressure that community colleges face is not only the challenge of keeping pace today, but also the critical task of doing more for tomorrow."

The pressure that community colleges face is not only the challenge of keeping pace today, but also the critical task of doing more for tomorrow. This is best exemplified by the supply and demand discrepancies between the requirements spelled out by the N.C. Workforce Development Commission's *2007 State of the Workforce* report and the resource capacity of the current N.C. Community College System. Based on its projections, 13.1 percent of the new jobs created in North Carolina between 2007 and 2017 will require an associate's degree, a percentage that exceeds the U.S. projections of 11.1 percent of new jobs requiring an associate's degree. This translates into almost 90,000 net new jobs for associate's degree holders in the state, and a preliminary assessment that the N.C. Community College System will need to generate 19,000 *more* associate's degree and occupational license program completers each year to meet the projected work force needs of the state over the next decade. However, even with the 22 percent increase in enrollments at North Carolina community colleges over the past six years and the enormous resource challenges this growth has created, all 58 North Carolina community colleges only produced 25,426 *total* associate's degree, diploma, and certificate completers in the 2006–07 academic year.

The need for health care workers is a perfect example of the tremendous discrepancy between current work force development supply and future demands. The growth in health care jobs has dominated recent job growth in North Carolina, where, without the increase of 60,000 health care jobs added since 2001, the total jobs in our state would have declined by an unprecedented 36,000 positions.[140] Health care occupations dominate all lists of the fastest growing employment opportunities, with the U.S. Bureau of Labor Statistics predicting that 16 of the 30 fastest-growing jobs over the next decade will be in health professions.[141] Not surprisingly, health care enrollments have grown to almost 15 percent of the overall student population at North Carolina community colleges.

However, the data clearly indicate that in most areas of health care, particularly nursing, there is a tremendous need for community colleges to do more, not just keep

pace. North Carolina currently employs almost 91,000 registered nurses, approximately 60 percent of which trained at community colleges. The N.C. Commission on Workforce Development projects a need to add more than 24,000 new nurses to the state's work force to meet projected demand over the next 10 years. Registered nurses will account for 3.5 percent of North Carolina's net new jobs between 2007 and 2017. Not surprisingly, a 2006 report by the Pappas Consulting Group named registered nursing as the number one occupational area where community colleges are not producing an adequate number of graduates to meet projected demand.[142]

According to the 2004 N.C. Nursing Workforce Report, there were 7,000 students during that year who could not be admitted to nursing programs due to limited student slots, thus illustrating the extreme discrepancy between current capacity and the need to do more. However, the resource challenges of North Carolina community colleges to keep pace with the current nursing education opportunities are enormous and growing. The total average annual instructional cost for health care students in North Carolina community colleges is $5008.16, 47 percent greater than the average student instructional funding of $3,406.91. This means that at current funding levels, increasing capacity for two additional nursing or other health care students comes at the cost of approximately three students in other program areas.

The costs of supporting the *current* community college nursing infrastructure—not the infrastructure that would be required to meet the projected demands—could significantly increase as a result of a recent N.C. Board of Nursing proposal to require North Carolina community college nursing programs to employ only master's degree nurses for both full-time and part-time instructor positions by 2015. This requirement would cost community colleges an estimated $7.2 million in additional costs just to keep current programs operational with the same number of full-time faculty, while serving fewer numbers of students and producing fewer nurses in the future. This is because community colleges could not use significant numbers of part-time, clinical instructors who do not have master's credentials.

Understanding the vital role of community colleges in meeting the significant future work force needs is easy for most North Carolina leaders to understand, but that does not mean that they are financially easy to address, as proposals to address the nursing requirements and to enhance technical and vocational education were not funded in the 2007–08 state budget. In 2007 and 2008, the 58 community colleges received $938 million, or 4.5 percent of the state General Fund budget, while the 16 campuses in the University of North Carolina system received $2.6 billion, or 12.6 percent.[143]

It is very difficult for North Carolina legislators to meet the needs of community colleges by simply keeping pace, when pending work force shortages call for community colleges to do much more. Defaulting to this conclusion, however, creates a brutal fact that in doing so, we are "eating the seed corn" of our future economic prosperity**.** "If you can't solve the education problem, you don't have to do anything else," once noted Alan Greenspan, former Chairman of the Federal Reserve Board. "If you don't solve it, nothing else is going to matter all that much."[144]

Conclusion

Community colleges are even more central to North Carolina's future economic prosperity than they were at their inception 50 years ago. What is not certain is whether North Carolina leaders will be able to find the resources necessary to enable community colleges to bridge the significant education and economic gaps that face so many North Carolinians today. The first, most important step in leadership will be a clear recognition of the "brutal facts" that stand in our path to another 50 years of significant educational progress and economic prosperity.

"Education is no place for modest ambitions," states Lee S. Shulman, President of the Carnegie Foundation for the Advancement of Teaching.[145] Rather it calls for the "outrageous ambitions" prescribed by former N.C. Governor Terry Sanford, when at the urging of Dallas Herring, he called upon the 1963 N.C. General Assembly to create the N.C. Community College System by stating:

> You will hear some whisperings abroad saying that we have done enough, have moved well and far and rapidly, and so it is time now to slow down, rest, and catch our breath.
>
> These whispers come from the fearful and those who have always opposed the accomplishments from which they now would rest. This cannot be and is not the spirit of North Carolina.
>
> Much remains to be done, to provide better educational opportunities for the competition our children will surely face, to encourage broader economic development so everybody will have a better chance to make a better living. Now is the time to move forward. Now is no time to loaf along.[146]

Footnotes

[1] Jon Lee Wiggs, *The Community College System in N.C.: A Silver Anniversary History, 1963–1988*, University Graphics, N.C. State University, Raleigh, N.C., 1989, p. 13.

[2] Pat Fahy, *Workforce Development in N.C.: An Overview*, National Center on Education and the Economy, Washington, D.C., 2006, p. 2. On the Internet at *www.skillscommission.org/pdf/Staff%20Papers/North_Carolina_Workforce.pdf*

[3] Ray Uhalde, Jeff Strohl, and Zamira Simkins, *America in the Global Economy*, National Center on Education and the Economy's New Commission on the Skills of the American Workforce, Washington, D.C., 2006, p. 8. On the Internet at *www.skillscommission.org/pdf/Staff%20Papers/America_Global_Economy.pdf*

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[5] Committee on Science, Engineering and Public Policy, *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future*, National Academies Press, Washington, D.C., 2007, p. 14.

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[31] Quinterno, note 26 above, p. 3.

[32] "Staying a Step Ahead," note 24 above, p. 2.

[33] Quinterno, note 26 above, p. 3.

[34] "Staying a Step Ahead," note 24 above, p. 65. See also "Race, Ethnicity, and Public Policy Outcomes: From Disparity to Parity," *North Carolina Insight*, Vol. 21, Nos. 1–2, N.C. Center for Public Policy Research, Raleigh, N.C., June 2004. The Center's study examined racial disparities across a broad

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[43] N.C. Commission on Workforce Development, note 10 above, pp. iv–vii.

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[46] *Graduation Pays*, note 25 above.

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[50] *Ibid*.

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[52] Brian J. Gottolb, *The High Cost of Low Graduation Rates in N.C.,* Milton and Rose D. Friedman Foundation, prepared for Parents for Educational Freedom in N.C., Oct. 2007, p. 5.

[53] Jim Collins, *Good To Great*, HarperCollins, New York, N.Y., 2001, p. 67.

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Community Colleges in North Carolina: What History Can Tell Us About Our Future

by John Quinterno

Executive Summary

Although sometimes overlooked as the poor cousin of elite liberal arts colleges and research universities, North Carolina's community colleges have greatly contributed to the state's emergence as one of America's fastest growing and most vibrant places to live by providing higher education access to any student. As in the past, the community college system must cope with changing educational, social, and economic challenges. Some are old challenges—simultaneously maintaining "open door" admissions and high-quality programs, remaining both affordable and financially afloat, balancing vocational and academic training, and garnering public support without prestigious reputations. Some are new challenges—serving a diverse and non-traditional student body and equipping a work force with the capacity to succeed in a service economy utterly divergent from the manufacturing economy which gave rise to the system itself. When facing these old and new challenges, insights may be drawn from the community colleges' historical evolution.

With the exception of a later start, the development of community colleges in North Carolina mirrored the national pattern. Although North Carolina established Buncombe County Junior College in 1928,

it was not until after World War II that state industrialization efforts began in earnest, creating pressure for skilled laborers and widespread community college access. Upon the war veterans' return and the advent of the G.I. Bill, the UNC system established 12 off-campus extension centers able to administer students' first two years of a four-year degree. These centers eventually became junior colleges with their own state funding.

The next major milestone came in 1955, when the General Assembly created the State Board of Higher Education, which in turn helped develop the Community College Act of 1957. Unfortunately, that legislation only addressed the need for junior colleges and not the vocational/technical education needed for industrial recruitment. In 1958, the first non-collegiate industrial education centers opened.

Upon his election in 1961, the task of piecing these fragments together into a unified system fell to Governor Terry Sanford. Sanford's 25-member Carlyle Commission studying postsecondary education devised a state plan whose centerpiece recommendation was a statewide, coordinated system of comprehensive community colleges. The Community College Act of 1963 converted nearly all of the commission's recommendations into law, creating a system with the primary goals of work force development, maintaining an "open door" admissions policy, keeping tuition as nearly free as possible, and ensuring that every state resident would live within 30 miles of a community college. By 1980, the system developed into 58 quasi-independent campuses with a separate State Board of Community Colleges, which assumed the powers formerly held by the State Board of Education.

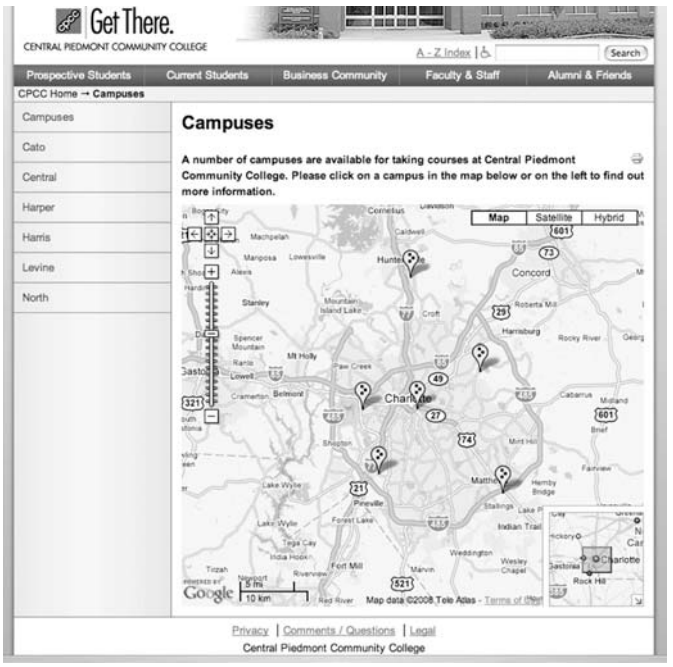
In the 21st century, the N.C. Community College System confronts profound economic and social change that will require the state once again to rethink the role of postsecondary education and its link to economic prosperity. North Carolina continues to evolve from a manufacturing-based economy competing with other states to one centered on the provision of services within a globally competitive economy. These shifts have eliminated many of the jobs open to people with modest levels of formal education—jobs that often paid low but living wages, provided basic benefits like health insurance, and offered upward mobility.

A sizable segment of North Carolina's work force, however, is unprepared to take advantage of the changes in our economy. Estimates of all projected job growth between 2000 and 2010 indicate that 13 percent will require a postsecondary vocational award or associate's degree, 21 percent will require a Bachelor of Arts or higher degree, and 71 percent will require work-related training. Given its mission and history, the task of preparing North Carolina's work force likely will fall squarely on the shoulders of the N.C. Community College System.

A drive along Trade Street, a long avenue running through the heart of Charlotte, showcases the Queen City's transformation from a trading and trucking town into a major metropolitan area and banking and financial center. A road previously used by farmers traveling to market now passes alongside modern skyscrapers, upscale restaurants, stately public buildings, and a sleek basketball arena. And at its eastern end, where the street dips under I-277 and changes its name to Elizabeth Avenue, sits North Carolina's largest institution of higher learning in terms of total enrollment: Central Piedmont Community College. Each year, some 70,000 students (nearly 13,000 are the equivalent of full-time students) participate in the various vocational, academic, developmental education, and customized training courses offered at Central Piedmont's six campuses and through the Internet.[1] The young adult studying for an associate's degree in preparation to enter the work force or transfer to a university; the recent immigrant striving to learn English; the high-school dropout trying to finish school; the displaced worker hoping to launch a new career; the senior citizen wishing to learn something new—all of these individuals turn to Central Piedmont for their educational needs.

The people educated and trained at Central Piedmont in turn have helped fuel Charlotte's growth, a growth reflected in the buildings that line Trade Street. Yet Central Piedmont is hardly unique. In different ways, each of the 58 institutions that constitute the N.C. Community College System has contributed to the state's emergence as one of America's fastest-growing and most vibrant places.

Today, the N.C. Community College System and its component colleges—institutions founded chiefly in the second half of the 20th century—are learning how best to meet the educational, social, and economic challenges of the 21st century. On one level, some of the challenges echo ones that have confronted the system since its founding: providing an open door to all students while maintaining high-quality programs; remaining affordable while staying financially sound; balancing vocational training with academic instruction; and cultivating public support for schools regarded as less prestigious than four-year universities. Yet on another level, some of the challenges are new, like serving an increasingly diverse and nontraditional student population and preparing a work force capable of succeeding in a service economy radically different from the manufacturing one that gave rise to the system itself.



Though each college will work out its own answers to such questions, insights into how to respond can be drawn from the N.C. Community College System's short but fruitful history, a history that has produced one of America's leading community college systems.

The Community College: A Distinctly American Institution

At first glance, Central Piedmont's central campus on Elizabeth Avenue appears indistinguishable from any other institution of higher learning. A visitor to campus would find most

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of the amenities typically associated with a college: neat brick buildings, an elegant Academic and Performing Arts Center, public sculpture, and nonstop construction—everything but residence halls. Despite these superficial similarities, Central Piedmont actually belongs to a radically different educational tradition than the one that gave rise to liberal arts colleges and research universities. While those institutions trace their roots back across the centuries to European antecedents, community colleges like Central Piedmont represent a distinctly 20th century, distinctly American tradition.

For much of the nation's history, the vast majority of Americans received little formal schooling. Most people attended local institutions that, prior to the rise of four-year high schools in the late 1800s, typically ended in the sixth or eighth grades. Only a few people would ever study at a university. This educational system, built for a predominantly agricultural society, was inadequate given the economic changes of the late 19th century. Rapid industrialization created a need for workers with higher levels of skills and training, while robust population growth and a steady decline in child labor increased the number of people interested in additional education. Furthermore, at the same time that interest in vocational education was rising, American universities were searching for ways to shift responsibility for the first two years of collegiate instruction down to other schools to free up time and resources for advanced teaching and research.[2]

"For much of the nation's history, the vast majority of Americans received little formal schooling. Most people attended local institutions that, prior to the rise of four-year high schools in the late 1800s, typically ended in the sixth or eighth grades."

Transcending all of these factors was a particularly American belief that "all individuals should have the opportunity to rise to their greatest potential" and that education was the best means of upward mobility.[3] In response to greater demand for education, some local public schools took action, first by creating four-year high schools and then by adding two additional years of instruction. "Rationalized as completing the students' general education, that is, helping them become good citizens, homemakers or workers, the schools were actually filling a gap," writes Arthur Cohen, professor *emeritus* of higher education at the University of California, Los Angeles, about the addition of grades 13 and 14 to public education. Cohen continues, "Community colleges rose into a vacuum, as it were, well ahead of state authorization or planning."[4]

The nation's first publicly-supported community college, Joliet Junior College, opened in 1902 in Illinois, and by 2001, approximately 1,100 such schools existed.[5] Because community colleges grew out of local efforts, they developed in a fragmented manner and initially assumed one of two forms. Some were junior colleges where students could complete the first two years of collegiate studies, while others were vocational/technical schools that generally offered two years of non-collegiate occupational training.[6] Following the Second World War, the two types of institutions merged, came under state oversight, and became what are now defined as comprehensive community colleges—namely, institutions "regionally accredited to award the associate in arts or the associate in science as its highest degree."[7]

The local roots of community colleges remained obvious even after state governments took control of many schools. Matters pertaining to funding, governance, curriculum, and faculty obligations still resemble local public schools more than four-year universities. "The policy of admitting all students who apply, the patterns of funding on the basis of student attendance, the qualifications and working life of the faculty and the generality of the curriculum all betray their origins," observes UCLA's Cohen.[8] Doubtless, the most important idea carried over from local schools is the policy of admitting all students. This "open door" approach is perhaps the hallmark of a community college.

Ironically, offering courses nearly free of charge statewide may have served to lessen its value in the public eye—a situation exacerbated by the fact that four-year universities never stopped providing the initial two years of postsecondary instruction.

"For most of the 20th century," argue education professors Barbara Townsend and Susan Twombly, "community colleges operated on the margins of the education system. From a four-year college perspective, the community college has sometimes been viewed as the poor cousin of elite liberal arts colleges and research universities."[9] This stereotype often blinds public leaders, many of whom are graduates of four-year institutions, to the impact that community colleges such as Central Piedmont have on local residents and businesses.

Community Colleges in North Carolina

Early Efforts, 1927–45

With the exception of a later start, the development of community colleges in North Carolina mirrored the national pattern. Like most southern states, North Carolina lagged behind the rest of the nation in terms of industrialization until after the Second World War. Once industrialization began in earnest, pressures to build community colleges mounted, and due to progressive leadership, North Carolina overcame its late start to lay the foundation for a comprehensive, coordinated network of community colleges. The system that finally coalesced during the 1960s both reflected the particular political culture of the postwar era and became a national model.

"In 1940, for example, half of all adults older than age 25 had completed fewer than 7.4 years of formal school, and in rural areas half of all adults had completed fewer than 6.6 years of schooling."

Prior to World War II, North Carolina was "an overwhelmingly rural state dependent upon agriculture and low-wage manufacturing, gripped by poverty and burdened by segregation."[10] The state was not just poor but poorly educated. In 1940, for example, half of all adults older than age 25 had completed fewer than 7.4 years of formal school, and in rural areas half of all adults had completed fewer than 6.6 years of schooling.[11] While this educational profile may have been acceptable for an agricultural economy, the need for better-educated, more skilled workers was becoming obvious to attentive public leaders across the state.

Early action came in 1927 when the Buncombe County schools used public funds to establish Buncombe Junior College, a free two-year institution offering vocational training and college transfer courses. This action engendered opposition from people who objected to the use of tax dollars to support such a school. A legal challenge followed, and the case, *Zimmerman v. Board of Education,* went before the state Supreme Court, which ruled in 1930 that "a junior college could be established and maintained as part of the public schools."[12] Despite the victory, Buncombe County Junior College would be the state's only public junior college until 1947.

Creating the Pieces, 1946–59

The push to build community colleges gained momentum after thousands of soldiers returned home at the end of World War II. After years of fighting, these veterans wanted to build better lives for themselves, and thanks in part to the G.I. Bill, they possessed the financial resources needed to pursue higher education. To meet the influx of students, the University of North Carolina system established 12 off-campus extension centers to provide college-level instruction to first- and second-year students.[13] Two of the extension centers soon began receiving money from local governments and were converted into junior colleges. In 1947, New Hanover County turned its local extension center into Wilmington Junior College, and in 1949, Mecklenburg County followed suit and transformed its local extension center into Charlotte College. In 1950, a time when racial segregation in public

and private colleges was the state norm, that county also established Carver College (later Mecklenburg College), a two-year institution for African Americans.[14]

Additional momentum came in 1947 with the release of a report by President Harry Truman's Commission on Higher Education, which argued that "half of the nation's young could benefit from extending their formal education through grade 14."[15] The Truman Commission's report prompted the N.C. General Assembly, with financial support from the Knapp Foundation, to establish a study committee chaired by Dr. Allan Hurlburt of Duke University. The Hurlburt Commission proposed creating a statewide network of free, accessible, and comprehensive two-year schools.[16]

The commission's recommendations died in the legislature as a result of opposition from church-sponsored colleges, a lack of legislative leadership, fear that the schools would be integrated racially, and a general reluctance to spend money. Ironically, the report rejected by North Carolina—which actually was the first state to sponsor a study focused exclusively on community colleges—would become the blueprint for Florida's system of community colleges.[17]

Despite the rejection of the Hurlburt Commission's report, interest in community colleges continued to grow during the 1950s. Leadership on this issue came from the modernizing tendencies of a group of public officials. UNC-Greensboro sociology professor and state Representative Paul Luebke (D-Durham) describes politics in North Carolina as revolving around a conflict between two competing ideologies: traditionalism and modernism. Luebke describes traditionalism as the product of rural culture and Baptist theology, favoring agriculture and historic industries like textile manufacturing, disliking taxation and active government, preferring the existing social order, and suspicious of change. Modernism, in contrast, thrives in metropolitan areas and favors economic growth, public spending, and government involvement needed for growth and the resulting social changes. Central to modernism is a belief in education as the driver of prosperity, he says.[18] Throughout the postwar period, modernists drew inspiration from the work of Howard Odum, a sociologist at the University of North Carolina–Chapel Hill, who argued that deficiencies in education were the most significant impediment to progress in North Carolina and the South.[19]

"Increased interest in postsecondary education and the realization that an economy that balanced industry and agriculture required better-skilled workers sparked political action in the 1950s."

Increased interest in postsecondary education and the realization that an economy that balanced industry and agriculture required better-skilled workers sparked political action in the 1950s. In 1955, the General Assembly created the State Board of

Higher Education to coordinate higher education across the state.[20] The board's first Chair, D. Hiden Ramsey of Asheville, supported public junior colleges, provided those schools offered only college-level programs, not vocational/technical education. Ramsey's view, which Governor Luther Hodges (1954–61) shared, helped bring about the Community College Act of 1957.[21] This legislation required publicly supported junior colleges to establish campus boards of trustees, sever ties to local school boards, and submit to the authority of the State Board of Higher Education. In return, the state provided financial support for college transfer courses. The 1957 legislation also facilitated the establishment of two additional junior colleges: College of The Albemarle and Gaston College.[22]

> *"Unfortunately, the Community College Act of 1957 did not address the state's need for vocational/ technical education—a need that was hindering the state's national efforts at industrial recruitment."*

Unfortunately, the Community College Act of 1957 did not address the state's need for vocational/technical education—a need that was hindering the state's national efforts at industrial recruitment. To address this problem, a separate network of industrial education centers was established. These schools were non-collegiate in focus and subject to the authority of local school boards and the State Board of Education. The first seven industrial education centers opened in 1958.[23] These centers also were the vehicles through which North Carolina provided customized industrial training to employers promising to create a certain number of new jobs.

By 1960, North Carolina possessed many of the building blocks of a statewide system of community colleges: five junior colleges offering academic instruction and 18 authorized industrial education centers providing vocational/technical education and customized industrial training.[24] Moreover, the state contained a large population of low-skilled workers who could benefit from those institutions. The existing resources, however, were not yet organized in a coherent manner and still confronted resistance from some public leaders, disagreements over the balance between academic and vocational/technical education, and opposition from private schools that perceived public schools as rivals. The challenge of uniting the pieces into a system would fall to the state's newly elected governor, Terry Sanford (1961–65).

Creating the N.C. Community College System, 1960–63

A lawyer and legislator from Fayetteville, Sanford entered the office of Governor determined to place education at the center of his administration—an intention clearly expressed in his 1961 Inaugural Address:

> We must give our children the quality of education which they need to keep up in this rapidly advancing, scientific, complex world. They must be prepared to compete with the best in the nation, and I dedicate my public life to the proposition that education must be of a quality that is second to none. A second-rate education can only mean a second-rate future for North Carolina.[25]

Sanford's ambitions for education—improved teacher pay, additional school funding, and expanded post-

secondary vocational/technical education—exceeded existing financial resources. Consequently, Sanford opted to pursue two objectives during the early part of his term. First, to generate revenue, Sanford proposed, and the legislature approved, an extension of the state sales tax on groceries.[26] Though this measure generated substantial revenue, it was a controversial decision, given that the sales tax is arguably a regressive form of taxation.

Second, Sanford convened a 25-member study commission called the Governor's Commission on Education Beyond the High School, led by Irving Carlyle, a lawyer from Winston-Salem. The Carlyle Commission was asked to study the state's system of postsecondary education and develop a plan for addressing the state's extremely poor ranking in the number of students pursing advanced education.[27]

Chairpersons of the North Carolina State Board of Community Colleges

Carl Horn	1981–1983
John A. Forlines	1983–1989
William F. Simpson	1989–1993
Lt. Governor Dennis A. Wicker	1993–1999
Dr. G. Herman Porter	1999–2001
James J. Woody	2001–2005
Hilda Pinnix-Ragland	2005–present

Source: A Matter of Facts: North Carolina Community College System Fact Book 2007, North Carolina Community College System, Raleigh, N.C., 2007, pp. 4–5. On the Internet at *http://www.ncccs.cc.nc.us/Publications/docs/Publications/fb2007.pdf*

Meeting in 1961 and 1962, the Carlyle Commission studied every aspect of postsecondary education and developed a set of 61 recommendations. The report was predicated upon three beliefs: (1) education serves a public purpose; (2) postsecondary education was growing in importance and should be open to all students able to benefit from it; and (3) more resources were needed. The report stated:

> In a day when some kind of post-high school training is essential to any sort of profitable employment, North Carolina cannot afford the 'economy' of sending a smaller percentage of our young people to college than do four-fifths of the 50 states. Moreover, all evidence attests that educational facilities, public and private, must be expanded substantially if we are to maintain even our present showing in the face of the rapidly rising enrollment demands of the mid-1960s.[28]

"The [Carlyle] commission set up an awareness that North Carolina had to act and set the wheels in motion for contemporary higher education."

William Friday, President *emeritus* of the University of North Carolina system

The report's centerpiece recommendation was to create a statewide, coordinated system of comprehensive community colleges. The commission proposed turning the junior colleges in Charlotte, Asheville, and Wilmington into four-year, state-supported institutions and merging the remaining junior colleges and industrial education centers into "one system of post-high school institutions offering college parallel, technical-vocational-terminal and adult education tailored to area needs." Additionally, the report called for placing the new community colleges under the authority of a professional department of community colleges under the umbrella of the State Board of Education and the establishment of local boards of trustees to oversee individual campuses. Finally, the commission suggested that the costs of operating each college be allocated among the state (65 percent), county governments (15 percent), and tuition receipts (20 percent). State funds generally would be directed towards operations while local funds would be used to provide and maintain physical facilities, a policy consistent with the state's mode of financing public schools.[29]

Reflecting back on his service on the Carlyle Commission, William Friday, President *emeritus* of the University of North Carolina system, described it as "the most constructive effort I ever worked on. The commission set up an awareness that North Carolina had to act and set the wheels in motion for contemporary higher education."

The wheels set in motion by the Carlyle Commission led to passage of the Community College Act of 1963, which incorporated essentially all of the commission's recommendations.[30] The statute tasked the new N.C. Community College System with the "the establishment, organization and administration of a system of educational institutions throughout the state offering courses of instruction in one or more areas of two-year college parallel, technical, vocational, and adult education programs." The authorizing legislation further articulated the system's mission:

> The major purpose of each and every institution operating under the provisions of this Chapter shall be and continue to be the offering of vocational and technical education and training, and of basic, high school level, academic education needed in order to profit from vocational and technical education, for students who are high school graduates or who are beyond the compulsory age limit of the public school system and who have left the public school.[31]

The 1963 legislation also established several defining features of the community college system. First, the old debate between academic and vocational/technical education seemingly was resolved in favor of vocational/technical education. College-level courses would be offered, but the system was to be primarily a work force development system—a point driven home through a later amendment to the legislation.[32] Additionally, the "open door" nature of community colleges was stated directly in the enabling legislation. The debates also gave rise to two policies that have guided the system for decades—that tuition be kept as low as possible and that every state resident live within commuting distance (generally 30 miles) of a community college.[33]

"The 1963 legislation also established several defining features of the community college system. First, the old debate between academic and vocational/technical education seemingly was resolved in favor of vocational/technical education."

Opposition to the community college bill came from three quarters. First, some were wary of new public spending for such a comprehensive network of schools. Second, private colleges, particularly Baptist ones, saw low-tuition community colleges as tax-subsidized rivals. Finally, advocates for the four-year universities claimed that a community college system would lower academic standards and harm the universities.[34] According to John Sanders, former director of what is now the UNC-Chapel Hill School of Government, legislators were—and may still be—concerned that "in a comprehensive community college, the college transfer role would tend to crowd out the technical-vocational role."

According to Dr. I. E. Ready, the first President of the N.C. Community College System, "Chapter 115A passed the General Assembly with a minimum of difficulty. Part of the reason was the changing of the name of North Carolina State College to North Carolina State University. … So, by drawing fire to that particular omnibus provision of the bill, we in the Community College program escaped with a minimum of opposition in the General Assembly."[35] Ultimately, many attribute the bill's legislative success to the political support of then-Governor Terry Sanford.[36]

In 1963, the N.C. Community College System was born. W. Dallas Herring, the Chair of the State Board of Education and an early advocate of the new system,

collaborated with other board members to appoint Dr. I.E. Ready as the new Department of Community Colleges' first director, a position that eventually became the system President (see table on right).[37] Charles R. Holloman became the department's business manager, crafting the system's first budget.[38]

The following year, at an organizational conference for the new network of schools, Herring described the vision for a community college system:

> The only valid philosophy for North Carolina is the philosophy of total education; a belief in the incomparable worth of all human beings … whose talents the state needs and must develop to the fullest possible degree. That is why the doors to the institutions in North Carolina's system of community colleges must never be closed to anyone of suitable age who can learn what they teach.[39]

A Time of Growth, 1964–79

The period between 1964 and 1979 was one of rapid growth for the N.C. Community College System. During this period, the system evolved from a collection of industrial education centers and junior colleges into a federation of 58 quasi-independent colleges.[40] Full-time equivalent enrollment grew fivefold, and annual state expenditures rose in real value from $37 million in 1964 to $376 million in 1979, or in nominal value from $6 million in 1964 to $140 million in 1979.[41] The community colleges also benefited from infusions of federal funds through "Great Society" programs such as the Manpower Development and Training Act and the Economic Opportunities Act.[42] By 1980, all of the system's 58 campuses, core programs, and fundamental policies were in place.

The history of Central Piedmont Community College illustrates this process. When the Community College Act of 1963 was passed, the Queen City possessed three post-secondary institutions: Charlotte College, slated to become UNC-Charlotte; Mecklenburg College, a vocational school for African Americans; and the Central Industrial Education Center. A decision was made to merge Mecklenburg College and the industrial education center into one school, the institution now known as Central Piedmont Community College. This merger was not easy. Leaders struggled to combine two existing schools, consolidate two locations into one (Central Piedmont's central campus on Elizabeth Avenue), establish programs, manage tensions surrounding racial integration, hire staff, win accreditation, comply with federal and state funding requirements, expand a campus, and earn

(continues on page 72)

Presidents of the North Carolina Community College System

I.E. Ready	1963–1970
Ben E. Fountain, Jr.*	1971–1978
Larry J. Blake	1979–1982
Robert W. Scott	1983–1995
Lloyd V. Hackley	1995–1997
Martin Lancaster	1997–April 2008
Scott Ralls	May 2008–present

**Charles* R. Holloman served in an acting capacity from September 1978 to July 1979.

Source: A Matter of Facts: North Carolina Community College System Fact Book 2007, North Carolina Community College System, Raleigh, N.C., 2007, p. 5. On the Internet at *http://www.ncccs.cc.nc.us/Publications/docs/Publications/fb2007.pdf*

Table 1. The North Carolina

College Name	Main Campus Location City (County)
1. Alamance Community College	Graham (Alamance)
2. Asheville-Buncombe Technical Community College	Asheville (Buncombe)
3. Beaufort County Community College	Washington (Beaufort)
4. Bladen Community College	Dublin (Bladen)
5. Blue Ridge Community College	Flat Rock (Henderson)
6. Brunswick Community College	Supply (Brunswick)
7. Caldwell Community College and Technical Institute	Hudson (Caldwell)
8. Cape Fear Community College	Wilmington (New Hanover)
9. Carteret Community College	Morehead City (Carteret)
10. Catawba Valley Community College	Hickory (Catawba)
11. Central Carolina Community College	Sanford (Lee)
12. Central Piedmont Community College	Charlotte (Mecklenburg)
13. Cleveland Community College	Shelby (Cleveland)
14. Coastal Carolina Community College	Jacksonville (Onslow)
15. College of The Albemarle	Elizabeth City (Pasquotank)
16. Craven Community College	New Bern (Craven)
17. Davidson County Community College	Lexington (Davidson)
18. Durham Technical Community College	Durham (Durham)
19. Edgecombe Community College	Tarboro (Edgecombe)
20. Fayetteville Technical Community College	Fayetteville (Cumberland)
21. Forsyth Technical Community College	Winston-Salem (Forsyth)
22. Gaston College	Dallas (Gastonia)
23. Guilford Technical Community College	Jamestown (Guilford)
24. Halifax Community College	Weldon (Halifax)
25. Haywood Community College	Clyde (Haywood)
26. Isothermal Community College	Spindale (Rutherford)
27. James Sprunt Community College	Kenansville (Duplin)
28. Johnston Community College	Smithfield (Johnston)
29. Lenoir Community College	Kinston (Lenoir)
30. Martin Community College	Williamston (Martin)
31. Mayland Community College	Spruce Pine (Avery)
32. McDowell Technical Community College	Marion (McDowell)
33. Mitchell Community College	Statesville (Iredell)

Community College System

Service Area (Counties)	# of Approved Off-Campus Facilities	Off-Campus Locations (Cities) Each city may contain multiple locations.
Alamance	1	Burlington
Buncombe, Madison	2	Enka, Marshall
Beaufort, Hyde, Tyrrell, Washington	N/A	N/A
Bladen	1	Kelly
Henderson, Transylvania	1	Brevard
Brunswick	3	Supply, Leland, Southport
Caldwell, Watauga	3	Boone
New Hanover, Pender	3+	Burgaw, Hampstead, Wilmington
Carteret	1*	Davis
Alexander, Catawba	1	Taylorsville
Chatham, Harnett, Lee	5	Pittsboro, Lillington, Sanford, Siler City, Pineview
Mecklenburg	6	Huntersville, Charlotte, Matthews
Cleveland	N/A	N/A
Onslow	N/A	N/A
Camden, Chowan, Currituck, Dare, Gates, Pasquotank, Perquimans	3	Edenton, Manteo, Elizabeth City
Craven	1	Havelock
Davidson, Davie	1	Mocksville
Durham, Orange	2	Durham, Hillsborough
Edgecombe	1	Rocky Mount
Cumberland	3	Fayetteville, Spring Lake
Forsyth, Stokes	4	Winston-Salem, King, Kernersville
Gaston, Lincoln	2	Lincolnton, Belmont
Guilford	4	Greensboro, High Point
Halifax, Northhampton	N/A	N/A
Haywood	4	Clyde, Waynesville
Polk, Rutherford	1	Columbus
Duplin	N/A	N/A
Johnston	3	Clayton, Four Oaks
Greene, Jones, Lenoir	5++	Kinston, Snow Hill, Trenton, Walstonburg, LaGrange
Bertie, Martin, Washington	1	Windsor
Avery, Mitchell, Yancey	2	Newland, Burnsville
McDowell	2	Marion
Iredell	1	Mooresville

Table 1. The North Carolina Community

College Name	Main Campus Location City (County)
34. Montgomery Community College	Troy (Montgomery)
35. Nash Community College	Rocky Mount (Nash)
36. Pamlico Community College	Grantsboro (Pamlico)
37. Piedmont Community College	Roxboro (Person)
38. Pitt Community College	Greenville (Pitt)
39. Randolph Community College	Asheboro (Randolph)
40. Richmond Community College	Hamlet (Richmond)
41. Roanoke-Chowan Community College	Ahoskie (Hertford)
42. Robeson Community College	Lumberton (Robeson)
43. Rockingham Community College	Wentworth (Rockingham)
44. Rowan-Cabarrus Community College	Salisbury (Rowan)
45. Sampson Community College	Clinton (Sampson)
46. Sandhills Community College	Pinehurst (Moore)
47. South Piedmont Community College	Polkton (Anson)
48. Southeastern Community College	Whiteville (Columbus)
49. Southwestern Community College	Sylva (Jackson)
50. Stanly Community College	Albemarle (Stanly)
51. Surry Community College	Dobson (Surry)
52. Tri-County Community College	Murphy (Cherokee)
53. Vance-Granville Community College	Henderson (Vance)
54. Wake Technical Community College	Raleigh (Wake)
55. Wayne Community College	Goldsboro (Wayne)
56. Western Piedmont Community College	Morganton (Burke)
57. Wilkes Community College	Wilkesboro (Wilkes)
58. Wilson Technical Community College	Wilson (Wilson)

Notes:

* Indicates an approved off-campus location that is not currently used. The number of asterisks indicates the number of off-campus locations not currently in use. Approved off-campus locations include only locations approved by the State Board of Community Colleges and not other local facilities available for community college use. Service areas are used for planning and administration purposes only and do not establish attendance areas. A student may enroll in any course at any community college.

\+ Indicates a vacated off-campus location. The number of plus signs indicates the number of vacated locations.

° Indicates an approved off-campus location being developed.

College System, *continued*

Service Area (Counties)	# of Approved Off-Campus Facilities	Off-Campus Locations (Cities) Each city may contain multiple locations.
Montgomery	N/A	N/A
Nash	N/A	N/A
Pamlico	1	Bayboro
Caswell, Person	1	Yanceyville
Pitt	1	Pitt
Randolph	2	Archdale, Asheboro
Richmond, Scotland	3	Rockingham, Hamlet, Laurinburg
Bertie, Hertford, Northampton	N/A	N/A
Robeson	3	Lumberton, Pembroke
Rockingham	N/A	N/A
Cabarrus, Rowan	3	Concord, Kannapolis
Sampson	2**	Clinton
Hoke, Moore	2	Raeford, Robbins
Anson, Union	2	Wadesboro, Monroe
Columbus	N/A	N/A
Jackson, Macon, Swain	2	Franklin, Bryson City
Stanly	1	Locust
Surry, Yadkin	2	Yadkinville, Mount Airy
Cherokee, Clay, Graham	1	Robbinsville
Franklin, Granville, Vance, Warren	3	Louisburg, Creedmoor, Warrenton
Wake	5°	Raleigh, Cary
Wayne	1	Goldsboro
Burke	N/A	N/A
Alleghany, Ashe, Wilkes	2	Sparta, West Jefferson
Wilson	1	Wilson

Source: A *Matter of Facts: The North Carolina Community College System Fact Book 2007,* North Carolina Community College System, Raleigh, N.C., pp. 12–15 and 55–58. On the Internet at *http://www.ncccs.cc.nc.us/Publications/docs/Publications/fb2007.pdf*

(continued from page 67)
community support. By 1970, Central Piedmont was North Carolina's fifth-largest institution of higher learning.[43]

Meanwhile, the state-level community college system office in Raleigh confronted funding battles with the legislature, clashes between the state department and local campuses, and institutional needs. Additionally, the department came under pressure in the late 1970s when the question of the proper balance between academic and vocational/technical education resurfaced. Some critics, including Gov. James B. Hunt, Jr., a protégé of Terry Sanford and a believer in the idea of education and economic growth, claimed that the system was slighting its vocational mission and failing to produce the skilled workers needed for industrial recruitment.[44]

"The establishment of the State Board of Community Colleges was the last major step in the development of the community college system."

In 1977, Senate Resolution 813 created a legislative study commission to study the community college system. The commission did not recommend the establishment of a separate board for the community colleges, according to the report of the commission to the 1979 General Assembly.[45] Nevertheless, in 1979, the Senate Education Committee, chaired by Sen. James D. Speed (D-Franklin), roiled the waters when it considered a proposal to transfer authority of the N.C. Community College System from the State Board of Education to a new, independent board of community colleges.[46] This proposal provoked opposition from the State Board of Education, editorial writers, and elected officials who feared that changes to the governance structure would weaken the system, transfer too much authority to local colleges, and de-emphasize vocational/technical education.[47] The opposition's two dominant rallying cries questioned "whether college parallel programs would be of high enough quality, and whether the public institutions would be a threat to comparable private colleges in the competition for students."[48]

The General Assembly established a separate community college board in 1979 and appointed a transition committee led by former Governor Sanford. The transition committee paved the way for a new State Board of Community Colleges to exercise oversight of the 58-campus system effective in 1981.[49]

The establishment of the State Board of Community Colleges was the last major step in the development of the community college system. As the board developed, it chose to craft a working mission statement derived from the statutory mission that would help the system better focus its resources on contemporary social issues. That working mission statement established the following goals for the system:

The mission of the N.C. Community College System is to open the doors to high-quality, accessible educational opportunities that minimize barriers to postsecondary education, maximize student success and improve the lives and well-being of individuals by providing:

- Education, training and retraining for the workforce, including basic skills and literacy education, occupation and pre-baccalaureate programs.
- Support for economic development through services for, and in partnership with, business and industry.
- Services to communities and individuals, which improve the quality of life.[50]

The N.C. Community College System Today

While the N.C. Community College System was in its nascent stages, "Governor Hodges prophesied that it one day might enroll as many as "fifty thousand annually." Less than a decade later, in 1973, the system enrolled 28,520 full-time equivalent (FTE) enrollments. Within six years after that, the number increased to 59,329. In 1982, Hodges' prediction had been exceeded more than twofold, to 129,368 FTE.[51] In 2003, Martin Lancaster, President of the N.C. Community College System, discussing Hodges' prediction of serving 50,000 students, noted, "He was only off by about 700,000."[52]

Just as the system has surpassed prophesies regarding enrollment, few would have predicted the contemporary challenges faced by the state's 58 community colleges. In the 21st century, the N.C. Community College System confronts profound economic and social changes that will require the state once again to rethink the role of postsecondary education and its link to economic prosperity.

Economically, North Carolina continues to evolve from a manufacturing-based economy to one centered on the provision of services within a globally competitive economy. These shifts have eliminated many of the jobs open to people with modest levels of formal education—jobs that often paid low but living wages, provided basic

benefits like health insurance, and offered upward mobility. Jobs now come in two forms: well-paying ones that require higher levels of educational attainment and poorly paying ones that require little education. In this environment, "education consequently has emerged as both a dividing line and a prerequisite for success in today's economy."[53]

> *"Given its mission and history, the task of preparing North Carolina's work force likely will fall squarely on the shoulders of the N.C. Community College System."*

A sizable segment of North Carolina's work force, however, is unprepared to take advantage of the changes in our economy. According to MDC, Inc.'s *State of the South 2004* report, out of all projected job growth between 2000 and 2010, 13 percent will require a postsecondary vocational award or associate's degree, 21 percent will require a Bachelor of Arts or higher degree, and 71 percent will require work-related training.[54] Given its mission and history, the task of preparing North Carolina's work force likely will fall squarely on the shoulders of the N.C. Community College System. The North Carolina Commission on Workforce Development estimates that balancing labor demand and supply will require the number of people completing programs

Study Commissions on Community Colleges in North Carolina

There have been two statewide study commissions of North Carolina's community colleges. In 1962, Winston-Salem lawyer Irving Carlyle headed the first commission, the Governor's Commission on Education Beyond the High School.[1] The "Carlyle Commission" issued a report whose centerpiece recommendation was a statewide, coordinated system of comprehensive community colleges.[2] The General Assembly adopted nearly all of the plan's recommendations in the Community College Act of 1963.[3]

Sherwood Smith, former CEO of Carolina Power & Light Company (now Progress Energy), chaired a second commission, the Commission on the Future of the N.C. Community College System, which issued a report in February 1989 entitled, *Gaining the Competitive Edge: The Challenge to North Carolina's Community Colleges*, from which the following excerpt is taken.

Thirty-two years ago, Governor Luther Hodges and State School Board Chairman Dallas Herring took a bold step. Then, as now, sweeping changes were transforming the North Carolina economy, creating a demand for a new class of industrial worker in a state historically geared to agriculture. The new economy required workers with sound technical skills, and full access to the opportunities of society required stronger general education credentials. Herring dreamed of a new type of college, the "people's college," that would fulfill industry's demand for trained employees and make higher education a possibility for adults over 18 who otherwise would never progress beyond high school.

In 1957 the General Assembly passed the first Community College Act and also provided funding to initiate a statewide system of Industrial Education Centers to provide technical training to adults and selected high school students. By 1961, North Carolina had five public junior colleges emphasizing arts and sciences and seven Industrial Education Centers focusing on technical and vocational education. In 1963 the two fledgling systems were unified under the jurisdiction of a new Department of Community Colleges in the State Board of Education. After 1963 the system grew quickly, from 24 institutions to 43 in 1966, 54 in 1969, and 58 by 1979. In 1981 a new, independent State Board of Community Colleges assumed

at community colleges across North Carolina to grow by 19,000 per year for the next 10 years.[55]

According to the N.C. Community College System's second President, Benjamin E. Fountain, "… [T]he population of the state today is some three million more than the five million of the 1970s. I talk these days with increasing numbers of highly qualified young people who are frustrated by the prospects of admission to the colleges of their choices. We soon must face the question of building more colleges or massively enlarging colleges some think are already unwieldy in size or of setting enrollment caps. North Carolina needs to consider now her response for the twenty first century. Surely North Carolina will find the way to meet the increasing demand for post high school education from its rising population in the twenty first century as it did in the last century."[56]

Dr. Tony Zeiss, president of Central Piedmont Community College, views the combination of community colleges' vocational focus and accessibility as the means to meeting such demands. "As 'career-focused' colleges, community colleges are

authority for the expanded system from the State Board of Education.

Growth in capacity was matched by growth in demand for the system's services. Early in the life of the system, Governor Hodges prophesied that it one day might enroll as many as "fifty thousand annually." By 1963, less than a decade after its birth, the system recorded 28,520 full-time-equivalent (FTE) enrollments; six years later the number had soared to 59,329. By 1982 Hodges' benchmark for success had been exceeded more than twice, to 129,368 FTE.[4]

Measured by numbers alone, the new system was a dramatic success; but it excelled on a qualitative scale also. The system's technical training capacity—superior to anything else in the South—helped North Carolina build and sustain an important competitive advantage in recruiting new industries to the state. The presence of a well-funded statewide technical training network assured prospective businesses that abundant skilled labor would be available and was testimony to the state's commitment to maintaining a strong workforce.

The hybrid character of the system—born of a marriage of technical and general education institutions—also gave the system attractive breadth and great appeal. Neither a pure technical training system nor a mere collection of junior colleges, the new system occupied previously uninhabited ground between the public schools and the colleges and universities, providing comprehensive advanced training for students with a wide range of aspirations and needs and extending the benefits of higher education to hundreds of thousands of others.

North Carolina's community colleges quickly assumed the profile that Dallas Herring hoped they would have: a place, according to Herring's frequent citation of Governor Aycock, where a student could "burgeon out all that is within him." As more narrowly focused two-year systems arose elsewhere during the 1960s, North Carolina's became and remained a model of depth, breadth, and quality for the nation.[5]

Footnotes

[1] Jon L. Wiggs, *The Community College System in North Carolina: A Silver Anniversary History, 1963–1988,* University Graphics, North Carolina State University, Raleigh, N.C., p. 15.

[2] *The Report of the Governor's Commission on Education Beyond the High School*, Raleigh, N.C., 1962, pp. xi–xiii.

[3] Wiggs, note 1 above, p. 12.

[4] Footnote added. In 2003, Martin Lancaster, President of the N.C. Community College System, discussing the prediction of eventually serving 50,000 students annually, notes, "He was only off by about 700,000." Tim Simmons, "College system evolves: 40 years have brought growth, new challenges to state's community colleges," *The News & Observer*, Raleigh, N.C., June 2, 2003, p. B1.

[5] *Gaining the Competitive Edge: The Challenge to North Carolina's Community Colleges*, the report of the Commission on the Future of the North Carolina Community College System, MDC, Inc., Chapel Hill, N.C., Feb. 1989, p. 12.

designed to be inclusive by nature," says Zeiss. "They are accessible—financially, geographically, and academically," thereby enabling Central Piedmont to serve a student body which consists of "emerging workers, existing workers, transitioning workers, and entrepreneurs." Community colleges, says Zeiss, train everyone from future Ph.D.s and veterans to immigrants and remedial students.

While the career needs of students have changed in the 40 years since the founding of the N.C. Community College System, the system's fundamental ability to connect North Carolinians to opportunities has endured. Zeiss, for instance, recounts the story of James White, who took his first Central Piedmont course while living in a homeless shelter in Charlotte. In time, White earned an associate's degree, married, bought a house, continued his education, and now is pursuing a doctoral degree. Looking backward to the commitment to opportunity that motivated the N.C. Community College System's creation offers powerful insights into how to aid students like White in their pursuit of a more prosperous future.

Footnotes

[1] *2005–2006 Annual Report*, Central Piedmont Community College, Charlotte, N.C., p. 4. On the Internet at *http://www1.cpcc.edu/administration/annual-report/2005_Annual-Report.pdf/view*, and *A Matter of Facts: The North Carolina Community College System Fact Book 2007,* North Carolina Community College System, Raleigh, N.C., p. 75. On the Internet at *http://www.nccccs.cc.nc.us/Publications/docs/Publications/fb2007.pdf*

[2] Arthur Cohen, "Governmental Policies Affecting Community Colleges: A Historical Perspective," *Community Colleges: Policy in the Future Context*, Apex Publishing, Westport, Conn., 2001, p. 5.

[3] Arthur Cohen and Florence Brawer, *The American Community College*, 4th ed., Jossey-Bass Publishers, San Francisco, Cal., 2003, p. 10.

[4] Cohen, note 2 above, pp. 5–6.

[5] *Ibid*., pp. 4 and 9.

[6] Cohen and Brawer, note 3 above, pp. 3–4.

[7] *Ibid*., p. 5.

[8] Cohen, note 2 above, pp. 5–6.

[9] Barbara Townsend and Susan Twombly, "Introduction," *Community Colleges: Policy in the Future Context*, Apex Publishing, Westport, Conn., 2001, p. ix.

[10] John Quinterno, *North Carolina's Unfinished Transformation: Connecting Working Families to the State's Newfound Prosperity*, North Carolina Budget and Tax Center, Raleigh, N.C., Winter 2006, p. 7. On the Internet at *http://www.aecf.org/KnowledgeCenter/Publications.aspx?pubguid=%7B068FE718-BD73-4346-B2E3-812A36A6AD58%7D*

[11] *Statistical Abstract of the United States: 1950*, U.S. Census Bureau, Washington, D.C., p. 113. On the Internet at *http://www2.census.gov/prod2/statcomp/documents/1950-01.pdf*

[12] Ben Fountain and Michael Latta, *The Community College in North Carolina: A Brief History*, State Advisory Council on Vocational Education, Raleigh, N.C., 1990, p. 3. See also *Zimmerman v. Board of Educ.*, 199 N.C. 259, 154 S.E. 397 (1930).

[13] Off-campus extension centers included those located in the following communities: Charlotte, Greensboro, and Wilmington. A definitive list of all 12 centers is unavailable.

[14] Jon Lee Wiggs, *The Community College System in North Carolina: A Silver Anniversary History, 1963–1988*, University Graphics, North Carolina State University, Raleigh, N.C., 1989, pp. 1–2.

[15] Cohen, note 2 above, p. 6.

[16] Wiggs, note 14 above, p. 2.

[17] *Ibid*., pp. 2–3.

[18] Paul Luebke, *Tar Heel Politics 2000*, University of North Carolina Press, Chapel Hill, N.C., 1998, pp. 19–23.

[19] Wiggs, note 14 above, p. 1.

[20] *Ibid*., p. 4. See also Chapter 1186 of the 1955 Session Laws (H.B. 201).

[21] *Ibid*., pp. 4–5. See also Chapter 1098 of the 1957 Session Laws (H.B. 761).

[22] Fountain and Latta, note 12 above, p. 4.

[23] *Ibid*., pp. 4–5.

[24] The five junior colleges were located in Asheville, Charlotte (which had two), Elizabeth City, and Wilmington. The 18 authorized industrial education centers were located in Asheboro, Asheville, Burlington, Charlotte, Durham, Fayetteville, Gastonia, Goldsboro, Greensboro-High Point, Kinston, Leaksville, Lexington-Thomasville, Newton-Hickory, Raleigh, Sanford, Wilmington, Wilson, and Winston-Salem. See Wiggs, note 14 above, pp. 6 and 15.

[25] Howard E. Covington and Marion A. Ellis, *Terry Sanford: Politics, Progress, and Outrageous Ambitions*, Duke University Press, Durham, N.C., 1999, p. 238.

[26] *Ibid*., pp. 246–47 and 254.

[27] Wiggs, note 14 above, p. 7.

[28] *The Report of the Governor's Commission on Education Beyond the High School (Carlyle Commission)*, Raleigh, N.C., 1962, p. 4.

[29] *Ibid*., pp. xi–xiii.

[30] Wiggs, note 14 above, p. 12.

[31] N.C. Gen. Stat. § 115D-1.

[32] Fountain and Latta, note 12 above, p. 5.

[33] Wiggs, note 14 above, pp. 7–8.

[34] *Ibid*., pp. 8–11.

[35] *Ibid*., pp. 12–13.

[36] *Ibid*., p. 16.

[37] *Ibid*., p. 17.

[38] *Ibid*., p. 67.

[39] *Ibid*., p. 12.

[40] According to the N.C. Community College System's second President, Benjamin E. Fountain, "The college of Textile Technology at Belmont for a few years became the 59th [community college] institution. Today, it is a part of Gaston College and the system is back to 58 colleges, with many branches."

[41] Fountain and Latta, note 12 above, pp. 7 and 11–12. "Real value" dollars are adjusted for inflation, and thus easily compared to current dollars. "Nominal value" dollars are not adjusted for inflation.

[42] Wiggs, note 14 above, p. 24.

[43] Carol Timblin, *Central Piedmont Community College: The First Thirty Years*, Central Piedmont Community College Foundation, Charlotte, N.C., 1995, pp. 1–56.

[44] Wiggs, note 14 above, pp. 207–08.

[45] Legislative Research Commission on Community Colleges, Report to the 1979 General Assembly of North Carolina, Raleigh, N.C., p. 12. Information on committee proceedings regarding the creation of a separate board can be found on pp. 11–12. Information on committee findings regarding the creation of a separate board can be found on p. 15.

[46] Wiggs, note 14 above. p. 202.

[47] *Ibid*., pp. 202–04.

[48] *Ibid*., p. 8.

[49] *Ibid*., pp. 204–05 and 207. Chapter 896, § 2 of the 1979 Session Laws and Chapter 1130, § 5 of the 1979 Session Laws.

[50] *Fact Book 2007*, note 1 above, p. 3.

[51] *Gaining the Competitive Edge: The Challenge to North Carolina's Community Colleges*, the report of the Commission on the Futures of the North Carolina Community College System, MDC, Inc., Chapel Hill, N.C., Feb. 1989, p. 12.

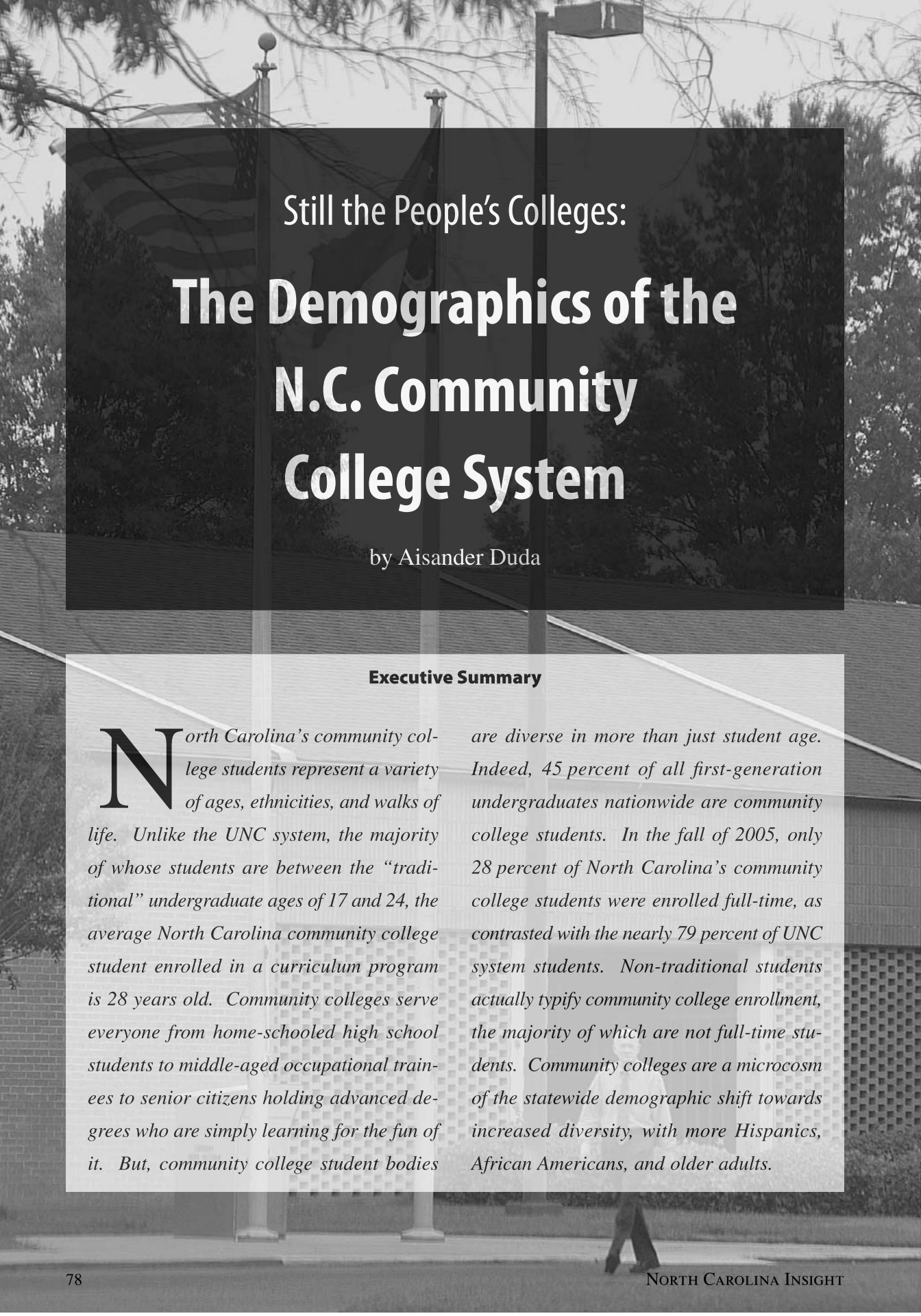
[52] Tim Simmons, "College system evolves: 40 years have brought growth, new challenges to state's community colleges," *The News & Observer*, Raleigh, N.C., June 2, 2003, p. B1.

[53] Quinterno, note 10 above, p. 17.

[54] *The State of the South 2004*, MDC, Inc., Chapel Hill, N.C., 2004, p. 9. Forecasts generated by the U.S. Bureau of Labor Statistics indicate that 28 percent of all the **jobs created in the United States** between 2004 and 2014 will require workers with some college education, meaning an associate's degree or postsecondary vocational credential. Daniel E. Hecker, "Occupational Employment Projections to 2014," *Monthly Labor Review*, Washington, D.C., Nov. 2005, pp. 70–101. According to a similar analysis sponsored by the N.C. Commission on Workforce Development, 13 percent of all the **jobs created in North Carolina** between 2007 and 2017 will require workers with some college education. N.C. Commission on Workforce Development, *State of the North Carolina Workforce: An Assessment of the State's Labor Force Demand and Supply 2007–2017,* N.C. Department of Commerce, Raleigh, N.C., 2007, p. 23.

[55] N.C. Commission on Workforce Development, note 54 above, p. 44.

[56] Benjamin E. Fountain, acceptance speech for the 2006 John Tyler Caldwell Award for the Humanities, North Carolina Humanities Council, Wake Technical Community College, May 4, 2007.



Still the People's Colleges:

The Demographics of the N.C. Community College System

by Aisander Duda

Executive Summary

North Carolina's community college students represent a variety of ages, ethnicities, and walks of life. Unlike the UNC system, the majority of whose students are between the "traditional" undergraduate ages of 17 and 24, the average North Carolina community college student enrolled in a curriculum program is 28 years old. Community colleges serve everyone from home-schooled high school students to middle-aged occupational trainees to senior citizens holding advanced degrees who are simply learning for the fun of it. But, community college student bodies are diverse in more than just student age. Indeed, 45 percent of all first-generation undergraduates nationwide are community college students. In the fall of 2005, only 28 percent of North Carolina's community college students were enrolled full-time, as contrasted with the nearly 79 percent of UNC system students. Non-traditional students actually typify community college enrollment, the majority of which are not full-time students. Community colleges are a microcosm of the statewide demographic shift towards increased diversity, with more Hispanics, African Americans, and older adults.

Age Diversity

- *The 17–24 age group, ages when students commonly attend college, accounted for only 29 percent of total enrollment within the N.C. Community College System during the 2005–06 school year. That same 17–24 age group in the UNC system accounted for 84 percent of total enrollment.*
- *During the 2005–06 school year, the N.C. Community College System reported that 36 percent of enrolled students were over the age of 40. By contrast, community colleges nationally enrolled only 16 percent over the age of 40, and the UNC system recorded a mere 3.6 percent.*

Already Working

- *In the U.S. today, self-supporting adults over the age of 24 constitute almost 40 percent of all college community students.*

Greater Percentages of Minorities

- *All but two community colleges in North Carolina serve a higher percentage of minorities than the percentage in their service area. According to the U.S. Census Bureau, in 2006, the non-white population in North Carolina was 29.7 percent of the total population. The N.C. Community College System's non-white enrollment during 2005–06 was approximately 36 percent of total enrollment.*
- *While white students constitute 64 percent of N.C community college students, African Americans constitute 24 percent, Hispanics 7 percent, Asians 2 percent, Native Americans 1 percent, and others 2 percent. Community college students compose 42 percent of all North Carolina undergraduates (all students in public and private 2- and 4-year colleges), and 20 percent of all first-time freshmen. Likewise, African American community college students compose 44 percent of all African American undergraduates, Hispanics 49 percent, Native Americans 51 percent, and Asians 33 percent.*

Part-Time Students

- *As of fall 2005, 246,929 North Carolina community college students, or 72 percent, were listed as part-time students. In the UNC system, 154,260 students were registered full-time, equaling nearly 79 percent of the total enrollment.*

Students Who Work

- *Nearly half of all U.S. undergraduate students enroll on a part-time basis, more than one-third are employed full-time, and 27 percent are parents. Of those working college students above the age of 24, two-thirds of all college students and a majority of community college students classify themselves as "employees who study," as opposed to "students who work." Of those, more than three-quarters work full-time (87 percent) or attend school part-time (76 percent), and approximately two-thirds do both (68 percent). When compared with students who work, employees who study are more likely to be aged 30 or more, married with children, and working towards associate degrees*

in computer science, business, vocational and technical fields. Employees who study have a 68 percent non-completion rate due to the strain of working full-time and attending college part-time. Of students who work, 39 percent fail to complete an undergraduate degree within six years after beginning their college or university programs, as compared with 62 percent of employees who study.

Low Degree Completion Rates

- *About 78 percent of first-time, full-time community college students nationwide fail to complete an associate's degree within three years, excluding the much larger number of part-time community college students. Only 48 percent of North Carolina's first-year community college students returned for their second year, as compared with 80 percent in the UNC system.*

- *These poor completion rates may be partly explained by the challenges facing community college students. For instance, the majority of students nationwide (61 percent) are part-time, with over half (57 percent) working more than 20 hours per week, a third (34 percent) spending 11 plus hours per week caring for dependents, and a fifth (21 percent) commuting for six to 11 hours per week.*

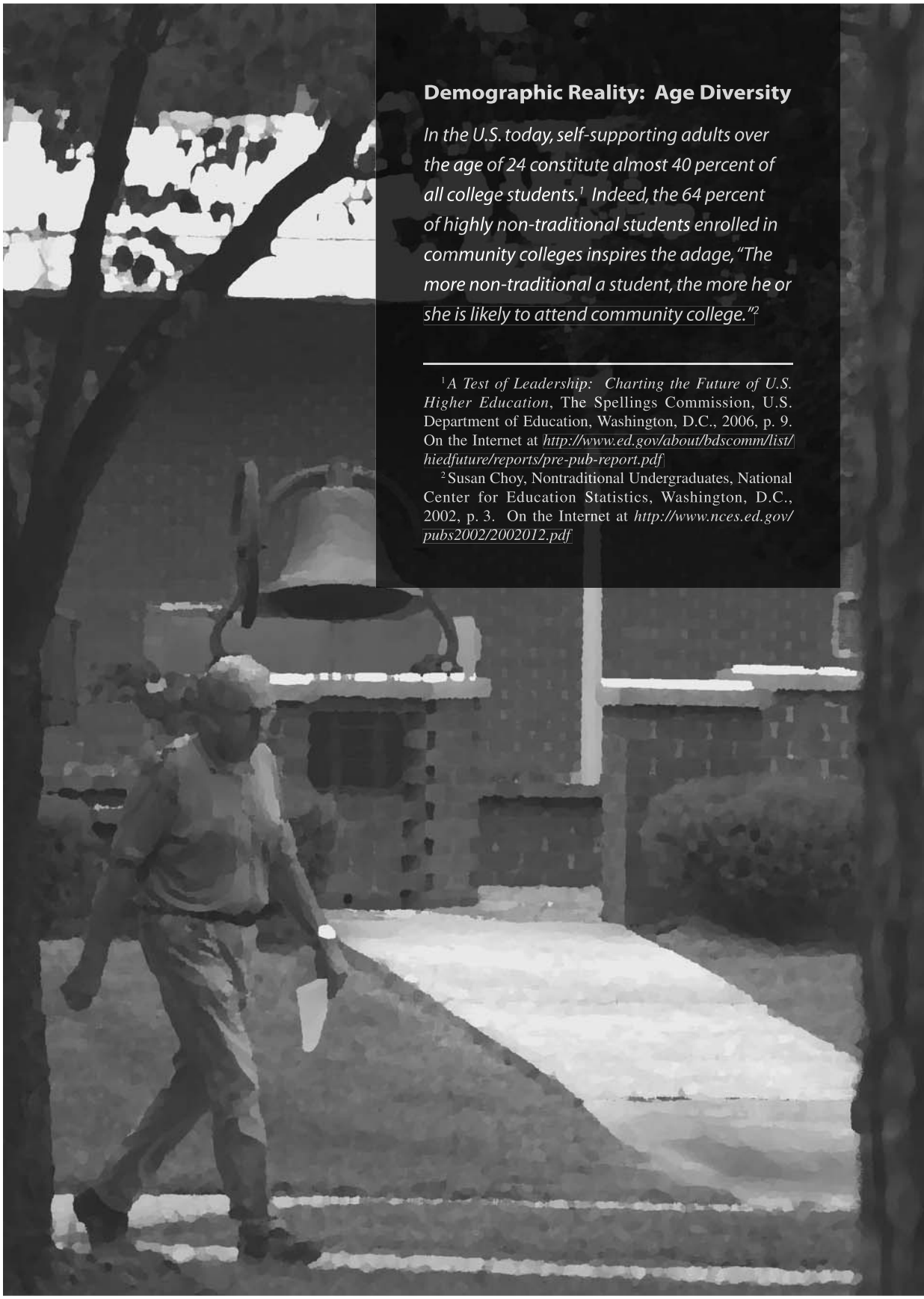
- *These poor completion rates may also result from community college students' personal goals. For instance, only 58 percent of community college students enroll with the primary intent of pursuing an associate's degree. Forty-one percent primarily seek to obtain or update job-related skills. Of those who do not primarily intend to pursue an associate's degree, 21 percent identify degree completion as a secondary goal while 21 percent stipulate that it is not a goal at all.*

Community colleges are a patchwork. Much like a well-worn quilt, these institutions are comprised of a variety of shapes and colors. Transfer students, working mothers, mid-life career changers, Hispanic immigrants, high school dropouts, home-schooled students, adult literacy students, and even retired elders who already possess advanced degrees—each constitute a piece of fabric in the community college quilt. Although these student groups are vastly different, they share many of the same aspirations and find themselves bound together by the thread of desire for more education and training.

While in the past community colleges may have been considered remedial education facilities aiding those who could not gain access to the standard four-year universities, the system of community colleges in place today across North Carolina has replaced that image with one that aims for "a globally and multi-culturally competent workforce."[1] This is evident at many community colleges across our state, including Durham Technical Community College (Durham Tech), where in one respiratory therapy class there are foreign-born students from India, Nigeria, Norway, and the Philippines. During the spring semester of 2006, there were twice as many curriculum students at Durham Tech who had previously attended foreign high schools than those students who had previously attended high schools in neighboring Orange County: 12 percent to 6 percent, respectively.[2] "We have 102 different countries represented on campus this semester," says Wanda Winslow, vice president of Durham Tech's Institutional Support Services. "There are many different lifestyles and backgrounds across this campus."

The draw of Durham Tech is so powerful that in 2006, 28 percent of the total enrollment at the college lived outside the "service area," or the targeted counties the college is meant to serve.[3] This phenomenon can be best explained by the development of certain programs based on employment opportunities in the community. "I think a lot of people are drawn to the health care programs here," says Christie, a 24-year-old occupational therapy student. "There aren't many [occupational therapy] programs like the one at Durham Tech. It's really focused." The N.C. Community College System on the whole draws over 30,000 non-residents into the state each year to attend various programs.[4]

Aisander Duda is a policy analyst and writer who works at the N.C. Division of Archives and History and lives in Durham, N.C. *For more information on the demographic realities in this article, see Scott Ralls, "Facing Brutal Facts: North Carolina Community Colleges in the New Economic Landscape," pp. 4–57.*



Demographic Reality: Age Diversity

In the U.S. today, self-supporting adults over the age of 24 constitute almost 40 percent of all college students.[1] *Indeed, the 64 percent of highly non-traditional students enrolled in community colleges inspires the adage, "The more non-traditional a student, the more he or she is likely to attend community college."*[2]

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[1] *A Test of Leadership: Charting the Future of U.S. Higher Education*, The Spellings Commission, U.S. Department of Education, Washington, D.C., 2006, p. 9. On the Internet at *http://www.ed.gov/about/bdscomm/list/hiedfuture/reports/pre-pub-report.pdf*

[2] Susan Choy, Nontraditional Undergraduates, National Center for Education Statistics, Washington, D.C., 2002, p. 3. On the Internet at *http://www.nces.ed.gov/pubs2002/2002012.pdf*

A Face with a Few More Wrinkles: Age Diversity

Doug Tate is far from what some would consider the "average" college student. But after spending 27 years working in the textile industry, the 50-year-old Mebane resident saw his type of job being shipped rapidly overseas. He had advised many of his peers to reconsider higher education in the past. "I guess I finally decided to take my own advice," says Doug, smiling, as he twitches his bristly mustache. "But I'm not the only older student on campus, either. There seems to be more and more folks like me each semester," he says, pointing to several middle-aged students walking across campus. "Being at Durham Tech, you definitely get to see all walks of life."

During the 2005–06 school year, the N.C. Community College System reported that 36 percent of enrolled students were over the age of 40.[5] Community colleges nationally enrolled only 16 percent over the age of 40,[6] and the UNC system enrolled a mere 3.6 percent.[7]

Doug's is not an isolated case but a sweeping trend in community college enrollment. A student like Doug is more common than the "traditional" student from the 17–24 age group, ages when students commonly attend college, which accounted for only 29 percent of total enrollment within the N.C. Community College System during the 2005–06 school year.[8] That same 17–24 age group in the University of North Carolina (UNC) system accounted for 84 percent of the total enrollment.[9] That age trend continues among community colleges nationally: The American Association of Community Colleges reports that the average age of community college students is 29.[10]

"It [teaching students at various ages] challenges you to make whatever you're presenting interesting to people at all levels," says Margaret L. Skulnik, dean of health technologies at Durham Tech. "You have to engage the students and get them to participate, because they have a rich body of knowledge, and you want them to share that with the rest of the class." But as much as a multi-generational class may improve learning, it can be equally problematic. Skulnik continues, "Sometimes it's difficult to get all the students at the same level. . . . You have an objective that everyone needs to reach this level. Some students get there a little faster than others. You have to really work at making sure everybody comes along."

Students themselves sometimes find the generation gap too much to overcome. "Young students that come from unstructured backgrounds can be rude and immature sometimes," says Wannesia, a 44-year-old nursing student. "They lose focus and can be disruptive."

Serving All People: Racial and Ethnic Diversity

In 2005–06, all but two community colleges in North Carolina—Central Carolina Community College and Beaufort County Community College—serve a higher percentage of minorities than the percentage in their service area. According to the U.S. Census Bureau, in 2006, the non-white population in North Carolina was 29.7 percent of the total population, of which African Americans comprised 21.4 percent, Hispanics 6.7 percent, Asian Americans 1.8 percent, and Native Americans 1.1 percent.[11] The N.C. Community College System's non-white enrollment during 2005–06 was approximately 36 percent of the total enrollment.[12] In the 2005–06 school year, Hispanics comprised 3.1 percent of curriculum enrollment and 8.1 percent of continuing education enrollment (a difference accounted for by the high Hispanic enrollment in the continuing education classes known as ESL or English as a Second Language). African Americans composed 25.8 percent of curriculum enrollment and 23.7 percent of continuing education enrollment, Asian Americans

Table 1. N.C. Community College System Enrollment by Race, 2005–06

Race	Percent of Curriculum Enrollment	Percent of Continuing Ed. Enrollment	Percent of All Students
Whites	65.3%	63.3%	64.0%
African Americans	25.8%	23.7%	24.0%
Hispanics	3.1%	8.1%	7.0%
Asian Americans	2.0%	1.8%	2.0%
Native Americans	1.4%	1.4%	1.0%
Other	2.4%	1.7%	2.0%

Source: A Matter of Facts: The North Carolina Community College System Fact Book 2007, North Carolina Community College System, Raleigh, N.C., May 2007, pp. 63 and 80. On the Internet at *http://www.ncccs.cc.nc.us/Publications/docs/Publications/fb2007.pdf*

2 percent of curriculum and 1.8 percent of continuing education, and Native Americans 1.4 percent of both curriculum and continuing education.[13]

Of the few seemingly homogenous campuses, nearly all serve a higher percentage of minorities than the population in their service area. For instance, consider Caldwell Community College and Technical Institute's Watauga Campus, nestled in the picturesque Appalachian Mountains, just minutes from Boone. The campus itself sits upon a plateau, bordered on one side by a mountain and on the other by a valley. Bathed in beauty, it seems the ideal place to learn. But as students come pouring out of the main building, there is something amiss. Not a single African American, Latino, Asian, or Native American can be seen in this homogenous stream of people. "I'm pretty sure that most, if not all, the students are white here," says Jamie, a 19-year-old student on the Watauga campus. Jamie continues, "I would say that I've never had a non-white student in my classes since coming here."

This observation seems odd, considering that in 2005–06 29.6 percent of the state's population was minority and 36 percent of the enrollment in community colleges was minority.[14] But in the case of Caldwell Community College, the student body is actually an accurate representation of the local population. The service area for Caldwell Community College is both Watauga and Caldwell counties. The percentage of non-white residents in this service area is 5.9 percent of the total population.[15] Still, Caldwell Community College had a non-white enrollment of 8.5 percent of the total student body.[16] During the spring 2006 semester, the Caldwell campus had a non-white enrollment of 10 percent and the Watauga campus had a non-white enrollment of 4.7 percent.

Caldwell Community College's student demographics appears anomalous in North Carolina, where since the early 1990s, North Carolina has found itself on the leading edge of a growing national immigration trend, one that is changing the political and educational future of the state.[17] For instance, in 2007, Hispanics constituted 15.5 percent of the national population, African Americans constituted 12.3 percent, Asians 3.7 percent, and Native Americans 0.9 percent. In North Carolina, African Americans

composed 21.6 percent of the state population, Hispanics 6.9 percent, Asians 1.4 percent, and Native Americans 1.2 percent.[18] North Carolina's Asian population increased by 128 percent between 1990 and 2000[19] and by 10 percent between 2000 and 2007.[20] Meanwhile, North Carolina's Hispanic population increased by 394 percent between 1990 and 2000[21] and by 60 percent between 2000 and 2007.[22] Moreover, a national study, *Rise, Peak, and Decline: Trends in U.S. Immigration 1992–2004*, conducted by the Pew Hispanic Research Center, noted a "shift of immigrant flows away from states with large foreign-born populations such as California and New York towards new settlement states such as North Carolina. . . ."[23]

The influx of both documented and undocumented immigrants puts the onus to educate and socially integrate these transplants upon the state, and more directly, the community college system. "Community colleges play a critical role in the work force development of our local communities," says John Herrera, vice president for Latino Hispanic affairs of the Durham-based Center for Community Self-Help. "They help integrate immigrants into mainstream society by facilitating the acquisition or enhancement of language skills. They also provide a cost-effective education to deal with the changing demands of the

Demographic Reality: Racial Diversity

While white students constitute 64 percent of N.C. community college students, African Americans constitute 24 percent, Hispanics 7 percent, Asians 2 percent, Native Americans 1 percent, and others 2 percent.[1] In addition, community college students compose 42 percent of all North Carolina undergraduates and 20 percent of all first-time freshmen. Likewise, African American community college students compose 44 percent of all African American undergraduates, Hispanics 49 percent, Native Americans 51 percent, and Asians 33 percent.[2]

[1] *A Matter of Facts: The North Carolina Community College System Fact Book 2007*, North Carolina Community College System, Raleigh, N.C., May 2007, p. 63. On the Internet at *http://www.ncccs.cc.nc.us/Publications/ docs/Publications/fb2007.pdf*

[2] Xiaoyun Yang, *Statistical Abstract of Higher Education 2005–06*, The University of North Carolina, Chapel Hill, N.C., May 2006, pp. 39–40. On the Internet at *http://www.northcarolina.edu/content.php/assessment/reports/previousabs.htm*

Table 2. Community College Demographics, 2005–06

	North Carolina [a]	National [b]
Number and Type of Community College		
Public Institutions	*58	991
Independent**	* 1	180
Total	*59	1,202
Enrollment		
Total	801,676	11.6 million
Full-Time	28%	40%
Part-Time	72%	60%
Demographics		
Average Age	*28	29
21 or Younger	NA	43%
22–39	NA	42%
24 or Younger	29%	NA
25–39	35%	NA
40 or Older	36%	16%
Women	53%	59%
Men	47%	41%
White	64%	66%
African American	24%	13%
Hispanic	7%	14%
Asian/Pacific Islander	2%	6%
Native American	1%	1%
Other	2%	NA
Degrees and Certificates Awarded Annually		
Associate's Degrees	16,071	550,000
Certificates	7,850	270,000

labor markets. Community colleges facilitate the transition caused by technological innovations, new family structures, immigration, and multicultural issues shaping the marketplace."

Over the past decade, the enrollment of Hispanic students has risen in community colleges. In 1996, the proportion of Hispanic students in North Carolina mirrored that of other non-black minorities, hovering around 1.3 percent of all curriculum students, and 3.8 percent of continuing education students.[24] By 2000, those percentages had risen significantly to 2.0 percent and 5.7 percent, respectively.[25] By 2006, those numbers rose to 3.1 percent of curriculum students and 8.1 percent of all continuing education students.[26] While these gains may seem small, they are telling.

Table 2. Community College Demographics, 2005–06, *continued*

	North Carolina [a]	National [b]
Average In-State Tuition and Fees		
58 Community Colleges	*$1,330	$2,272
16 4-Year Public Universities	*$3,424	$5,836
*Community College Students Constitute the Following Percentages of All Undergraduates****		
All NC/US Undergraduates	*42%	46%
First-Time Freshmen	*20%	45%
African American	*44%	47%
Hispanic	*49%	55%
Native American	*51%	57%
Asian	*33%	47%

Sources:

[a] *A Matter of Facts: The North Carolina Community College System Fact Book 2007,* North Carolina Community College System, Raleigh, N.C., May 2007. On the Internet at *http://www.ncccs.cc.nc.us/Publications/ docs/Publications/fb2007.pdf*

* *Alternate Source*: Xiaoyun Yang, *Statistical Abstract of Higher Education 2005–06*, The University of North Carolina, Chapel Hill, N.C., May 2006. On the Internet at *http://www.northcarolina.edu/content.php/assessment/reports/previousabs.htm*

** Louisburg College is North Carolina's only private junior college.

*** Denotes all community colleges, private junior colleges, and public and private senior colleges and universities.

[b] *Community College Facts at a Glance 2007*, American Association of Community Colleges, Washington, D.C. On the Internet at *http://www2.aacc.nche.edu/pdfs/factsheet07.pdf*

The Pew study found the peak of Hispanic migration to be during the 1999–2000 year period, which "took the inflow to more than 1.5 million. . . ."[27] During the two school years at the peak of this migration, 1999–2000 and 2000–01, the N.C. Community College System saw a dramatic 30.3 percent increase in English as a Second Language (ESL) enrollment, and its highest enrollment ever of 40,378 ESL students occurred during the 2000–01 school year.[28] According to the U.S. Census in 2000, the Hispanic population in North Carolina was 378,963, totaling 4.7 percent of the total state population.[29] The Census Bureau's 2006 American Community Survey for North Carolina estimates the Hispanic population to have grown to 597,382 residents, totaling 6.7 percent of North Carolina's population.[30] During that same period,

between 2000–06, the Hispanic population grew from 12.5 percent to 14.8 percent of the national population.[31] It is also important to note that those figures may not cover all or even most undocumented immigrants, notes the Pew study.[32]

The Census Bureau's 2006 American Community Survey also reports that 394,151 North Carolina residents speak English "less than very well." Out of those, 309,730 residents, or 78.6 percent, are from households that speak Spanish.[33] But despite this, North Carolina's community college enrollment for ESL courses has fallen by nearly 13 percent from the high of 40,378 students in 2001 to 35,258 in 2006.[34] "For us to convince [Hispanic immigrants] that more education is needed, well, that is a hard thing," said Marco Zarate, president of the North Carolina Society of Hispanic Professionals, in *The News & Observer* of Raleigh. "You need to realize that for some families, they were already struggling in Mexico or wherever they lived before… It is already better for them…. [T]hey don't realize the chances they are missing."[35]

A national study by the American Association of Community Colleges, *Faces of the Future: A Portrait of First-Generation Community College Students*, finds that more than 50 percent of Hispanic community college students are the first of their family to attend college. The report describes the motivations and desires that differ between first-generation students and those students whose parents were of either moderate or high education levels. Most notably, the study concludes that first-generation students are more concerned with preparing for a future job (47 percent), whereas those students who are not the first in their family to attend college are more focused on transferring into a four-year institution (57 percent).[36] Typical first-generation students have lower incomes, take fewer credit hours, and generally face more financial difficulties than their moderate or higher education counterparts.[37] According to the American Association of Community Colleges, 45 percent of all first-generation undergraduate students are community college students.[38]

Finding the Time: Part-Time Students and Students Who Work

For some students, a standard four-year program cannot meet their needs. Nontraditional students actually typify community college enrollment, the majority of which are *not* full-time students. In fact, as of fall 2005, 246,929 North Carolina community college students, or 72 percent, were listed as part-time students.[39] In the UNC system, 154,260 students were registered full-time, equaling nearly 79 percent of the total enrollment.[40]

Students are drawn to community colleges for their flexibility. Students can take a full-time course load or one or two classes part-time. In 2005–06, those students taking six to eight or nine to 11 credit hours accounted for 40 percent of the total enrollment, while students taking one to five credit hours accounted for 30 percent of the community college population.[41] A majority of students prefer a daytime class schedule as 77 percent of curriculum and 65 percent of continuing education students pursue their studies during the day.[42]

However, many students involved in work force development programs, such as health care training and technology fields, do take courses full-time. "The occupational therapy program is really fast-tracked so I take a full load to finish sooner," says Jillian, a middle-aged student. "I used to be an interior designer, but I felt like I really wanted to help people, not just help them pick curtains."

Of the community college students who are unemployed, a 38 percent minority in 2005–06, many were still living at home with relatives and enrolled in the 2+2 program. This program is a four-year degree program with the first two years of coursework centered at a community college and the next two years at a University of North Carolina institution.[43] "I'm hoping next to attend UNC-Chapel Hill or

(continues on page 98)

Demographic Reality: Employment Status

Nearly half of all U.S. undergraduate students enroll on a part-time basis, more than one-third are employed full-time, and 27 percent are parents.[1] Of those working college students above the age of 24, two-thirds of all college students and a majority of community college students self-classify as "employees who study," as opposed to "students who work." Of these employees who study, over three-quarters work full-time (87 percent) or attend school part-time (76 percent), and approximately two-thirds do both (68 percent). When compared with students who work, employees who study are more likely to be aged 30 or more, married with children, and working towards associate's degrees in computer science, business, vocational, and technical fields.[2] Employees who study have a 68 percent noncompletion rate due to the strain of working full-time and attending college only part-time. Of students who work, 39 percent fail to complete an undergraduate degree within six years after beginning their college or university programs, as compared with 62 percent of employees who study.[3]

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[1] *A Test of Leadership: Charting the Future of U.S. Higher Education*, The Spellings Commission, U.S. Department of Education, Washington, D.C., 2006, p. 9. On the Internet at *http://www.ed.gov/about/bdscomm/list/hiedfuture/reports/pre-pub-report.pdf*

[2] Ali Berker, Laura Horn, and Dennis C. Carroll, W*ork First, Study Second: Adult Undergraduates Who Combine Employment and Postsecondary Enrollment*, National Center for Education Statistics, Washington, D.C., Aug. 2003, pp. iii–iv. On the Internet at *http://nces.ed.gov/pubs2003/2003167.pdf*

[3] *Ibid.*, p. ix.

Table 3. N.C. Community College Non-White

Non-White Enrollment by Community College				
Community College	**Total Enrollment**	**Non-White Enrollment**	**% of Non-Whites**	
1. Alamance CC	4,451	1,536	35%	
2. Asheville-Buncombe Tech. CC	6,259	727	12%	
3. Beaufort County CC	1,392	506	36%	
4. Bladen CC	1,476	891	60%	
5. Blue Ridge CC	2,048	230	11%	
6. Brunswick CC	980	246	25%	
7. Caldwell CC & Tech. Institute	3,690	313	9%	
8. Cape Fear CC	7,463	1,475	20%	
9. Carteret CC	1,619	244	15%	
10. Catawba Valley CC	4,822	976	20%	
11. Central Carolina CC	4,636	793	17%	
12. Central Piedmont CC	16,440	7,035	43%	
13. Cleveland CC	3,004	747	25%	
14. Coastal Carolina CC	4,103	1,340	33%	

Enrollment by Counties Served, 2005–06

	Non-White Population by County				% Non-Whites for Entire Service Area
	County(ies) Served by Community College	Total Population	Non-White Population	% of Non-Whites	
	Alamance	140,494	29,537	21%	21%
	Buncombe	219,082	20,390	9%	9%
	Madison	20,466	307	2%	
	Beaufort	46,235	13,357	29%	35%
	Hyde	5,592	2,056	37%	
	Tyrrell	4,240	1,763	42%	
	Washington	13,389	6,877	51%	
	Bladen	33,010	13,174	40%	40%
	Henderson	99,544	4,575	5%	5%
	Transylvania	30,129	1,705	6%	
	Brunswick	92,686	13,856	15%	15%
	Caldwell	78,783	5,350	7%	6%
	Watauga	43,101	1,308	3%	
	New Hanover	185,222	33,301	18%	19%
	Pender	47,833	10,679	22%	
	Carteret	63,511	5,329	8%	8%
	Alexander	36,553	2,227	6%	12%
	Catawba	150,812	20,223	13%	
	Chatham	57,201	9,479	17%	22%
	Harnett	103,884	26,269	25%	
	Lee	54,765	11,674	21%	
	Mecklenburg	820,487	277,553	34%	34%
	Cleveland	97,367	21,846	22%	22%
	Onslow	158,194	37,747	24%	24%

Table 3. N.C. Community College Non-White

Non-White Enrollment by Community College				
Community College	**Total Enrollment**	**Non-White Enrollment**	**% of Non-Whites**	
15. College of The Albemarle	2,146	624	29%	
16. Craven CC	3,075	913	30%	
17. Davidson County CC	3,128	567	18%	
18. Durham Tech. CC	5,495	3,090	56%	
19. Edgecombe CC	2,403	1,443	60%	
20. Fayetteville Tech. CC	8,408	4,737	56%	
21. Forsyth Tech. CC	6,996	2,258	32%	
22. Gaston College	5,094	1,069	21%	
23. Guilford Tech. CC	9,814	3,937	40%	
24. Halifax CC	1,482	863	58%	
25. Haywood CC	2,053	93	5%	
26. Isothermal CC	2,130	415	20%	
27. James Sprunt CC	1,402	644	46%	
28. Johnston CC	4,164	1,100	26%	
29. Lenoir CC	2,594	1,171	45%	

Enrollment by Counties Served, 2005–06, *continued*

	Non-White Population by County				% Non-Whites for Entire Service Area
	County(ies) Served by Community College	Total Population	Non-White Population	% of Non-Whites	
	Camden	9,307	1,445	16%	22%
	Currituck	23,757	1,726	7%	
	Dare	35,391	1,332	4%	
	Gates	11,328	4,299	38%	
	Pasquotank	39,693	17,480	44%	
	Perquimans	12,339	3,286	27%	
	Craven	93,115	26,128	28%	28%
	Davidson	155,864	17,211	11%	10%
	Davie	39,805	2,846	7%	
	Durham	245,284	114,193	47%	37%
	Orange	123,778	23,857	19%	
	Edgecombe	52,598	31,011	59%	59%
	Cumberland	305,829	132,869	43%	43%
	Forsyth	331,289	94,890	29%	26%
	Stokes	46,690	2,432	5%	
	Gaston	195,546	32,439	17%	14%
	Lincoln	70,914	4,850	7%	
	Guilford	448,694	160,066	36%	36%
	Halifax	56,172	32,984	59%	59%
	Haywood	57,005	1,439	3%	3%
	Polk	19,207	1,183	6%	11%
	Rutherford	63,617	7,918	12%	
	Duplin	52,652	14,655	28%	28%
	Johnston	151,031	24,655	16%	16%
	Green	20,466	8,578	42%	41%
	Jones	10,282	3,656	36%	
	Lenoir	58,244	24,575	42%	

Table 3. N.C. Community College Non-White

Non-White Enrollment by Community College				
Community College	**Total Enrollment**	**Non-White Enrollment**	**% of Non-Whites**	
30. Martin CC	969	579	60%	
31. Mayland CC	1,366	69	5%	
32. McDowell Tech. CC	1,217	133	11%	
33. Mitchell CC	1,898	501	26%	
34. Montgomery CC	852	270	32%	
35. Nash CC	2,511	1,013	40%	
36. Pamlico CC	378	172	46%	
37. Piedmont CC	2,613	1,100	42%	
38. Pitt CC	6,085	2,340	39%	
39. Randolph CC	2,292	347	15%	
40. Richmond CC	1,475	651	44%	
41. Roanoke-Chowan CC	935	631	68%	
42. Robeson CC	2,162	1,625	75%	
43. Rockingham CC	2,065	467	23%	
44. Rowan-Cabarrus CC	5,220	1,332	26%	
45. Sampson CC	1,459	644	44%	
46. Sandhills CC	3,605	1,287	36%	

Enrollment by Counties Served, 2005–06, *continued*

	Non-White Population by County				% Non-Whites for Entire Service Area
	County(ies) Served by Community College	Total Population	Non-White Population	% of Non-Whites	
	Martin	24,504	11,506	47%	47%
	Avery	18,146	983	5%	3%
	Mitchell	15,887	179	1%	
	Yancey	18,297	211	1%	
	McDowell	43,528	2,706	6%	6%
	Iredell	143,154	22,115	15%	15%
	Montgomery	27,643	6,350	23%	23%
	Nash	92,480	34,559	37%	37%
	Pamlico	13,147	3,333	25%	25%
	Caswell	23,904	8,455	35%	31%
	Person	37,512	10,739	29%	
	Pitt	145,429	53,018	37%	37%
	Randolph	139,223	10,380	8%	8%
	Richmond	46,847	16,368	35%	41%
	Scotland	36,943	18,335	50%	
	Bertie	19,582	12,514	64%	58%
	Chowan	14,505	5,568	38%	
	Hertford	23,950	15,081	63%	
	Northampton	21,669	13,053	60%	
	Robeson	129,148	83,564	65%	65%
	Rockingham	91,981	18,544	20%	20%
	Cabarrus	154,284	22,088	14%	16%
	Rowan	134,511	23,703	18%	
	Sampson	64,749	20,565	32%	32%
	Hoke	42,339	20,694	49%	27%
	Moore	82,296	13,454	16%	

Table 3. N.C. Community College Non-White

Non-White Enrollment by Community College				
Community College	**Total Enrollment**	**Non-White Enrollment**	**% of Non-Whites**	
47. South Piedmont CC	1,935	785	41%	
48. Southeastern CC	1,810	721	40%	
49. Southwestern CC	1,906	264	14%	
50. Stanly CC	2,046	345	17%	
51. Surry CC	3,000	245	8%	
52. Tri-County CC	1,066	57	5%	
53. Vance-Granville CC	4,042	2,030	50%	
54. Wake Tech. CC	12,236	4,586	38%	
55. Wayne CC	3,171	1,256	40%	
56. Western Piedmont CC	2,774	458	17%	
57. Wilkes CC	2,592	215	8%	
58. Wilson Tech. CC	1,892	988	52%	
Total Community Colleges	198,339	66,153	33%	

Source: *Statistical Abstract of Higher Education 2005–06*, The University of North Carolina, Chapel Hill, N.C., May 2006, p. 19. On the Internet at *http://www.northcarolina.edu/content.php/assessment/reports/previousabs.htm*

Enrollment by Counties Served, 2005–06, *continued*

	Non-White Population by County				% Non-Whites for Entire Service Area
	County(ies) Served by Community College	Total Population	Non-White Population	% of Non-Whites	
	Anson	25,864	13,083	51%	18%
	Union	168,270	21,629	13%	
	Columbus	54,757	19,268	35%	35%
	Jackson	36,114	4,837	13%	12%
	Macon	33,154	714	2%	
	Swain	13,743	4,618	34%	
	Stanly	59,209	8,718	15%	15%
	Surry	73,908	4,155	6%	5%
	Yadkin	37,862	1,549	4%	
	Cherokee	26,537	1,089	4%	4%
	Clay	10,036	143	1%	
	Graham	8,176	673	8%	
	Franklin	55,310	16,050	29%	40%
	Granville	54,139	18,747	35%	
	Vance	43,761	22,511	51%	
	Warren	20,425	12,113	59%	
	Wake	782,283	194,926	25%	25%
	Wayne	116,458	42,154	36%	36%
	Burke	88,619	11,261	13%	13%
	Allegheny	10,889	196	2%	4%
	Ashe	25,752	390	2%	
	Wilkes	67,162	3,321	5%	
	Wilson	77,478	32,177	42%	42%
	North Carolina	8,828,041	2,244,972	25%	25%

Source: U.S. Census Bureau, 2005 American Community Survey

(continued from page 88)
UNC-Greensboro," says Rachel, a 19-year-old 2+2 transfer student at Durham Tech. "Living with my parents and taking classes here is a less expensive way to get my first two years out of the way."

Conclusion

Woven together, the 58 community colleges are patches of a quilt of education and training that may safeguard North Carolina as it weathers the shift from a manufacturing to a service-based economy. Sandhills Community College has focused over the years on getting students to transfer to four-year colleges and universities, according to Kristie Huneycutt Sullivan, the college's dean of planning and research. Within the N.C. Community College System, Sandhills ranks 11th for student transfers to four-year colleges and universities.[44]

Yet Sandhills is a microcosm of the system as a whole. Sandhills' annual continuing education enrollment is about 15,000 students, and its curriculum classes enroll approximately 4,000 students. Of the 3,790 curriculum students enrolled during the current fall 2007 semester, 66 percent are female and more than 53 percent have enrolled part-time. Although the average student age is 26 years of age, about 40 percent of the students are under the age of 20, and 15 percent aged 40 or older. More than 36 percent of the student body is non-white, with African Americans comprising more than 23 percent. In Moore County, the college's service area, 19 percent of the population is non-white, with African Americans comprising more than 15 percent.[45] While about 8 percent of enrolled students have a

The ever popular drag racing classes at Sandhills Community College

Photo provided by Sandhills Community College

Demographic Reality: Completion Rates

About 78 percent of first-time, full-time community college students nationwide fail to complete an associate's degree within three years, excluding the much larger number of part-time community college students.[1] Only 48 percent of North Carolina's first-year community college students returned for their second year, as compared with 80 percent in the UNC system.[2]

In order to assess these low community college completion rates, one must first become aware that, nationally, "community colleges often serve students who have the fewest options and the greatest challenges." For instance, the majority of students (61 percent) are part-time, with over half (57 percent) working more than 20 hours per week, a third (34 percent) spending 11 plus hours per week caring for dependents, and a fifth (21 percent) commuting for six to 11 hours per week.[3] Such challenges are significant for community college students, 89 percent of whom are considered "non-traditional."[4] Non-traditional status is determined by one or more of the following characteristics: delayed college enrollment after high school, part-time attendance for at least part of the academic year, full-time employment, financial independence, dependents other than a spouse, status as a single parent, and/or possession of a GED instead of a high school diploma. According to Phil Kirk, vice president for external relations at Catawba College, "traditional" students are enrolling in college transfer programs for reasons such as cost, the need to develop stronger basic skills and study skills, and flexible scheduling.

While 46 percent of non-traditional community college students leave in their first year (as compared with 48 percent in North Carolina), 62 percent leave without a degree within three years. By contrast, 19 percent of "traditional" community college students leave without a degree within three years.[4] For non-traditional students with two or more risk factors, the community college completion rate is less than 15 percent — a stark contrast to the 57 percent of traditional students.[5]

These poor completion rates may also result from community college students' personal goals. For instance, only 58 percent of community college students enroll with the primary intent of pursuing an associate's degree. Forty-one percent primarily seek to obtain or update job-related skills. Of those who do not primarily intend to pursue an associate's degree, 21 percent identify degree completion as a secondary goal while 21 percent stipulate that it is not a goal at all.[6]

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[1] *Adult Learners in Higher Education: Barriers to Success and Strategies To Improve Results*, U.S. Department of Labor Employment and Training Administration, Washington, D.C., Mar. 2007, p. 16. On the Internet at *http://www.eric.ed.gov/ERICWebPortal/custom/portlets/recordDetails/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED497801&ERICExtSearch_SearchType_0=eric_accno&accno=ED497801*

[2] *Measuring Up 2006: The State Report Card on Higher Education—North Carolina*, The National Center for Public Policy and Higher Education, San Jose, Cal., 2006, p. 10. On the Internet at *http://www.measuringup.highereducation.org/_docs/2006/statereports/NC06.pdf*

[3] *Act on Fact: Using Data to Improve Student Success*, Community College Survey of Student Engagement, Austin, Tex., 2006, pp. 3 and 5. On the Internet at *http://www.ccsse.org/publications/CCSSENationalReport2006.pdf*

[4] Susan Choy, *Nontraditional Undergraduates*, National Center for Education Statistics, Washington, D.C., 2002, pp. 2–3 and 13. On the Internet at *http://www.nces.ed.gov/pubs2002/2002012.pdf*

[5] *Adult Learners in Higher Education*, note 1 above, p. 9.

[6] *Act on Fact*, note 3 above, p. 5.

General Equivalency Degree, nearly 17 percent dropped out of either middle school or high school and never obtained an equivalent high school certification. By contrast, 129 students, or more than 3 percent, have either a bachelor's or master's degree, and 29 students, or nearly 1 percent, have a doctorate or other advanced degree.[46]

In addition to its renowned horticulture program featuring beautiful gardens that are the pride of the community, Sandhills attracts students with curricula that include polysomnography (the study of sleep), gaming and simulation, and the ever-popular drag racing. Prompted by the high retiree population in Moore County, Sandhills' continuing education department includes the Center for Creative Retirement, which equips active retirees with "programs and resources to enhance . . . intellectual, physical, and personal well being," and promotes participation with local organizations.[47] Moreover, Sandhills' Hoke Center satellite campus in Raeford caters to a variety of continuing education students, including those enrolled in Adult High School. By contrast, Sandhills Early College High School gives first-generation college students the opportunity to earn both a high school diploma and associate's degree in fine arts on a tuition-free basis.[48]

With a student body diverse in age, race, employment status, and career aspirations, Sandhills is a microcosm of the N.C. Community College System at large. Taken together, the system serves not only remedial and transfer students, but also North Carolina's emerging "globally and multi-culturally competent workforce."[49]

Photo provided by Sandhills Community College

Footnotes

[1] Mission Statement of the North Carolina Community College System, on the Internet at *http://www.ncccs.cc.nc.us/External_Affairs/system_mission.htm.* See also *A Matter of Facts: The North Carolina Community College System Fact Book 2007*, North Carolina Community College System, Raleigh, N.C., May 2007, pp. 2–3. On the Internet at *http://www.ncccs.cc.nc.us/Publications/ docs/Publications/fb2007.pdf*

[2] "Student Profile," Durham Technical Community College, Spring 2006.

[3] *Ibid.*

[4] *Fact Book 2007*, note 1 above, p. 64.

[5] *Ibid.,* p. 74.

[6] *Community College Facts at a Glance 2007,* American Association of Community Colleges, Washington, D.C. On the Internet at *http://www2.aacc.nche.edu/pdfs/factsheet07.pdf*

[7] *Statistical Abstract of Higher Education 2005–06*, The University of North Carolina, Chapel Hill, N.C., May 2006, p. 19. On the Internet at *http://www.northcarolina.edu/content.php/assessment/reports/previousabs.htm* In order to establish parity with the N.C. Community College System's most recent available data from academic year 2005–06, all comparative *Statistical Abstract* data in this article will be from 2005–06. However, 2006–07 *Statistical Abstract* data will be recorded in the endnotes. Thus, for the 2006–07 academic year, the number of students over the age of 40 enrolled in the UNC system was also 3.6 percent. *Statistical Abstract of Higher Education 2006–07*, The University of North Carolina, Chapel Hill, N.C., May 2007, p. 19. On the Internet at *http://www.northcarolina.edu/content.php/assessment/reports/abstract-current.htm*

[8] *Fact Book 2007*, note 1 above, p. 62.

[9] *Statistical Abstract of Higher Education 2005–06*, note 7 above, p. 19. For the 2006–07 academic year, the number of students under the age of 24 enrolled in the UNC system was also 84 percent. *Statistical Abstract of Higher Education 2006–07*, note 7 above, p. 19.

[10] *Community College Facts at a Glance 2007*, note 6 above, p. 4.

[11] *U.S. Census Bureau, American Community Survey, 2006 Summary Tables,* generated by Aisander Duda using *American FactFinder* at *http://factfinder.census.gov* on Oct. 9, 2007. See generally on the Internet at *http://www.census.gov/acs*

[12] *Fact Book 2007*, note 1 above, p. 80.

[13] *Ibid.*, p. 63.

[14] *Ibid.*, pp. 63 and 80.

[15] *U.S. Census Bureau, American Community Survey,* note 11 above.

[16] *Statistical Abstract of Higher Education 2005–06*, note 7 above, p. 39. In the 2006–07 academic year, the percentage of non-white students enrolled at Caldwell Community College was 10.5 percent. See *Statistical Abstract of Higher Education 2006–07*, note 7 above, p. 39.

[17] See also "Race, Ethnicity, and Public Policy Outcomes: From Disparity to Parity," *North Carolina Insight*, Vol. 21, Nos. 1–2, N.C. Center for Public Policy Research, Raleigh, N.C., June 2004.

[18] Data Appendices in *State of the North Carolina Workforce*, N.C. Commission on Workforce Development, Raleigh, N.C., Jan. 2007. On the Internet at *http://www.nccommerce.com/en/WorkforceServices/FindInformationForWorkforceProfessionals/PlansPoliciesandReports/*

[19] Census 2000 Redistricting Data (P.L. 94–171) Summary File and 1990 Census, U.S. Census Bureau, Washington, D.C., Table 3. States Ranked by Percent Population Change: 1990–2000, as cited in "Race, Ethnicity, and Public Policy Outcomes: From Disparity to Parity," note 17 above, p. 20.

[20] Editorial calculation based on *State of the North Carolina Workforce*, note 18 above, and U.S. Census Bureau, note 11 above.

[21] Census 2000 Redistricting Data, note 19 above.

[22] S*tate of the North Carolina Workforce*, note 18 above.

[23] Jeffrey S. Passel and Robert Suro, *Rise, Peak, and Decline: Trends in U.S. Immigration 1992–2004*, Pew Hispanic Center, Washington, D.C., Sept. 27, 2005, p. iv. On the Internet at *http://www.pewhispanic.org/ files/reports/53.pdf*

[24] **Curriculum programs** include credit courses contributing to certificates, diplomas, or associate degrees and range in duration from one semester to two years. Most curriculum programs are designed either to prepare students for entry level positions in business and industry or to allow students to transfer to a senior college or university. **Continuing Education programs** include non-credit courses that are occupational, academic, or avocational. Most Continuing Education programs are designed either as categorically-funded community service or as a means to upgrade occupational skills. *A Matter of Facts: The North Carolina Community College System Fact Book 1997*, North Carolina Community College System, Raleigh, N.C., pp. 6 and 65. On the Internet at *http://www.ncccs.cc.nc.us/ Publications/docs/Publications/fb1997.pdf*

[25] *A Matter of Facts: The North Carolina Community College System Fact Book 2000*, North Carolina Community College System, Raleigh, N.C, p. 65. On the Internet at *http://www.ncccs.cc.nc.us/ Publications/ docs/Publications/fb2000.pdf*

[26] *Fact Book 2007*, note 1 above, p. 63.

[27] Passel and Suro, note 23 above, p. 3.

[28] *2006 Critical Success Factors for the North Carolina Community College System*, North Carolina Community College System, Raleigh, N.C., May 2006, p. 59. On the Internet at *http://www.ncccs.cc.nc.us/ Publications/docs/Publications/csf2006.pdf*

[29] U.S. Census Bureau, note 11 above.

[30] *Ibid.*

[31] *Ibid.*

[32] Passel and Suro, note 23 above, pp. 14–15.

[33] U.S. Census Bureau, note 11 above.

[34] *2006 Critical Success Factors*, note 28 above, p. 59, and *2007 Critical Success Factors for the North Carolina Community College System*, North Carolina Community College System, Raleigh, N.C., May 2006, p. 63. On the Internet at *http://www.ncccs.cc.nc.us/Publications/docs/Publications/csf2007.pdf*

[35] Tim Simmons, "He pushes Latinos to help themselves," *The News & Observer*, Raleigh, N.C., Sept. 21, 2003, p. B1.

[36] Takako Nomi, *Faces of the Future: A Portrait of First-Generation Community College Students,* American Association of Community Colleges, Washington, D.C., 2005, p. 8. On the Internet at *http://www.aacc.nche.edu/Content/NavigationMenu/ResourceCenter/Projects_Partnerships/Current/FacesoftheFuture/SurveyContent/Faces_Brief_Final.pdf*

[37] *Ibid.*, pp. 3–6.

[38] *Community College Facts at a Glance 2007*, note 6 above.

[39] *Fact Book 2007,* note 1 above, p. 65.

[40] *Statistical Abstract of Higher Education 2005–06,* note 7 above, p. 6. For the 2006–07 academic year, 158,267 students were registered full-time in the UNC system, equaling approximately 78 percent of the total enrollment. See *Statistical Abstract of Higher Education 2006–07,* note 7 above, p. 6.

[41] *Fact Book 2007*, note 1 above, p. 65.

[42] *Ibid*., p. 64.

[43] *Ibid*., p. 62, and *Report to the General Assembly on Existing and New 2+2 Programs Between UNC and N.C. Community College System*, Raleigh, N.C., Feb. 2006.

[44] Sandhills Community College website, accessed Oct. 30, 2007 on the Internet at *http://www.sandhills.edu/campus-information/pages/facts-history.html*

[45] U.S. Census Bureau, note 11 above.

[46] *Fall 2007 Enrollment Report,* Sandhills Community College, Pinehurst, N.C., Oct. 2007.

[47] Sandhills Community College, note 44 above.

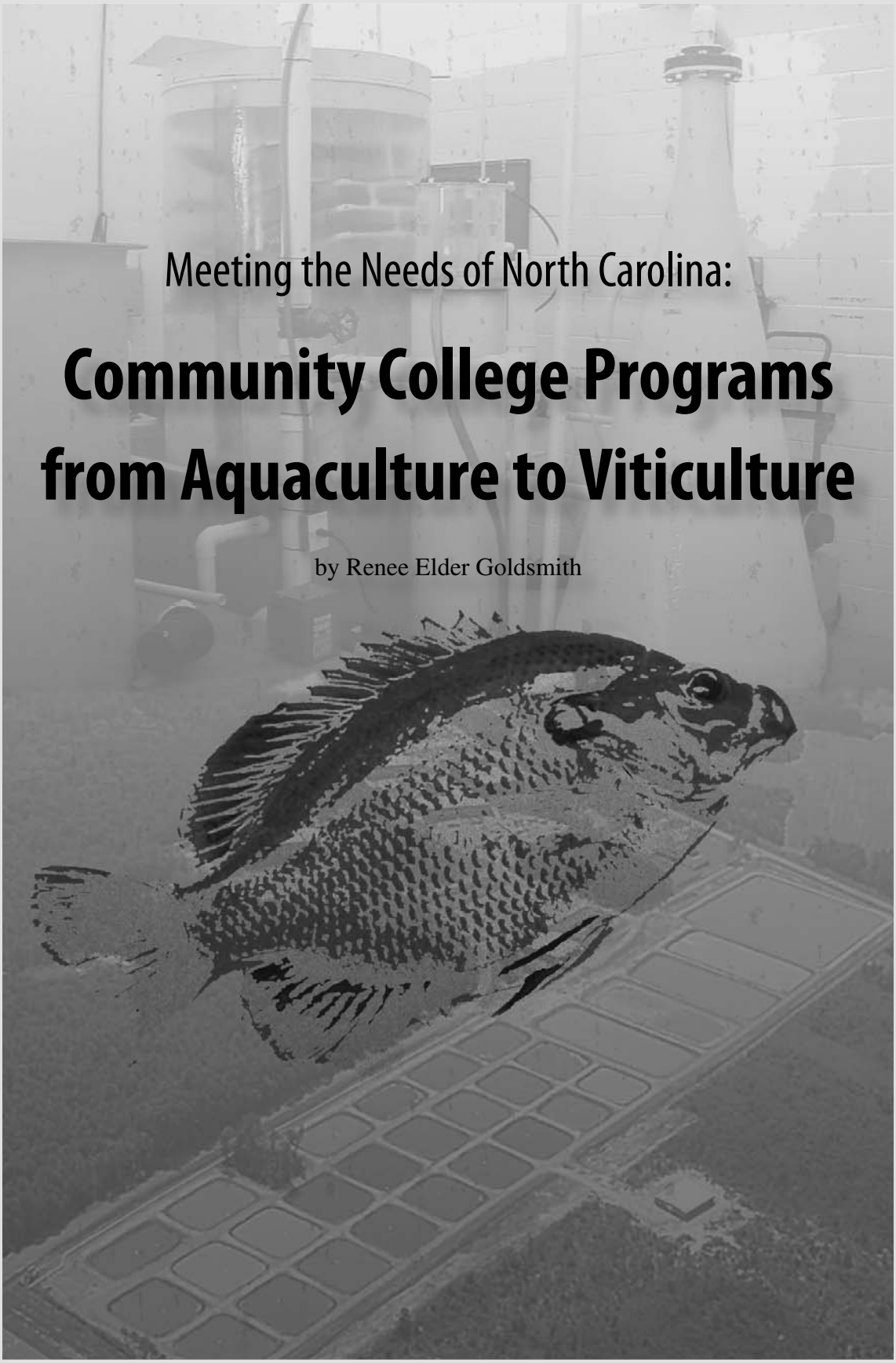
[48] *Ibid.*

[49] *Fact Book 2007*, note 1 above, pp. 2–3.

Meeting the Needs of North Carolina:

Community College Programs from Aquaculture to Viticulture

by Renee Elder Goldsmith



John Edward Baka

From A to V, or from aquaculture (the cultivation of water plants and animals) to viticulture (the cultivation of grapes), North Carolina's community colleges, like their national counterparts, strive to offer a variety of programs that meet local work force and educational needs. Consequently, some courses reflect regional or statewide economic development needs, while others target students who are planning to transfer to continue their education at a four-year institution. Because students enroll in community college programs for a variety of purposes—work force training for new job skills, job retraining, basic educational skills, and academic- and certificate-track programs—community college programs vary greatly. They may be broken into three broad categories: curriculum, continuing education, and special programs.

Curriculum programs *often lead to one of three types of credentials: a certificate, diploma, or associate's degree. While some degree programs prepare students for entry-level technical positions in business and industry, others enable students to transfer to a four-year college or university. For instance, certificate and diploma programs are curriculum tracks aimed at work force training. Examples of certificate programs include Greenhouse and Grounds Maintenance, Data Entry, Insurance, and Health Care Technology. Examples of diploma programs include Pharmacy Technology, Dental Assisting, Telecommunications Installation and Maintenance, and Positron Emission Tomography.*

Curriculum programs also allow community college students to transfer credits to universities. Approved in 1997 by the UNC Board of Governors and the State Board of Community Colleges, the ***Comprehensive Articulation Agreement*** *(CAA) identifies which and under what circumstances community college courses may be transferred for credit to the UNC system or any of the 23 private colleges and universities which have signed the agreement.*

The community colleges also collaborate with the UNC system in the ***2+2 Program*** *to develop four-year degree programs, with the first two years of coursework centered at a community college and the next two years on a UNC campus. Some 2+2 programs allow a student to complete a four-year degree without leaving their community college campus, while others anticipate an actual transfer from a community college to a four-year college or university. For example, Lenoir Community College in Kinston has a 2+2 engineering technology program that identifies the coursework necessary for transfer to a university, eliminating guesswork for students.*

Continuing education programs *are non-credit courses that teach basic skills and provide occupational training. Basic skills courses include* ***Adult Basic Education,*** *which addresses competencies in reading, writing, mathematics, and other areas;* ***General Education Development,*** *which leads to a high school diploma equivalency degree;* ***Adult High School,*** *offered by the community college in collaboration with the local public schools and leading to a joint diploma issued by the college board of trustees and the local school board;* ***English Literacy/English as a Second Language,*** *designed to help non-English speaking adults achieve competency in the English language; and* ***Compensatory Education,*** *a program that provides a specially designed curriculum for adults with moderate*

mental retardation who need supplemental education and training.

Special programs *are tailored by the community colleges to meet the economic development needs of the local community. Such programming includes: New and Expanding Industry Training (NEIT); Customized Industry Training (CIT); Focused Industrial Training (FIT); and the Small Business Center Network. Created and customized for companies bringing 12 or more "net new jobs" into the state,* ***New and Expanding Industry Training*** *prepares workers for new full-time jobs in North Carolina. Through NEIT, Getrag, a maker of motor vehicle gears in Newton, is able to identify capable workers and help them take their skills to the next level through specialized training.*

Unlike the NEIT program, the ***Customized Industry Training*** *program provides* ***retraining*** *for employees of* ***existing*** *industries that are introducing new equipment or techniques into the workplace, but that will* ***not*** *bring 12 or more net new jobs into the state. In an effort to assist local employers,* ***Focused Industrial Training*** *staff design customized programs to existing workers' skills in response to advancements in the local manufacturing, computer, and telecommunications industries. For example, Stephenson Millwork Company Inc., an architectural millwork manufacturing company, used Wilson Community College's FIT program to conduct training programs to meet its production needs. Finally, the* ***Small Business Center Network*** *supports business growth and development through training, counseling, and information.*

Distance learning programs *provide another path to education for community college students, with instruction provided over the Internet—through teleweb services and videoconferencing—or through a combination of face-to-face and online instruction. Distance learning programs enable students to continue their education even when transportation issues, work schedules, or other obligations prevent them from regularly attending classes on campus. Through the Virtual Learning Community, the N.C. Community College System approaches distance learning as a collaborative effort—sharing hardware, software, content, and training instructors and administrators among all 58 campuses. Distance learning often comes into play when a specific community college program has statewide impact. For instance, Progress Energy relies on Nash Community College's distance learning program to train its utility linemen.*

The need for **student services** *is growing on community college campuses, including registration and academic counseling, basic skills and General Equivalency Degree assistance, career planning, financial aid, grants and scholarships, transfer information, and student records. System President Martin Lancaster says, "Student services such as counseling, tutoring, and child care services are key to student success. Until these services are boosted dramatically, the student success we're capable of and which the students deserve will never happen. We are criticized for the low number of completers, but the fact of the matter is that only a small percentage of our stop-outs and drop-outs leave for academic reasons. They are not flunk-outs. They just need more help to stay in and persist to a certificate, diploma, or degree. Just because a staff person doesn't teach doesn't mean that they aren't important to the educational program."*

In order to create **new programs**, *often prompted by the local business community, community colleges must first complete a program curriculum application designed to ensure that the proposed offering meets certain academic guidelines and standards. This screening process also considers data on job openings in*

that field, figures on the cost of implementing the program, funding plans, and whether the same or similar courses exist at other regional colleges. See "Establishing New Programs in Community Colleges," pp. 114–15.

Funding new and existing community college programs *has its challenges. While the State Board of Community Colleges has authority to set tuition, it does so within the confines set forth by the General Assembly in the "Current Operations Appropriations Act," or budget bill. If the legislature has signaled its intention to raise tuition, but has not yet passed a budget bill with the tuition increase by the start of a new fiscal year on July 1, the State Board will usually increase the tuition to the anticipated new rate to avoid confusion when registration for the fall semester begins. The N.C. Community College System's commitment to an "open door" tuition policy hinders the use of student tuition as a substantial generator of revenue for the system given the low economic resources of the student body. Kennon Briggs, vice president of business and finance for the N.C. Community College System, explains, "The State Board of Community Colleges has historically argued to keep tuition charges to students as low as practicable, in order to maintain access to higher education for adult learners. It is not necessarily low tuition that precludes the System from having a sufficient amount of funds, but rather low per capita funding. Given that 60 percent of curriculum students work full- or part-time and the fact that almost 60 percent of students receive some form of financial aid, it is counter-intuitive to raise tuition on working adults to spend more upon them, or to drive them to seek additional financial aid. These students might be called the 'working poor.' The State Board seeks to keep tuition low to facilitate upward financial mobility by enhancing, through education, their value to employers and the marketplace."*

From aquaculture to viticulture, the programs offered by the N.C. Community College System strive to meet the needs of students, employers, and the state. To ease credit transfers between community colleges and public and private colleges and universities, to help community college programs adapt to the new opportunities provided by distance education, and to increase North Carolina's college-going rates, the N.C. Center for Public Policy Research makes the following recommendations:

(1) The University of North Carolina System and the N.C. Community College System should work together to continue to expand enrollment in the 2+2 programs with the goal of increasing the number of 18 to 24-year-olds enrolled in college in North Carolina from 30 percent in 2006 to 41 percent (the college-going rate of top five states) by 2012.

(2) The North Carolina General Assembly should expand funding for student services staff in the community college system.

(3) Given the trend towards distance learning and the mobility of students in North Carolina, the N.C. General Assembly should create a legislative study commission to study and facilitate distance learning and report to the 2009–10 N.C. General Assembly. Among other topics, the study commission should work with accrediting agencies, the UNC System, and the N.C. Community College System to study the possibility of creating a new state or regional authority that could serve as a repository for credits and grant degrees. This would allow students seeking an associate's degree—either as an end in itself or as a component of a 2+2 program—to acquire the necessary credits from various institutions and would facilitate the attainment of both two- and four-year degrees.

John Edward Baka

Fish harvest with tractor drawn seine at Brunswick Community College Center for Aquaculture Technology

Tad Daniels, 41, a native of Blowing Rock in the mountains, followed his love of the open water when he signed up for the aquaculture program at Brunswick Community College in Wilmington. "I grew up on my daddy's farm, but I've always been interested in the sea, the ocean, and the water," Daniels said. Right after high school, Daniels attended the University of North Carolina at Asheville as a computer science major. But, he discovered he did not really enjoy working in that field.

Instead, Daniels joined the U.S. Coast Guard, and then spent time on a shrimp boat before deciding to enroll in Brunswick Community College's aquaculture technology program in 2005. "I see this program as a way for me to do something that I enjoy, and make money doing it. It's a real special program." Daniels said he has no doubts about aquaculture as a growth industry. "Look at marine fisheries—depletion happening as the demand [for seafood] goes up," he says. "I think it's the future, really."

As a second-year student during fall 2007, Daniels took 13 credit hours of classes while working 35 hours a week at the Southport Marina, where he also lives on a houseboat. The aquaculture program has taught him to work with a variety of species, including cobia, large mouth bass, Louisiana crawfish, and prawns. Daniels points out that the geography of North Carolina is particularly well suited to the study of aquaculture. "We have plenty of water resources, a good aquifer, and lots of salt water," he says. "There's no telling what we can do in time with aquaculture. It just keeps getting better."

From A (aquaculture, the cultivation of water plants and animals) to V (viticulture, the cultivation of grapes), the 58 institutions that make up the N.C. Community College System provide learning opportunities in many diverse fields. Although each campus is unique, the overall system provides a comprehensive range of course offerings, including work force training for new job skills, job retraining, basic educational skills, and academic- and certificate-track programs. Some of the courses made available through the community colleges are tied to regional or statewide economic development needs, while others provide resources to advance students' personal

"Although each campus is unique, the overall system provides a comprehensive range of course offerings, including work force training for new job skills, job retraining, basic educational skills, and academic- and certificate-track programs."

Renee Elder Goldsmith is a free-lance writer living in Raleigh, N.C.

growth. Still others are geared toward students who are planning to continue their education at a four-year institution.

"Responsiveness to local need—that's one of the things that is so unique about the community college system, what makes it strong, really," says Norma Turnage, chair of the program services committee of the North Carolina Board of Community Colleges. "Each campus offers courses that respond to the needs of an individual community. You would not have the same curriculum in New Bern that you would have in Waynesville. The needs are different."

A Variety of Programs

Students enroll in community college programs for a variety of purposes. Their coursework may be remedial, job-specific, or lead to a diploma, certificate of proficiency, or an associate's degree. The types of programs available through the community college system can be broken into three broad categories: curriculum, continuing education, and special programs.

"Many degree programs are designed to prepare students for entry-level technical positions in business and industry, while others are largely aimed at students intending to transfer to a four-year college or university."

1. Curriculum Programs

There are more than 2,200 curriculum programs offered through the community college system under more than 250 titles.[1] These programs range from one semester to two years in duration. Some terminate in one of three types of credentials: certificate, diploma, or associate's degrees. Many degree programs are designed to prepare students for entry-level technical positions in business and industry, while others are largely aimed at students intending to transfer to a four-year college or university.

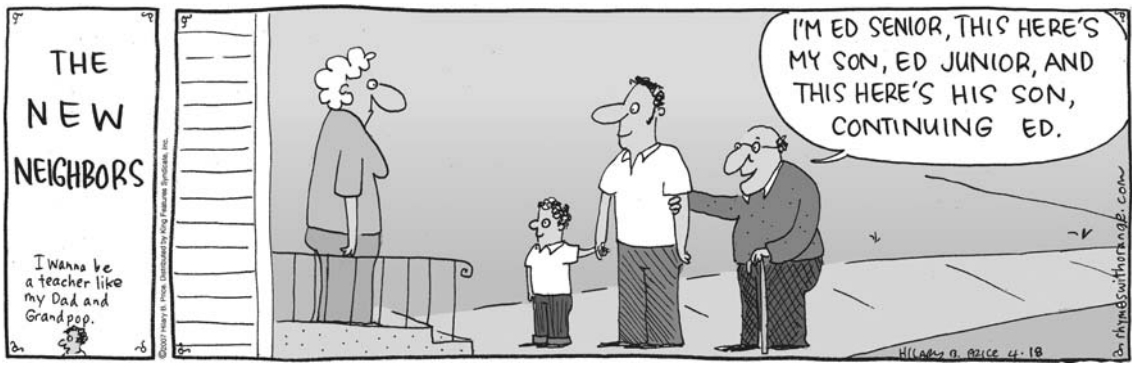
The associate of applied science (AAS) program is offered at all colleges within the N.C. Community College System. Requiring 64 to 76 semester hours of work, the program can be completed within two years. While certain courses within the AAS curriculum may be accepted for credit at four-year colleges and universities, the primary goal of the AAS is to train students for entry-level work in their chosen field.[2]

Other two-year degrees include the associate in arts, associate in science, and associate in fine arts. The state's Comprehensive Articulation Agreement (CAA) with the University of North Carolina system allows community college graduates who meet specific requirements to enroll as third-year students or juniors at a UNC campus or at any one of the 23 private colleges or universities which have signed the CAA. These requirements include successfully completing, with a grade of "C" or higher, 44 semester hours of core general education classes, including English, mathematics, natural sciences, and social sciences that may transfer to other community colleges within the system or to a four-year college or university.[3]

"Only about 25 percent of our students are transfer-bound," says Martin Lancaster, President of the N.C. Community College System. "But it's still a significant minority of our enrollment, and it is growing. All of the [community college] boards want that to be an option, but it continues to be a minor mission of our community colleges. Some colleges' enrollments are 30 percent transfer-bound [such as Rockingham Community College in Wentworth], some are 11 percent [such as Catawba Valley Community College in Hickory]." At eight percent, Pamlico Community College in Grantsboro has the lowest transfer-bound percentage, while Coastal Carolina Community College in Jacksonville has the highest, at roughly 60 percent.[4]

Carol Majors

Certificate and diploma programs are curriculum tracks aimed at work force training. Students in certificate programs take between 12 to 18 credit hours of classes,



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the equivalent of one full-time semester of coursework, while diploma programs require between 36 to 48 semester hours of credit, taking slightly more than two semesters to complete. Many students earning community college diplomas complete the requirements by enrolling in two full-time semesters plus a summer term. Examples of certificate programs include Greenhouse and Grounds Maintenance, Data Entry, Insurance, and Health Care Technology. Examples of diploma programs include Pharmacy Technology, Dental Assisting, Telecommunications Installation and Maintenance, and Positron Emission Tomography.[5]

The number of full-time equivalent students following an associate's degree track stood at 180,027 (65 percent of curriculum enrollment and 22 percent of the total community college enrollment of 801,676) at the end of the 2006 school year. The number of students in diploma programs was 17,635 (6 percent of curriculum enrollment and 2 percent of total enrollment), the number in certificate programs was 15,555 (6 percent of curriculum enrollment and 2 percent of total enrollment), and the number of transitional students or those enrolled in classes that do not lead to a formal degree or other award was 64,943 (23 percent of curriculum enrollment and 8 percent of total enrollment).[6] The state's spending on curriculum programs for the fiscal year ending June 2006 totaled $448.9 million.[7]

2. Continuing Education Programs

Another category of community college courses is continuing education. These programs are non-credit courses that teach basic skills and provide occupational training. Basic skills courses include Adult Basic Education, which addresses competencies in reading, writing, mathematics, and other areas; General Education Development, which leads to a high school diploma equivalency degree; Adult High School, offered by the community college in collaboration with the local public schools and leading to a joint diploma issued by the college board of trustees and the local school board; English Literacy/English as a Second Language (ESL), designed to help non-English speaking adults achieve competency in the English language; and Compensatory Education, a program that provides a specially designed curriculum for adults with moderate mental retardation who need supplemental education and training.[8] State spending for the fiscal year ending June 2006 included $41 million for Adult Basic Education and ESL; $12.2 million for Adult High School; $9.8 million for Compensatory Education; and $2.4 million for General Education Development.[9]

3. Special Programs

A final category of instructional programs in the community colleges are known as special programs. These are courses tailored to the economic development needs of the local community. Within this category are New and Expanding Industry Training, Customized Industry Training, Focused Industrial Training, and the Small Business Center Network. (See Table 1, pp. 110–11.)

New and Expanding Industry Training (NEIT) is aimed at preparing workers for new full-time jobs in North Carolina. These courses are created and customized for companies bringing 12 or more "net new jobs" into the state. In 2006–07, 208 NEIT programs were created for 97 start-up and relocating companies within the state and 111 existing companies that were expanding their North Carolina operations. There were 19,380 trainees enrolled in NEIT programs during 2006–07 at a total cost of $463.38 per trainee. NEIT expenditures for 2006–07 totaled $9 million.[10] (See Table 2, p. 112.)

According to Janet Robbins, training coordinator for Getrag Corp., a maker of motor vehicle gears in Newton, Getrag is able to fill highly skilled, high-tech jobs with training assistance through NEIT. "The training dollars and support through NEIT provide a tremendous service." While helping Getrag fill specific jobs, the program also "improves the knowledge, skills and abilities of the state's work force," she said. Through NEIT, Getrag is able to identify capable workers and help them take their skills to the next level through specialized training. "We take assessments of the critical skills that are needed, and then we have the opportunity to go to the community college and advance those skills," Robbins says.

> *"Continuing Education Programs are non-credit courses that teach basic skills and provide occupational training."*

Unlike the NEIT program, the Customized Industry Training (CIT) program provides *retraining* for employees of *existing* industries that are introducing new equipment or techniques into the workplace, but that will *not* bring 12 or more net new jobs into the state. The CIT program responds to the idea that, given the manufacturing industry's decline in North Carolina, the future of the state's manufacturing would be in new technology requiring worker training. Although the introduction of new technology decreases the actual number of jobs, those workers who complete the training would receive a wage increase and the continued presence of both the company and capital investment in the plant and equipment would increase the tax base of the county. Initiated in March 2006, the CIT program had trained 1,253 workers by June 2007 at an average cost of $888.39 per trainee. The 2006–07 expenditures for the CIT program totaled $1,113,156.[11]

Focused Industrial Training (FIT) assists employers by designing customized programs to upgrade existing workers' skills in response to advancements in the manufacturing, computer, and telecommunications industries. The FIT staff conducts an individualized needs assessment before designing and implementing the training program.[12] In 2005–06, the FIT program served 10,557 trainees through 1,074 classes, workshops, seminars, and meetings.[13] The program's annual budget in 2005–06 totaled $3.7 million.[14]

According to Theresa Peaden, director of continuing education at Wilson Community College in Wilson, the college's FIT program has received positive feedback from employers such as Lee Stephenson at Stephenson Millwork Company, Inc., an architectural millwork manufacturing company specializing in the design, production, and installation of millwork products for the commercial, residential, and institutional markets. Peaden quotes Lee Stephenson as saying in a FIT program evaluation, "A flexible approach from instructors and Wilson Community College allowed us to conduct training programs around our production needs. There is value in having someone from outside of our company come in to observe processes, make recommendations and train. Wilson Community College put the pieces together to make this happen, and the training was positive for everyone involved."

Small Business Centers have been established in each of the 58 community college campus service areas. The Small Business Center Network was created to support business growth and development through training, counseling, and information. The network provides support to approximately 70,000 North Carolinians each year.[15] The 2005–06 expenditures for Small Business Centers totaled $5.23 million.[16]

Chris Robinson, director of the Ashe Center, a satellite campus of Wilkes Community College located at the foot of Mount Jefferson, says, "Work force training

Table 1. Special Programs

Program Name	Description
New and Expanding Industry Training (NEIT)	New and Expanding Industry Training (NEIT) is aimed at preparing workers for new full-time jobs in North Carolina. These courses are created and customized for companies bringing 12 or more "net new jobs" into the state. In 2006–07, 208 NEIT programs were created for 97 start-up and relocating companies within the state and 111 existing companies that were expanding their North Carolina operations. There were 19,380 trainees enrolled in NEIT programs during 2006–07 at a total cost of $463.38 per trainee. NEIT expenditures for 2006–07 totaled $9 million.[1]
Customized Industry Training (CIT)	Customized Industry Training (CIT) provides *re-training* for employees of *existing* industries that that are introducing new equipment or techniques into the workplace, but that will *not* bring 12 or more net new jobs into the state. Initiated in March 2006, the CIT program had trained 1,253 workers by June 2007 at an average cost of $888.39 per trainee. The 2006–07 expenditures for the CIT program totaled $1,113,155.66.[2]

[1] *A Matter of Facts: The North Carolina Community College System Fact Book 2007,* North Carolina Community College System, Raleigh, N.C., p. 41. On the Internet at *http://www.ncccs.cc.nc.us/Publications/docs/Publications/fb2007.pdf* See also Office of State Budget and Management (OSBM), *The Community College New and Expanded Industry Training Management Study*, as directed by § 8.7 of N.C. Session Law 2006–66, Apr. 2007.

[2] *New and Expanding Industry Training and Customized Industry Training—Trends and Statistics 2006–2007,* N.C. Community College System, Raleigh, N.C., Aug. 2007, p. 23. On the Internet at *http://www.ncccs.cc.nc.us/Business_and_Industry/reports.htm*

still emphasizes 'new and expanding,' rather than 'stability and retention.' Our cost of training is pretty low, but we need tools to constantly re-recruit our existing industries. The new CIT program is a start, but the threshold for those programs needs to be lowered to make additional companies eligible."

Currently, the NEIT program requires employers to predict growth of at least 12 jobs in order to be eligible. The CIT program requires the industry both to raise wages at the completion of training and offer health care and other benefits.

The Cost of Programs: Tuition

The State Board of Community Colleges has statutory authority to set tuition for the N.C. Community College System. The North Carolina General Statutes state, "The State Board of Community Colleges shall fix and regulate all tuition and fees charged to students for applying to or attending any institution pursuant to this Chapter."[17] The statutes also specify that "The State Board shall have authority

Table 1. Special Programs, *continued*

Program Name	Description
Focused Industrial Training (FIT)	Focused Industrial Training (FIT) assists employers by designing customized programs to upgrade existing workers' skills in response to advancements in the manufacturing, computer, and telecommunications industries. The FIT staff conducts an individualized needs assessment before designing and implementing the training program.[3] In 2005–06, the FIT program served 10,557 trainees through 1,074 classes, workshops, seminars, and meetings.[4] The program's annual budget in 2005–06 totaled $3.7 million.[5]
Small Business Centers	Small Business Centers have been established in each of the 58 community college campus service areas. The Small Business Center Network was created to support business growth and development through training, counseling, and information. The network provides support to approximately 70,000 North Carolinians each year.[6] The 2005–06 expenditures for Small Business Centers totaled $5.23 million. [7]

[3] *Fact Book 2007,* note 1 above, p. 38.

[4] *Ibid.*

[5] *Ibid.,* p. 51.

[6] Pat Fahy, *Workforce Development in the State of North Carolina: An Overview,* National Center on Education and the Economy, Washington, D.C., June 2005, p. 14. On the Internet at *http://www.skillscommission.org/pdf/Staff%20Papers/North Carolina_Workforce.pdf*

[7] *Fact Book 2007,* note 1 above, p. 51.

with respect to individual institutions: … to establish and regulate student tuition and fees within policies for tuition and fees established by the General Assembly . . ."[18] While the State Board has authority to set tuition, it does so within the confines set forth by the General Assembly in the "Current Operations Appropriations Act," or budget bill. Though the State Board has the power to raise tuition and on occasion has done so, the State Board generally does not raise tuition on its own. If the legislature has signaled its intention to raise tuition, but it has not yet passed a budget bill with the tuition increase by July 1, the State Board will usually increase the tuition to the anticipated new rate to avoid confusion when registration for the fall semester begins.

The N.C. Community College System's commitment to an "open door" tuition policy hinders the use of student tuition as a substantial generator of revenue for the system, given the economic resources of the student body. Kennon Briggs, vice president of business and finance for the N.C. Community College System, explains, "The State Board of Community Colleges has historically argued to keep tuition charges to students as low as practicable, in order to maintain access to higher education for

Table 2. New and Expanding Industry Training (NEIT): Twenty-Year Trends for 1987–88 – 2006–07

	Number of					
Year	Projects	New Companies	Expanding Companies	Total Expenditures	Number of Trainees	Average Expenditure Per Trainee
2006–2007	208	97	111	$8,980,238.63	19,380	$463.38
2005–2006	197	92	105	8,382,557.11	23,799	352.22
2004–2005	164	70	94	5,484,063.55	12,398	442.33
2003–2004	121	38	83	3,841,225.22	10,117	379.68
2002–2003	131	52	79	4,005,104.75	10,610	377.48
2001–2002	155	65	90	5,391,598.35	14,771	365.01
2000–2001	203	82	121	7,024,819.47	24,068	291.87
1999–2000	197	81	116	7,247,885.47	20,256	357.81
1998–1999	193	77	116	7,614,677.69	19,960	381.50
1997–1998	201	100	101	8,086,955.47	22,985	351.84
1996–1997	184	93	91	10,090,944.73	25,076	402.41
1995–1996	183	93	90	8,554,529.00	27,505	311.02
1994–1995	197	88	109	7,132,426.00	18,740	380.60
1993–1994	180	84	96	7,126,896.00	19,537	364.79
1992–1993	160	83	77	6,186,847.00	16,640	371.75
1991–1992	151	96	55	5,484,869.00	15,738	348.51
1990–1991	140	93	47	5,400,630.00	14,857	363.51
1989–1990	165	117	48	7,828,250.00	16,805	465.82
1988–1989	149	101	48	8,938,463.00	16,833	531.01
1987–1988	167	104	63	5,874,136.00	12,263	479.01

Source: New and Expanding Industry Training and Customized Industry Training—Trends and Statistics 2006–2007, N.C. Community College System, Raleigh, N.C., Aug. 2007, p. 23. On the Internet at *http://www.ncccs.cc.nc.us/Business_and_Industry/reports.htm*

adult learners. It is not necessarily low tuition that precludes the system from having sufficient funds, but rather low per capita funding. Given that 60 percent of curriculum students work full- or part-time, and the fact that almost 60 percent of students receive some form of financial aid, it is counter-intuitive to raise tuition on working adults to spend more upon them, or to drive them to seek additional financial aid. These students might be called the 'working poor.' The State Board seeks to keep tuition low to facilitate upward financial mobility by enhancing, through education, their value to employers and the marketplace."

The fall 2007 tuition for curriculum programs at North Carolina community colleges was $42 per semester hour, with a maximum charge of $672 per semester for in-state students. Out-of-state students pay $233.30 per semester hour or a maximum of $3,732.80 per semester. Tuition is waived for students simultaneously enrolled in high school and for North Carolina residents aged 65 and older.

There are no registration fees for basic skills programs. Registration fees for other continuing education programs start at $50 for courses of up to 10 hours in duration to $65 for those of 100 hours or more.[19]

Online Programs: Distance Learning

Access to the programs offered at community colleges across the state is not limited to traditional classroom environments. Students at North Carolina's community colleges are given the option of enrolling via distance learning, with instruction provided over the Internet—through teleweb services and videoconferencing—or through a combination of face-to-face and online instruction. In addition, many instructors provide students with online supplements for traditional courses. These programs enable students to continue their education even when transportation issues, work schedules, or other obligations prevent them from attending classes on campus on a regular basis.

"Statistically, the typical distance learner is a working parent with job and family responsibilities," notes the N.C. Community College System Fact Book. "Removing scheduling, travel, and babysitting responsibilities increases the opportunities for e ducation and the likelihood those students can enter and complete programs of study. Current registration data suggests a trend is emerging whereby students are migrating to online and/or hybrid courses or a combination of online/hybrid and traditional courses." A hybrid course is a blend of face-to-face and online instruction. [20]

The distance learning phenomenon has spread throughout the UNC and N.C. Community College Systems. According to UNC system President Erskine Bowles, the next 10 years may see a UNC system enrollment expansion

(continues)

School would be better on line instead of in person.

Establishing New Programs in Community Colleges

Most North Carolinians have come to expect fine dining in Asheville, world-class golfing in Pinehurst, and great fishing along the North Carolina coast. But perhaps less known is that when it comes to academics, these regional strengths are also nurtured in courses at local community colleges in those areas. For example, Asheville-Buncombe Tech in Asheville is home to a top-notch culinary arts program, Brunswick Community College in Bolivia has a state-of-the-art aquaculture program with courses on fish hatcheries for the production of fish to stock ponds and streams for recreational fishing, and Sandhills Community College in Pinehurst teaches future golf course operators about turfgrass management.

Efforts to add a new course at a community college often get started within the local business community, particularly the office of economic development for the cities and counties in a college's service area. "Economic developers view the community college system and local campuses as primary partners in work force training and development, whether for new or expanding business," says Scott Daugherty, executive director of the Small Business and Technology Development Center, which is administered by N.C. State University on behalf of the University of North Carolina system and which operates in partnership with the U.S. Small Business Administration. Daugherty says, "I've been to several places where a new industry was coming in, and when they have the groundbreaking, they always credit the local community college for helping them train people and get them ready to go into the work force."

For instance, the N.C. Community College System's Small Business Center Network was created to support business growth and development through training, counseling, and information. Boat building is one area in which the Small Business Center Network acts, hosting all of the state's boat building programs. According to Scott Deal, president of Cobia Boat in Marion, "The community college [McDowell Technical Community College] played a key role in our decision to choose McDowell County and continues to play a major role in our employee training and new employee hiring."

These programs are examples of how North Carolina's community colleges update and tailor their offerings to meet the needs of the local economy as well as employment needs throughout the state. A first step for community colleges considering adding a new program is often a phone call to the community college system office, where the staff may provide information about existing programs in that or a related field, says Jennifer Frazelle, director of program services for the community college system.

Before adding a new program, colleges must complete a program curriculum application designed to make sure that the proposed offering meets certain academic guidelines and standards.[1] This screening process also takes into consideration data on the number of available jobs in that field and figures on the cost of implementing the program—including equipment costs, information on how the funding is to be generated, and whether other colleges in the region are offering the same or a similar program, Frazelle says.

"You always have to keep an eye on how adding a particular course is going to affect other schools in the system," says James Woody, past chairman of the State Board of Community Colleges and a former trustee at Piedmont Community College in Roxboro. "Let's say I'm at Piedmont, and we want to add a high-dollar program [like allied health]. To have that program, the State Board has to approve it. They want to know how many people it is going to affect. They ask: Is it going to be worth the dollars knowing it's going to be a high-cost program? Either they approve or deny it."

Each year, the General Assembly approves a budget for the community colleges, which is allocated to each campus based on the previous academic year's enrollment of full-time-equivalent students.[2] The basic definition of a full-time student is one who takes 16 hours of coursework per semester for two semesters during the school year. A mathematical formula is used to convert hours of coursework into full-time-equivalent units. It takes 16.5 credit hours to equal one educational unit, according to the formula.[3] For more information on program funding, see "Key Issues Facing the N.C. Community College System: Enrollment Trends, Faculty Compensation, Funding Formulas, and Strategic Planning" by John Quinterno, pp. 207–21).

A study conducted by Hockaday-Hunter & Associates for the N.C. Community College System in 2005 examined the funding formula and its implications for the addition of new and often expensive courses in fields such as allied health. The study was in response to concerns expressed by some community college presidents that a combination

of increased student enrollment and adoption of high-cost programs on some campuses was causing an inequitable distribution of state funds.[4] In his presentation on the 2006–07 Consensus Expansion Budget Request, System President Martin Lancaster said the study recommended that the state allocate $11 million for a reserve fund to be used to offset enrollment growth exceeding 3.2 percent of full-time enrollment. The General Assembly approved a $2 million fund for this purpose in 2005–06.[5] Lancaster says, "One of the largest—and fastest-growing—sectors of our economy is health care—and our programs prepare huge percentages of the nurses, technicians and assistants who staff our hospitals, doctors' offices and nursing homes. Allied health programs are very expensive and, according to [this] independent study, very much in need of weighted funding to grow."[6]

Among new programs added in the system in recent years were biotechnology, polysomnography (the study of sleep), computer simulation and game development, agricultural biotechnology, and positron emission tomography (a nuclear medicine imaging technique which produces a three-dimensional image or map of functional processes in the body), the system's Frazelle says. These additions reflect the growth of the job market in fields such as health sciences and technology.

—Renee Elder Goldsmith

Footnotes

[1] *Curriculum Procedures Reference Manual*, N.C. Community College System, § 15, p. 3. Accessed Nov. 8, 2007, on the Internet at *http://www.nccommunitycolleges.edu/programs/reference_manual.htm*

[2] *A Matter of Facts: The North Carolina Community College System Fact Book 2007*, North Carolina Community College System, Raleigh, N.C., p. 48. On the Internet at *http://www.ncccs.cc.nc.us/Publications/docs/Publications/fb2007.pdf*

[3] *Ibid.*

[4] Jeff Hockaday and Donnie Hunter of Hockaday-Hunter & Associates, *Community College Funding Formula Study*, N.C. Community College System, Raleigh, N.C., 2005, p. 2.

[5] Martin Lancaster, *The Costs of Change: (Re)educating North Carolina's Workforce*, a slideshow on the 2006–2007 Consensus Expansion Budget Request, N.C. Community College System, Raleigh, N.C. On the Internet at *http://www.ncccs.cc.nc.us/External_Affairs/Presentations/new0607budget.ppt*

[6] *Ibid.*

Table 3. 2006 Median and Mean Hourly Wages for the 10 Fastest-Growing Occupations in North Carolina, by Percentage Change

Occupation	Hourly Wage	
	Median	Mean
Personal and home care aides	$8.35	$8.54
Home health aides	8.73	8.97
Medical assistants	12.43	12.54
Dental assistants	15.67	15.96
All occupations	**13.45**	**17.08**
Physical therapist assistants	20.33	20.63
Dental hygienists	29.23	28.51
Network systems and data communications analysts	30.28	31.17
Biomedical engineers	32.98	34.35
Physicians assistants	35.54	36.04
Computer software engineers	40.89	42.00

Notes: Minimum wage in North Carolina is $6.15 per hour.

Minimum Wage Laws in the States—January 1, 2008, U.S. Department of Labor's Employment Standards Administration Wage and Hour Division, Washington, D.C. Accessed Jan. 30, 2008, on the Internet at *http://www.dol.gov/esa/minwage/america.htm#NorthCarolina*

A living wage for one person in North Carolina is $7.71 per hour.

Living Wage Calculator, Living Wage Project, Pennsylvania State University, University Park, Pa. Accessed Jan. 30, 2008, on the Internet at *http://www.livingwage.geog.psu.edu/results.php?location=27*

Source: State Occupational Employment and Wage Estimates, U.S. Bureau of Labor Statistics' Division of Occupational Employment Statistics, Washington, D.C., May 2006. On the Internet at *http://www.bls.gov/oes/current/oes_nc.htm*

"The typical distance learner is a working parent with job and family responsibilities."

from 200,000 to 300,000 students. An integral mechanism for accommodating such an influx of students will be online and distance learning.[21] Consequently, in June 2007, UNC's system leaders launched the University of North Carolina Online, meant to promote the more than 90 existing online degree programs on a single site: *http://online.northcarolina.edu/*. The UNC system has been monitoring student online education enrollment, which has grown by more than 10 percent annually over the last 10 years and now reaches 25,000 UNC students. According to President Bowles, the UNC system intends to "market the hell out of this."[22]

Likewise, since 1997, the N.C. Community College System has sought to expand its distance education curricula. (See Table 4, p. 117.) In 1999, the entire system offered a total of only 10 online classes. By 2007, most individual community college campuses offered more than 100 online classes each. In 2006, the community college system's distance learning registration count was more than 200,000 students. The increase in online course offerings results from both increased demand from prospective students and technological innovations. According to the N.C. Community College System's distance learning coordinator, Linda Nelms, the online curricula serve nontraditional students. "Every day, I get an e-mail or telephone call from students looking for courses or information about programs that are available online. It's being driven not only by the student but by the need to offer alternative programs."

In addition to individual course offerings, some community colleges are crafting entire degree programs via online distance learning, such as Guilford Technical Community College's associate of arts degree. According to Amy Brown, coordinator of distance learning at Guilford Tech, "[Distance learning] is very popular because you can work the classes into your schedule more easily. You can do them on your timetable. You don't have to ask to get off work to come to class, and you don't have to find child care."

Table 4. Distance Learning in the N.C. Community College System

Curriculum Distance Learning Registration

Year	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06
Distance Learning Registration	40,392	60,742	90,337	121,356	155,556	182,249	201,626
Rate of Growth	51.31%	50.38%	48.72%	34.34%	28.18%	17.16%	10.64%

Occupation and Continuing Education Distance Learning Registration

Year				2002–03	2003–04	2004–05	2005–06
Number of Students				16,300	18,389	26,452	25,950
Rate of Growth				n/a	12.82%	43.85%	-2.30%

Source: A Matter of Facts: The North Carolina Community College System Fact Book 2007, North Carolina Community College System, Raleigh, N.C., May 2007, p. 31. On the Internet at *http://www.nccc s.cc.nc.us/Publications/ docs/Publications/fb2007.pdf*

The system employs a myriad of technological mechanisms for online education, including three-dimensional virtual reality imaging and two-way video conferencing. System President Martin Lancaster says, "An incredible new tool for enhancing teaching in public schools, community colleges, and universities—both online and traditional face-to-face—will be the Learning Objects Repository (LOR), which the community college system developed but which can be used by our sister institutions. The LOR will be a repository of learning objects which can be dropped into an online course or used in the classroom to enhance the lecture. These objects can be visuals of various kinds—video clips, charts, or graphs. By adding them, you get away from stale, text-only online instruction or stale, lecture-only classroom presentations."

Nelms stipulates that the online curriculum does not forfeit quality education for convenience. "There was always reluctance from some individuals regarding the distance learning because there was concern about the ability to offer the same quality and resources to the students. That has been one of the guiding goals of distance learning in the community college system—to ensure that whatever method the student chooses to obtain their education is a quality one. Whether it's face-to-face or by distance, that student receives a high level of quality in their education," Nelms says.[23]

The N.C. Community College System approaches distance learning as a collaborative effort between the 58 campuses. Jennifer Frazelle, director of program services for the N.C. Community College System, says distance learning is a priority for the community college system. "We have developed a virtual learning community, basically a library of virtual learning courses," Frazelle says. "This is especially helpful to smaller colleges that might not have the opportunity to develop a particular program themselves." The Virtual Learning Community provides hardware, software, content,

"The lecture hall is very large and my seat is far back. I feel like I'm in a distance - learning program."

and training to instructors and administrators across the state. This approach results in an estimated 50 to 65 percent reduction in costs to the system as compared to the purchase of software and other materials by each campus individually.[24]

Alisa Chapman, assistant vice president for university-school programs at UNC General Administration, says, "The way the UNC system defines distance learning is not necessarily online," Chapman says. "In many instances, but not in all cases, those last two years are being offered by our university [system through on-site instruction] on community college campuses. Some may be offered at a local high school at night."

Distance learning often comes into play when a specific community college program has statewide impact. Such is the case with the utility lineman program at Nash Community College in Rocky Mount that trains workers for utility companies, says Hilda Pinnix-Ragland, Chair of the State Board of Community Colleges and vice president of northern region energy delivery services for Progress Energy in Raleigh. "Nash Community College has the flagship program for linemen, and we [at Progress Energy] rely on the community college system to train our linemen," Pinnix-Ragland says. "Because most of our students actually work, and many cannot get to Nash County to attend classes, they also have the option of taking the course online."

"Cooperation between the N.C. Community College System and the University of North Carolina system is on the rise, facilitating the transfer of credits for students from the former system to the latter."

Program and Course Transfers to the UNC System

Cooperation between the N.C. Community College System and the University of North Carolina system is on the rise, facilitating the transfer of credits for students from the former system to the latter. In a cover letter to President Bowles and President Lancaster transmitting the final report on *Staying a Step Ahead: Higher Education Transforming North Carolina's Economy,* Alceste Pappas (president of the Pappas Consulting Group, based in Stamford, Connecticut) wrote:

> A remarkable collaboration between the President of the University of North Carolina [Erskine Bowles] and the President of the North Carolina Community College System [Martin Lancaster] emerged in January [2006]. A joint UNC-NCCCS Cabinet has been formulated and has started meeting on a quarterly basis to enable both systems to work more seamlessly for the benefit of students in both sectors and to formulate higher education policy that will address the educational, workforce and economic development needs of the state.[25]

1. 2+2 Programs

In 2004, the community colleges began working with the University of North Carolina system to develop four-year degree programs, with the first two years of coursework centered at a community college and the next two years on a University of North Carolina campus.[26] Known as 2+2 programs, these programs may involve online coursework as well as face-to-face instruction, says Chapman. Some 2+2 programs allow students to complete a four-year degree without leaving their community

college campus, while others anticipate an actual transfer from a community college to a four-year college or university. For more information on specific 2+2 programs, including the Appalachian Learning Alliance and Wachovia Partnership East, see "Help Wanted: Community Colleges' Role in Meeting Work Force Shortages" by John Manuel, pp. 136–82.

The 2+2 approach relies on the establishment of a pre-major program which serves as a blueprint for community college students based on the degree they intend to pursue, Chapman says. "If you wanted to be an elementary education teacher and you are a community college student, you would need to take the pre-major list of courses at the community college for elementary education. You should be able to get that information from the counselor—either your community college counselor or a transfer advisory counselor at the UNC system."

Bill Fortney, head of the engineering technology program at Lenoir Community College in Kinston, describes the 2+2 program at Lenoir as a pathway students may follow as they work toward a four-year degree in engineering technology. Students who complete the two-year pre-engineering technology program at Lenoir are qualified to transfer to North Carolina State University to finish their degree. Fortney says the program "lays out the progression so there's no guesswork regarding which courses will be needed for transfer to the university.... Our transfer numbers are pretty low; only six or seven a year actually transfer. But I think that's great. That's six or seven students in Lenoir County who have an opportunity they never otherwise would have had."

Fortney has seen some students start with only the most basic math skills, do well, and end up with an engineering career. "One Greenville construction worker came here and started with developmental math, which is a high-school level course. Now he's a civil engineer working in the state. All a student needs is the ability and the heart to do the work. We can meet them where they are and start from there."

2. The Comprehensive Articulation Agreement

The Comprehensive Articulation Agreement (CAA) between the University of North Carolina System and the North Carolina Community College System governs the transfer of credits between public two-year colleges and the UNC System. Approved in 1997 by the UNC Board of Governors and the State Board of Community Colleges, the agreement identifies which and under what circumstances community college courses

Erskine Bowles and Martin Lancaster

Sam Watts

Student in machine shop at Wake Technical Community College

may be transferred for credit to the UNC system. Twenty-three of North Carolina's 36 private colleges and universities have agreed to honor the terms of the Comprehensive Articulation Agreement for community college transfer students.[27]

Critical to the development of the agreement was the adoption of the semester calendar by the community colleges, along with a common course numbering system.[28] "English 111 is supposed to be the same at all our campuses, so there is consistency in offerings," N.C. Community College System President Lancaster says. "That is something we did as part of reengineering our whole program to implement the Comprehensive Articulation Agreement."

The agreement was jointly developed by faculty and administrators of the community college system and the UNC system based on a proposed transfer plan approved by both governing boards in 1996. The agreement also complements the strategic directions adopted by the University of North Carolina Board of Governors to "expand access to higher education for both traditional and non-traditional students through…uniform policies for the transfer of credit from community colleges to constituent institutions…development of electronic information systems on transfer policies, off-campus instruction, and distance education…[and] increased collaboration with other education sectors.[29] As part of the agreement, 44 semester hour credits of general education core courses were identified that, once completed with a grade of 'C' or higher, constitute a block of general education credits that may be transferred as a unit from community colleges to UNC campuses. These courses include humanities/fine arts, social and behavioral sciences, natural sciences, mathematics, and English composition.[30]

The agreement also enables North Carolina community college graduates holding associate in arts or science degrees to enter UNC universities with status as a junior, if standard admissions requirements are met. However, this status is not typically extended to students who have earned an associate in applied science or associate in fine arts, which require fewer general education core courses at community colleges.

For students holding two-year degrees in applied science, the college system relies on individual "bilateral agreements" between colleges and specific universities to facilitate transfers to baccalaureate degree programs at university campuses. Students earning an associate in fine arts may transfer all their courses to a four-year school, but the receiving university has the option of deciding whether to count those credits as general education, major, or elective credits.[31]

Dennis King, vice president of student services at Asheville-Buncombe Technical Community College and co-chair of the Transfer Advisory Committee, explains, "We [Asheville-Buncombe Tech] have a program here called 'early childhood education' which is an applied science program. These are not transferable programs to the university system as a whole. Some universities do offer four-year degrees in areas like early childhood education. They want to get hold of our two-year students to finish their degree with them. So a university that has those kind of programs may want to set up a bilateral agreement… between the two institutions. It is not statewide the way the Comprehensive Articulation Agreement is. It is simply a document written [between a community college and a university]… only to cover the one field—for example, early childhood education."

Kelly Pipes, an institutional effectiveness officer in the Office of Instruction for Wilkes Community College in Wilkesboro, believes that the CAA, though a sound foundation, needs to be built up further. Pipes says, "I see this as an area where major progress has been made over the years but that still needs serious attention. There are far too many core classes that will not transfer to certain universities [as core credit hours, and are instead classified as elective credit hours]… despite the instructor being properly accredited and the classes covering the same content. The state should be concerned when the same institutions will not give transfer credit for the same community college courses for which other state institutions will give credit."

Likewise, Chris Robinson, director of Wilkes Community College's satellite campus in Mount Jefferson, the Ashe Center, gives another reason to expand the articulation agreement and 2+2 programming, saying, "The expansion of [the 2+2 program and articulation agreement] helps us, especially in rural communities, to keep a professional work force. Engineers, for example, are hard to find, and usually stay in the area where they receive their initial education. Expanding 2+2 programs, particularly online programs, puts rural areas on more equal footing in keeping the professional expertise needed to keep the economy growing."

Some of the problems with the CAA relate specifically to the state's need to produce more teachers. System President Martin Lancaster indicates that the greatest problem with transfer in preparing public school teachers is in the applied science area. The UNC system will not allow community college applied science courses to transfer as university credits because community college applied science instructors are not required to have a master's degree.

President Lancaster also indicates that while 2+2 programs are progressing well, alternative licensure and lateral entry program agreements for teachers have been problematic. Lateral entry programs have had a low retention rate and have been met with resistance from the UNC system. Central Piedmont Community College approached the System office about developing an alternative teacher licensure program. However, a study conducted by the State Board of Education recommended that community colleges not be allowed to pursue alternative licensure. Lancaster suggests that the state look at high-need areas by subject and geographic area and pilot alternative licensure programs in those areas.

Central Piedmont Community College boasts the largest student body of any higher education institution in North Carolina, with approximately 70,000 students in 2007. According to Dr. Tony Zeiss, the college's president, 40 percent of its students are enrolled in college credit courses. Zeiss says that while the lateral entry teaching program permits students to complete their first two years before transferring to

a university to complete their training, the UNC system campuses are not expanding capacity quickly enough to satisfy student demand or work force shortages. Zeiss recounts a lateral entry program crafted by the community colleges in which students could take courses online for the low cost of $125 per course, as compared with $625 per course in the UNC system. Zeiss says the UNC system killed the program, and the community colleges lost their authorization. Zeiss contrasts this scenario with that in Florida, where community colleges are granted the power to award 4-year degrees in high-need areas. Lancaster says, "Many of these limitations and impediments to community college lateral entry programs were removed by legislative action in 2007."

According to Scott Ralls, president of Craven Community College and President-elect of the community college system, the "college transfer role" is one of the N.C. Community College System's four primary roles, along with the "remediation role," "contract for customized training role," and "community service role." Ralls says that the college-transfer role should incorporate more rigorous programs in order to adequately prepare students for university studies.

MGT of America, a consulting group that issued a report to the Joint Legislative Education Oversight Committee of the General Assembly of North Carolina in 2004 regarding the Comprehensive Articulation Agreement (CAA), found both strengths and weaknesses regarding the articulation agreement's implementation.[32] On a positive note, MGT said the agreement has succeeded in providing greater standardization of the transfer process and offering students a definite curricular path to follow. The report determined that the agreement has been effective in ensuring that students who successfully complete the 44-hour general education core and/or receive an associate in arts or associate in science degree from a community college will be able to transfer to a UNC institution. As evidence of the agreement's success, it was credited with bolstering the numbers of students making the transition from North Carolina community colleges to UNC campuses. For instance, that number rose from 5,349 in 1999–2000 to 6,806 in 2002–03.[33] And, in just the fall semester of the 2005–06 school year, that number was 6,251.[34]

However, some significant weaknesses in the process were also noted. "The most revealing finding from our research evaluating the CAA is the low level of student awareness of the existence of the agreement and its provisions," the MGT report stated. "More than half of the surveyed community college students who are enrolled in transfer degree programs or surveyed university students who have successfully transferred from community colleges were not aware of the CAA. Without basic knowledge of the CAA, students cannot plan their course work effectively or efficiently in preparation for transfer to a four-year institution."[35]

The report also noted problems in transferring the general education core block from community colleges to universities, with students being required to "repeat courses or take additional courses to fulfill requirements at the receiving UNC institution." The report recommended that all students who successfully complete an associate in arts or associate in science degree at one of the community colleges in North Carolina should be *guaranteed admission* to an institution within the University of North Carolina system. This requirement would put such students on equal footing with those who started as freshman at UNC institutions and who automatically rise to junior status once sufficient credits are earned. The UNC system has since adopted this recommendation.[36]

In addition, the report found, "The special circumstances surrounding transfer agreements for associate in applied science programs, which are not designed for transfer, require bilateral rather than statewide articulation. Special circumstances include the different accreditation criteria for faculty in transfer and non-transfer programs, the different general education requirements for transfer and non-transfer programs, and the workforce preparedness mission of the technical/community college AAS programs."[37] East Carolina University and Western Carolina University are

Sam Watts

Student at Wake Technical Community College

actively pursuing effective strategies to make possible the transfer of the associate in applied science degree.

Since the 2004 report was issued, several steps have been taken to improve the transition of community college graduates into UNC institutions, says Robert Kanoy, senior associate vice president for academic and student affairs at UNC-General Administration. The Comprehensive Articulation Agreement has incorporated a Transfer Assured Admissions Policy for North Carolina community college students moving into their junior year at a university campus. Provisions of the policy are spelled out in the Comprehensive Articulation Agreement and on the College Foundation of North Carolina website to help inform students at the point that they are applying to college.[38] A community college graduate is assured of admission to at least one of the 16 UNC campuses under the following circumstances:

- The student must hold an Associate in Arts or Associate in Science degree.
- The student must have an overall GPA of at least 2.0 on a 4.0 scale, as calculated by the college from which he or she graduated, and a grade of "C" or better in all core courses.
- The student must be academically eligible for re-admission to the last institution attended.
- The student must meet all application requirements at the receiving institution, including the submission of all required documentation by stated deadlines.[39]

According to Dennis King of Asheville-Buncombe Tech, the Transfer Assured Admissions Policy is a "tremendous selling point" to students. "So, we can tell the community college graduate that if he stays with us and he gets a diploma, even if he graduates with a 2.0 average, he is admissible to continue his education at some campus in the university system. I think that's a tremendous selling point to our students.

All you got to do is stay in college, persist, and graduate, and you will be able to get your bachelor's degree by going to the university campus."

However, the policy does not guarantee admission to a specific campus, program, or major within UNC, Kanoy says. "We don't use the word guarantee because it may be interpreted as guaranteeing a student a spot at whatever institution they choose." Nonetheless, four of 16 UNC schools grant automatic admission to students who meet the requirements—UNC-Charlotte, UNC-Pembroke, Elizabeth City State University, and East Carolina University. Students holding degrees other than an associate in science and associate in arts do not fall under the Transfer Assured Admissions Policy, although students may meet the requirements for transfer through other means, including bilateral agreements in which a specific public university agrees to accept qualified graduates from a specific community college program.

Kanoy says that automatic admission is not granted by all UNC campuses for a reason. "Basically, it is a supply and demand issue which leads to different campuses having to have different levels of selectivity. UNC-Chapel Hill has more applications than any campus and ends up denying admissions to more students than any other campus. In the late 1990s, we started the "focused-growth initiative" where we actually had campuses that were not at full capacity and the state supported efforts to help those campuses grow more quickly than our others. And, you also have to consider the infrastructure issues for our other campuses that are at capacity.

"In working with colleagues in other states, the term guarantee was often misinterpreted that it would guarantee admission to the senior institution of your choice. If you look at the Comprehensive Articulation Agreement, it was very careful to point out that the agreement did not guarantee admission to a certain campus or a certain program of study or major. Just as the community colleges have caps on certain programs, e.g., nursing, we also have caps in certain majors or professional schools. And, we do not control all the admissions criteria. For example, the State Board of Education has a policy that teacher education students must have a minimum GPA of

English class at Wake Technical Community College

Sam Watts

2.5 and pass the Praxis I test to be admitted to a teacher education program in North Carolina. So, we may be able to admit a transfer student onto a campus, yet not admit them to a professional degree program," Kanoy says.

Dennis King says another enhancement has been made to the agreement since its initial formation regarding the transfer of individual courses. King explains, "For a student who attends Asheville High School and in his senior year passes…one class with us [Asheville-Buncombe Tech] and gets a university-transferable course, there was a question as to whether that course was automatically covered under the agreement.… Now, as long as the course is transferable, it is guaranteed to be transferable to the university even if the student never attends community college after high school."

Dean Sprinkle, vice president of instruction and student services at Wilkes Community College in Wilkesboro, identifies another major weakness in the credit transfer process among the 58 community college campuses and, by extension, between the community college system and UNC system. Sprinkle says, "I see the future of [community colleges in North Carolina] as folks piecing programs together from multiple institutions. I think this overlaps with regional accrediting as a challenge, since current agreements require that a specified percentage of the credits are required to be taken at the degree-granting institution." As a solution, Sprinkle says, "There may need to be a state or regional authority for degree-granting credits." In this way, students seeking an associate's degree, either as an end in itself or as a component of a 2+2 program, could acquire the necessary credits from various institutions, thus facilitating the attainment of both two- and four-year degrees.

Dennis King agrees with Sprinkle. King says, "Universities are steeped in tradition that goes back hundreds of years, and they are slow to respond to change. They still have policies that are ineffectual for the 21st century. One of those policies at most universities is that at least half the degree needs to be done there. That worked real nicely back in the 1950s when people didn't move around, before the day of distance learning, and before the day of high school dual enrollment. But today we are so much more mobile as a society."

King offers the example of a student who, while a senior at Asheville High School, takes two classes at Asheville-Buncombe Tech. He also takes another two courses through the Learn and Earn online program at Fayetteville Tech and Wake Tech. Upon high school graduation, the student enrolls in a private university in Tennessee and completes 6 credit hours there before deciding to transfer to a public university. Although the student has earned 12 credit hours from four institutions, a UNC campus's "native student policy" will require the student to complete 50 percent of his degree at that particular campus in order to earn a degree. King says, "We have students that are so mobile today that they carry credits from so many institutions that the "native student policy" has become unrealistic. It's anachronistic. It's out of date. I would say before too long it's going to change. You get institutions like the University of Phoenix [which offers online degree programs] who are going to eat somebody's lunch. They're going to take the kind of student that I just mentioned and say, "We'll take every credit that you've earned at five or six different places and we'll roll them all together, and if you get 15 more credits here, we'll give you a University of Phoenix degree."

Meanwhile, the UNC system insists that 50 percent of a student's degree be completed on their campuses. King says, "So then you've got a guy who sits down with a piece of paper in front of him, and he says, 'I've already earned 90 credits in all these other experiences. University of Phoenix is saying 15 more credits and I've got a degree, and a university in North Carolina, an outstanding school, is saying I've got to do 70 credits there because I'm going to lose all these other credits because of their native student rule.' Now, that student is going to be smart enough to say, "I'm going to get my degree from the University of Phoenix."

King notes that UNC representatives respond by insisting that although a student must complete 50 percent of his or her degree on campus, the cost per course will be significantly less than that of the University of Phoenix. However, King explains, "It's not going to cost you more if they [the University of Phoenix] are only going to require you to take 15 more credits whereas the local university here wants you to go back and start at the 50 percent point and move on. I think that the kind of rule that you've mentioned [the native student policy], because of the old rule of supply and demand, is going to get shot down because of the University of Phoenix and others that are ready, willing, and able to work with the mobile student of the 21st century."

> *"The biggest complaint we hear back from our transfers is the culture shock once they arrive on the receiving institution's campus. They are stunned and overwhelmed by the sheer size and bureaucracy of the campuses. We are working toward establishing transfer student networks, orientations, and so on to try to ease the acclimation process."*
>
> Thomas Gould, associate dean of arts, sciences, and university transfer at Durham Technical Community College and president of the College Transfer Program Association

King mentions another area of improvement needed for the Comprehensive Articulation Agreement: community college student counseling. King explains, "First-year students come to the community college and say, 'Well, I don't know what I want to major in at the university.' If that persists through their two years with us, then they may graduate and actually be admissible to the university but may not be ready for a major. You can think about a major as complex as chemistry. A student goes to the university and had very good grades with us at the community college. Then he wants to major in chemistry, but he hasn't had the right mixture of courses at the community college. He's not ready for a major in chemistry, and that's where the student will still use some time by having to catch up. So, one of the improvements that we've got to do at our level is make the student more aware that he's got to make a decision about what he's going to major in at the university—not late but early. That kind of advising is something which is missing presently. We don't have the staff at the community college level to really deal with those issues as fast and as thoroughly as we would like to. That's something that's got to be worked out so that articulation can be as smooth as possible."

King reports that some progress has been made in this area. King says, "Up until recently, the only people the agreement pertained to were people from the N.C. Community College System and the North Carolina university system and a few private schools that have signed on to the document.… Any work done anyplace else, such as at a community college in Florida or at Yale or Harvard, anyplace else, would negate the articulation agreement. I didn't think that was a very good idea, and we have got that worked out now so that a student can transfer into the agreement as much as 14 credits—that would be four three-credit hour classes—and perhaps some labs from any regionally accredited university. I think that is a tremendous enhancement—particularly in this day and age when so many of our students are mobile. They move from institution to institution and state to state."

Thomas Gould serves both as the associate dean of arts, sciences, and university transfer at Durham Technical Community College and as president of the College Transfer Program Association, North Carolina's largest organization of transfer professionals, which boasts more than 250 members from the community college system, the UNC system, and private colleges and universities. Gould views the Comprehensive Articulation Agreement as a largely successful collaborative effort. Gould says, "The Comprehensive Articulation Agreement between the community college and UNC systems is a unique and groundbreaking document and nothing less than the very foundation upon which the "seamless education" initiative is built." Moreover, Gould says the agreement serves as a pathway to success for North Carolina's students and as a model for other states crafting their own articulation agreements. According to Gould, one of the agreement's primary benefits is that "it has fostered a productive and truly collaborative working relationship between the two systems."

This working relationship in turn has fostered additional partnerships, including both the previously mentioned bilateral agreements, as well as the Transfer Advisory Committee of which Dennis King is co-chair. Gould says, "The state Transfer Advisory Committee has done an exceptional job as caretakers of the CAA. They continue to address the issues surrounding transfer and work diligently to resolve any problems and remove any obstacles blocking the path to a smooth transition."

Among the issues and obstacles faced by those navigating the Comprehensive Articulation Agreement are the understandings of students, faculty, and staff of the protections and limitations of the agreement. Specifically, Gould says, "Students on the community college campuses need a greater awareness of what the agreement means to them. We have just received approval from the Transfer Advisory Committee to develop a transferable one-credit hour course on College Transfer Success, that we hope will go a long way in defining the Comprehensive Articulation Agreement for students." The course will offer instruction in fundamental academic skills such as critical thinking and written and verbal communication and will help students developing a strategic plan for transfer, including understanding the benefits of the Comprehensive Articulation Agreement. Gould says that admissions and transfer staff at colleges and universities also need assistance in understanding the agreement. To that end, Gould says, "The Transfer Advisory Committee holds yearly training/information sessions to address this problem, but we still have the occasional students who are not being awarded all the credit they have earned."

> *"The needs in student services and support are particularly urgent—first, because many community college students require a lot of support, and second, because these areas have suffered disproportionately in budget cuts in the recent past."*
>
> **2006–07 Budget Presentation to the N.C. General Assembly by the N.C. Community College system**

A resolution incorporated into the Comprehensive Articulation Agreement in November 2007 allows the transfer of courses on a course-by-course basis. The resolution allows students who complete a community college course designated for college transfer with a grade of "C" or better to receive credit for that course at a four-year institution. The receiving institution retains the ability to determine whether the credit will count as general education, major, or elective credit. According to Lancaster, "This will be a tremendous boost to transfer. Now a student will not have to complete that associate's degree to transfer their credits. This is big, big, big!"

Gould concludes, "The biggest complaint we hear back from our transfers is the culture shock once they arrive on the receiving institution's campus. They are stunned and overwhelmed by the sheer size and bureaucracy of the campuses. We are working toward establishing transfer student networks, orientations, and so on to try to ease the acclimation process."

Student Services

Student services are a growing part of North Carolina community college campuses. These services include registration and academic counseling, basic skills and General Equivalency Diploma (GED) assistance, career planning, financial aid, grants and scholarships, transfer information, and student records.[40] The community college system spent $66.7 million on student support programs during 2005–06, including $1.87 million on child care.[41] This is an area that is expected to grow with the needs of the student population, according to the administration's presentation to the General Assembly on the 2006–07 budget: "The needs in student services and support are particularly urgent—first, because many community college students require a lot of support, and second, because these areas have suffered disproportionately in budget cuts in the recent past."

President Lancaster says, "Here's what community college students look like in this country—and North Carolina's numbers aren't far off: 29 percent have incomes below $20,000, 41 percent are first-generation college students, 33 percent are parents, and 54 percent work full-time in addition to taking classes; 47 percent of African-Americans, 56 percent of Hispanics, and 47 percent of Native Americans who attend college go to community college, and 9 percent have a disability. These are students who need hands-on attention. Financial aid and student services have lost staff members and been forced to cut back on training and professional development—all during a time when laid-off industrial workers have flooded our colleges, many new students with limited English proficiency have arrived, and low-income students eager to take advantage of generous new scholarship programs have come looking for help."[42]

Lancaster says, "Student services such as counseling, tutoring, and child care services are key to student success, but the General Assembly actually cut these services during the 1990 to 1991 recession and they have never given us back all the positions we lost. We have gotten a little increase back, but not much. Until these services are boosted *dramatically*, the student success we're capable of and which the students deserve will never happen. We are criticized for the low number of completers, but the fact of the matter is that only a small percentage of our stop-outs and drop-outs leave for *academic* reasons. They are *not* flunk-outs. They just need more help to stay in and persist to a certificate, diploma, or degree. Just because a staff person doesn't teach doesn't mean that they aren't important to the educational program."

According to Jennifer Haygood with the fiscal research division of the General Assembly, student services are funded through what is called the "Institutional Support" formula, which provides funding for both student support services and general college administration. Colleges have flexibility regarding how they use the funds. Haygood provides a history of budget actions taken with regard to that formula since 1990:

- 1991: Cut $8,303,831—Changed administrative and instructional support allotment ratios from per 100 FTE to per 110 FTE.
- 1993: Cut $1,563,777—Reduced the formula allotment for senior administrators and administrators of programs from a ratio per 110 FTE to one based on every 125 FTE.
- 1993: Added $1,000,000—Funded additional counselor positions.
- 1994: Added $6,016,047—Funded additional counseling and support personnel, including career development specialists, academic advisors, financial aid specialists, placement directors, employment counselors, disabled services directors, and clerical support.
- 1999: Added $8,000,000—Provided additional support positions so that funds that community colleges had been transferring from the formula salary line could be significantly reduced. The State Board ensured that at least one additional financial aid counselor would be distributed to each college.
- 2003: Cut $9,727,663—Adjusted the administrative formula.
- 2005: Added $3,557,430—Provided one position in the base allotment for administration for additional financial aid staff at each college.

Haygood summarizes, "If you take an $8 million cut in one year, it will take more than $8 million to 'restore' that cut in future years due to enrollment growth and legislative salary increases. Even if you take that into account, it appears that it isn't the cut in the 1990–91 recession that the community colleges haven't had restored; rather, it is the cut in 2003 that has not been fully restored."

First Impressions

During their first three weeks of classes, students at 22 community colleges reported the following:

***41%** said they had never used academic-planning services in the first few weeks.*

***40%** said "friends, family, or other students" were their primary source for academic advising during their first three weeks of college.*

***29%** said a financial-aid staff member had helped them analyze their needs.*

***20%** said they "strongly agreed" with the statement, "The very first time I came to this college, I felt welcome."*

***23%** of students needed developmental classes in reading, writing, and math.*

— 2007 National Survey of Entering Student Engagement

Kennon Briggs, vice president of business and finance for the community college system, concludes, "Both the President and Ms. Haygood are factually correct."

Conclusion

Surry Community College in Dobson is going to be home to the North Carolina Viticulture/Enology Center (enology is the study of wine and winemaking). In addition to operating as a teaching laboratory and wine industry demonstration model, the commercially-bonded winery will cultivate high-quality, student-made wines. The Viticulture/Enology Center also will boast classrooms, instructors' offices, a resource library, outdoor "crush pad" for initial processing of grapes, and a climate-controlled wine cellar and barrel room. The center will have space for seminars, conventions, and conferences for the North Carolina wine industry. Moreover, the four-acre campus vineyard will afford students the opportunity to grow, harvest, and process 14 varieties of vinifera, hybrid, and native American grapes in an environment aimed at work force preparation.

Currently, Surry Community College offers degrees, diplomas, and certificates in viticulture/enology through curriculum classes, with some available online. Continuing education courses are offered through a series of workshops, seminars, and demonstrations. In doing so, the college attracts national and international experts on the most innovative technology within the wine industry. According to college officials, "The North Carolina wine industry has left its infancy. It is now ready for significant growth and recognition."[43]

Carol Majors

Gill Giese is the lead instructor for the current viticulture/enology program. He says in fall 2007 there were between 40 and 50 students enrolled in the viticulture/enology program at Surry, but only about a dozen were degree-seeking. "Most are entrepreneurial," Giese says. "Almost all my students work. A few don't work in the industry now but have aspirations to start their own vineyard."

"The program here was started in 1999 and was first housed in the science department. Now we are under business and technology." The campus includes a vineyard and a bonded winery with a 2,500 gallon capacity. Giese says, "We produce 400 to 1,000 cases a year. Students make the wine and market it. Under the direction of enology instructor Molly Kelly, Surry Community College wines took gold, silver, and bronze medals this year at the State Fair."

Dana Acker, originally from Mt. Airy but now a winemaker at Buck Shoals in Hamptonville, says of his decision to enroll in Surry's viticulture/enology program, "What prompted me to do it was, basically, starvation. I had worked close to 20 years in the computer end of textiles. Then all of that went out of the country, and I was laid off. I looked for work for about six months and didn't find anything."

Acker says he was interested in beer making after having experimented successfully with an at-home brewery. "But I didn't think it was feasible to open a brew pub in my home town," he says. "With the wine industry moving into our area, that seemed like something reasonable to do. I believe I was the first person to go back to school and major in viticulture and enology on a North American Free Trade Agreement (NAFTA) grant in the country. The paperwork didn't even exist. I had to go to several wineries and ask questions."

Acker's work paid off. He says, "I spent half my time working in the vineyard and half working in the winery. Through an internship, I got paid to work in the campus winery. I graduated in May 2005 and got a job as an assistant winemaker at Old North State Winery and then was offered the job of winemaker. After they went out of business, I got the job as lead winemaker at Buck Shoals."

Acker does not regret his decision to go into viticulture. "At this stage of my life, I couldn't envision doing anything else," Acker says. "The training I got at Surry was so valuable. I've managed to stay employed. After I graduated, I went right to work. When I came out of the program, I felt confident in handling any situation that might come up in a winery. It's not just theoretical knowledge; you are doing a lot of hands-on at the same time. I felt quite prepared."

Acker believes that Surry's viticulture program has helped Mt. Airy overcome the loss of manufacturing jobs. Acker says, "Mt. Airy at one time was thriving because everybody worked in the textiles or furniture industries. The mills worked the majority of the population; the rest were in tobacco farming. Then there was the crackdown on tobacco. A lot of people quit farming tobacco, and all the mills shut down." Acker continues, "Economically, this area has been hit hard. The only bright spot is the wine industry. That's allowed some of the land to go back into agriculture production, which is nice. And it's providing jobs for people who have lost jobs."

Acker also sees viticulture as a resource for the state as a whole. Acker says, "North Carolina now is something like fifth-largest in the U.S. for wine tourism, with

California first.[44] We're seeing new wineries open every year and new vineyards being planted." According to Acker, both N.C. State University and Appalachian State University are trying to get four-year viticulture programs going.

Surry's viticulture program is one of many community college programs meeting employment needs in North Carolina. Scanning the list of student completions by programs for 2005–06, you get a sense of the job needs across our state and of the faces of the work force trained by the community colleges. Systemwide, 3,167 students obtained their associate's degree in arts; 1,975 completed the associate's degree in nursing leading to the registered nurse credential; 1,207 completed medical office administration; 1,030 completed business administration; 716 completed practical nursing; 655 completed information systems; 540 completed basic law enforcement training; 395 completed truck driver training; and 121 completed electronics engineering technology. And, yes, one completed aquaculture technology, and four completed viticulture and enology technology.[45] From A to V, community colleges are offering programs to meet the needs of students, employers, and the state.

Recommendations

To ease credit transfers between community colleges and public and private colleges and universities, to help community college programs adapt to the new opportunities provided by distance education, and to increase North Carolina's college-going rates, the N.C. Center for Public Policy Research makes the following recommendations:

(1) The University of North Carolina System and the N.C. Community College System should work together to continue to expand enrollment in the 2+2 programs with the goal of increasing the number of 18 to 24-year-olds enrolled in college in North Carolina from 30 percent in 2006 to 41 percent (the college-going rate of the top five states) by 2012.[46]

Access to higher education is key to economic growth in our state, and yet tuition on UNC campuses has risen in nine of the last 10 years, with proposals for increases for at least three more years. By contrast, the community college system has an open door policy and much lower tuition costs. With 80 percent of new jobs requiring some postsecondary education, continued expansion of the 2+2 programs is a central component of state policies that encourage access to higher education in North Carolina.

Access to higher education also is key to economic growth in our nation. The U.S. rapidly is losing its once dominant portion of the world's population of college students. Thirty years ago, the U.S. boasted 30 percent of all college students. By 2006, that percentage had decreased to 14 percent and continues to drop as students in other nations increasingly pursue college education.[47] According to the National Collaborative for Higher Education Policy, "If current national trends continue, the proportion of American workers with high school diplomas and college degrees is expected to decline over the next 15 years, making today's young Americans the first generation to be on track to have lower educational attainment than the previous generation."[48]

The U.S. now ranks 16th out of 27 developed nations in the proportion of students who complete college certificate or degree programs.[49] Among those in North Carolina's young adult work force, only 34 percent have an associate's degree or higher.[50] Out of those in North Carolina's work force aged 25 to 54, almost two-thirds lack any postsecondary credential.[51]

According to the National Center for Public Policy and Higher Education, this downward shift in national educational attainment will result in declining economic

prosperity, with an estimated 2 percent decrease in annual U.S. per capita income between 2000 and 2020. By contrast, over the previous 20-year period, 1980–2000, the U.S. experienced a 41 percent increase in per capita income.[52]

North Carolina likely will experience similar economic ramifications for low educational attainment. By 2012, 24 percent more jobs in the state will require some postsecondary education.[53] Today, those with a bachelor's degree in North Carolina earn $18,000 more annually than a high school dropout, and those with an associate's degree earn $11,900 more.[54] Moreover, the new job market will be tailored to those with some postsecondary education. While more than 13 percent of jobs created in North Carolina over the next 10 years will require an associate's degree, 25 percent will require at least a four-year degree.[55]

While any postsecondary attainment will improve one's economic prosperity in the new job market—both within North Carolina and nationally—those with four-year degrees will fare even better. In order to facilitate economic prosperity for the state through an increase in four-year degree attainment, the N.C. Center for Public Policy Research recommends that the University of North Carolina System and the N.C. Community College System continue to expand enrollment in the 2+2 programs.[56]

The recently adopted rule championed by UNC System President Erskine Bowles and N.C. Community College System President Martin Lancaster, which permits the transfer of individual courses from community colleges to four-year universities, is an important step in the effort to expand articulation enrollment. Future efforts should specifically target those occupations projected to be the fastest growing in North Carolina *by percentage change* between 2004 and 2014: medical assistants, biomedical engineers, physicians assistants, network systems and data communications analysts, personal and home care aides, home health aides, dental hygienists, dental assistants, physical therapist assistants, and computer software engineers, see Table 3 on p. 115. For more information, see Table 2 on p. 151 in "Help Wanted: Community Colleges' Role in Meeting Work Force Shortages" by John Manuel.[57] If state policymakers find that other occupations offer more promise for employment and above average income, this initial list could be modified. The goal is to use the 2+2 programs to increase college-going rates in fields that will lead to employment in higher-paying jobs.

(2) The North Carolina General Assembly should expand funding for student services staff in the community college system.

Student services are vital to the performance of America's community college students, 89 percent of whom qualify as "nontraditional." Sixty-one percent of community college students in the U.S. are part-time, 57 percent work more than 20 hours per week, 34 percent spend 11 or more hours per week caring for dependents, and 21 percent spend between six and 20 hours per week commuting to and from class.[58]

The challenges faced by the non-traditional student lead to poor completion rates, and this condition is exacerbated by a lack of student services. Only 48 percent of North Carolina's first-year community college students returned for their second year, as compared with 80 percent in the UNC system.[59] While 46 percent of non-traditional community college students leave in their first year, 62 percent leave without a degree within three years. By contrast, 19 percent of "traditional" community college students leave without a degree within three years.[60] For non-traditional students with two or more risk factors, the community college completion rate is less than 15 percent—a stark contrast to the 57 percent of traditional students.[61]

President Lancaster says, "Until these services are boosted *dramatically*, the student success we're capable of and which the students deserve will never happen."

(3) Given the trend towards distance learning and the mobility of students in North Carolina, the N.C. General Assembly should create a legislative study commission to study and facilitate distance learning and report to the 2009–10 N.C. General Assembly. Among other topics, the study commission should work with accrediting agencies, the UNC System, and the N.C. Community College System to study the possibility of creating a new state or regional authority that could serve as a repository for credits and grant degrees. This would allow students seeking an associate's degree—either as an end in itself or as a component of a 2+2 program—to acquire the necessary credits from various institutions, thus facilitating the attainment of both two- and four-year degrees.

Distance learning courses are offered at all 58 community colleges in North Carolina. Between 1999–2000 and 2005–06, the growth in curriculum distance learning registrations was almost 400 percent. In 1999–2000, there were 40,392 curriculum distance learning registrations, but by 2005–06, there were 201,626 registrations. In 2005–06, the number of occupational and continuing education distance learning course registrations was 25,950. (See Table 4.)

Traditionally, the "native student policy" has required a specified percentage of credits to be taken at the degree-granting institution. For instance, UNC requires that 50 percent of the credits required for a degree be taken at the degree-granting institution. The Southern Association of Colleges and Schools (SACS), the regional accrediting body for North Carolina, requires students at community colleges to take 25 percent of credits required for a degree to be taken at the degree-granting institution. These policies hinder the community college system in serving the needs of the new mobile student, and it prevents the system from competing with for-profit institutions such as the University of Phoenix, which grants distance learning degrees.

Dr. Delores Parker, vice president for academic and student services for the N.C. Community College System, correctly points out some threshold problems in creating such an authority. She says that current accreditation requirements would not allow for such an authority, either regionally or statewide. Discussing the idea of *the system* holding credits for students and having degree-granting authority, Parker says, "Number one—we are not a degree-granting institution. Number two—we don't have the staff. I really don't see this being feasible for the system. You would have to have registrars here. And the system office is not designed to do that. For the system to act as a repository for credits, we would need to dramatically increase staff and technology. Out of the 800,000 students enrolled each year, 250,000 are transfers, many of which are reverse-transfers from four-year institutions back to community colleges to complete community college programs, including associate's degrees leading to transfer back to the four-year institution. Students move around a lot now. It's an enormous job. The [idea of a state repository for credits] is intriguing. We could work with an organization that had the staff and other resources to act as a repository for credits. The organization would have to be well-researched and well-funded. I would be supportive of that. Absolutely."

Bruce Vandal at the Education Commission of the States says this is a novel idea, but suggests that it might be compared to virtual universities and whether they should be accredited. North Carolina has created new authorities before to adapt to changing needs, such as the State Education Assistance Authority, State Ports Authority, and the N.C. Turnpike Authority.

A legislative study commission can study whether the authority concept is the best way to meet the needs of students who want access to an online degree program through the N.C. Community College System. The overall goal for the commission should be to help community college programs adapt to the new opportunities provided by distance learning and increase college-going rates in North Carolina.

Footnotes

[1] *A Matter of Facts: The North Carolina Community College System Fact Book 2007*, North Carolina Community College System, Raleigh, N.C., p. 22. On the Internet at *http://www.ncccs.cc.nc.us/Publications/docs/Publications/fb2007.pdf* For an in-depth analysis of curriculum students by program area, curriculum type, and average age, from fall 2001–02 to fall 2004–05, see *Data Trends and Briefings*, N.C. Community College System, Planning, Accountability, Research & Evaluation, Sept. 18, 2006. On the Internet at *http://www.ncccs.cc.nc.us/Reports/docs/data_trends_and_briefings/Data_Trends_9_18_06.pdf*

[2] *Ibid*. See also *Staying a Step Ahead: Higher Education Transforming North Carolina's Economy,* Interim Report to the North Carolina General Assembly Joint Legislative Education Oversight Committee, as authorized by House Bill 1264, Pappas Consulting Group, Stamford, Conn., May 11, 2005, p. 101. On the Internet at *http://www.ncccs.cc.nc.us/External_Affairs/docs/interimreport.pdf*

[3] *Overview of the Comprehensive Articulation Agreement Between the University of North Carolina and the North Carolina Community College System*, MGT of America, Austin, Tex., Aug. 16, 2004, p. C-1.

[4] Data provided by Keith Brown, associate vice president for planning, accountability, research, and evaluation at the N.C. Community College System.

[5] *Educational Catalog*, N.C. Community College System, Raleigh, N.C., Sept. 21, 2007, § 3 on certificate and diploma programs, p. 12. On the Internet at *http://www.ncccs.cc.nc.us/Programs/education_catalog.htm*

[6] *Fact Book 2007*, note 1 above, pp. 60 and 78.

[7] *Ibid.*, p. 51.

[8] *Ibid*., p. 60.

[9] *Ibid.*, p. 51.

[10] *Ibid.,* p. 41. See also Office of State Budget and Management (OSBM), *The Community College New and Expanded Industry Training Management Study*, as directed by § 8.7 of N.C. Session Law 2006–66, Apr. 2007. On the Internet at *http://www.ncleg.net/documentsites/committees/JLEOC/Reports%20Received/2007%20Reports%20Received/New%20and%20Expanding %20Industry%20Training%20Report.pdf*

[11] *New and Expanding Industry Training and Customized Industry Training—Trends and Statistics 2006–2007*, N.C. Community College System, Raleigh, N.C., Aug. 2007, p. 23. On the Internet at *http://www.ncccs.cc.nc.us/Business_and_Industry/reports.htm*

[12] *Fact Book 2007,* note 1 above, p. 38.

[13] *Ibid.*

[14] *Ibid.*, p. 51.

[15] Pat Fahy, *Workforce Development in the State of North Carolina: An Overview,* National Center on Education and the Economy, Washington, D.C., June 2005, p. 14. On the Internet at *http://www.skillscommission.org/pdf/Staff%20Papers/North_Carolina_Workforce.pdf*

[16] *Fact Book 2007*, note 1 above, p. 51.

[17] N.C. Gen. Stat. § 115D-39.

[18] N.C. Gen. Stat. § 115D-5(a).

[19] *Educational Catalog*, note 5 above, pp. 2–3.

[20] *Fact Book 2007*, note 1 above, p. 31.

[21] Mark Zimmerman, "A chance to grow," *Chapel Hill News*, Chapel Hill, N.C., July 15, 2007, p. A1.

[22] Tim Simmons and Jane Stancill, "UNC to push online degrees," *The News & Observer*, Raleigh, N.C., June 3, 2007, p. A1.

[23] As quoted in Nick Zulovich, "Students Flocking to Distance Learning Programs," *NC Magazine*, North Carolina Chamber, Raleigh, N.C., Oct. 2007, p. 46.

[24] *Ibid.*, p. 32.

[25] *Staying a Step Ahead: Higher Education Transforming North Carolina's Economy,* Final Interim Report to the North Carolina General Assembly Joint Legislative Education Oversight Committee, as authorized by House Bill 1264, Pappas Consulting Group, Stamford, Conn., July 21, 2006, p. 1 of cover letter. On the Internet at *http://intranet.northcarolina.edu/docs/econ_transform/Pappas_Core.pdf*

[26] *Report by the UNC and N.C. Community College Systems*

Automotive shop students at Wake Technical Community College

Sam Watts

to the Joint Legislative Oversight Committee of the General Assembly on Existing and New 2+2 Programs Between UNC and N.C. Community College System, Raleigh, N.C., Feb. 2006, pp. 2 and 11.

[27] Concurring private colleges and universities include: Barton College, Belmont Abbey College, Bennett College, Brevard College, Campbell University, Catawba College, Chowan College, Gardner-Webb University, Johnson C. Smith University, Livingstone College, Louisburg College, Mars Hill College, Montreat College, Mount Olive College, North Carolina Wesleyan College, Peace College, Pfeiffer University, Queens University of Charlotte, St. Andrews Presbyterian College, Saint Augustine's College, Shaw University, Warren Wilson College, and Wingate University.

[28] *Overview of the Comprehensive Articulation Agreement Between the University of North Carolina and the North Carolina Community College System*, note 3 above, p. iv.

[29] *Comprehensive Articulation Agreement Between the University of North Carolina and the North Carolina Community College System,* 2004 ed. revised, p. 2.

[30] *Comprehensive Articulation Agreement Between the University of North Carolina and the North Carolina Community College System,* 2002 ed., p. 5.

[31] *Ibid.*, p. 7.

[32] *Overview of the Comprehensive Articulation Agreement Between the University of North Carolina and the North Carolina Community College System*, note 3 above.

[33] *Ibid.*, p. 4-3.

[34] *Statistical Abstract of Higher Education 2005–06*, The University of North Carolina, Chapel Hill, N.C., May 2006, p. 57. On the Internet at *http://www.northcarolina.edu/content.php/assessment/reports/previousabs.htm*

[35] *Overview of the Comprehensive Articulation Agreement Between the University of North Carolina and the North Carolina Community College System*, note 3 above, p. 7-4.

[36] *Ibid.*, p. 7–11.

[37] *Comprehensive Articulation Agreement Between the University of North Carolina and the North Carolina Community College System,* 2002 ed., note 30 above, p. 3.

[38] Transfer Assured Admissions Policy, College Foundation of North Carolina. On the Internet at *http://secure.ncmentor.org/Planning/TAAP/*

[39] *Ibid.*

[40] *Student Support Services*, N.C. Community College System, Raleigh, N.C. On the Internet at *http://www.ncccs.cc.nc.us/studentSupportServices.htm*

[41] *Fact Book 2007*, note 1 above, p. 51.

[42] Martin Lancaster, *The Costs of Change: (Re)educating North Carolina's Workforce*, a slideshow on the 2006–2007 Consensus Expansion Budget Request, N.C. Community College System, Raleigh, N.C. On the Internet at *www.nc-net.info/resourcexchange/ReEducatingNCWorkforce.ppt*

[43] "North Carolina Viticulture/Enology Center & Surry Community College: Workforce Development Partnership," *NC Magazine*, North Carolina Chamber, Raleigh, N.C., Oct. 2007, p. 47.

[44] According to the Travel Industry Association, "The top 15 destinations for food-related travel visited by the respondents (in order) include: California (14%), Florida (10%), New York (7%), Texas (6%), North Carolina (4%), Georgia (4%), Louisiana (3%), Illinois (3%), Nevada (3%), Pennsylvania (3%), Washington (3%), Hawaii (3%), Michigan (2%), Arizona (2%), Virginia (2%)." *Comprehensive Culinary Travel Survey Provides Insights on Food and Wine Travelers*, Press Release from Travel Industry Association, Gourmet, and International Culinary Tourism Association, New York, N.Y., Feb. 14, 2007. Provided by Evelyn Law, N.C. Wine and Grape Council.

[45] *Fact Book 2007*, note 1 above, pp. 66–70.

[46] *Measuring Up 2006: The State Report Card on Higher Education—North Carolina*, The National Center for Public Policy and Higher Education, San Jose, Cal., 2006, p. 7. On the Internet at *http://www.measuringup.highereducation.org/_docs/2006/statereports/NC06.pdf*

[47] *Tough Choices or Tough Times,* National Center on Education and the Economy's New Commission on the Skills of the American Workforce, Washington, D.C., 2006, p. 16.

[48] Gordon K. Davies, *Setting a Public Agenda for Higher Education in the States: Lessons Learned from the National Collaborative for Higher Education Policy*, National Collaborative for Higher Education Policy (The Education Commission of the States, The National Center for Public Policy and Higher Education, and The National Center for Higher Education Management Systems), Dec. 2006, p. 18. On the Internet at *http://www.highereducation.org/reports/public_agenda/public_agenda.pdf*

[49] *Ibid.*, p. 2.

[50] *Graduation Pays: The Economic Case for High School Redesign in N.C.*, National Governors Association Center for Best Practices, Washington, D.C., 2006. On the Internet at *http://www.nga.org/portal/site/nga/menuitem.9123e83a1f6786440ddcbeeb501010a0 /?vgnextoid=56cde9b7d9e1a010VgnVCM1000001a01010aRCRD*

[51] John Quinterno, *N.C.'s Unfinished Transformation: Connecting Working Families to the State's Newfound Prosperity*, N.C. Budget and Tax Center, Raleigh, N.C., Winter 2006, p. 19. On the Internet at *http://www.aecf.org/KnowledgeCenter/Publications.aspx?pubguid=%7B068FE718-BD73–4346-B2E3–812A36A6AD58%7D*

[52] *Adult Learners in Higher Education: Barriers to Success and Strategies To Improve Results*, U.S. Department of Labor Employment and Training Administration, Washington, D.C., Mar. 2007, p. 5. On the Internet at *http://www.eric.ed.gov/ERICWebPortal/custom/portlets/recordDetails/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED497801&ERICExtSearch_SearchType_0=eric_accno&accno=ED497801*

[53] *Graduation Pays*, note 50 above.

[54] *Ibid.*

[55] North Carolina Commission on Workforce Development, *State of the North Carolina Workforce: An Assessment of the State's Labor Force Demand and Supply 2007–2017,* N.C. Department of Commerce, Raleigh, N.C., 2007, pp. 23 and 44. On the Internet at *http://www.nccommerce.com/en/WorkforceServices/FindInformationForWorkforceProfessionals/PlansPoliciesandReports/#Resource3*

[56] *Report by the UNC and N.C. Community College Systems to the Joint Legislative Oversight Committee of the General Assembly on Existing and New 2+2 Programs Between UNC and N.C. Community College System*, note 26 above, pp. 2 and 11.

[57] *North Carolina Occupational Trends, Projections 2004–2014*, N.C. Employment Security Commission, Raleigh, N.C. Accessed Oct. 1, 2007 on the Internet at *http://eslmi23.esc.state.nc.us/projections/EmpByMajIndGr p.asp?areatype=01&area=000037&PeriodID=07&version=&OccGroup=&whichMethod=&socCode=*

[58] *Act on Fact: Using Data To Improve Student Success*, Community College Survey of Student Engagement, Austin, Tex., 2006, pp. 3 and 5. On the Internet at *http://www.ccsse.org/publications/CCSSENationalReport2006.pdf*

[59] *Measuring Up 2006: The State Report Card on Higher Education—North Carolina*, note 46 above, p. 10.

[60] Susan Choy, *Nontraditional Undergraduates*, National Center for Education Statistics, Washington, D.C., 2002, pp. 13 and 17. On the Internet at *http://www.nces.ed.gov/pubs2002/2002012.pdf*

[61] *Adult Learners in Higher Education*, note 52 above, p. 9.

Help Wanted:

Community Colleges' Role in Meeting Work Force Shortages

by John Manuel

Executive Summary

North Carolina's economy has shifted from a manufacturing-based three-legged stool of textiles, tobacco, and furniture to a service-based ladder missing the rungs of the "traditional middle jobs." Without some postsecondary education or extensive on-the-job training, those on the bottom rungs of low-skill, low-pay jobs have no way of climbing to the higher rungs of "new middle jobs" or to the top rungs of high-skill, high-pay jobs. The community college system has the ability to bridge the gaps in the new economic ladder left by the missing rungs of traditional middle jobs.

Of the various work force shortages North Carolina currently faces, the most serious are in the fields of allied health, nursing, pharmacists, physical therapists, respiratory therapists, laboratory technicians, and radiology technicians (see Table 1, items 2, 4, 9, and 13, p. 150). As the Baby Boom generation ages and the state's in-migration of retirees continues to increase, the demand for health care is rising rapidly.

Although registered nursing is our state's second fastest growing occupation, North Carolina will have a shortage of 9,000 ***nurses*** *in 2015 and almost 18,000 by 2020. North Carolina will need roughly 2,400 more graduates annually in the field of health care, 2,000 of which will need some postsecondary education or training. For academic year 2005–06, North Carolina colleges and universities produced a total of 3,380 pre-licensure (not yet licensed to practice) registered nurse (RN) graduates. Of the RN graduates, 68 percent, or 2,292, came from the community colleges. One issue affecting the shortage of nurses involves the differentiated funding needed for high-cost programs such as allied health programs.*

The state faces a critical shortage of nursing faculty as well. One reason for the faculty shortage is the inability of community colleges to offer competitive salaries. The average 9-month salary for instructors for the associate's degree in nursing program during the 2006–07 academic year was $47,303. However, in 2007, the average salary for an RN in North Carolina was $61,347.

Added to the pay differential is the fact that there may not be enough nurses trained at a master's degree level to fill the teaching vacancies. Currently, a bachelor's or *master's degree of science in nursing is the minimum education degree required by the N.C. Board of Nursing to teach in that profession. However, a rule proposed by the N.C. Board of Nursing would require that all faculty initially employed after December 31, 2014, have a master's degree or a nursing doctorate degree from an accredited institution. This proposal is opposed by the N.C. Association of Community College Presidents and the State Board of Community Colleges.*

Another severe shortage is that of ***public school teachers.*** *The shortages are especially great in high school math; special education: general curriculum; high school science; middle school math; middle school science; special education: adapted curriculum; cross categorical; behavioral/emotional disabilities; learning disabilities; and second languages (see Table 1, item 18, p. 150). Due to projected population growth, North Carolina will need 953 more* new *teachers each year even to maintain current student-teacher ratios, much less improve them. In addition, the public schools must* replace *approximately 10,000 teachers every year due to resignation and retirement. North Carolina will need approximately 6,500* more *graduates each year in order to address the teacher shortage.*

While not quite as dire as the allied health care and public teaching situations, the service and manufacturing industry also must cope with labor shortages, specifically with maintenance workers, machinists, skilled tradesmen, and ***truck drivers*** *(see Table 1, item 6, p. 150). In 1949, North Carolina established the first national Truck Driving Training School at Johnston Community College, which now graduates 300 drivers per year. However, there are a total of 3,430 annual job openings in this field.*

The field of ***biotechnology*** *also faces significant work force shortages. North Carolina's government leaders recognized the potential of biotechnology as a major employer early, creating the North Carolina Biotechnology Center in 1984, the world's first government-sponsored organization dedicated to developing the biotechnology industry. But while the state now ranks third in the nation in the number of biotechnology companies, the state has only recently begun supporting biotechnology work force development, as in BioNetwork, a statewide network of community college campus-based education and training programs. The BioNetwork's multifaceted partnerships have paved the way for North Carolina to be the only state in the nation to rank in the top 10 for job growth in all biotechnology sectors. Despite the efforts of BioNetwork, the demand for biotechnicians exceeds the community college output by an estimated 200 percent.*

Conclusions and Recommendations

As North Carolina's economy shifts from a three-legged stool of textiles, tobacco, and furniture to a ladder missing the rungs of the traditional middle jobs, our state must take new initiatives to address key work force shortages. The N.C. Community College System has a crucial role to play.

Based on our research, the N.C. Center for Public Policy Research recommends:

(1) The N.C. General Assembly, the State Board of Education, and the N.C. Department of Public Instruction should adopt policies that establish the N.C. Community College System as the primary venue through which to train the number of teachers and nurses the state needs.

North Carolina must be strategic in trying to meet work force shortages in teaching and nursing. Any state plan to address these shortages must provide for the N.C. Community College System to play the primary role. There are three reasons for this—the community colleges' greater affordability, greater ability to produce a larger number of program completers and graduates, and greater ability to meet region-specific demands in terms of the number of graduates produced.

(2) The State Board of Education, Community College System, and Department of Public Instruction should work together to establish policies that address the shortage of public school teachers, including making it easier for community colleges to train teacher education students for licensure. Two policy options could accomplish this goal:

(a) The State Board of Education should amend current policies to accept teacher education licensure credits from community colleges in all nine areas of teaching competence. *Currently, the State Board only accepts community colleges licensure credits in six of the nine areas of teaching competence. The State Board of Education only accepts licensure credit for the remaining three areas of teaching competence from four-year colleges and universities.*

(b) The State Board of Education and N.C. Community College System should work together to ensure that all 58 community college campuses take advantage of the State Board of Education's new policy of permitting community colleges, in conjunction with a university, to participate in lateral entry teaching programs that lead to licensure. *As of April 2008, no applications for lateral entry teaching programs had been received by the State Board of Education. In order to raise community college awareness of the opportunity available, the State Board of Education should encourage community college participation in lateral entry teaching programs by developing and promulgating rules under which community colleges can apply. In turn, the N.C. Community College System should encourage all of its 58 campuses to apply.*

(3) The N.C. General Assembly should provide differentiated funding for community college programs, including more funding for high-cost programs in areas of increased state need such as allied health.

Because funding per full-time equivalent students (FTEs) is determined by the previous year's enrollment and is the same for all programs regardless of cost, the current funding model fails to account for differences in program costs. In other words, all FTEs have the same financial value despite the fact that certain programs are more expensive to operate than others. Health science programs, in particular, are in great need now and for the future but cost $1,520 more per FTE than other curriculum programs. Due to the paucity of additional funding for high-cost programs, community colleges must limit program enrollments, eliminate other

high-cost programs, or funnel money from other areas. In response, the State Board of Community Colleges has identified the establishment of differentiated funding as a priority. The Center endorses this concept. While the General Assembly made an important step towards differentiated funding for high-cost programs in the 2007 legislative session, the General Assembly should continue to adopt differentiated funding policies, especially granting higher funding for high-cost programs in areas of high state need such as allied health programs.

(4) The N.C. Community College System should use the BioNetwork's strategy of forming innovative, strategic, and diverse partnerships with industry, private grant-making foundations, the UNC system, and the General Assembly as a blueprint for achieving similar success in the fields of allied health, teacher education, and other fields of strategic importance. The System also should identify its top four fields of strategic importance for the General Assembly and the public.

Just as the BioNetwork has taken forceful strides in satisfying work force demands in the field of biotechnology, the occupations of nursing, teaching, and other fields of strategic importance could benefit from similar partnership strategies.

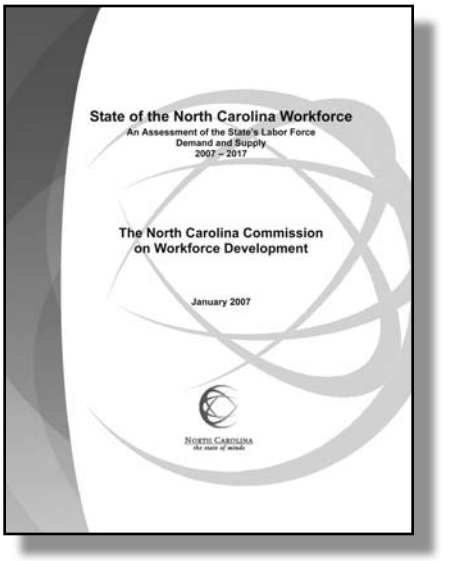
The BioNetwork is so effective because it is precisely that—a "network" of various partnerships. The N.C. Community College System should try to emulate the BioNetwork example by diversifying partnerships in health, teaching, and other fields. This diversification strategy could prove particularly effective in allied health if stronger partnerships with UNC were linked with partnerships with the health industry.

(5) The General Assembly should adopt a policy of moving community college faculty salaries to the national average by 2016.

In 2005–06, the average salary for North Carolina community college faculty was $40,989. That same year, the average community college faculty salary nationally was $55,405, and North Carolina community college faculty pay ranked 46th in the nation. By comparison, the average North Carolina public school teacher salary is $46,410, ranking 27th in the nation. The average full-time faculty member at North Carolina's 16 public universities is paid $80,784, ranking 13th in the nation. Raising community college faculty pay to the national average would cost an estimated $77.3 million over the period 2007–10. The community college system is the key to addressing work force shortages and adjusting to the huge transition in North Carolina's economy. That being the case, community college faculty pay must improve, or the state's response to work force shortages and economic transformations will be as below average as the pay.

North Carolina's economy has shifted from a manufacturing-based three-legged stool of textiles, tobacco, and furniture to a service-based ladder missing the rungs of "traditional middle jobs." Without some postsecondary education or extensive on-the-job training, those on the bottom rungs of low-skill, low-pay jobs have no way of climbing to the higher rungs of "new middle jobs" or to the top rungs of high-skill, high-pay jobs. The community college system may have the unique ability to bridge the gaps in the new economic ladder left by the missing rungs of traditional middle jobs.

North Carolina's economic shift is evidenced in the fact that no manufacturing industries are included among North Carolina's current 25 fastest growing industries, and between 2007 and 2017, only one manufacturing industry—animal slaughtering and processing—is predicted to be among the top 50 fastest growing industries.[1] During the past four years alone, North Carolina has lost 72,000 manufacturing jobs, 75 percent of which were in textiles, apparel, furniture, and computer electronics.[2]



According to the N.C. Commission on Workforce Development's 2007 report, *State of the North Carolina Workforce*, the state's new service economy has actually created an imbalance that may prove detrimental to those most affected by the loss in manufacturing jobs. While the state is expected to add almost 700,000 more jobs to its current 5.15 million by 2017, few of those new jobs will offer "family-sustaining" wages to the dislocated work force without significant upgrades in their skill set.[3] While many of North Carolina's fastest-growing jobs will be in the more knowledge-intensive industries that require far higher education levels, industries that require only the existing skills of dislocated workers pay less than 80 percent of average earnings.[4]

The commission describes the advent of "new middle jobs" which require workers in traditional middle jobs to upgrade their skills. According to the commission, "Those that do not make the investment or whose companies do not adapt, run the risk of falling behind. Increasingly, those that do not adapt are losing their jobs and settling for re-employment opportunities in one of the low skill occupations" requiring less than a General Equivalency Degree.[5] Furthermore, the advent of new middle jobs has been coupled with an increase in the percentage of low-skill, low-wage jobs. While low-skill jobs currently constitute 34 percent of North Carolina's *total* jobs, they will represent more than 40 percent of jobs *created* between 2007 and 2017, thus driving down North Carolina's average earnings as compared with the U.S. average.

Ultimately, the loss of traditional middle jobs and the growth both of high-skill, high-pay and low-skill, low-pay jobs are "creating an increasingly polarized workforce," in which low-skill workers have fewer opportunities for upward mobility.[6] According to the commission, "The challenge for North Carolina's workforce and education system will be to ensure that North Carolinians are prepared to take advantage of the better-paying, higher skill jobs, and preventing people from having to accept low pay jobs just because they are not prepared for the good job opportunities available in the state."[7]

The commission says North Carolina's community colleges are key to meeting this challenge. Community colleges must generate almost 19,000 more "program completers" annually in order to satisfy the demand for workers with associate's degrees and occupational licenses.[8] Program completers are students who complete certificate or work force training programs, as opposed to associate's degree

> *"While many of North Carolina's fastest-growing jobs will be in the more knowledge-intensive industries that require far higher education levels, industries that require only the existing skills of dislocated workers pay less than 80 percent of average earnings."*

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programs. The commission also notes employers' upcoming difficulty in filling both high-end jobs and "new middle jobs," saying, "If the University of North Carolina and the North Carolina Community College System, combined, were charged with meeting all of the anticipated needs, the two postsecondary educational systems would need to generate an additional 39,000 program completers per year during the next decade." Specifically, North Carolina will need approximately 6,500 more completers each year in order to address the state's teacher shortage. In addition, the health care field will require roughly 2,400 more completers annually, 2,000 of which will need at least an associate's degree, technical training, or extensive on-the-job training.[9]

While the community college system may be North Carolina's greatest asset in helping the work force bridge the gaps in the new economic ladder left by the missing rungs of traditional middle jobs, its capacity to do so is not a given. Students must be recruited constantly and educated through new methods that meet their budgets and life situations. Skilled faculty and administrative personnel must be hired and retained with competitive salaries and professional development. Facilities and equipment must be upgraded to correspond to what is used in the workplace. In some crucial cases, that is not happening.

Hospital Emergency

Of the various work force shortages North Carolina currently faces, the most serious are in the fields of allied health, nursing, pharmacists, physical therapists, respiratory therapists, laboratory technicians, and radiology technicians. As the Baby Boom generation ages and as the in-migration of retirees to the state in-

creases, the demand for health care and its associated personnel is rising. Yet the production of allied health care workers, particularly of qualified nurses, is nowhere close to meeting the demand.

According to the Employment Security Commission, registered nurses (RNs) represent the second fastest growing occupation in North Carolina with a projected 26,060 openings occurring through 2014 (see Table 1, p. 150). Nursing aides represent the ninth fastest growing occupation with 13,150 openings, and home health aides the 13th fastest growing occupation with 9,300 job openings.[10]

> *"While the community college system may be North Carolina's greatest asset in helping the work force bridge the gaps in the new economic ladder left by the missing rungs of traditional middle jobs, its capacity to do so is not a given."*

North Carolina's community colleges have been involved in the training of nurses since 1963. Currently, all 58 community colleges in the state offer programs in nursing and allied health. Associate's degree nursing (ADN) is a two-year program, graduates of which take the same state board examination as four-year college graduates to become registered nurses (RNs). Licensed practical nursing (LPN) is a one-year program leading to certification as a licensed practical nurse, which requires less training. Once the State Board of Community Colleges approves a new nursing program for Martin Community College in Williamston, every college in the system except Pamlico Community College in Grantsboro will have either an associate's degree in nursing or LPN, with many having both. Pamlico has only a certified nursing assistant (CNA) program and one other allied health program.

For academic year 2005–06, North Carolina colleges and universities produced a total of 3,380 pre-licensure (not yet licensed to practice) RN graduates. Of those, 2,292 of the graduates, or 68 percent, came from the community colleges. Of RN graduates from four-year colleges and universities, 843, or roughly 85 percent, matriculated through the UNC system, while 144, or roughly 15 percent, matriculated through private colleges and universities.[11]

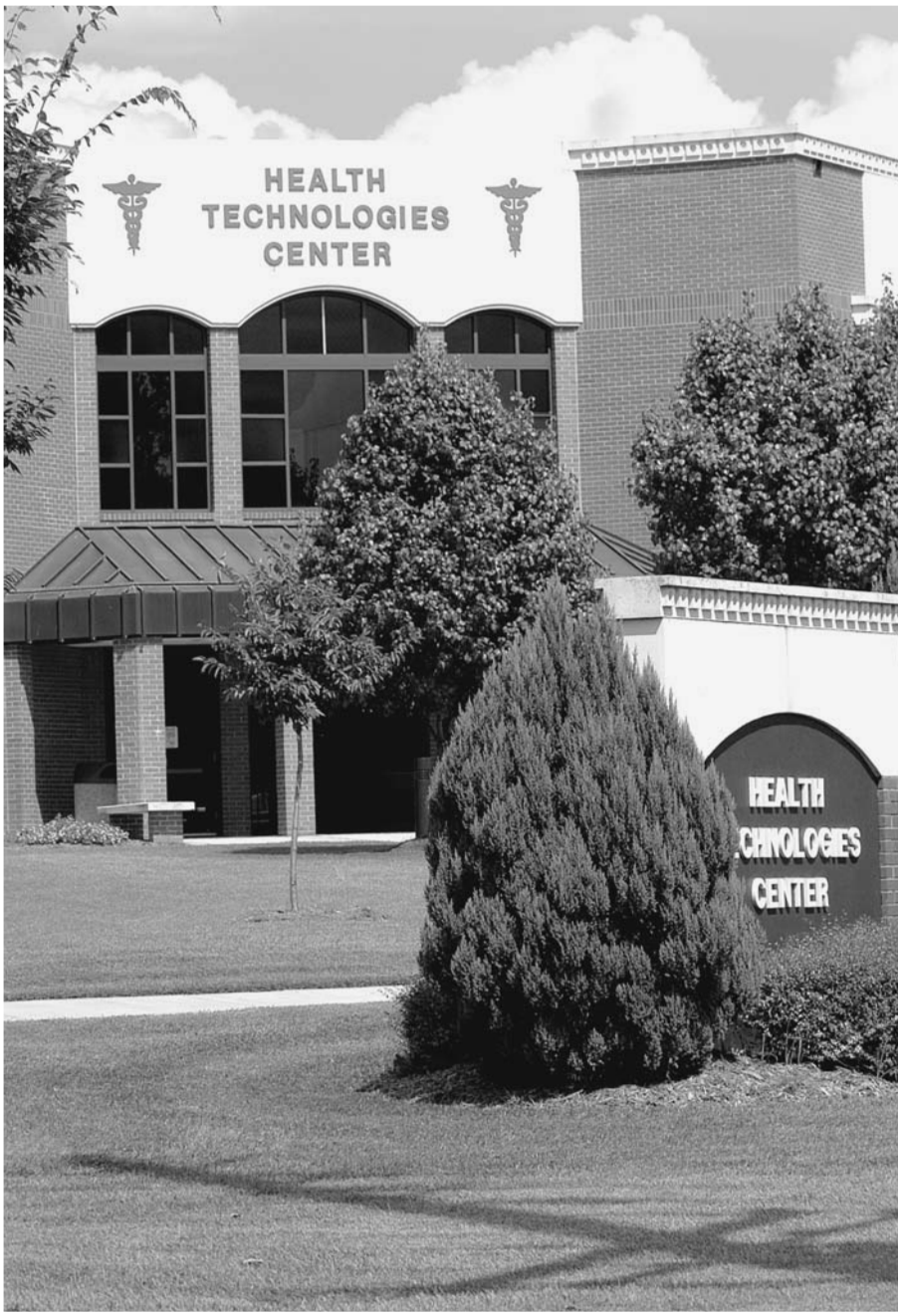
One cause of the nursing shortage is the lack of adequate funding for nursing programs at community colleges. Following the 2005–06 legislative session, N.C. Community College System President Martin Lancaster expressed frustration in dealing with the legislature over the issue of funding for allied health. "We requested $29 million for Allied Health programs in the latest [2005–06] session. They gave us $1 million for personnel and $5 million for equipment and technology. They give us the same amount of money per FTE [full-time equivalent] in allied health as they do for cosmetology. They need to understand that it costs 10 times as much to train a nurse as a cosmetologist."

However, following the 2007 session, President Lancaster reports that some progress has been made. President Lancaster says, "We *asked* for $31 million in the regular session to address salaries, differential funding, and other allied health needs. We *got* $5.6 million, which is being used for differential funding in allied health programs—to cover salary and equipment costs that are greater per FTE than any other curricula." While Lancaster says that allied health programs remain "grossly underfunded," he says, "We at least we have our foot in the door and have broken the ice on the concept of differentiated funding."

In 2004, the N.C. Institute of Medicine's Task Force on the N.C. Nursing Workforce called on the state's colleges and universities to significantly increase their enrollment of nursing students.[12] Enrollment has been increasing but is running up against a barrier caused by a shortage of faculty. North Carolina colleges were forced to deny admission to 6,588 *qualified* applicants for entry-level RN programs in 2005–06, a deficit that N.C. Center for Nursing's associate director of research,

Linda Lacey, attributes to "a lack of faculty, classroom space, and clinical placements for these students."[13]

Kathy Weeks, director of the associate's degree nursing program at Wake Technical Community College in Raleigh, says, "I do feel like it [the shortage of faculty] is a very significant issue. This fall [2007], we had several teaching vacancies that were difficult to fill. We need full-time and part-time faculty with expertise in psychiatric nursing. The full-time position for the mental health nursing course remained unfilled all semester. Fortunately, we could shift several students to other courses. Nursing programs are required by law to have a faculty-to-student ratio of no more than one-to-10 in clinical settings. Because of the high acuity level of patients [indicating that the patients are beyond uncomplicated, short-term illness], we try to



keep that ratio to one-to-eight. We can get by with larger numbers [of students] in a classroom and be fairly effective, but students in clinical settings are providing care to patients. That's why we need so many faculty. In a clinical setting, the students can't do the work of a nurse without a nursing instructor or preceptor [a supervising, experienced staff member] on the floor."

The N.C. Center for Nursing is the nation's first state-funded agency dedicated to ensuring adequate nursing resources for the state's health care needs. Its 2006 report says, "A shortage of new nursing faculty, compounded by the aging of current faculty, will sorely challenge us in successfully addressing an evolving nursing shortage . . . . Unfortunately, the situation could get much worse."[14]

"The Task Force on the N.C. Nursing Workforce ... predicts a shortage of 9,000 nurses in 2015 and almost 18,000 by 2020."

Likewise, Lacey says, "... without an immediate increase in the number of registered nurses qualified and willing to teach in nursing education programs, we cannot begin to address the general shortage of registered nurses we expect to deepen in the next 5 years. While we were able to expand registered nurse production between 2003 and 2005, the total number of new registered nursing graduates is down from 3,422 in 2005 to 3,380 in 2006—a total loss of 42. But in the associate's degree in nursing programs, total new registered nursing graduates declined by a total of 67 from 2005 to 2006."[15]

Lacey continues, "While these numbers are small, I think it indicates that at the very least we have hit the ceiling in terms of being able to expand our community college programs with existing staff and facility resources. Couple that with increasing workloads for community college faculty as evening and weekend program options open up, salaries that are far behind what these registered nurses can earn in clinical practice, and a general aging of the faculty pool in North Carolina where the average age among instructors was 50.6 in 2006, and almost half (47.8 percent) are over the age of 50."

As early as 2004, the Task Force on the N.C. Nursing Workforce, convened by the N.C. Institute of Medicine, released a report addressing some of Lacey's concerns. The report predicts a shortage of 9,000 nurses in 2015 and almost 18,000 by 2020.[16] Using other models to forecast the demand for nurses, estimates of the shortage of RNs is even higher, with 19,914 needed by 2015 and 32,072 needed by 2020 (see Table 4, p. 155). Renee Batts, health sciences program coordinator for the community college system says, "The N.C. Center for Nursing reports that we are at the beginning of a nursing shortage that will become more severe by 2020. They estimated that for 2007 we had an 8.9 percent shortage that will increase to 20.8 percent in 2015 and in 2020 the shortage will be 29.6 percent." The N.C. Center for Nursing also predicts that the state may have less than half of the faculty needed to train new nurses by 2020.

One reason for the faculty shortage is the inability of community colleges to offer competitive salaries. "The community college system struggles to match the salaries that a nurse can get in a clinical setting," says Linda Hofler, vice-president of office quality for Pitt County Memorial Hospital. "Nurses might find the teaching hours attractive, but the pay difference is too great." According to Keith Brown, associate vice president for planning, accountability, research, and evaluation for the N.C. Community College System, the average 9-month salary for system faculty instructing the associate's degree in nursing program during the 2006–07 academic year was $47,303. However, in 2007, the average salary for a registered nurse in North Carolina was $61,347.[17]

Added to the pay differential is the fact that there are not enough nurses trained at a master's degree level to fill the teaching vacancies. Currently, a bachelor's *or* master's degree of science in nursing is the minimum education degree required by the N.C. Board of Nursing to teach in that profession. However, a rule proposed by the N.C. Board of Nursing would require that all faculty initially employed after December 31, 2014, have a master's degree or a nursing doctorate degree from an accredited institution.

The Need for Nurses as Caretakers and Faculty

North Carolina needs more nurses to serve two primary functions: We need caretakers, and we need nursing faculty. First, and most immediately, North Carolina needs nurses to care for the aging Baby Boom population. Beginning in 2011, the Baby Boom generation will begin to reach the retirement age of 65. By 2020, there will be an estimated 1,618,578 Baby Boomers aged 65 and older in North Carolina.[1] Many of these retirees will need care from nurses, and nurses retiring from the field of nursing will need to be replaced. Second, North Carolina needs more nursing faculty in order to train the number of nurses needed to meet projected shortages.

These two needs for nurses lead to differing proposals on how to satisfy the nursing shortage. Community colleges, as contrasted with four-year colleges and universities, are best equipped to satisfy the immediate need for nurses as caretakers. There are three reasons for this—the community colleges' greater affordability, greater ability to produce a larger number of program completers and graduates, and greater ability to meet region-specific demands in terms of the number of graduates produced. North Carolina will have an estimated shortage of 9,000 registered nurses (RNs) in 2015 and almost 18,000 by 2020.[2] The state will need roughly 2,400 *more* graduates annually in the field of health care, 2,000 of whom will need some postsecondary education or training.[3] For academic year 2005–06, North Carolina colleges and universities produced a total of 3,380 pre-licensure (not yet licensed to practice) RN graduates.[4] Of the RN graduates, 68 percent, or 2,292, came from the community colleges.[5]

In addition to their capacity to produce a greater number of RN graduates, community colleges also have shown they can produce high-quality nurses equal to any other source. In 2006, North Carolina's passing rate for *all* registered nursing licensures was 90 percent. The community colleges' passing rate for all associate's degree in nursing licensures was 89 percent, while the passing rate for all bachelor's of science in nursing licensures was 92 percent.[6] Within bachelor's of science licensures, the UNC system passing rate was approximately 89 percent, while the passing rate for private colleges and universities was approximately 94 percent.[7]

Out of North Carolina's registered nurses, 60 percent have an associate's degree in nursing (ADN) and 40 percent have a bachelor's of science in nursing (BSN). A 2004 report from the N.C. Institute of Medicine recommended that North Carolina flip the current percentages in its RN work force to be 60 percent BSN and 40 percent ADN "through enabling more ADN and diploma graduates licensed as RNs to extend their educational credentials through RN-to-BSN programs, as well as through expansion of pre-licensure BSN programs and accelerated BSN options."[8]

The N.C. Center for Nursing supports the Institute of Medicine's recommendation to produce more BSN than ADN nurses on the grounds that four-year colleges and universities may be better equipped to satisfy the long-term need for nursing faculty. According to a report by the N.C. Center for Nursing, more than 80 percent of all nurses who attain a master's degree or a doctorate in any field began their nursing career in a bachelor's degree program. In other words, those nurses with a BSN, as opposed to those with an ADN, are more likely to attain a master's degree or doctorate in nursing. According to Brenda Cleary, executive director of the N.C. Center for Nursing, "We are not making sustained progress [in flipping the current percentages], which has many implications in light of the nursing faculty shortage."

But, the N.C. Center for Nursing's position assumes that all nursing faculty must have a master's degree or doctorate in nursing. Currently, that is not the case—nursing faculty need only have a bachelor's of science in nursing. However, a recent proposal from the N.C. Board of Nursing would alter current rules to require that all nursing faculty initially employed after December 31, 2014, have a master's degree or a nursing doctorate degree from an accredited institution. This proposal has been formally opposed by the N.C. Association of Community College Presidents and the State Board of Community Colleges.[9]

Some experts say the community colleges are actually contributing to the shortage of nurses. "The majority of nursing graduates are coming from the community colleges and are prepared at the associate's degree level," says Brenda Cleary, former executive director of the N.C. Center for Nursing. "The vast majority of these nurses never complete additional degrees beyond entry, and those who do rarely complete more than one additional degree. That is a recipe for disaster. We have to get more master's degree and doctorally prepared nurses, or we can't prepare the next generation of any kind of nurse."

It's not that you've got the qualifications, for this or any other work, but there are plenty who have. You haven't got the disqualifications, though, and that's much rarer. Any more questions?

–Kingsley Amis, Lucky Jim

Cleary applauds the community colleges' "open door" admissions policy, but says it attracts a stream of students who don't advance their education and, in many cases, drop out before graduation. "We lose about 40 percent of students in the nursing track," Cleary says. "We need to provide these students more support in terms of child care and the like, but we also need to look at whether we are setting students up for failure because of the lack of rigorous admission requirements. We need to have more rigorous admission requirements for community college nursing programs, and we need to urge the graduates to go on for higher degrees. We need to increase salaries for faculty. And we need to look at non-traditional methodologies for increasing nursing education, such as expansion of distance learning and online formats, and sharing of faculty and other resources across nursing education."

The UNC Board of Governor's Committee on the Future of Nursing released a report on this issue in 2004. The report includes a goal of doubling the number of the UNC system's prelicensure BSN graduates to 1,132 by 2009–10 (the system had 843 graduates in 2005–06). Alan Mabe, vice president for academic planning and university-school programs with UNC-General Administration says of the report, "It is quite a dramatic plan to both double the number of prelicensure nurses produced by UNC and to expand the production of nursing faculty generally and especially for community colleges. We have expanded to three doctoral programs, added a number of MSN programs in nursing education, with at least three online. Through Project Health, we also have partnered with the community colleges and the N.C. Hospital Association to provide more than twenty nursing faculty to the community colleges, and UNC led the effort to get the 2.4 million scholarship/loan program for graduate study with the condition that the graduates teach in a North Carolina nursing program."

Everyone agrees that in order to meet the need for nurses, North Carolina must address the need for nurses both as caretakers and as nursing faculty. But many disagree about which credentials should be required for nurses teaching nursing.

—Lauren Law Akers

Footnotes

[1] *Interim Projections of the Population by Selected Age Groups for the United States and States: April 1, 2000 to July 1, 2030*, U.S. Census Bureau, Washington, D.C. Accessed Jan. 7, 2008 on the Internet at *http://www.census.gov/population/projections/SummaryTabB1.xls*

[2] *Task Force on the North Carolina Nursing Workforce Report,* N.C. Institute of Medicine, Durham, N.C., May 2004, p. 5. On the Internet at *http://www.nciom.org/projects/nursingworkforce/nursingreport.html*

[3] *Ibid.,* pp. 46–47.

[4] *North Carolina Trends in Nursing Education: 2003–06,* N.C. Center for Nursing, Raleigh, N.C., Aug. 2007, pp. 35–36. On the Internet at *http://www.ga.unc.edu/NCCN/research/Trends2007/final%20report%20schools%202007.pdf*

[5] *Ibid.*

[6] *Five-Year NCLEX Pass Rates (RN & LPN)*, N.C. Board of Nursing, Raleigh, N.C. Accessed Oct. 29, 2007, on the Internet at *http://www.ncbon.com/content.aspx?id=1090&terms=NCLEX+pass+rates*

[7] *Ibid.*, editorial calculation.

[8] *Task Force on the North Carolina Nursing Workforce Report*, note 2 above, p. 102.

[9] On the Internet at *http://www.ncccs.cc.nc.us/news_releases/Nursing_resoluton.htm*

Delores Parker is vice-president of academic and student services for the N.C. Community College System. Parker agrees that the shortage of faculty is a major problem and getting worse. She cites a July 2006 department poll that identified 29 full-time and 84 part-time teaching vacancies in the licensed practical nursing and associate's degree in nursing programs systemwide. She says the department even has had difficulty filling its own nursing administrator position.

Parker points out the quality of community college nursing students, given that their passing rate on nursing licensing exams for community college graduates is comparable to that of the four-year colleges and universities. In 2006, North Carolina's passing rate for *all* registered nursing licensures was 90 percent (88 percent nationally). The community colleges' passing rate for all associate's degree in nursing licensures was 89 percent (about 88 percent nationally), while the passing rate for all bachelor's of science in nursing licensures was 92 percent (about 86 percent nationally).[18] Within bachelor's of science licensures, the UNC system passing rate was approximately 89 percent, while the passing rate for private colleges and universities was approximately 94 percent.[19]

Alan Mabe, vice president for academic planning and university-school programs for the UNC General Administration, says, "Faculty shortages are a problem. UNC has added two new doctoral programs—one at East Carolina University and one at UNC-Greensboro—to produce more doctoral level graduates. We have also increased the size of our master's programs in nursing, especially nursing education, with at least two programs fully online. This should be a good source for community college faculty. We now have funding from the General Assembly of $2.4 million for graduate scholarship/loans for those who will teach in North Carolina for two or three years depending on the length of their scholarship. The community colleges have been trying to raise the salaries of nursing faculty to be better able to attract more faculty."

N.C. Community College System President Lancaster says that the Board of Nursing's proposed requirement that all faculty, including clinical supervisors and clinical faculty, have at least a master's degree "has greatly exacerbated the already critical shortage of nursing faculty." Lancaster says, "We can't fill our classroom

slots as it is and to expect that our clinical staff also have a master's degree is an impossible task, especially given the fact that most of that staff is adjunct—working as nurses in the hospital and taking on part-time responsibilities as clinical faculty. Very few direct care nurses on hospital staffs even in metropolitan areas have a master's. There is such a dearth of master's-prepared nurses that most of them fill supervisory roles of various kinds. We do not see how we—or the universities for that matter—will ever hire enough master's-prepared adjunct faculty to do the clinical rotations. We believe this will lead to the closure of many, especially rural programs where the need for nurses we produce is most critical."

> *"It is increasingly important as we see the aging of the American population and as we see the demand for health care continue to grow that the community college be capable not only of providing the historic pool of well-trained and well-motivated workers that they do already, but to actually expand that capability. I think there's probably no better education return for the dollar in North Carolina."*
>
> **Bill Atkinson, president and chief executive officer, WakeMed Health & Hospitals**

Both the N.C. Association of Community College Presidents and the State Board of Community Colleges have passed resolutions opposing the Board of Nursing's proposal. According to Hilda Pinnix-Ragland, State Board of Community Colleges Chair, many part-time instructors for the community college system do not have master's degrees. The task of finding part-time nursing teachers with master's degrees could prove difficult. The resolution passed by the State Board of Community Colleges says, "The pay for part-time faculty is insufficient to justify their returning to university to obtain their master's degree."[20]

In response to the challenges in the allied health field, numerous community colleges have developed innovative and strategic partnerships with the health industry. For instance, due to the need for highly trained health professionals, WakeMed Health & Hospitals and Wake Technical Community College in Raleigh have collaborated with Wake County Public Schools to create the Wake Early College of Health and Sciences. Stemming from Governor Easley's Learn and Earn program, the school enables high school students to graduate with both high school and associate's degrees without any added costs. Coursework occurs on Wake Tech's campus under instructors experienced in training individuals for work at WakeMed.

Due in part to the high demand for the Wake Early College of Health and Sciences, Wake Tech president Steve Scott is excited about the $92 million bond referendum that passed on the October 2007 ballot. Scott intends to use $50 million of the $92 million for Wake Tech's health care programs. According to Scott, "We have a huge need for investment into the program. . . . We help physicians expand their reach to patients and improve the overall quality of health care and the quality of life."

One particular need is health care technology. According to Scott, sophisticated machines permit students to learn decision-making in a simulated environment. "It's about making it as realistic as possible for the student before they get to real people. If you can speed up that process, we can take more students into the pipeline and meet the big demands," Scott says.

Bill Atkinson, president and chief executive officer of WakeMed Health & Hospitals, says, "It is increasingly important as we see the aging of the American population and as we see the demand for health care continue to grow that the community college be capable not only of providing the historic pool of well-trained and well-motivated workers that they do already, but to actually expand that capability."[21] Consequently, Atkinson advocates increased resources for community

(continues)

Table 1. Fastest Growing Occupations in North Carolina
***by Number of Job Openings,* 2004–14**

Occupation		Total Job Openings	Total Percentage Change
1.	Retail Salespersons	29,470	+24.03
2.	**Registered Nurses**	**26,060**	**36.73**
3.	Combined Food Preparation and Serving Workers	17,150	20.39
4.	**Home Health Aides**	**16,680**	**48.33**
5.	Waiters and Waitresses	16,420	25.47
6.	**Truck Drivers, Heavy and Tractor-Trailer**	**15,770**	**27.10**
7.	Customer Service Representatives	15,440	25.85
8.	Janitors and Cleaners, Except Maids and Housekeeping	15,060	29.15
9.	**Nursing Aides, Orderlies, and Attendants**	**13,150**	**27.78**
10.	General and Operations Managers	11,090	20.22
11.	Cashiers	10,580	9.98
12.	Laborers and Freight, Stock and Material Movers	10,510	13.67
13.	**Personal and Home Care Aides**	**9,300**	**49.47**
14.	Landscaping and Groundskeeping Workers	9,280	30.01
15.	Team Assemblers	9,220	15.23
16.	Teacher Assistants	9,150	26.70
17.	Executive Secretaries and Administrative Assistants	8,660	16.83
18.	**Elementary School Teachers, Excluding Special Education**	**8,520**	**24.07**
19.	Maintenance and Repair Workers	7,550	15.66
20.	Maids and Housekeeping Cleaners	7,350	20.92

Note: **Bold** indicates those occupations for which the N.C. Community College System provides training.

Source: North Carolina Occupational Trends, Projections 2004–2014, N.C. Employment Security Commission, Raleigh, N.C. Accessed Oct. 1, 2007, on the Internet at *http://eslmi23.esc.state.nc.us/projections/index.asp?section=2&periodID=07*

Table 2. Fastest Growing Occupations in North Carolina *by Percentage Change*, 2004–14

Occupation	Total Growth Openings	Total Percentage Change
Medical Assistants	4,880	+52.03%
Biomedical Engineers	140	51.85
Physician Assistants	1,320	50.38
Network Systems and Data Communications Analysts	3,810	50.13
Personal and Home Care Aides	9,300	49.47
Home Health Aides	16,680	48.33
Dental Hygienists	2,430	46.55
Dental Assistants	3,200	46.24
Physical Therapist Assistants	870	44.85
Computer Software Engineers, Applications	3,880	43.16
Diagnostic Medical Sonographers	610	42.66
Occupational Therapist Assistants	230	41.07
Occupational Therapists	850	40.28
Veterinary Technologists and Technicians	1,040	40.00
Network and Computer Systems Administrators	2,930	39.92
Tile and Marble Setters	390	39.80
Medical Scientists, Except Epidemiologists	980	39.04
Psychiatric Technicians	950	38.78
Physical Therapists	1,440	38.30
Employment, Recruitment, and Placement Specialists	2,070	37.91
Riggers	30	37.50
Athletic Trainers	70	36.84
Registered Nurses	26,060	36.73
Paralegals and Legal Assistants	2,800	36.70
Forensic Science Technicians	110	36.67

Source: North Carolina Occupational Trends, Projections 2004–2014, N.C. Employment Security Commission, Raleigh, N.C. Accessed Oct. 1, 2007, on the Internet at *http://eslmi23.esc.state.nc.us/projections/EmpByMajIndGrp.asp?areatype=01&area=000037&PeriodID=07&version=&OccGroup=&whichMethod=&socCode=*

colleges. "I think there's probably no better education return for the dollar in North Carolina."[22]

Wake Tech is not unique in its collaborative effort to meet work force needs in the health field or in its need for funding. Asheville-Buncombe Technical Community College in Asheville has partnered with Mission Hospitals both to ease the nursing shortage and train employees for better-paying jobs in the health field. With nearly 6,000 employees, Mission Hospitals is western North Carolina's regional medical referral center and Buncombe County's largest employer. With funding from Mission Hospitals, Asheville-Buncombe Tech was able to expand its nursing program to include evening and weekend classes. Moreover, in 2002, the hospital loaned the community college a fully equipped teaching lab for its surgical technology program. Asheville-Buncombe Tech utilizes Mission Hospitals as the clinical site for all its allied health programs and has been given hospital equipment for nursing, surgical technology, emergency medical science, medical laboratory technology, and sonography programs (an ultrasound-based diagnostic imaging technique used to view muscles and internal organs).

Table 3. Average Job Openings in North Carolina *by Occupational Group*, 2004–14

Major Occupational Group	Total Annual Openings	Percent of Total Openings	Annual Growth Openings	Annual Replacement Openings
Architecture and Engineering Occupations	2,130	1.24%	870	1,260
Arts, Design, Entertainment, Sports, and Media Occupations	1,780	1.04%	910	870
Building, Grounds Cleaning, and Maintenance Occupations	6,450	3.75%	3,740	2,710
Business and Financial Operations Occupations	5,240	3.05%	2,850	2,390
Community and Social Services Occupations	3,170	1.85%	1,780	1,390
Computer and Mathematical Occupations	3,420	1.99%	2,310	1,110
Construction and Extraction Occupations	8,330	4.85%	4,290	4,040
Education, Training, and Library Occupations	11,540	6.72%	6,730	4,810
Farming, Fishing, and Forestry Occupations	440	0.26%	30	410
Food Preparation and Serving-Related Occupations	19,530	11.37%	7,080	12,450
Healthcare Practitioners and Technical Occupations	9,930	5.78%	6,250	3,680
Healthcare Support Occupations	6,070	3.53%	4,310	1,760

Mission Hospitals also has partnered with Asheville-Buncombe Tech to create two job training programs. The first program, health advancement training, assists Mission employees with basic reading, English as a Second Language, and General Equivalency Degree certification. The second program, career advancement training, grants Mission employees the necessary time, money, and materials to pursue community college training for the hospital's "high demand, hard-to-fill jobs."[23]

Another watershed work force development partnership has been struck between Laboratory Corporation of America Holdings, or LabCorp, and Alamance Community College in Graham. Over a period of almost 20 years, LabCorp has invested approximately $1 million in the college, including financial assistance, equipment donations, scholarships, cooperative education positions, jobs for graduates, and volunteer service on boards and advisory committees.

For instance, over a two-year period, 12 LabCorp employees designed and implemented Alamance's laboratory technology program. The company also provided space in downtown Burlington for the college's small business center and computer lab used to instruct employees from 84 companies, not just LabCorp.

Table 3. Average Job Openings in North Carolina *by Occupational Group*, 2004–14, *continued*

Major Occupational Group	Total Annual Openings	Percent of Total Openings	Annual Growth Openings	Annual Replacement Openings
Installation, Maintenance, and Repair Occupations	7,100	4.13%	2,910	4,190
Legal Occupations	840	0.49%	580	260
Life, Physical, and Social Science Occupations	1,760	1.02%	800	960
Management Occupations	8,130	4.73%	3,920	4,210
Office and Administrative Support Occupations	20,900	12.17%	6,910	13,990
Personal Care and Service Occupations	4,730	2.75%	2,520	2,210
Production Occupations	12,730	7.41%	2,520	10,210
Protective Service Occupations	3,630	2.11%	1,270	2,360
Sales and Related Occupations	21,750	12.66%	7,290	14,460
Transportation and Material Moving Occupations	12,200	7.10%	5,260	6,940
Total Occupations	**171,850**	**100%**	**75,180**	**96,670**

Source: North Carolina Occupational Trends, Projections 2004–2014, N.C. Employment Security Commission, Raleigh, N.C. Accessed Oct. 1, 2007, on the Internet at *http://eslmi23.esc.state.nc.us/projections/EmpByMajIndGrp.asp?areatype=01&area=000037&PeriodID=07&version=&OccGroup=&whichMethod=&socCode=*

Alamance used the donated space from 1995 through 2000 and opened its own Burlington facility in 2001. Since 1989, LabCorp has funded scholarships for 63 students to help them study basic laboratory techniques, biotechnology, medical laboratory technology, and phlebotomy. And, LabCorp provides about $36,000 in annual general support for these programs from an endowment of $723,000. Since 1990, LabCorp has hired more than 70 percent of the 160 graduates of Alamance's medical laboratory technology program graduates at an average salary of approximately $26,000 per year.[24]

Crisis in the Classroom

Paralleling the shortage of allied health personnel is a shortage of teachers in North Carolina's public schools as they face population growth and teacher retention problems. In July 2007, the N.C. State Data Center said North Carolina had a school-age population (ages 5–17) of 1,584,471. By July 2020, the school-age population will increase to 1,848,662, adding demand for a minimum of 953 more *new* teachers each year to maintain current student-teacher ratios, much less improve them.[25] In addition, according to annual reports published by the N.C. Department of Public Instruction, the public schools must *replace* approximately 10,000 teachers every year due to resignation and retirement.[26] By comparison, the 16 public universities graduated 3,969 prospective teachers in 2005–06[27] (see Table 5, p. 158). In 2005–06, North Carolina's private colleges and universities graduated 897 prospective teachers (see Table 6, p. 159).[28]

This figure includes "traditional graduates" from four-year colleges as well as "alternative completers." Traditional graduates include both students who complete a four-year bachelor's degree in education at a senior college or university and those who complete the 2+2 programs, which allow students seeking a bachelor's degree or licensure in education to take the first two years of coursework at a participating community college and then transfer to a four-year college. Alternative completers include lateral entry students, or individuals with a bachelor's degree in an area other than education hired by a North Carolina public school prior to meeting state licensure requirements. Lateral entry students are granted three years upon being hired to complete all course requirements at the community college level and at the university level through online courses or special workshops. Other routes of alternative preparation exist, but vary from campus to campus.

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"As an uninsured adjunct instructor, tonight, as I give my lecture on quantum physics, I will also be doing a low-impact aerobic workout."

Teacher shortages are occurring all over the state and in every discipline. For the fall of 2006, the N.C. Department of Public Instruction listed vacancies for 211 K-6 instructors, 108 math teachers, 38 language arts teachers, and 35 English

Table 4. Supply and Demand Forecast for Registered Nurses in North Carolina: 2000–2020

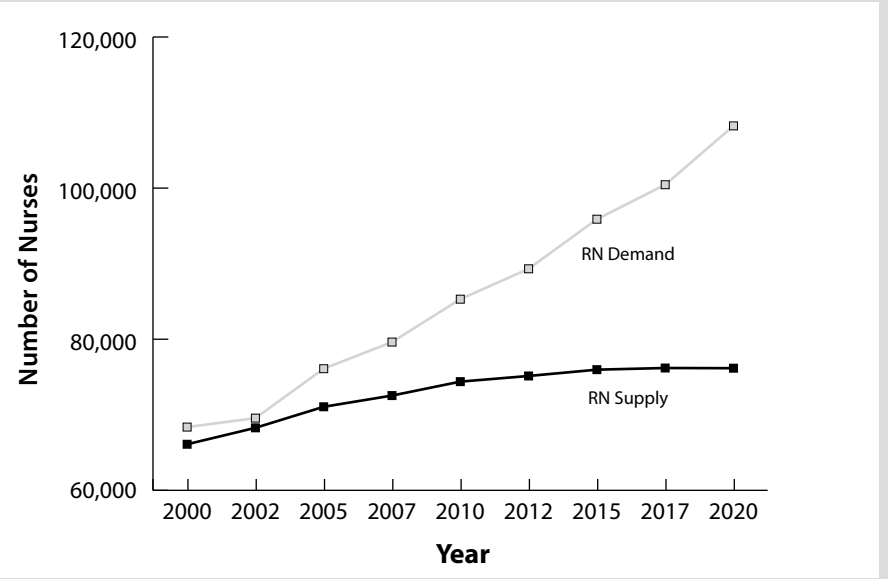
Year	RN Supply	RN Demand	Excess or Shortage	Percent Shortage
2000	66,097	68,372	-2,275	-3.30%
2002	68,272	69,557	-1,285	-1.80%
2005	71,058	76,096	-5,038	-6.60%
2007	72,541	79,625	-7,084	-8.90%
2010	74,387	85,299	-10,912	-12.80%
2012	75,136	89,320	-14,184	-15.90%
2015	75,971	95,885	-19,914*	-20.80%
2017	76,189	100,449	-24,260	-24.20%
2020	76,165	108,237	-32,072*	-29.60%

Note: Excess or shortage is determined by supply minus demand figures. A negative sign indicates a shortage of RNs in a given year.

This table was created using an econometric model. Future supply of RN's was calculated using the nurse supply model. Demand for RNs was calculated using the nurse demand model. Both forecasting models were developed by the Bureau of Health Professions National Center for Health Workforce Analysis in the Health Resources and Services Administration, U.S. Department of Health and Human Services. However, default values in the model were replaced with historical data for North Carolina whenever possible.

* Using a different model, the N.C. Institute of Medicine also predicts a nursing shortage, but at much lower levels. See p. 145.

Source: "RN and LPN Supply Trends," *North Carolina Trends in Nursing: 1987–2006*, North Carolina Center for Nursing, Raleigh, N.C., Apr. 2007.



teachers.[29] Reflecting the growing population of Hispanic students, schools are in need of 42 English as a Second Language instructors. Speech and language pathologists are also in demand (35 vacancies), as are psychologists (33 openings) and guidance counselors (32 openings). Schools also are in desperate need of administrative staff, including 84 central office personnel, 23 assistant principals, and 7 principals.[30]

> *By July 2020, the school-age population will increase to 1,848,662, adding demand for a minimum of 953 more* new *teachers each year to maintain current student-teacher ratios, much less improve them.*

According to the N.C. Department of Public Instruction's October 2006 "System Level Teacher Turnover Report," North Carolina's top 10 teacher shortage areas are high school math; special education: general curriculum; high school science; middle school math; middle school science; special education: adapted curriculum; cross categorical (which permits students with different areas of disability to be combined for delivery of services); behavioral/emotional disabilities; learning disabilities; and second languages (see Table 7, p. 160).[31]

Geographically, the greatest need is occurring in the fast-growing metropolitan areas of the state. Mecklenburg County Schools topped the list with 136 vacancies, Wake County Schools had 62, Durham had 55, and Guilford had 41. But rural counties are suffering as well, especially in the eastern part of the state. Robeson County Schools posted 33 vacancies, Wayne had 23, and Bertie had 21.

For several decades, the state's community colleges and four-year colleges and universities have partnered together to offer 2+2 programs. The 2+2 programs allow students seeking a bachelor's degree in education and licensure in a number of different education areas (such as elementary education or special education) to take the first two years of coursework at a participating community college and then transfer to a four-year college or university to complete their degree. While transfer to a university is still an option, 2+2 programs have evolved towards providing the full four-year program at community colleges and/or online.

In what is called the University Center Model, Appalachian State University, East Carolina University, and UNC-Wilmington each have formed partnerships with area community colleges to deliver the final two years of coursework to students on community college campuses. Instructors from these public universities travel to the local community colleges to teach classes and may offer some courses online. Another East Carolina University partnership with Pitt Community College provides the university portion of coursework entirely online. The net result is that students can now pursue a degree in education without leaving their area.

By all accounts, this latest version of 2+2 is shaping up to be a success. Appalachian State University was the first to adopt the off-campus learning model, forming a partnership in 1999 known as the Appalachian Learning Alliance with 10 community colleges in the western region.

"This program has been tremendously helpful in meeting the needs for teachers in this region," says Tom Fisher, former director of extension and distance education at Appalachian State. "Since 1999, we have graduated 152 students in elementary education, middle grades, special education, and birth-kindergarten. We had approximately 375–380 students in the pipeline seeking undergraduate degrees in teacher education disciplines in the spring of 2007 after we added our first ever daytime program on the campus of Caldwell Community College."

Wachovia Partnership East, a joint venture between East Carolina University and area community colleges, is designed to serve eastern North Carolina, ranging from the Virginia line south to Onslow County, with hub sites at 19 community colleges. It also serves all of North Carolina through virtual courses. This partnership was launched in 2002 and was awarded a grant of $1.25 million in scholarship money from The Wachovia Foundation in 2004. Marilyn Sheerer, former dean of East Carolina's college of education and interim provost, helped create Wachovia Partnership East

after realizing that students receiving associate's degrees in education at community colleges were failing to complete four-year degrees simply because they were predominantly 30-something women with children, and they could not travel to a distant senior college or institution. Wachovia Partnership East allows such students to complete a bachelor's degree in education by using a "community college campus in their own backyard."

According to Wachovia's regional president for eastern North Carolina, David Parker, "I always thought it [Wachovia Partnership East] was sort of an economic development effort on our part because teaching is a very meaningful career in a lot of smaller, rural markets." The first 16 teachers-to-be graduated from ECU in December 2005. As of the fall 2007 semester, more than 260 students enrolled.[32] By the end of the fall 2007 semester, the number of Wachovia Partnership East graduates totaled 129.

The partnership currently is focused on training teachers for the elementary schools. "Elementary is the area that most people are interested in teaching," says Anne Faulkenberry, coordinator of the Wachovia Partnership East. "It's a much easier program for us to establish, because high school teachers must have a core competency. We are hoping to find prospective middle grade math and science students to start this summer. This is where the real need is."

Faulkenberry says they actively recruit students to participate in the 2+2 programs by speaking to different classes at area community colleges and high schools. "Many students believe a four-year program is not attainable for them, but when they hear about our program, they change their minds," Faulkenberry says. "About half our students are already teacher assistants, so they know what they want to do professionally." *(continues on page 161)*

Table 5. Teacher Education Graduates and Completers, University of North Carolina, 2005–06

	Campus	Traditional Graduates	Alternative Completers	Total
1.	Appalachian State University	482	46	528
2.	East Carolina University	427	323	750
3.	Elizabeth City State University	26	16	42
4.	Fayetteville State University	94	39	133
5.	NC A&T State University	34	42	76
6.	NC Central University	46	119	165
7.	NC State University	155	114	269
8.	UNC-Asheville	41	36	77
9.	UNC-Chapel Hill	83	103	186
10.	UNC-Charlotte	250	262	512
11.	UNC-Greensboro	376	94	470
12.	UNC-Pembroke	87	58	145
13.	UNC-Wilmington	255	103	358
14.	Western Carolina University	150	79	229
15.	Winston-Salem State University	21	8	29
	UNC Total	**2,527**	**1,442**	**3,969**

Note:

Traditional graduates include both students who complete a four-year bachelor's degree in education at a senior college or university and those who complete the 2+2 programs, which allows students seeking a bachelor's degree or licensure in education to take the first two years of coursework at a participating community college and then transfer to a four-year college.

Alternative completers include lateral entry students, or individuals with a bachelor's degree in an area other than education hired by a North Carolina public school prior to meeting state licensure requirements who are granted three years upon being hired to complete all course requirements.

Source: Report on UNC Production of Teacher Education Graduates and Alternative Licensure Completers 2005–2006, The University of North Carolina, Raleigh, N.C., Mar. 2007, p. 4.

Table 6. Teacher Education Graduates, North Carolina Private Colleges and Universities, 2005–06

	Institution	Total
1.	Barton College	34
2.	Belmont Abbey College	23
3.	Bennett College	2
4.	Brevard College	3
5.	Campbell University	57
6.	Catawba College	19
7.	Chowan University	22
8.	Duke University	20
9.	Elon University	102
10.	Gardner-Webb University	44
11.	Greensboro College	24
12.	Guilford College	21
13.	High Point University	44
14.	Johnson C. Smith University	8
15.	Lees-McRae College	78
16.	Lenoir-Rhyne College	27
17.	Livingstone College	3
18.	Mars Hill College	58
19.	Meredith College	64
20.	Methodist College	20
21.	Montreat College	6
22.	NC Wesleyan College	8
23.	Pfeiffer University	40
24.	Queens University	31
25.	Salem College	11
26.	Shaw University	3
27.	Southeast College at Wake Forest	3
28.	St. Augustine's College	3
29.	St. Andrews Presbyterian College	43
30.	Wake Forest University	31
31.	Warren Wilson College	15
32.	Wingate University	30
	North Carolina Private Colleges and Universities Total	**897**

Source: Dan Holloman, Manager of the Center for Recruitment, Retention, Recognition, and Advancement, North Carolina Department of Public Instruction.

Table 7. Top 20 Teacher Shortage Areas in North Carolina, 2005–06

	Teacher Shortage Area	Number of Local Education Agencies Indicating Need (out of 115 LEAs)
1.	High School Math	97
2.	Special Education: General Curriculum	77
3.	High School Science	72
4.	Middle School Math	62
5.	Middle School Science	49
(tie)	Special Education: Adapted Curriculum	49
7.	Cross Categorical	34
8.	Behavioral/Emotional Disabilities	32
9.	Learning Disabilities	29
10.	Second Languages	28
11.	Mental Disabilities	20
12.	Speech Language Pathologist	14
(tie)	English as a Second Language*	14
(tie)	Middle School Language Arts	14
15.	High School Family/Consumer Sciences	12
16.	Elementary Education	11
(tie)	High School English	11
18.	Middle School Social Studies	8
(tie)	Severely/Profoundly Disabled	8
20.	Counselor	7

*Spanish was the second language most often identified.

Note: Numbers above include only those areas identified by five or more LEAs.

Source: *System Level Turnover Report*, N.C. Department of Public Instruction, Oct. 2006, pp. 3–4. On the Internet at *www.ncpublicschools.org/docs/recruitment/surveys/turnover/2005–06turnoverreport.pdf*

(continued from page 157)

Verlie Pittman, 38, of Seven Springs in Wayne County, is one such person. Previously a teacher's assistant at an elementary school and mother of two, Pittman had wanted to earn a teaching degree, but couldn't afford the time away or the expense of attending a full-time university. Through Wachovia Partnership East, Verlie has set out to accomplish her goal. "I can take Internet classes and work and be a mom," says Pittman. "I take three to four classes a semester and don't commute. If the professor wants a face-to-face class, I go to Wayne Community College [in Goldsboro]."

Pittman was one of a group of 24 students, 22 of whom graduated in December, 2007. She loved being part of a group that got to know each other, both in person and through online discussion groups. And she loved the price. "If you are employed by a school system, the N.C. Model Teacher Education Consortium helps pay your tuition," she says. "They also pay you $1,000 to help set up your classroom." Pittman was offered a full-time teaching job before graduation. She will be teaching in 2008 at the Seven Springs Elementary School.

"But, conditions imposed by the legislation and by the Department of Public Instruction, which administers the program, make lateral entry more complex than some say it should be."

Recently, the N.C. General Assembly has allowed community colleges to offer a second option aimed at further increasing the supply of teachers. House Bill 563, passed in the 2005–06 General Assembly and implemented by the State Board of Education in 2006, allows teachers to be certified through a process known as "lateral entry" via courses taught at community colleges. Lateral entry is intended to provide a quick route to licensure for those who hold at least a bachelor's degree in areas other than education and who have been hired by a North Carolina public school. This bypasses the traditional four-year education degree track by providing the necessary courses at the community college level and at the university level through online courses or special workshops.

By law, applicants for a lateral entry license must have earned a minimum cumulative grade point average of at least 2.5, including a GPA of at least 3.0 in their major field of study, or have passed the National Teacher Examination or the Praxis II test, which measures general and subject-specific knowledge and teaching skills. Individuals licensed through lateral entry must, within three years, complete an approved education program in their area of licensure at a college or university or through a regional alternative licensing center, of which there are four in North Carolina. The college or regional alternative licensing center evaluates the individual's credentials and outlines a plan of study for the coursework necessary to earn a license.[33]

But, conditions imposed by the legislation and by the Department of Public Instruction, which administers the program, make lateral entry more complex than some say it should be. Currently, the State Board of Education accepts community college course credits in six of the nine areas of teaching competence—human growth and development, educational and instructional technology, learning theory and styles, school policies and procedures, home school and community collaborations, and classroom management. The public schools also can offer teacher workshops in four of these six areas of competence. The four-year universities have retained the sole right to provide the other three areas of teaching competence—reading, special education, and instructional core content. Thus, any given applicant may have to enroll in multiple courses in multiple locations in order to earn their teaching license. And the training may vary from one institution to another.

Until the 2001 legislative session, lateral entry applicants also had to be employed by a North Carolina public school for the coming academic year. This requirement eliminated a large pool of potential students, such as retired or soon-to-be-released military personnel who wanted to teach but who needed to get their lateral entry

certification out of the way while still on active duty. It also eliminated career-changers who needed to remain employed in their old jobs until they completed the credentialing for their new teaching jobs. UNC system President Erskine Bowles became convinced that community colleges had a larger role to play in teacher training and worked with N.C. Community College System President Lancaster to get the legislature to lift all restrictions. This included the employment restriction, except for the requirement that community colleges partner with a four-year college to provide three of the nine competencies required for teacher licensure. Partnerships have led to online provision of most of the competencies. President Lancaster says, "This change in the legislation has led to much greater interest on our campuses to offer lateral entry, and I believe our colleges will become major players by fall 2008."

> *"But it would be much easier if we could teach all the competencies; then we could offer a complete package."*
>
> **Peggy Teague,** vice president of academic services for Wayne Community College

"We [the community colleges] have the capacity to train hundreds of teachers every year through this program," says Peggy Teague, vice president of academic services for Wayne Community College in Goldsboro. "But it would be much easier if we could teach all the competencies; then we could offer a complete package."

However, Kathy Sullivan, senior policy analyst at the State Board of Education, says that the State Board of Education passed a policy in June 2007 saying that a school system or community college, in conjunction with a university, could submit to the Board a proposal for an innovative lateral entry teaching program that would lead to licensure. "Community colleges now have the option of working with the universities to develop a lateral entry program," Sullivan says. "So far, we have not had any applications for the experimental program."

"It's always been an issue of meeting the same standards as the four-year institutions," Sullivan says. "We can't have two different sets of standards. If the community colleges want to meet the same standards as the universities, that's fine." Alisa Chapman, vice-president for academic planning at UNC General Administration, says, "We recognize the extreme shortage of teachers and that the community colleges have a role to play in this—perhaps a more expanded role than in the past."

Teague says, "The University of North Carolina system wants to hold on to the idea that their schools of education are the only place that teachers can be educated and licensed, and they worked to have the community college bill that allowed us to teach all nine competencies changed to limit our offerings. This, then, limited the options of some of the lateral entry teachers, especially in rural areas that are served by community colleges. I firmly believe that it takes all of us working together to resolve this critical issue."

"The problem is there may not be a critical mass of applicants in one area who need a particular course, so it's difficult to offer a course for one or two people at community colleges," says Vivian Covington, director of teacher education at East Carolina University's college of education. "All three entities—the community colleges, the public schools, and the universities—need to work together to make sure people can complete their coursework in a timely manner." The N.C. Teach program has addressed this issue by offering summer workshops where aspiring teachers can take both the methods courses and the specialty courses, completing their licensure in one year. "This works better than putting random courses online," Covington says. "We do general methods first, then break the students out into specialty areas."

The lateral entry program was started in 1986. Between 1995–96 and 2005–06, 9,129 students completed the program. However, Mike Cash, information analysis officer for N.C. Department of Public Instruction, says this number underestimates the overall impact of lateral entry teachers. Cash says, "There are still those [lateral entry students] from 2004–05 and 2005–06 who are working toward satisfying their requirements [but are now teaching]. Therefore, the 9,129 is short.... In addition, I think it would be a grave error to exclude the impact and importance that lateral entry teachers have played. While only 9,129 have so far *completed* the process,

all of the 18,291 laterals [entry students reported] were teaching, regardless of whether they eventually completed the process. Therefore, they were all filling vacant teacher positions, which is significant, considering the teacher shortage." Nonetheless, lateral entry does not appear to be the panacea for the teacher shortage that some had hoped.

Some efforts to ease the teaching shortage also have been forged through community college partnerships with the UNC system. For instance, prompted by the teacher shortage in Onslow County and the fact that Coastal Carolina Community College in Jacksonville is one of the state's only community colleges without a university within 30 miles, a group of local leaders met in a Coastal Carolina conference room in Jacksonville. Participants included Coastal Carolina President Ron Lingle, Onslow County Public Schools Superintendent Ron Singletary, Marine Corps Camp Lejeune commanding officer Maj. Gen. Lawrence H. Livingston, former UNC-Wilmington Chancellor James Leutze, and Representative Robert Grady (R-Onslow).

Ultimately, the meeting led to the 1995 creation of a cooperative extension department through Coastal Carolina and UNC-Wilmington that enables students to obtain an education degree and employment without ever leaving Jacksonville. Over the past three years, 64 of the 200 UNC-Wilmington graduates who teach in Onslow County graduated from this cooperative extension department. Currently, almost 200 more students are enrolled in the cooperative extension program for elementary or secondary education.

My occupational hazard is my occupation's just not around.

–Jimmy Buffett

"A Pirate Looks at Forty"

Coastal Carolina President Ron Lingle says, "Every time I see Jim Leutze or Ron Singletary or talk to Gen. Livingston, we always seem to get around to that topic and how scared we all were because we all knew we had this huge problem out there and very limited resources to throw at a problem that big. We all just kind of chuckle at the audacity of it."[34]

The partnerships between the N.C. Community College System and the UNC System have resulted in part from the direct support of the systems' presidents. N.C.

Community College System President Lancaster says, "When people ask me about major progress in our system since I've been president, I have to rank greatly expanded and improved partnerships with universities—including private ones—right near the top."

Likewise, UNC system President Erskine Bowles says, "Our community colleges … are every bit as important, if not more so, than the university is to the economic well-being of North Carolina."[35] Bowles adds, "I truly believe our community colleges are North Carolina's greatest assets for economic development… I also believe it just makes common sense—and good economic sense—for our public universities and community colleges to be working together in partnership… ."[36]

Wanted: Truck Drivers

Though not as severe as the shortages in allied health or teaching, North Carolina also faces labor shortages in certain sectors of the service and manufacturing economy. Larry Keen, president of Fayetteville Technical Community College and former vice-president of economic and work force development for the N.C. Community College System, says the state is currently experiencing shortages in industrial maintenance workers, machinists, truck drivers, and skilled trades such as carpentry. These are jobs for which the community colleges have traditionally provided sufficiently trained workers, but that situation is not guaranteed.

"At times, we've faced a shortage of facilities and/or training equipment," Keen says. "But just as important is the perception that these are undesirable, low-wage jobs. We are trying to foster a more accurate portrayal of these jobs, but we are limited in our ability to do so. Other than through our class brochures, our printed descriptions of course offerings, and our websites, we don't have a budget to advertise."

"The state is currently experiencing shortages in industrial maintenance workers, machinists, truck drivers, and skilled trades such as carpentry."

The difficulty of enticing people into the truck driving profession, combined with the high rate of retirement, is leading to a significant shortage of truck drivers. The N.C. Employment Security Commission estimates North Carolina has 2,380 annual job openings for heavy truck and tractor trailer truck drivers and 1,050 annual job openings for light or delivery service truck drivers.

"Nationwide, there is a need for at least 6,000 truck drivers," says Paul Jump, head of the Truck Driving Training School at Johnston Community College in Smithfield. "If the trend continues, we will need 100,000 by 2010. We've started a task force to beef up the ranks and to retain the drivers we have, but it's hard to do. The working conditions are difficult. Truckers are getting tired, changing jobs, or retiring."

Still, some students are drawn to Johnston's truck driving school. Richard Hopkins, a 54-year-old carpenter by training, realized his age and competition from low-wage carpenters would not allow him to make a good living from his profession in the future. He felt it was not too late to learn another skill, and having no wife or children, decided truck driving offers good possibilities.

Hopkins looked at private companies that offered training, but they were too expensive—$3,000 on average. Then he discovered Johnston Community College's Truck Driver Training School. At $800 for a 12-week course, Johnston's program was cheaper, and it offers classes at nights and on weekends, allowing Hopkins to continue working while earning his degree.

Hopkins has been well-pleased with the program. "The course has been very thorough, teaching government rules and regulations, as well as driving skills," he says. "You not only graduate with a CDL [commercial driver's license], but also you

get a certificate that proves you have the skills and experience. That can help you start out at a higher wage."

Hopkins is confident that his life situation, combined with his degree and the nationwide shortage of drivers, will make him an attractive prospect for many trucking companies. "Near the end of class, the college will bring in a number of companies to recruit people," he says. "You can also use their Internet service at the library to search for openings around the country."

Yet even with students such as Hopkins who have become attracted to the truck driving profession, Johnston Community College's truck driving school still faces significant obstacles. Begun in 1949, it is the oldest in the nation. The program operates seven days a week, with both a full-time day program and a part-time night program, and it graduates 280–300 people per year. Jump says they have sufficient faculty to teach that number and more, a reasonable advertising budget, and a regular presence at job fairs.

However, they are short on decent equipment. "Our newest truck is a year 2000 model, then it drops to 1998 and a 1995," Jump says. "We constantly need to upgrade our equipment, but our budget won't allow for that. We make a new request every year. Each year, it comes and goes."

Aged equipment is not the problem faced by the machining program at Guilford Technical Community College in Jamestown. It recently moved into a new $12.9 million building on the Greensboro campus with $5 million worth of new equipment. But as with truck drivers, the program is having trouble attracting students. "We have 16 students in our daytime program and 16 at night," says Chris Halker, department chair of machinery technology at Guilford Tech. "We could get jobs for three times that many."

Halker says he is constantly being called by area companies looking for skilled machinists, particularly CNC (computer numerical control) and CAD-CAM (computer-aided design/computer-aided manufacturing) operators. These are positions

that pay from $12–26 an hour, but many of the jobs go begging. "The reason is all the stories in the press about manufacturing jobs moving overseas," Halker says. "People are scared to take a job [in manufacturing] for fear of losing it. But the jobs going overseas are mostly low-skilled. There are still good jobs in automotive and aircraft manufacturing right here."

Halker has been out talking to area high schools and says enrollment is looking better. "Companies say they will hire good students even if they don't need them right away. The need will come."

Scott Ralls, president of Craven Community College in New Bern, who will become President of the N.C. Community College System in May 2008, has faced a similar problem. Ralls says, "One of the programs where we have low enrollments is machining and auto body repairs, even though there are a lot of jobs in this field. On the other hand, two cosmetology programs have high enrollments, but not as many jobs open. We don't even have to advertise to get people to enroll in that program. Logically, we would have closed the low-performing machining and auto body repair programs and expanded the cosmetology program. We did the opposite, and luckily it worked out."

In a manner similar to allied health programs, some community colleges have developed strategic partnerships with the transportation industry in order to address the economic and enrollment shortages within the service and manufacturing curricula. For example, in spring 2008, Lexington's Davidson County Community College will break ground for a transportation technology center funded by an $810,000 grant from the Economic Development Administration in the U.S. Department of Commerce. The new center will enable the college to expand truck driver training, automotive technology, and heavy equipment technology, thus enabling Davidson County to meet the needs of regional transportation employers with 600 new job openings. U.S. Xpress, also located in Lexington, pays tuition and fees for graduates upon signing a six-month employment contract. The college's program also partners with Old Dominion Freight Line, A.M. Haire Body Co., Richard Childress Racing, May Heavy Equipment, Coastal Transport, and Sun Delivery.[37]

Biotech Boom

Biotechnology, in the form of domesticating crop plants and farm animals through selective breeding, has been practiced for thousands of years. Contemporary biotechnology, involving the use of living cells and their molecules to grow and manufacture products, has evolved rapidly in the last 50 years. North Carolina's government leaders recognized the potential of biotechnology as a major employer early, creating the North Carolina Biotechnology Center in 1984, the world's first government-sponsored organization dedicated to developing the biotechnology industry.

"North Carolina today ranks third in the nation in biotechnology companies, with nearly 400 companies employing nearly 50,000 people."

North Carolina today ranks third in the nation in biotechnology companies, with nearly 400 companies employing nearly 50,000 people.[38] "There isn't a single biomanufacturing company in the state that hasn't grown in the last few years," says Norman Smit, marketing and recruitment director for BioNetwork, a statewide biotech work force preparation initiative sponsored by the N.C. Community College System. "Although we're producing more [biotechnology] graduates now than ever before, there is still more demand than we can meet."

How great is the shortage of workers? The question is difficult to answer for a variety of reasons. Biotechnology *per se* is not an industry, but rather an array of

technologies used by a wide variety of enterprises. In North Carolina, biotechnology might be employed by everything from vintners developing new breeds of grapes to pharmaceutical giants manufacturing the latest cancer drugs. Therefore, it can be hard to identify exactly who qualifies as a biotechnology company, how many workers are needed, and what types are needed. Further, work force needs can vary widely from year-to-year and from region-to-region as companies bring facilities into operation.

In response to industry demand for more entry-level workers with some biotechnology training, the N.C. Biotechnology Center and the N.C. Community College System jointly developed BioWork in 2001. BioWork is a 128-hour introductory course that brings together the basics of manufacturing technology and the fundamentals of science. It is intended for high school graduates and traditional manufacturing workers who have lost their jobs. As of the spring of 2007, 14 community colleges were offering BioWork. As local industries recognized the value of BioWork, they came to the UNC and N.C. Community College systems and asked that they more comprehensively address the work force shortage.

To get a picture of work force needs, the N.C. Biotechnology Center, N.C. Community College System, UNC System, and local industries commissioned a study in 2002 which surveyed 32 companies in biomanufacturing research and development and the pharmaceutical fields in North Carolina. The results, published in *Window on the Workplace: A Training Needs Assessment for the Biomanufacturing Workforce*,[39] estimated a need of 2,270–2,970 workers in the scientific and technical fields. More than 60 percent of the prospective biomanufacturing and pharmaceutical jobs required education beyond high school, such as a certificate or associate's degree (AAS) in biotechnology, but not a bachelor's degree or higher. Employers subsequently expressed the opinion that education at the community college level is the minimum they would prefer. Based on this data and an estimated annual growth rate of 3–10 percent, spokespersons for the Biotechnology Center have said we need 1,000–2,000 workers per year trained at a community college level.[40]

With the *Window on the Workplace* study in hand, the N.C. Community College System, UNC System, and Biotechnology Center presented a comprehensive Biotechnology Education and Training plan to the Golden LEAF Foundation of Rocky Mount to obtain funding. Golden LEAF is a grantmaking foundation that uses one-half of the funds from the state's settlement agreement with cigarette manufacturers to help North Carolina's tobacco-dependent and economically-distressed counties. Golden LEAF made a four-year grant for programs and buildings which gave rise to BioNetwork, the Biomanufacturing Training and Education Center, and the Biomanufacturing Research Institute and Technology Enterprise. Seeing the immediate results produced by BioNetwork, the North Carolina legislature then picked up and fully funded the initiative upon the expiration of Golden LEAF funding.

Another Public/Private Partnership: Google and Caldwell Community College

During the first half of 2007, two groundbreaking events occurred in the town of Lenoir, North Carolina. First, Google announced the formation of a local data center in the town. Second, Google initiated an unprecedented partnership between itself and a community college—namely, an information technology institute co-developed with Caldwell Community College and Technical Institute. Caldwell opened the institute in May 2007, offering an 129-hour training program designed to prepare students for entry-level information technology positions. The institute equips students with current knowledge and skills, resumés tailored for the computer industry, and portfolios for prospective employers.

College officials traveled to Google's California headquarters in order to garner insight into the company's particular culture, which in turn equipped them to instruct students not only on "hard" technical skills, but also "soft" skills involved in team-building, problem-solving, interviewing, communication, and self-management. In turn, Google officials have hosted several public forums on the Caldwell campus to educate the local community about opportunities within their company.

Source: "Google & Caldwell Community College and Technical Institute: Workforce Development Partnership," *NC Magazine*, North Carolina Chamber, Raleigh, N.C., Oct. 2007, p. 43.

Since the publication of *Window on the Workplace,* North Carolina's biotechnology industry has grown as expected, with companies such as Merck and Novartis opening or expanding major manufacturing facilities and numerous small companies being created across the state. Based on this growth and incorporating a larger definition of biotechnology than simply biomanufacturing and pharmaceuticals, BioNetwork Director Matthew Meyer says, "Community colleges will need to train 3,500 to 4,000 workers per year in order to help the North Carolina life science industry maintain its current growth rate."

How many biotechnology students are the community colleges graduating each year? Again, identifying exactly which students are trained for work in the biotechnology industry is inexact. The course entitled "biotechnology," for example, is clearly geared to employment in that industry, while industrial engineering technology could lead to work in a variety of settings. Norman Smit, marketing and recruitment director for BioNetwork, estimates that out of 4,113 students enrolled during 2004–05 in the biotechnology, biology, and biological/chemical engineering curricula, approximately 1,800 will graduate with skills suitable for employment in the biomanufacturing and pharmaceutical industry.[41] That is less than half of the upper estimate of 4,000 jobs needed.

Meyer says, "If program completers from related life science programs are any indication of how the goal of 3,500 to 4,000 students per year is being approached, then there is still much room for improvement." There were 1,421 program completers (students who complete certificate or work force training programs, as well as associate's degree programs) in 2005–06 and 1,780 in 2006–07. While the need for 3,500–4,000 workers per year is still not met, BioNetwork has shown promising

Sam Watts

Homeland Security: A New Work Force Shortage?

Since the attacks of 9/11 in 2001, the term "homeland security" has become part of our everyday jargon. The responsibility for protecting us from all imaginable manner of terrorist attacks has been cast on everyone from small town policemen to the Office of the President, from food inspectors to airport screeners. A federal Department of Homeland Security has been created and more than $1 billion in grants has been awarded to states and cities across the nation to spend on planning, equipment, training, and management. Is there a shortage of "homeland security" workers in North Carolina and do the community colleges have a role in meeting that?

"There is a shortage of sorts," says Scott Bullard, director of emergency services at the N.C. Community College System. "I can't think of a single community that is able to keep up with the demand for fire protection or police protection, but that's more a question of growth rather than a response to homeland security alone. The immediate need is for training of existing personnel in incident command, and there is a huge role for the community colleges in that." The Incident Command System employs a "first-on-scene" model in responding to emergencies, in which the first responder on a scene takes charge until the incident is resolved or another, more-qualified responder arrives and assumes command.

In 2003, President Bush issued Homeland Security Presidential Directive #5 (HSPD-5), directing the Secretary of Homeland Security to develop and administer a National Incident Management System (NIMS). NIMS provides a consistent nationwide model to enable all government, private sector, and nongovernmental organizations to work together during domestic incidents. Courses have been developed to implement this model and, in 2006, the N.C. Community College System received $1.2 million to provide the training.

The N.C. Community College System sent requests for proposals out to the local campuses offering to provide up to $40,000 worth of training each. Forty-three of the 58 colleges chose to participate. Sixteen courses have been designed for community colleges by the federal government, most in a continuing education context. "These involve upgrading and standardizing incident management systems, terminology, and training," Bullard says. "A number of our community colleges have been offering Incident Command System programs that already meet federal requirements."

After the events of September 11, 2001, Elizabeth Frosberg longed to join the Coast Guard to help people out in a state of emergency. But a medical disability disqualified her. She was a high school graduate but had not attended college. In 2006, she learned of Durham Technical Community College's two-year degree program in Emergency Preparedness Technology, which offers courses in areas such as response to terrorism, the sociology of disaster, emergency preparedness centers, and the need for coordination between federal, state, and local agencies and volunteer responders. Most courses are offered online.

When she graduates, Frosberg hopes to work in the public sector or for a private company in the area of risk prevention and analysis. She believes she will need to supplement her education with a bachelor's degree. "I think this program is most useful as an additional degree for people who work in emergency management services or for fire departments," she says. "An associate's degree is probably not enough for a career in emergency preparedness, but it gives you a good start."

Scott Bullard says, "It's safe to say that we [the community colleges] have an obligation to provide this training. . . . We've got more than 50,000 fire fighters across the state that need Level 100–400 Incident Command Training and 33,000 emergency medical services folks. Then there's the state's law enforcement group. Other disciplines identified by the Department of Homeland Security as needing to be in compliance with NIMS include hazardous materials, emergency management, public works, governmental administration, public safety communications, health care, and public health. It's a huge job."

—John Manuel

growth. Between 2004–05 and 2006–07, the number of program completers more than doubled, says Meyer.

The community college system developed a new and more rigorous course entitled "Bioprocessing in the Workplace" through a pilot project at Johnston Community College in Smithfield involving true biotechnology—working with living cells to produce products like insulin. Currently, BioNetwork is running another pilot project with Durham Technical Community College in conjunction with Eisai Corporation, a U.S. pharmaceutical subsidiary of Tokyo-based Eisai Co., Ltd. The Durham Tech pilot program is focused on working with chemicals to produce pharmaceuticals. They hope to be able to offer pharmaceuticals to the general public in the spring of 2008.

Recognizing the need for a comprehensive approach to worker training, the N.C. BioSciences Organization—which monitors legislation and lobbies on behalf of the state's bioscience industry before the North Carolina General Assembly, state courts, regulatory agencies, and executive branch policy leaders—collaborated with the N.C. Community College System, the UNC System, and the N.C. Biotechnology Center to create the N.C. Biomanufacturing and Pharmaceutical Training Consortium in 2003.[42] The Consortium conceptualized a three-part training initiative to include BioNetwork; the N.C. Community College System's statewide network of campus-based education and training programs; a Biomanufacturing Training and Education Center at North Carolina State University; and a Biomanufacturing Research Institute and Training Enterprise at North Carolina Central University.[43]

In 2004, the Golden LEAF Foundation provided a $60 million grant for the construction and initial operation of these facilities. This was supplemented by $11.9 million in operational funding from the General Assembly for Fiscal Year 2005–06 and $13 million in in-kind equipment donations and donations of employee time to advise and participate in engineering design and specifications for new buildings.

BioNetwork's core activity is providing grants to the local community colleges for the development of courses and the purchase of equipment. As of March 2007, BioNetwork had awarded direct grants to 39 community colleges, serving 68 of the 100 counties. Fourteen additional community colleges have developed "1+1 agreements," which allow students at a community college that may have only limited biotechnology offerings to transfer after one year to another community college without losing credit. These agreements provide coverage to an additional 25 counties.[44] "Effectively, we are serving 53 out of the 58 community colleges, covering 93 out of 100 counties," says BioNetwork associate director Kris Allsbury.

The initial plan funded by Golden LEAF made appropriations for the formation of five centers based at community colleges to serve as support facilities for colleges statewide. The centers now are funded by the legislative appropriation, which took effect once Golden LEAF funds expired. These centers are the BioBusiness Center at Asheville-Buncombe Technical Community College, the BioEducation Center at Gaston College, the Pharmaceutical Center at Forsyth Technical Community College (in collaboration with Guilford Technical Community College), the BioAgricultural Center at Robeson Community College, and the Bioprocessing Center at Pitt Community College. Staff at these centers develop curriculum, train the trainers, review textbooks, and develop equipment protocols.

A sixth center, the Capstone Center, is housed at the newly completed $34 million Biomanufacturing Training and Education Center on N.C. State University's Centennial Campus and is managed by Wake Technical Community College. The Golden LEAF Biomanufacturing Training and Education Center features a facility where students can learn current good manufacturing practice employed by biopharmaceutical companies manufacturing Federal Drug Administration-approved drugs. Students trained on bench-scale equipment at the community colleges will be able to come to the Golden LEAF Biomanufacturing Training and Education Center for a "Capstone experience" using commercial-scale equipment. Some cur-

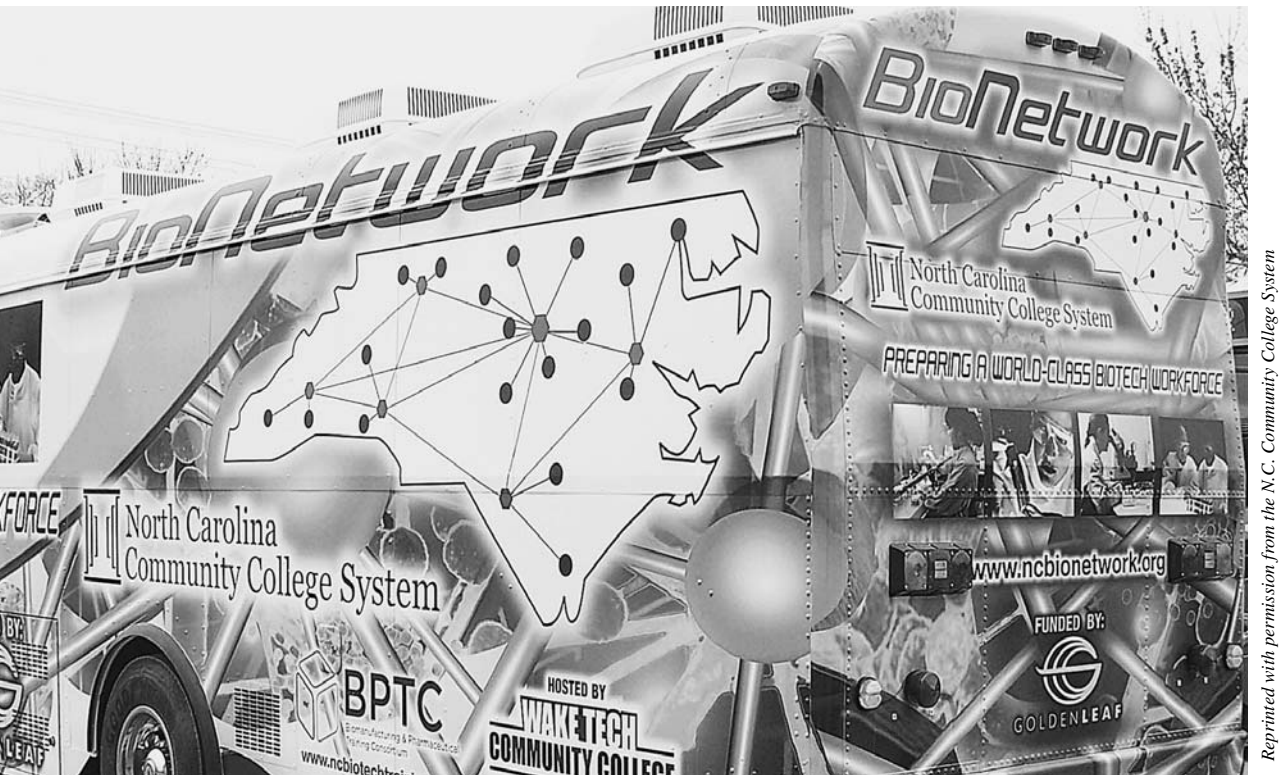
ricula may call for one week's training, but other curricula may call for longer training, such as a month to six weeks. According to Matthew Meyer, "The Capstone Center's ability to adapt to industry's most pressing needs by offering customized, 'shut-down,' or 'just-in-time' training must not be overlooked. This capability is unmatched nationally." Students will leave prepared to step into a job for which they will need only minimal company-specific training. Sponsors estimate that the Biomanufacturing Training and Education Center will train 2,000–3,000 community college students, incumbent workers, university students, and distance education students each year.[45]

BioNetwork also sponsors a mobile laboratory which travels to industrial work sites to provide worker training in biotechnology. The BioNetwork mobile laboratory, managed by Wake Tech, is available to support biotechnology training at community colleges that lack specialized equipment.

In February 2006, ground was broken on the 311,000-square foot David Murdock Core Laboratory Building, the centerpiece of what will be the N.C. Research Campus in Kannapolis, dedicated to the advancement of biotechnology.[46] The campus is a public-private partnership between David Murdock (president of Dole Foods Co., Inc.), the city of Kannapolis, the UNC System, Duke University, and the N.C. Community College System. It is hoped that more than 100 biotechnology companies will locate on campus, generating more than 5,000 jobs. The N.C. Community College System will run a 40,000-square foot biotechnology education and training center on campus, which is currently housed at nearby Rowan-Cabarrus Community College.

According to Allsbury, "We are trying to develop an entire portfolio of biotechnology education and technology, so that if a company is thinking of coming into the state, we can say these are the resources that we can offer at the community colleges. This might be an entire course or it might be a four-hour training session

BioNetwork Mobile Laboratory



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with the BioNetwork mobile laboratory. For example, one company wanted to train its employees in proper staining techniques. We sent the [BioNetwork mobile laboratory] out there and conducted a one-day training."

Will all this be enough to eliminate North Carolina's shortage of biotechnology workers? "If it doesn't, we'll be very surprised," says Sam Taylor, president of the N.C. BioSciences Organization. "It is a comprehensive, vertically-integrated training system. A student can get in anywhere and get out anywhere, starting at a community college and going on to an advanced degree from a four-year university. Likewise, existing workers could go in at the appropriate level and refine their skills or take advanced training and work their way up to a B.A. or post-graduate degree. We feel it is a model for worker training in other industries."

> *"[BioNetwork is] probably one of the most impressive collaborations between academics and industry that I have ever seen."*
>
> **Joanne Steiner,**
> **retired Novozymes executive**

According to the North Carolina Chamber's *NC Magazine*, BioNetwork has "propelled North Carolina to be the only state in the nation to rank in the top 10 for job growth in all biotechnology sectors."[47] An economic impact report released in May 2007 gave N.C. Community College System officials more reason to praise and stress the importance of the BioNetwork Initiative. The study indicated that due in part to growth of training at community colleges, biotechnology's four primary sectors—agricultural feedstock and chemicals, drugs and pharmaceuticals, medical devices and equipment, and research testing and medical laboratories—employ nearly 61,000 people statewide, and are projected to increase employment by approximately 15,000 more positions, or by 25 percent, within 10 years. Furthermore, important niche biotechnology areas that were not at the forefront when BioNetwork was conceived—such as biofuels, natural products and nutraceuticals, and biosafety—have since emerged. This has community colleges and industry stakeholders looking to BioNetwork to respond with new worker training programs. The challenge for the organization is to continue to meet industries' needs even though each new niche area further strains BioNetwork's limited resources.

According to Joanne Steiner, a retired Novozymes executive who now serves on the State Board of Community Colleges and chairs BioNetwork's industry advisory board, BioNetwork's favorable work force impact is no accident. Steiner lauds both the industrial catalyst for the network and the partnership created, saying, "I have to give credit to the industry people who came together to try to solve this. When you look at industries needing the same resources and talent but coming together to solve the problem, it is quite impressive. It's probably one of the most impressive collaborations between academics and industry that I have ever seen."

Steiner indicates that the prototype for BioNetwork was a partnership between Novozymes and Vance-Granville Community College, but the true catalyst for the network's creation was the Golden LEAF Foundation, which funneled millions of dollars into the project. Valeria Lee, the foundation's president (who has announced her retirement in March 2008) says, "The reports we get back indicated that the funding from Golden LEAF has done exactly what we thought it would do. The BioNetwork has taken the training literally across North Carolina." Lee does not see the foundation's investment payoffs as limited to 2007. "We are looking down the road and believe it will pay off in 2010 and 2020 and beyond."

Steiner looks at possible BioNetwork payoffs and says, "This may sound a bit trite, but I think it's kind of limitless. Biotechnology and pharmaceutical industries, there are so many facets to that . . . . From a standpoint of work force development and economic development, it's a wonderful tool for North Carolina. I would say it's a gem."[48]

(continues)

Table 8. National Council Licensure Examination Passing Rates: Associate's Degree in Nursing (ADN), Bachelor's of Science in Nursing (BSN), Nursing Diploma (DIP), and Licensed Practical Nursing (LPN), 2000–2006

School	Type	2000	2001	2002	2003	2004	2005	2006
National Pass Rate	**ALL RN**	**83.84**	**85.5**	**86.6**	**87**	**85**	**87.3**	**88**
State Pass Rate	**ALL RN**	**87**	**92**	**90**	**90**	**86**	**89**	**90**
National Pass Rate	**ADN**	**83.81**	**85.29**	**86.62**	**87**	**85**	**87.5**	**87.95**
State Pass Rate	**ADN**	**87.45**	**92**	**90**	**91**	**86**	**89.3**	**89**
Alamance CC	ADN	87	90	81	94	78	83	87
Asheville-Buncombe CC	ADN	89	91	95	97	92	91	96
Beaufort County CC	ADN	90	86	96	93	82	85	92
Bladen CC	ADN							53
Blue Ridge CC	ADN	87	74	71	100	88	90	81
Cabarrus College of Health Sciences	ADN	90	88	89	88	97	98	93
Caldwell CC	ADN	86	96	81	81	91	84	90
Cape Fear CC	ADN	100	100	95	97	89	100	100
Carolinas College of Health Sciences	ADN	81	95	89	84	86	95	97
Catawba Valley CC	ADN	97	86	93	91	93	84	88
Central Carolina CC	ADN	69	100	93	100	88	100	100
Central Piedmont CC	ADN	77	80	93	91	92	76	88
Coastal Carolina CC	ADN	92	92	96	88	92	91	96
College of The Albemarle	ADN	100	86	91	96	90	100	96
Craven CC	ADN	84	89	92	91	74	86	90
Davidson County CC	ADN	92	97	94	92	100	98	98
Durham Tech CC	ADN	96	83	92	96	90	91	96
Fayetteville Tech CC	ADN	96	94	93	82	90	89	82
Foothills Nursing Consortium	ADN	88	92	89	97	83	87	71
Forsyth Tech CC	ADN	82	86	92	95	77	86	90
Gardner-Webb University	ADN	75	89	84	85	78	72	83
Gaston College	ADN	96	89	100	100	95	86	90
Guilford Tech CC	ADN	88	86	85	86	100	93	97
James Sprunt CC	ADN	70	75	78	100	91	90	77
Johnston CC	ADN	100	100	100	91	97	100	97
Lenoir CC	ADN	95	78	93	83	83	77	97
Mayland CC	ADN	50	75	89	94	77	100	100
Mitchell CC	ADN	94	89	97	96	100	97	100
Nash-Edgecombe-Wilson-Halifax Nursing Consortium	ADN	79	84	90	94	83	95	91
Piedmont CC	ADN	100	100	92	100	75	93	95
Pitt CC	ADN	78	67	77	93	92	91	80
Presbyterian School at Queens University	ADN	81	91	76	89	98	89	91
Randolph CC	ADN	78	92	91	86	76	76	71

(continues)

Source: Five-Year NCLEX Pass Rates, N.C. Board of Nursing, Raleigh, N.C. Accessed on Oct. 29, 2007, on the Internet at *http://ww.ncbon.com/contenxt.apsx?id=1090&terms-NCLEX+pass+rates.*
EE = Exit Exam.

Table 8. National Council Licensure Examination Passing Rates: Associate's Degree in Nursing (ADN), Bachelor's of Science in Nursing (BSN), Nursing Diploma (DIP), and Licensed Practical Nursing (LPN), 2000–2006, *continued*

School	Type	2000	2001	2002	2003	2004	2005	2006
Region A Nursing Consortium	ADN	93	87	89	94	85	90	84
Richmond CC	ADN	100	97	91	94	89	78	88
Roanoke-Chowan CC	ADN	74	75	81	91	83	100	95
Robeson CC	ADN	70	67	90	83	56	57	96
Rockingham CC	ADN	93	89	100	100	88	96	74
Rowan-Cabarrus CC	ADN	84	70	88	93	94	100	100
Sampson CC	ADN	88	93	83	96	92	88	77
Sandhills CC	ADN	96	100	85	85	91	84	96
Southeastern CC	ADN	88	86	96	100	82	92	83
Stanly CC	ADN	95	89	88	88	82	97	92
Surry CC	ADN	85	94	98	85	73	99	95
Vance-Granville CC	ADN	96	90	94	89	75	79	74
Wake Tech CC	ADN	100	98	100	92	94	91	84
Wayne CC	ADN	100	100	93	92	91	93	91
Western Piedmont CC	ADN	86	89	82	86	59	88	97
Wilkes CC	ADN	76	86	86	82	88	65	86
National Pass Rate	**BSN**	**83.89**	**85.86**	**86.5**	**86.9**	**85**	**86.7**	**86.2**
State Pass Rate	**BSN**	**86**	**91**	**91**	**87**	**84**	**87.2**	**92**
Barton College	BSN	83	94	93	86	71	84	100
Duke University	BSN				100	85	98	94
East Carolina University	BSN	91	93	97	81	83	94	99
Lenoir-Rhyne College	BSN	91	92	100	88	73	76	94
NC A&T State University	BSN	77	81	77	75	81	69	69
NC Central University	BSN	94	81	82	81	65	65	82
Queens University of Charlotte	BSN	84	93	71	79	93	75	89
UNC-Chapel Hill	BSN	93	94	94	93	97	94	98
UNC-Charlotte	BSN	83	94	86	89	72	77	97
UNC-Greenboro	BSN	82	92	98	95	80	93	93
UNC-Wilmington	BSN	79	91	90	89	74	94	96
Western Carolina University	BSN	87	95	88	71	88	88	85
Winston-Salem State University	BSN	90	84	93	94	97	87	83
National Pass Rate	**DIP**	**83.38**	**86**	**86.31**	**89.8**	**88**	**90.2**	**86.2**
State Pass Rate	**DIP**	**89.66**	**92**	**83**	**91**	**97**	**99**	**98**
Watts School of Nursing	DIP	100	100	96	94	93	98	96
Mercy School of Nursing	DIP	88	89	92	91	98	100	100

Table 8. National Council Licensure Examination Passing Rates: Associate's Degree in Nursing (ADN), Bachelor's of Science in Nursing (BSN), Nursing Diploma (DIP), and Licensed Practical Nursing (LPN), 2000–2006, *continued*

School	Type	2000	2001	2002	2003	2004	2005	2006
National Pass Rate	**LPN**	**85.1**	**86.45**	**86.4**	**88.2**	**89**	**89.4**	**88.33**
State Pass Rate	**LPN**	**92**	**92**	**94**	**96**	**97**	**93.9**	**94**
Asheville-Buncombe CC	LPN	97	97	98	100	100	97	97
Beaufort County CC	LPN	88	100	90	100	100	92	94
Bladen CC	LPN	90	95	91	97	100	100	100
Brunswick CC	LPN	95	87	80	100	100	81	90
Caldwell CC	PN EE	100	100	96	100	100	100	100
Cape Fear CC	LPN	100	92	100	100	100	95	100
Carteret CC	LPN	93	93	92	85	86	95	100
Central Carolina CC	LPN	91	100	95	96	100	100	97
Cleveland CC	LPN	67	100	100	100	100	89	81
Coastal Carolina CC	LPN	100	100	94	100	100	100	100
College of The Albemarle	LPN	83	80	82	80	78	77	100
Craven CC	LPN	90	92	100	85	100	100	100
Durham Tech CC	LPN	76	88	85	88	67	74	97
ECPI-Charlotte	LPN						84	86
ECPI-Raleigh	LPN						100	80
Fayetteville Tech CC	LPN	94	77	95	100	100	95	94
Forsyth Tech CC	LPN	100	100	100	100	100	100	92
Gaston College	LPN	94	100	100	93	96	97	96
Guilford Tech CC	LPN						93	100
Isothermal CC	LPN	76	86	86	96	100	89	100
James Sprunt CC	LPN	81	80	73	77	100	100	93
Johnston CC	PN EE	100	100	94	100	100	100	100
Lenoir CC	LPN	100	100	100	100	93	100	88
Mayland CC	LPN						88	95
McDowell Tech CC	LPN	88	76	95	95	95	96	94
Montgomery CC	LPN	84	86	75	96	96	90	95
Nash-Edgecombe-Wilson-Halifax Nursing Consortium	LPN	99	100	100	97	96	100	99
Roanoke-Chowan CC	PN EE	100	100	100	100	100	100	100
Robeson CC	PN EE	91	92	100	100	94	91	89
Rockingham CC	LPN	79	92	90	81	94	86	80
Rowan-Cabarrus CC	LPN	95	97	84	95	87	89	88
Sampson CC	LPN	91	100	92	100	96	97	96
Sandhills CC	LPN	90	94	89	100	100	88	96
South Piedmont CC	LPN	100	78	100	80	100	100	100
Southeastern CC	LPN	100	100	100	100	100	100	83
Southwestern CC	LPN					100	100	100
Surry CC	LPN	78	96	100	95	100	100	100
Vance-Granville CC	LPN	65	90	94	100	91	94	90
Wayne CC	LPN	100	92	100	93	100	100	100

Conclusions and Recommendations

As North Carolina's economy shifts from a three-legged stool of textiles, tobacco, and furniture to a ladder missing the rungs of traditional middle jobs, our state must develop a new means to fill the new middle jobs and prevent North Carolinians from having to accept low-skill, low-wage jobs due to lack of education or skills. The N.C. Community College System has a crucial role to play in creating a new middle work force that will realign the economic imbalance and polarization left by the loss of textiles and tobacco and the waning furniture industry.

For now, biotech is the leading model in North Carolina for dealing with work force shortages at the community college level through innovative and strategic partnerships with industry, private foundations, the UNC system, and the General Assembly. But the occupations of nursing, teaching, truck driving, and machining are a century or more old, and the shortages here speak to different kinds of problems. Dramatic retirement and departures from the existing work force and a lack of job appeal for emerging workers are testing the community college's abilities to fill these gaps. Added to this is a lack of funding to provide competitive salaries, proper facilities and equipment, and advertising to attract the needed students. This situation needs to change if the community colleges are to continue to be the engines for economic development that they have been in the past.

Based on our research, the N.C. Center for Public Policy Research recommends:

(1) The N.C. General Assembly, the State Board of Education, and the N.C. Department of Public Instruction should adopt policies that establish the N.C. Community College System as the primary venue through which to train the number of teachers and nurses the state needs.

North Carolina must be strategic in trying to meet work force shortages in teaching and nursing. Any state plan to address these shortages must provide for the N.C. Community College System to play the *primary* role. There are three reasons for this—the community colleges' greater affordability, greater ability to produce a larger number of program completers and graduates, and greater ability to meet region-specific demands in terms of the number of graduates produced.

This does not mean that the University of North Carolina system has no role. It does. It means that the public universities are unlikely to be able to ramp up to produce the number of teachers and nurses needed as fast as they are needed. In the field of teacher education, North Carolina's will need 953 more *new* teachers each year even to maintain current student-teacher ratios, much less improve them.[49] Public schools must *replace* approximately 10,000 teachers every year due to resignation and retirement.[50] North Carolina will need approximately 6,500 *more* graduates each year in order to address the state's teacher shortage.[51] Yet, for academic year 2005–06, all of North Carolina colleges and universities combined produced a total of 4,866 pre-licensure teaching graduates and completers. Of the 3,969 teaching graduates and completers from the UNC system, 1,442, or roughly 36 percent, were alternative completers, a classification that includes lateral entry applicants, among others.[52] Since April 2006, the UNC system has adopted a policy of producing more teachers. While the number of UNC system teacher education program graduates has increased from 2,282 in 2001–02 to 3,969 in 2005–06, the total number of teachers produced is not nearly enough.

In the field of health care, North Carolina will have an estimated shortage of 9,000 nurses in 2015 and almost 18,000 by 2020.[53] Using other models to forecast the demand for nurses, estimates of the shortage of RNs is even higher, with 19,914 needed by 2015 and 32,072 needed by 2020 (see Table 4, p. 155). North Carolina will need roughly 2,400 *more* graduates annually in the field of health care, 2,000 of whom will need some postsecondary education or training.[54] For academic year 2005–06, North Carolina colleges and universities produced a total of 3,380 pre-licensure (not yet licensed to practice) RN graduates.[55] Of the RN graduates, or 68 percent, or 2,292, came from the community colleges.[56]

And, community colleges have shown they can produce high-quality nurses equal to any other source. In 2006, North Carolina's passing rate for *all* registered nursing licensures was 90 percent (88 percent nationally). The community colleges' passing rate for all associate's degree in nursing licensures was 89 percent (about 88 percent nationally), while the passing rate for all bachelor's of science in nursing licensures was 92 percent (about 86 percent nationally).[57] Within bachelor's of science licensures, the UNC system passing rate was approximately 89 percent, while the passing rate for private colleges and universities was approximately 94 percent (see Table 8, p. 173).[58]

According to Renee Batts, health sciences program coordinator for the community college system, two primary factors limit the community college system's capacity to expand nursing student enrollment. First, funding for nursing programs is provided retrospectively. In order to expand, a nursing program must initially use non-state funds or grants. Second, the community college system faces a shortage of nursing faculty. Batts says the faculty shortage is due in part to the inability to offer competitive salaries.

In addition, Batts indicates that the faculty shortage could be worsened by the N.C. Board of Nursing's pending rule that would require all nursing faculty initially employed after December 31, 2014, to have a master's degree or a nursing doctorate degree from an accredited institution. Batts says, "If approved, this rule would have a negative impact on our enrollment in some areas and would further increase the nursing shortage." Batts explains, "A number of the community colleges use part-time clinical nursing instructors to satisfy the 10:1 student to teacher ratio requirement in clinic. Part-time clinical nursing faculty are hired based on their clinical expertise. They are bedside nurses with multiple years of experience, but usually they will not have a master's. If the master's is required for part-time faculty, we will lose an invaluable source of instructors and will probably not be able to recruit adequate staff to meet our student's needs." The Center joins the N.C. Association of Community College Presidents and the State Board of Community Colleges in opposing the N.C. Board of Nursing's proposed rule requiring that all nursing faculty initially employed after December 31, 2014, have a master's degree or a nursing doctorate degree from an accredited institution.

Due to the N.C. Community College System's affordability, large pool of students, ability to meet region-specific demands, and the UNC system's current inability to move fast enough to produce the number of teachers and nurses needed, policymakers in North Carolina should establish the community college system as the primary venue through which to train teachers and nurses.

(2) The State Board of Education, N.C. Community College System, and Department of Public Instruction should work together to establish policies that address the shortage of public school teachers, including making it easier for community colleges to train teacher education students for licensure. Two policy options could accomplish this goal:

(a) The State Board of Education should amend current policies to accept teacher education licensure credits from community colleges in all nine areas of teaching competence. Currently, the State Board only accepts community college licensure credits in six of the nine areas of teaching competence—human growth and development, educational and instructional technology, learning theory and styles, school policies and procedures, home school and community collaborations, and classroom management. The State Board of Education only accepts licensure credit for the remaining three areas of teaching competence—reading, special education, and instructional core content—from four-year colleges and universities.[59]

(b) The State Board of Education and N.C. Community College System should work together to ensure that all 58 community college campuses take advantage of the State Board of Education's new policy of permitting community colleges, in conjunction with a university, to participate in lateral entry teaching programs that lead to licensure. State Board of Education senior policy analyst Kathy Sullivan says that as of April 2008, no applications for lateral entry teaching programs have been received and only one is expected in the near future. In order to raise community college awareness of the opportunity available, the State Board of Education should encourage community college participation in lateral entry teaching programs by developing and promulgating rules under which community colleges can apply. In turn, the N.C. Community College System should encourage all of its 58 campuses to apply.

(3) The N.C. General Assembly should provide differentiated funding for community college programs, including more funding for high-cost programs in areas of increased state need such as allied health.

Community college programs vary in their cost to community college campuses. Therefore, program funding from the N.C. General Assembly should be "differen-

tiated," or allocated according to relative cost, so that high-cost programs remain affordable for community college campuses. Following the 2005–06 legislative session, Martin Lancaster, President of the N.C. Community College System, expressed frustration in dealing with the legislature over the issue of funding for allied health. "We requested $29 million for Allied Health programs in the latest [2005–06] session. They gave us $1 million for personnel and $5 million for equipment and technology. They give us the same amount of money per FTE [full-time equivalent enrollment] in allied health as they do for cosmetology. They need to understand that it costs 10 times as much to train a nurse as a cosmetologist."

However, following the 2007 session, President Lancaster reports that some progress has been made. President Lancaster says, "We *asked* for $31 million in the regular session to address salaries, differential funding, and other allied health needs. We *got* $5.6 million, which is being used for differential funding for allied health programs—to cover salary and equipment costs that are greater per FTE than any other curricula." While President Lancaster says that allied health programs remain "grossly underfunded," he says, "We at least we have our foot in the door and have broken the ice on the concept of differentiated funding."

According to Jennifer Haygood with the legislature's Fiscal Research Division, the N.C. General Assembly appropriated $1 million in differentiated funding specifically for nursing on a recurring basis in 2006. It is allocated among colleges based on associate's degree nursing (ADN) FTE. There has also been what are called "special allotments" provided for certain high cost programs. For fiscal year 2007–08, these special allotments are for: Caldwell Community College's truck driving program ($119,574); Johnston Community College's truck driving program ($186,004); Cape Fear Community College's marine technology program ($460,362); Haywood Community College's Regional High Tech Center (robotics) program ($613,736); and Wilson Community College's heavy equipment operation ($296,650). These special allotments have been funded for several years. Typically, the funds are to support the additional staff and operating expenses related to maintaining the program's equipment.

The N.C. Community College System relies upon the state for 69.1 percent of its budget, with local governments accounting for 12.7 percent, tuition receipts for 12.5 percent, and other sources for the remaining 5.7 percent.[60] In the 2006 fiscal year, the N.C. Community College System received more than $934 million in state appropriations, 92 percent of which was allocated according to full-time equivalent enrollment (FTE).[61] In curriculum programs, community college campuses receive one FTE for every 32 credit hours completed by a student over two semesters. For continuing education programs, community colleges earn FTEs at a lower rate (75 percent).[62]

Because FTEs are determined by the previous year's enrollment and are the same for all programs regardless of cost, the current funding model fails to account for differences in program costs.[63] In other words, all FTEs have the same financial value despite the fact that certain programs are more expensive to operate than others and the fact that certain programs are more key to the state's needs and future at a particular time. Health science programs, in particular, are in great need now and for the future but cost $1,520 more per FTE than other curriculum programs.[64] Due to the paucity of additional funding for high-cost programs, community colleges must limit program enrollments, eliminate other high-cost programs, or funnel money from other areas. In response, the State Board of Community Colleges has identified the establishment of differentiated funding as a priority.[65] The Center endorses this concept. While the General Assembly made an important step towards differentiated funding for high-cost programs in the 2007 legislative session, the General Assembly should continue to adopt differentiated funding policies, especially granting higher funding for high-cost programs in areas of high state need such as allied health programs.

(4) The N.C. Community College System should use the BioNetwork's strategy of forming innovative, strategic, and diverse partnerships with industry, private grantmaking foundations, the UNC system, and the General Assembly as a blueprint for achieving similar success in the fields of allied health, teacher education, and other fields of strategic importance. The System also should identify its top four fields of strategic importance for the General Assembly and the public.

Just as the BioNetwork has taken forceful strides in satisfying work force demands in the field of biotechnology, the occupations of nursing, teaching, and other fields of strategic importance could benefit from similar partnership strategies. Such strategic and innovative partnerships with industry and/or the UNC system provide another avenue to help community colleges satisfy work force needs.

Our research has revealed important partnerships between community colleges and the health industry (the Wake Early College of Health and Sciences), UNC teaching programs (the Wachovia East Partnership), and the trucking industry (Davidson County Community College's Transportation Technology Center). However, only in the field of biotechnology have the state's community colleges engaged in diversified partnerships with the biotechnology industry, the UNC system, a private foundation, and the General Assembly. The BioNetwork's multifaceted partnerships have paved the way for North Carolina to be the only state in the nation to rank in the top 10 for job growth in all biotechnology sectors. BioNetwork has shown promising growth. Between 2004–05 and 2006–07, the number of program completers more than doubled, with 1,780 program completers in 2006–07.

The BioNetwork is so effective because it is precisely that—a "network" of various partnerships. The N.C. Community College System should try to emulate the BioNetwork example by diversifying partnerships in health, teaching, and other fields. This diversification strategy could prove particularly effective in allied health if stronger partnerships with UNC were linked with partnerships with the health industry.

The American Association of Community Colleges has proposed one possible method for such a diversification called the RN (registered nursing) to MSN (master's of science in nursing) Faculty and Scholarship Initiative, "which would establish the first collaborative effort between the nation's largest source of new registered nurses (associate's degree programs), its largest employer of RNs (hospitals) and nurse educators (master's degree programs) to address the greatest obstacle to increasing RN program enrollments—faculty shortage." [66] According to Brenda Cleary, formerly of the N.C. Center for Nursing, similar programs exist at both East Carolina University and UNC-Chapel Hill. The N.C. Community College System and UNC system should collaborate to create more such programs between their constituent institutions, private industry, and private grantmaking foundations.

(5) The General Assembly should adopt a policy of moving community college faculty salaries to the national average by 2016.

In 2005–06, the average salary for North Carolina community college faculty was $40,989. That same year, the average community college faculty salary nationally was $55,405, and North Carolina community college faculty pay ranked 46th in the nation.[67] By comparison, the average North Carolina public school teacher salary is $46,410, ranking 27th in the nation. The average full-time faculty member at North Carolina's 16 public universities is paid $80,784, ranking 13th in the nation.[68] Raising community college faculty pay to the national average would cost an estimated $77.3 million over the period 2007–10. The community college system is the key to addressing work force shortages and adjusting to the huge transition in North Carolina's economy. That being the case, community college faculty pay must improve, or the state's response to work force shortages and economic transformations will be as below average as the pay.

Footnotes

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[3] *Ibid.,* pp. 12–13 and 15.

[4] *Ibid.,* p. 15.

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[25] Editorial calculation based on average teacher-to-student ratios provided by Scott Douglass with N.C. Department of Public Instruction's school business division and "July 1, 2007 County Total Age Groups-Children" and "July 1, 2020 County Total Age Groups-Children," N.C. State Data Center, Raleigh, N.C. Accessed Nov. 9, 2007, on the Internet at *http://demog.state.nc.us/*

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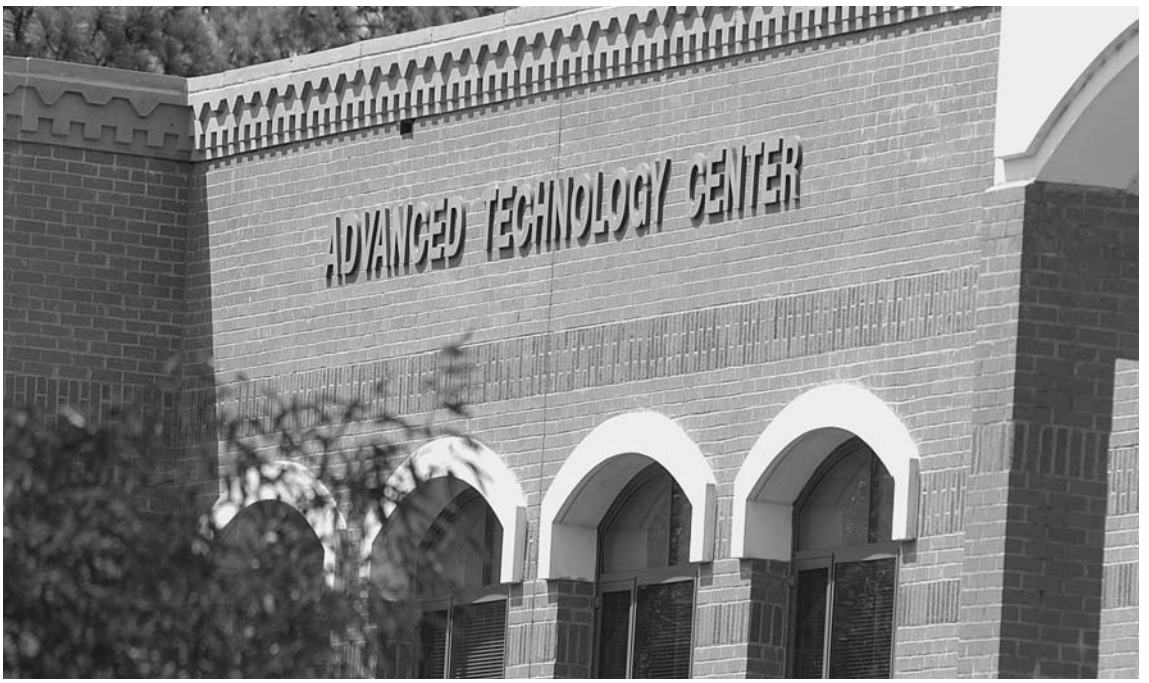

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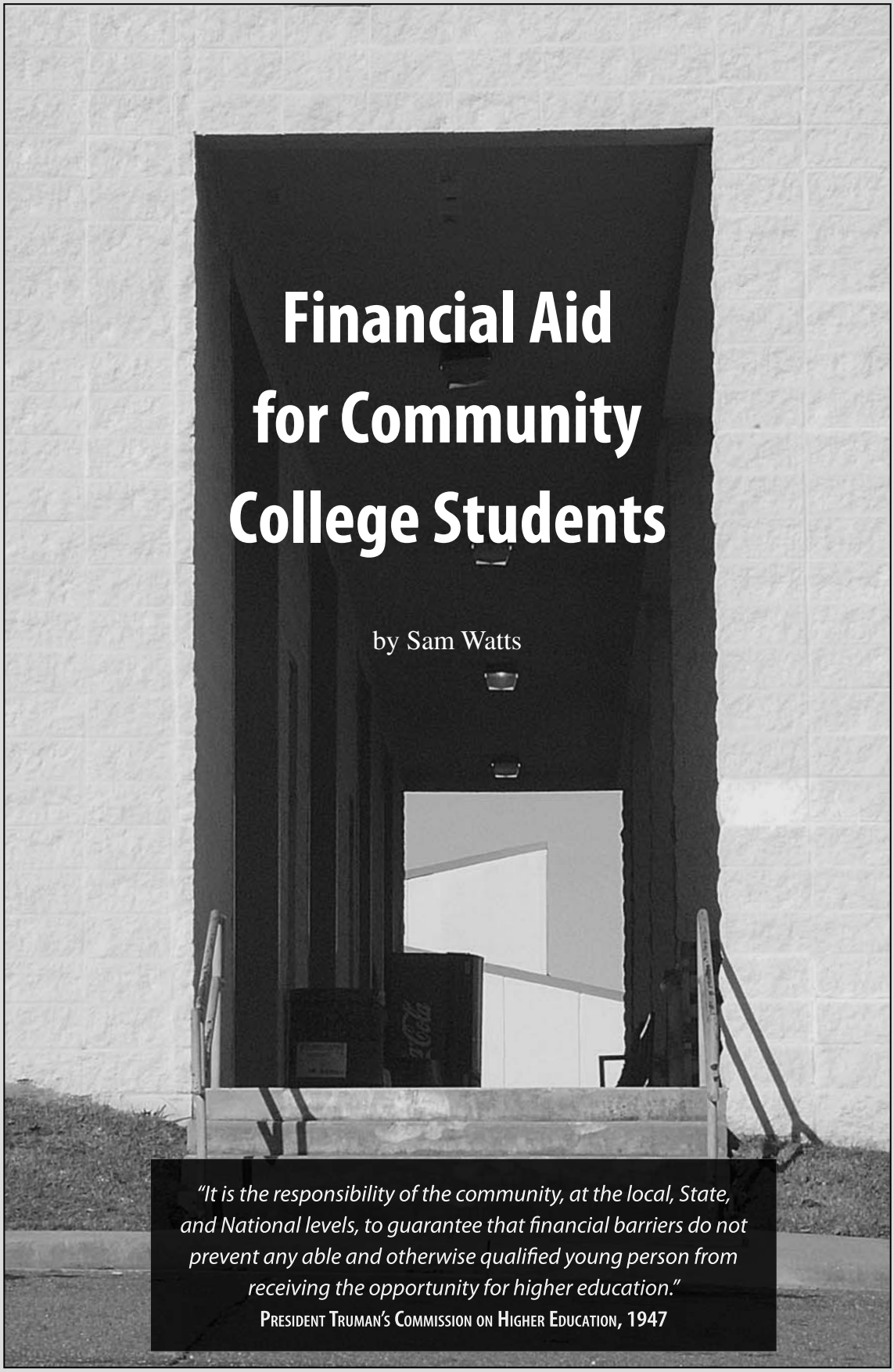

Financial Aid for Community College Students

by Sam Watts

"It is the responsibility of the community, at the local, State, and National levels, to guarantee that financial barriers do not prevent any able and otherwise qualified young person from receiving the opportunity for higher education."
President Truman's Commission on Higher Education, 1947

Executive Summary

State-funded, need-based financial aid to community college students is an area of North Carolina's financial aid policy that has received less attention than the provision of similar aid to traditional students in four-year colleges and universities. Financial aid programs that best serve community colleges take into account the facts that the demographics of the student population are not the same as at traditional colleges and that students receiving aid are typically those not given an opportunity to attend the state's four-year institutions.

Of the 268,421 students enrolled in North Carolina community colleges' curriculum instruction courses (classes that go toward a degree or credit) in 2005–06, 57 percent received some form of student financial aid. This aid totaled $321,915,077. In North Carolina, 62 percent of the aid awarded to community college students was from the need-based Pell Grant program—the baseline ***federal*** *student aid program designed to help the nation's neediest students.*

Community colleges offer the lowest cost path to postsecondary education or training in the state, and at $1,100, the tuition and fees at North Carolina community colleges are 45 percent lower than the national average. However, the true cost of attending a North Carolina community college full-time for nine months for a resident student who does not live with his or her parents is $15,600.

Because tuition and fees represent such a small percentage of the total cost, the student aid needs of community college students are often perceived as being less than those of students in other types of institutions. The result is that aid programs often are designed for traditional students who are financially dependent on their parents and proceed directly from high school to college. Aid programs for community colleges must deal with the reality that in North Carolina students are more likely to be independent of their parents, working, and perhaps supporting a family, and they must take into account that the institutions are often called on to retrain workers.

Special Financial Aid Programs for Community Colleges

The state provides a number of student aid programs that assist students in all sectors of higher education in North Carolina. However, there are some programs that are geared toward the particular needs of community college students.

1. N.C. Community College Grant, Targeted Financial Assistance, and Loan Program

The N.C. Community College Grant, Targeted Financial Assistance, and Loan Program was enacted by the legislature in 1999. The three goals of the program are to provide need-based grants, to offer incentives for individuals to enroll in programs with high local demand from employers but low student enrollment, and to offer short-term loans.

Since the Community College Grant's inception, community colleges have left funds unspent at the end of each year. The unspent funds historically have been a sore spot between state budget officials and community college administrators and often are cited as a reason not to increase the appropriation for the Community College Grant Program.

The stability of the Community College Grant's funding worries community college administrators. The state's escheats account is comprised of abandoned and unclaimed money and property—for example, money that

is left in safe deposit boxes. The Escheats Fund is ***constitutionally*** *required to be used for need-based aid for students in public higher education institutions.*

The Escheats Fund is being used to fund six different student aid programs with the interest generated by the State Treasurer's investment of the escheats, as well as some of the principal. The budget provision requires that the balance of the Escheats Fund not be allowed to dip below $400 million. Even though the balance in the Escheats Fund has increased in each of the last 10 years, the amount of interest spent on student aid from the fund has decreased during each of the last three years.

The state funds three parallel need-based programs that are specific to each sector of higher education—the N.C. Community College Grant, the UNC Need-Based Grant, and the State Contractual Scholarship for students in private colleges and universities. In addition to these major need-based programs, the state funds numerous work force contingent financial aid programs. Work force contingent financial aid programs provide money for college in exchange for an individual's commitment to work in occupations where there is a shortage or in regions that have difficulty attracting employees. Some of these programs are not open to community college students or have academic participation requirements that preclude participation by community college students.

2. Tuition Waivers

Tuition waivers are used as a form of student aid more often in community colleges than in other type of institutions. Waivers are grants of free or reduced tuition for certain groups, such as volunteer firefighters, that are identified by the legislature or the State Board of Community Colleges as needy or deserving of special access to college. The two main types of waivers are full tuition waivers or a waiver of the non-resident portion of tuition so that the student pays in-state tuition.

3. The Need-Based Teaching and Nursing Grant Program

The Need-Based Teaching and Nursing Grant Program was a program funded by the legislature for only one year using non-recurring state funds. The legislature provided the community college system $500,000 for the year 2006–07. The 2006 budget conference report indicated that this was a start-up appropriation made with the intention that the program would be funded by the state lottery in subsequent years. The program was intended to help address work force shortages in the fields of teaching and nursing.

4. Federal Student Loan Programs

According to an April 2008 report released by the Project on Student Debt, only 23 of the 58 North Carolina community colleges offer access to all of the need-based, low-interest loan programs offered by the federal government. North Carolina ranks third-worst in the nation in terms of community college students not having access to federal student loans. Any institution whose student loan default rate reaches 25 percent for three consecutive years will lose access to ***all*** *federal aid programs for students. For most of the community colleges, the risk of the sanction outweighs the potential benefits of offering the loans.*

Most colleges with federal loan programs have default management initiatives—programs that educate students on how to manage, defer, and repay student loans. Higher default rates are to be expected at community colleges because the institutions have higher dropout rates. Students who did not perform well in high school but aspire to earn a four-year degree may attend community colleges in order to prove their academic ability. However,

many of the behavior patterns responsible for poor high-school performance also lead many students to fail to complete community college programs—and subsequently to default on student loans. As a result, the high loan default rates at two-year institutions are a cost of having a system that offers second chances.

5. The North Carolina State Child Care Grant

The North Carolina State Child Care Grant is a need-based program funded by the legislature that provides child care services to students who also are parents enrolled in community colleges. The services are locally controlled and managed by individual institutions. To be eligible, students must enroll at least half-time in a community college curriculum program and make satisfactory academic progress. Funds in the program do not go directly to students, but are made as payments to local child care vendors. The goals are to increase access to a college education for parents with young children and to lower the odds that a student will not finish a program of study.

6. The Dreamkeepers and Angel Fund Emergency Financial Aid

The Dreamkeepers and Angel Fund Emergency Financial Aid programs are a national pilot project that offers emergency funds to community college students facing financial crises that could force them to drop out of school. The programs are managed locally but administered by two national organizations—Scholarship America and the American Indian College Fund. Both efforts are operating in the third year of a three-year grant from the Lumina Foundation for Education of Indianapolis, Indiana. The three goals of the national project are "to support the development of an infrastructure to offer emergency financial aid at the participating colleges; to learn whether and to what extent emergency assistance helps students stay enrolled in college; and to promote the long-term sustainability of an emergency aid program at the participating colleges."

Conclusions and Recommendations

In order to maintain and expand access to the state's community colleges for low-income North Carolinians, the N.C. Center for Public Policy Research makes four recommendations based on our research:

(1) The N.C. General Assembly should appropriate additional funding for the N.C. Community College Grant Program so that more community college students have access to financial aid. The Center recommends that the maximum grant be raised to $1,250 per year, an amount that would allow the working poor to qualify for grants and an amount more closely correlated to the average cost of in-state tuition and fees at community colleges.

(2) The N.C. General Assembly should move to put the Community College Grant Program on more solid financial footing by shifting its funding source from escheats to the state's General Fund.

(3) The N.C. Community College System and the State Education Assistance Authority should help community colleges develop default management initiatives so that they can participate in federal student loan programs. The N.C. General Assembly should provide the funding and personnel for the state system and local community colleges to develop successful default management programs.

(4) The N.C. General Assembly should increase the annual appropriation to the N.C. State Child Care Grant Program.

In 2005–06, North Carolina's community colleges enrolled 268,421 students in curriculum instruction courses, or those classes that go toward a degree or credit.[1] Of those students, 152,260, or 57 percent, received some form of student financial aid, totaling $321,915,077, in the same year. In North Carolina, 62 percent of the aid awarded to community college students was from the need-based Pell Grant[2] program—the baseline *federal* student aid program designed to help the nation's neediest students.[3] Nationally, 47 percent of community college students receive some form of student financial aid, and 23 percent receive federal grants.[4]

Community colleges offer the lowest cost path to postsecondary education or training in the state. In fact, according to the Southern Regional Education Board, the tuition and fees at North Carolina community colleges are the lowest in the Southeast and are 45 percent lower than the national average for two-year institutions.[5]

However, the true cost of attending a North Carolina community college full-time for nine months for a resident student who does not live with his or her parents is $15,600. Only $1,100 of this cost are tuition and fees from the college. This includes living expenses and assumes the student is taking at least 12 hours of courses[6] (see Table 1).

Because tuition and fees represent such a small percentage of the total cost, the student aid needs of community college students are often perceived as being less than those of students in other types of institutions. Consequently, student aid programs and issues geared toward community college students do not get as much attention from the public and policymakers as those geared for students attending baccalaureate institutions. The result is that aid programs often are designed for traditional students who are financially dependent on their parents and who proceed directly from high school to college. In North Carolina, the reality is that community college students

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are more likely to be independent of their parents, working, and perhaps supporting a family.

Student aid programs designed for community college students often require a non-traditional approach. For example, many students don't qualify for some aid programs because they earn too much money to get help but not enough to afford school. Kennon Briggs, vice president for business and finance for the N.C. Community College System, says, "Financial aid eligibility formulas do a disservice to the working poor. People who work make a little too much to get Pell Grants." The state's response to that assistance gap in the Pell Grant program was to tailor the eligibility requirements of two state-funded financial aid programs so that community college financial aid officers could use them to plug the gap.

> *"Financial aid eligibility formulas do a disservice to the working poor. People who work make a little too much to get Pell Grants."*
>
> KENNON BRIGGS, VICE PRESIDENT FOR BUSINESS AND FINANCE, N.C. COMMUNITY COLLEGE SYSTEM

Aid programs at community colleges often must respond to changing employment situations of students. Stephen Scott, President of Wake Technical Community College, says, "Another hardship imposed by the financial aid structure is the stipulation that the income basis for qualification is calculated from the student's previous yearly income. This means that anyone who has lost employment or suffered an economic setback, such as a serious accident or expensive illness during the current fiscal year, will not qualify for federal aid if their previous yearly salary was above federal guidelines." Since community colleges often are called on to serve the needs of workers who have lost their jobs, making an exception to this federal stipulation requires financial aid administrators to exercise professional judgment in estimating income for the newly jobless—a process that requires time and staff resources.

Special Financial Aid Programs for Community Colleges

The state of North Carolina funds three general financial aid programs for students in higher education—the Education Access Rewards North Carolina (EARN) Grant, the Education Lottery Scholarship, and the Student Incentive Grant. The state also funds three sector-specific aid programs—one for students in UNC institutions, one for private colleges and universities, and one for community colleges. In addition to general and sector-specific financial aid programs, the state provides work force contingent aid programs that offer money for college in exchange for an individual's commitment to work in occupations where there is a shortage or regions that have difficulty attracting employees. Most of North Carolina's state-funded general and work force contingent aid programs are available to students in community colleges, as well as those in public and private universities and baccalaureate colleges.

> *"When you talk about the world of community college financial aid, there has to be a real divide in how we are looked at from a policy perspective."*
>
> KENNON BRIGGS

However, there are a number of programs that are unique to community colleges. These community college financial aid programs are geared toward the particular needs of community college students—needs driven by the differing mission and demographic composition of students in the institutions. "When you talk about the world of community college financial aid, there has to be a real divide in how we are looked at from a policy perspective," says Briggs. Aid programs for community colleges must deal with the reality that students are more likely to be independent of their parents, working, and perhaps supporting a family and they must take into account that the institutions often are called on to retrain workers.

1. N.C. Community College Grant, Targeted Financial Assistance, and Loan Program

The N.C. Community College Grant, Targeted Financial Assistance, and Loan Program was enacted by the legislature in 1999 and replaced an older program called the N.C. Community College Scholarship Program. The three goals of the program are to provide need-based grants, to offer incentives for individuals to enroll in programs with high local demand from employers but low student enrollment, and to offer short-term loans.[7]

The program is North Carolina's primary state-funded need-based grant source for community college students. It is designed to dovetail with federal Pell Grants to meet the needs of students who require assistance but who do not qualify for the maximum aid from the Pell program. Beginning in 2008–09, financial aid administrators at community colleges will tailor financial aid packages to student needs using combinations of four state-level programs—the Community College Grant, the new Education Access Rewards North Carolina (EARN) Grant, the N.C. Education Lottery Scholarship, and the N.C. Student Incentive Grant—to fill in the gaps left by the Pell Grant program. The four programs are need-based and have similar minimum academic requirements.

Community colleges will compete with the state's other higher education institutions for allocations from the EARN Grant, the Lottery Scholarship, and the Student Incentive Grant. The EARN grants will be offered for the first time in 2008–09, but may have limited usefulness for community colleges because the grants are restricted to dependent students—those who live with their parents. The EARN Grant has a high maximum award—$4,000—and is projected to serve 3,500 community college students in 2008–09. The Lottery Scholarship was offered for the first time in 2007–08 and is projected to provide a total of $14,188,028 to 12,256 community college students this fiscal year. The Student Incentive Grant has been around since the 1970s, but has remained a relatively small program because it is based on a federal appropriation that is then matched by the state.

The Community College Grant Program is only available to students in the state's community colleges. The program is limited to state residents without baccalaureate degrees and is

Table 1. Cost of Attendance at N.C. Community Colleges for Nine Months of Full-Time Study, 2006–07 Estimates

Student Not Living with Parent (In-State)	
Tuition and fees*	$ 1,100
Books and supplies	1,500
Transportation	2,000
Personal expenses	1,500
Room and board	9,500
Total:	$15,600

* Tuition was raised by the 2007 General Assembly to $1,344 for 16 hours of classes.

Note: The estimated cost of attendance is used to determine financial aid eligibility and does not represent the direct cost paid to the college.

Source: Figures provided to the N.C. Center for Public Policy Research by Wanda White, director of student development services, N.C. Community College System. The cost estimates are provided by the system office for information only. Actual fees and living expenses vary at institutions across the state. Since community college students are typically older and may be supporting their families while they are in school, living expenses for community college students not living with parents may be higher than expenses for traditional college students.

administered by the State Educational Assistance Authority, the state agency responsible for coordinating most federal, state, and private student financial aid programs in North Carolina. The program's maximum grant award amount for students is $900 per year.

The high employer demand/low student enrollment goal in the program allows the State Board of Community Colleges to designate up to 10 percent of the program's annual appropriation from the legislature to grants for students in courses that are identified as offering training needed to fill high local work force demands but that have too few students enrolled. Local community colleges identify appropriate credit or non-credit courses for the initiative and select students who will receive the grants.

The short-term loan goal of the program is geared toward helping students who anticipate receiving federal educational tax credits to obtain cash to pay for tuition, books, and fees at the beginning of each community college term. The loan program is administered by each local community college. When students repay the loans on time, the collections are handled by the local institution. Colleges must report the names of students who default on loans to the N.C. Department of Revenue and to the community college system office. The state Revenue Department then manages collections on loans that are in default.

Escheats after June 30, 1971.
All property that, after June 30, 1971, shall accrue to the State from escheats, unclaimed dividends, or distributive shares of the estates of deceased persons shall be used to aid worthy and needy students who are residents of this State and are enrolled in public institutions of higher education in this State. The method, amount, and type of distribution shall be prescribed by law.
—Article IX, §10 (2) of the N.C. Constitution

Macon County resident Timothy Barnett is a recipient of a Community College Grant. He was one of 930 workers who lost jobs when Fruit of the Loom closed its textile plant in Rabun Gap, Georgia, in 2006 and moved its operations overseas. Barnett, who lives just over the state line in Franklin, N.C., had been working at the plant more than eight years when he received a pink slip. Facing an uncertain future, he decided to enroll in Southwestern Community College's electronics engineering technology program. That decision, he said, was driven in large part by his ability to obtain funding through the North Carolina Community College Grant and other assistance programs.

"It would have been very difficult, probably darn near impossible, to go back to school without that help," says Barnett, 48, who is married and has two college-age children. "My family was very accustomed to me bringing in money, and even though the funding just pays for my schooling, I'm not complaining. I get to keep collecting unemployment until my school career is done. Even though it's wonderful, it's only a small percentage of what I used to make. Every bit of money I receive helps me and my family to keep going."

The Community College Grant Program also gets high marks in effectiveness from community college administrators interviewed for this article. They say that there is unmet need for student aid in community colleges and identify increased funding for this program as a way to help meet that need.

Unspent Funds in the Community College Grant Program

Since the Community College Grant Program's inception in 1999, community colleges have left funds unspent at the end of each year. The unspent funds historically have been a sore spot between state budget officials and community college

administrators and often are cited as a reason not to increase the appropriation for the Community College Grant Program.

Vickie Call, director of financial aid at Wilkes Community College, attributes the problem to requirements that a portion of the funds be used as an incentive for students to enroll in training programs with high local demand from employers but low student enrollment.

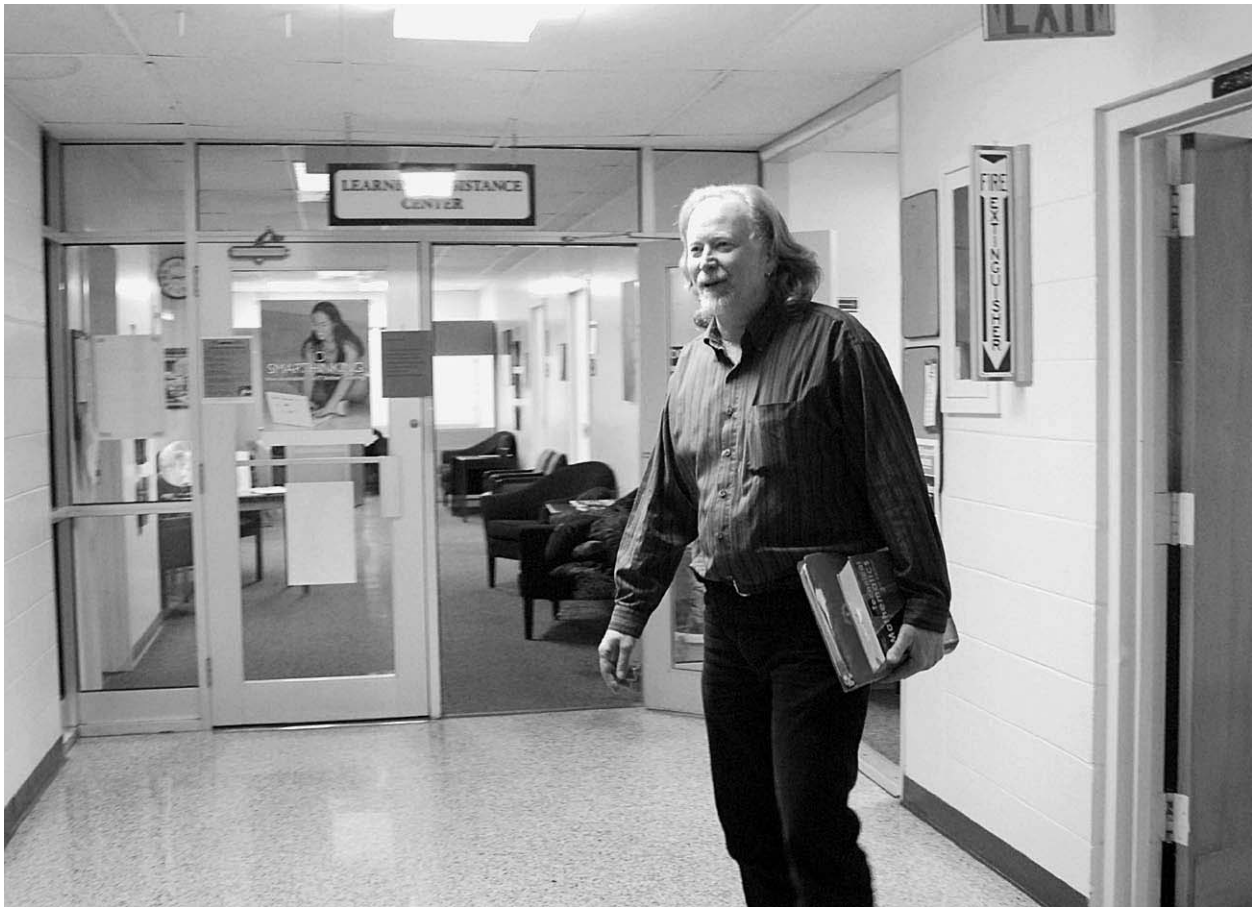
"We have always spent funds that we have for Wilkes Community College, but it is difficult to try to work in certain [financial aid formulas] to find programs with high demand but low enrollment. If these funds could be put into another fund that does not have such strict requirements, then more students' needs could be met."

Escheats Funding of the Community College Grant

The stability of the Community College Grant's funding also worries community college administrators. "It's all escheats, and that's a concern for us," says Briggs. The state's escheats account is comprised of abandoned and unclaimed money and property—for example, money that is left in safe deposit boxes. The Escheats Fund is *constitutionally* required to be used for need-based aid for students in public higher education institutions.[8]

Proceeds from the Escheats Fund are not as stable a source of revenue as the state's General Fund. Additionally, the Escheats Fund is being used to fund six different student aid programs. As of 2007–08, escheat funding is not only being used for the Community College Grant, but also for the Child Welfare Postsecondary Support

Timothy Barnett, a recipient of a Community College Grant at Southwestern Community College



Program for students from the foster care system, the new Education Access Rewards North Carolina (EARN) Grant, the Millennium Teaching Scholarship Loan Program, the UNC Need-Based Grant, and the state's Veterans Scholarships.

The provision of the state budget that allocates escheats funds to the Community College Grant and five other student aid initiatives allows the programs to spend the interest generated by the State Treasurer's investment of the escheats as well as some of the principal—the actual escheats. The state has used the principal *and* the interest for student aid during the last four years. Previously, the state spent *only* the interest earned on the Fund. The budget provision also requires that the balance of the Escheats Fund not be allowed to dip below $400 million.[9] Even though the balance in the Escheats Fund has increased in each of the last 10 years, the amount of interest spent on student aid has decreased during each of the last three years.

A separate concern about the stability of the escheats funding is whether the $400 million floor in the fund is too low. At that level, it would only be possible to generate the average amount of escheat interest spent on student aid for the last three years if the annual investment earnings exceeded 6.2 percent. The 10-year average of earnings on the fund is 6.04 percent (see Table 2).

N.C.'s Higher Education Sector-Specific Need-Based Financial Aid Programs

The state funds three parallel need-based programs that are specific to each sector of higher education—the N.C. Community College Grant, the UNC Need-Based Grant, and the State Contractual Scholarship for students in private colleges and universities. "The parallel system works well," says Steve Brooks, executive director of the State Education Assistance Authority. "Where each has its own program, there is less elbowing and arguing over technical aspects of the eligibility formula—so the program can be closely targeted to the needs of the students served by each sector of higher education."

The 2007–08 state appropriation for the Community College Grant Program is $13,981,202. In 2006–07, a total of $10,463,547 was awarded through the state's Community College Grant Program to 12,641 community college students—an average of $827 per student. The state's companion aid program for public universities,

Table 2. Trends in Escheats Funding of Student Aid Programs with Percentages of Interest and Principal Spent

	2003–04		2004–05		2005–06		2006–07	
Annual Balance of the Escheats Fund	$475,676,542		$510,153,641		$522,074,323		$686,260,019	
Escheat Interest Spent on Student Aid	$36,356,125	88%	$27,255,262	47%	$24,726,366	30%	$22,730,705	27%
Escheat Principal Spent on Student Aid	$5,178,324	12%	$31,278,641	53%	$58,271,500	70%	$62,461,074	73%
Total Escheat Funding of Student Aid	$41,534,449	100%	$58,533,903	100%	$82,997,866	100%	$85,191,779	100%

Source: Escheat Fund Fact Sheet, Fiscal Research Division, N.C. General Assembly

the UNC Need-Based Grant, served 33,929 students in 2005–06 with expenditures of $58,071,081—an average of $1,712 per student. That same year, a parallel program for private colleges and universities in North Carolina, the need-based State Contractual Scholarship, received $35,148,247 from the legislature to provide 14,531 residents attending private institutions—an average grant of $2,419.[10] Each year in undergraduate degree or certificate-track programs, the state's private institutions serve 51,000 North Carolinians, while the UNC system serves 195,000, and the community colleges serve more than 268,000 residents (see Table 3).

In addition to these major need-based programs, the state of North Carolina funds numerous work force contingent financial aid programs. Work force contingent financial aid programs provide money for college in exchange for an individual's commitment to work in occupations where there is a shortage or in regions that have difficulty attracting employees. Sixteen such programs funded by the state provided a total of $27,549,156 to 4,230 students in higher education institutions in 2005. While many of these programs, such as the Teacher Assistant Scholarship Program, are available to community college students, some, such as the N.C. Teaching Fellows Program, are

Table 3. Annual Awards from North Carolina's Major State Need-Based Student Aid Programs

State Program	Community Colleges	UNC System	Private Colleges	Total
N.C. Community College Grant	$10,463,547	N/A	N/A	$10,463,547
UNC Need-Based Grant	N/A	$58,071,081	N/A	58,071,081
State Contractual Scholarship Program	N/A	N/A	$35,148,247	35,148,247
EARN Grant (Projected)	33,000,000	67,000,000	N/A	100,000,000
Lottery Scholarship (Estimated)	14,188,028	18,352,432	5,469,094	38,009,554
N.C. Student Incentive Grant	1,275,450	3,305,781	543,070	5,124,301
Total	$58,927,025	$146,729,294	$41,160,411	$246,816,730
Percentage of Total Annual Awards	23.9%	59.4%	16.7%	

Notes: Amounts for N.C. Community College Grant, UNC Need-Based Grant, State Contractual Scholarship Program, and N.C. Student Incentive Grant are actual disbursements from 2005–06 from the *Statistical Abstract of Higher Education in 2006–07*, University of North Carolina, Chapel Hill, N.C., May 2007, pp. 143–44. Amounts for the Lottery Scholarship are based on estimates for 2007–08 provided to the General Assembly's Fiscal Research Division by the State Education Assistance Authority. Amounts for the Education Access Rewards North Carolina (EARN) Grant are based on 2008–09 projections provided by the State Education Assistance Authority of 8,300 community college students and 16,850 UNC students being awarded an EARN Grant of up to $4,000. N/A means that the grant is not available to students in that sector of higher education.

Table 4. Groups Entitled to Tuition Waivers at N.C. Community Colleges

A. Full Tuition Waivers for N.C. Residents

1. Volunteer firefighters
2. Local fire department personnel
3. Volunteer rescue and lifesaving department personnel
4. Local rescue and lifesaving department personnel
5. Radio Emergency Associated Citizens Team (REACT) members [(a)]
6. Local law enforcement officers
7. Full-time custodial employees of the Department of Correction [(b)]
8. Employees of the Division of Community Corrections [(b)]
9. Employees of the Division of Juvenile Justice and Delinquency Prevention [(b)]
10. Members of the N.C. State Defense Militia
11. Members of the N.C. Civil Air Patrol [(c)]
12. Individuals engaged in Civil Preparedness [(c)]
13. Patients in state Alcoholic Rehabilitation Centers
14. Clients of sheltered workshops
15. Clients of Adult Developmental Activity Programs
16. Students in Health and Human Services Development Programs [(d)]
17. Juveniles committed to Division of Juvenile Justice and Delinquency Prevention
18. Prison inmates
19. High school students taking college courses (Huskins Bill) [#]
20. High school students taking college courses (Concurrent Enrollment)
21. Students enrolled in Middle and Early College High School Programs
22. Students enrolled in Basic Skills (e.g., High School Equivalency)
23. Students enrolled in Human Resources Development Program [(d)]
24. Students enrolled in a Learning Laboratory (curriculum program)
25. Trainees enrolled in Basic Law Enforcement Training with sponsorship letter [(d)]
26. Trainees enrolled in the New & Expanding Industry Training Program [(e)]
27. Full-time community college staff [(f)]
28. Senior citizens who are legal residents of N.C. and aged 65 or older
29. Elementary and secondary school teachers who take CPR or first-aid classes
30. Any child, between 17 and 23 years old, who is a ward of the State [(d)]
31. Survivors, spouse and child, of a law enforcement officer, firefighter, volunteer firefighter, or rescue squad worker who was killed or permanently and totally disabled as a direct result of a traumatic injury sustained in the line of duty [(d)]

B. Waivers of the Non-Resident Portion of Tuition (Non-Residents Who Are Allowed To Pay In-State Tuition)

32. Armed services personnel and their dependents
33. Members of the N.C. National Guard Unit
34. N.C. residents who lose their legal residence status
35. Members of families that were transferred to N.C. by business, industry, or civilian families transferred by the military
36. Out-of-state residents who work for N.C. employers (employer is charged in-state rate)
37. Refugees who lawfully entered the U.S. and are living in the state
38. Non-residents of the U.S. who have resided in N.C. for a 12-month qualifying period and have filed an immigrant petition
39. A person lawfully admitted to the U.S. who satisfied the qualifications from a public school and has graduated
40. A person sponsored by a N.C. nonprofit entity who is lawfully admitted to the U.S. [(g)]

Notes:

[(a)] The REACT team must be under contract to a county as an emergency response agency enrolled in job-specific training courses

[(b)] Limited to positions that require certification under the rules of the Criminal Justice and Training Standards Commission

[(c)] Limited to training courses directly relating to job performance and job title, and responsibility must be included in a local Emergency Plan

[(d)] Individuals must meet program-specific eligibility requirements

[(e)] Courses do not earn budget reimbursement from the General Assembly

[(f)] Limited to one curriculum or continuing education course per reporting term

[(g)] Individual, employer, or sponsor must meet specific eligibility requirements

[#] The Huskins bill is legislation from 1983 named for former state Representative Joseph P. Huskins (D-Iredell) allowing community colleges to offer classes not otherwise available to students free of charge in the 9th through 12th grades at participating high schools.

Source: N.C. Community College System, *Authorized Groups Eligible for Tuition and Fee Waivers—Quick Reference Guide.*

Kathy Owens lost her job with Fruit of the Loom when the plant closed and attended Southwestern Community College through a work/study program

not. Still others, such as the Prospective Teacher Scholarship-Loan, are competitively awarded based on academic merit—a process that usually precludes participation by community college students.

2. Tuition Waivers

Tuition Waivers are a tool that, while not unique to the community college system, are used as a form of student aid more often in community colleges than in other types of institutions. Waivers are grants of free or reduced tuition for groups, such as volunteer firefighters, that are identified by the legislature or the State Board of Community Colleges as needy or deserving of special access to college. The two main types of waivers are full tuition waivers or a waiver of the non-resident portion of tuition so that the student pays in-state tuition.

As of 2007, there are 40 groups entitled to receive some form of tuition waiver from North Carolina community colleges. "It's [worth] about $41 million a year," says Briggs. "And that's guaranteed access, because you don't have to pay."[11] The community college system granted tuition waivers of one or both types to 25,434 students in curriculum and non-curriculum courses in 2005–06, while the UNC System granted waivers to 1,522 that same year (see Table 4).

3. The Need-Based Teaching and Nursing Grant Program

The Need-Based Teaching and Nursing Grant Program was a program funded by the legislature for only one year using non-recurring state funds. The legislature provided the community college system $500,000 for the year 2006–07. The 2006 budget conference report indicated that this was a start-up appropriation made with the intention that the program would be funded by the state lottery in subsequent years.[12] The program was intended to help the state address work force shortages in the fields of teaching and nursing.

Teresa Gale Johnson receives a Pell Grant to attend Southwestern Community College

In the field of teacher education, North Carolina's schools will need 953 more *new* teachers each year even to maintain current student-teacher ratios, much less improve them.[13] Public schools must *replace* approximately 10,000 teachers every year due to resignation and retirement.[14] North Carolina will need approximately 6,500 *more* graduates each year in order to address the state's teacher shortage.[15] Yet, for academic year 2005–06, all public and private North Carolina colleges and universities combined produced a total of 4,866 pre-licensure teaching graduates and completers.

In the field of health care, North Carolina will have an estimated shortage of 9,000 nurses in 2015 and almost 18,000 by 2020.[16] For academic year 2005–06, North Carolina colleges and universities produced a total of 3,380 pre-licensure (not yet licensed to practice) registered nursing graduates.[17] North Carolina will need roughly 2,400 more graduates annually in the field of health care.[18] (For an in-depth discussion of these work force shortages, see John Manuel, "Help Wanted: Community Colleges' Role in Meeting Work Force Shortages," p. 136.)

The Community College Teaching and Nursing Grant program provided $950 annual grants for full-time students and $750 grants for part-time students in teaching and nursing preparation courses. However, the program ended after one year and more than 200 students who received the grants for one year of school did not receive funding for a second year.[19]

"We were able to serve quite a few students with that money," says Wanda White, director of student development services for the community college system. "That really should have been a recurring appropriation."

4. Federal Student Loan Programs

Some community colleges in North Carolina participate in Federal Student Loan Programs. According to an April 2008 report released by the Project on Student Debt, only 23 of the 58 institutions offer access to all of the need-based, low-interest loan programs offered by the federal government. The Project estimates that 47 percent of North Carolina's community college students have no access to federal loans—ranking

the state third-worst nationally. North Carolina trails only Alabama and Georgia. The Project on Student Debt says that failure to provide access to federal loans increases the risk that students will incur more debt by utilizing private loans with interest rates as high as 19 percent, rather than taking advantage of the subsidized federal loan rates which have interest rates not exceeding 6 percent.[20]

"A loan program is worth it because it's access," says Monty Hickman, the community college system's associate director for financial aid. "But participation is a tradeoff," adds Briggs. The two go on to explain that most North Carolina community colleges do not participate in all federal government student loan programs because a high default rate on the loans would put the schools at risk of losing access to Pell Grants and all other federal aid programs. Any institution whose student loan default rate reaches 25 percent for three consecutive years will lose access to all federal aid programs for students. For most of the community colleges, the risk of the sanction outweighs the potential benefits of offering the loans.

"I feel that community colleges do need to participate in federal loan programs," says Vickie Call, financial aid director of Wilkes Community College. "But, we obviously do not want the default rate to affect us, causing us to lose access to the federal financial aid programs."

"There are ways in which more community colleges could offer federal loans to students," says Wanda White. "But they will have to develop default management initiatives on their campuses."

Most colleges with federal loan programs have default management initiatives—programs that educate students on how to manage, defer, and repay student loans. U.S. Department of Education guidelines suggest that institutions provide entrance and exit counseling for students, financial literacy training for borrowers, counseling for those most at-risk for default, and many other campus-based tools to ensure lower default rates.[21]

The state agency responsible for managing most student aid in North Carolina is willing to help community colleges solve this problem. "The State Education Assistance Authority will be happy to serve as a resource for our community colleges in North Carolina in developing default management programs for campuses to use," says Steve Brooks, director of the authority. "We have good experience in the area as a guarantor of federal loans, and I believe that we can offer solid advice and support under current law."

> *"There are ways in which more community colleges could offer federal loans to students. But they will have to develop default management initiatives on their campuses."*
>
> **Wanda White,**
> **director of student development services,**
> **N.C. Community College System**

Robert B. Archibald, a professor of economics and a former director of the Thomas Jefferson Program in Public Policy at the College of William and Mary, in Virginia, explains that higher default rates are to be expected at community colleges because the institutions have higher dropout rates. Archibald writes, "Students who think they have the ability to go to a four-year college, but who do not perform well in high school, use [community colleges] to demonstrate that they are worthy of admission to a four-year college. Because many of the behavior patterns responsible for poor high-school performance stick with those students, their failure rate at community colleges is quite high. Still, a significant number of students do go on to four-year institutions. *The high loan defaults at two-year institutions then are simply a cost of having a system that offers second chances* [emphasis added]"[22] (see Table 5).

5. The North Carolina State Child Care Grant

The North Carolina State Child Care Grant is a need-based program funded by the legislature that provides child care services to benefit community college students who also are parents. The services are locally controlled and managed by individual institutions. To be eligible, students must enroll at least half-time in a community

Table 5. Student Loan Default Rates for N.C. Public Higher Education Institutions Participating in Federal Loan Programs

	N.C. Community Colleges	2005 Student Loan Default Rate (%)
1.	Roanoke-Chowan Community College	10.9%
2.	Davidson County Community College	10.8
3.	Bladen Community College	10.1
4.	Guilford Technical Community College	9.7
5.	Lenoir Community College	9.1
6.	Martin Community College	8.6
7.	Fayetteville Technical Community College	6.7
8.	Southeastern Community College	5.4
9.	Robeson Community College	5.2
10.	Sampson Community College	4.3
11.	Wake Technical Community College	3.9
12.	Halifax Community College	3.7
13.	Western Piedmont Community College	3.7
14.	Gaston College	2.9
15.	Carteret Community College	2.6
16.	Asheville-Buncombe Technical Community College	2.6
17.	Wilson Technical Community College	2.5
18.	Craven Community College	2.2
19.	Surry Community College	2.2
20.	Vance-Granville Community College	2.1
21.	Caldwell Community College & Technical Institute	1.7
22.	Pitt Community College	1.7
23.	Cape Fear Community College	1.5
24.	Haywood Community College	1.3
25.	Johnston Community College	1.2
26.	James Sprunt Community College	1.1
	University of North Carolina Institutions	
1.	Elizabeth City State University	11.3%
2.	Fayetteville State University	11.2
3.	North Carolina Agricultural & Technical State University	10.2
4.	North Carolina Central University	9.2
5.	Winston-Salem State University	5.0
6.	Western Carolina University	3.6
7.	University of North Carolina at Pembroke	2.9
8.	North Carolina School of the Arts	2.9
9.	University of North Carolina at Wilmington	2.8

—continues

Table 5. Student Loan Default Rates for N.C. Public Higher Education Institutions Participating in Federal Loan Programs, *continued*

	University of North Carolina Institutions	2005 Student Loan Default Rate (%)
10.	University of North Carolina at Asheville	2.1
11.	University of North Carolina at Greensboro	2.0
12.	University of North Carolina at Charlotte	1.4
13.	North Carolina State University	1.2
14.	East Carolina University	1.1
15.	Appalachian State University	0.6
16.	University of North Carolina at Chapel Hill	0.2

Source: U.S. Department of Education 2005 student loan cohort default rate database, released Sept. 10, 2007. On the Internet at *http://www.ed.gov/offices/OSFAP/defaultmanagement/cdr.html.* The 2005 default rates represent the percentage of borrowers at each school in the Federal Family Education Loan and William D. Ford Federal Direct Loan programs who began loan repayments between October 1, 2004, and September 30, 2005, and who defaulted before September 30, 2006. This table does not necessarily reflect the list of schools that currently participate in federal loan programs because to be listed in the database, a school must have had at least one borrower in repayment any time between October 1, 2002, and September 30, 2005, and the school must have had cohort loan default rate calculated to be found in this database.

college curriculum program and make satisfactory academic progress. Funds in the program do not go directly to students, but are made as payments to local child care vendors.

The goals are to increase access to a college education for parents with young children and to lower the odds that a student will not finish a program of study. Wanda White, director of student development services for the community college system, says, "If there is money for child care programs, students will graduate sooner, enter the work force sooner, and the number of people on public assistance will decrease."

One recipient of the Child Care Grant is Sarah Haldeman, 27. The Sanford resident was a newly-divorced single mom when she decided to enroll in Sandhills Community College. "I have a 7-year-old and an 8-year-old," Haldeman says. "I had been an assistant manager for Dollar Tree and had done retail for awhile. With the hours working retail, I couldn't find anyone to watch the kids. Plus, I needed insurance and a way to pay for college for my two kids. The motivation for going back to school involved a lot of financial reasons, plus I wanted more time with them and to give them and myself a better future."

Either the United States will destroy ignorance or ignorance will destroy the United States.

—W.E.B. DuBois,
The Souls of Black Folk, 1903

Haldeman enrolled in Sandhills' early childhood development program in fall 2004. A year later, she switched to elementary education because she saw more job opportunities in that field. She received her associate's degree in December 2007. Her grade point average is 3.94, and she has been admitted to Fayetteville State University for the spring 2008 semester. She plans to continue her education there, working toward a bachelor's degree in elementary education.

In 2005–06, the child care program cost $1,792,533 and benefited 1,146 community college students like Sarah Haldeman across the state. In addition to the 1,146 students served by the program that year, 1,396 students applied and met qualifications

> *"Many community college students are working adults who would not be able to further their education and skills without child care. This is particularly true for single mothers."*
>
> Rep. Deborah Ross (D-Wake)

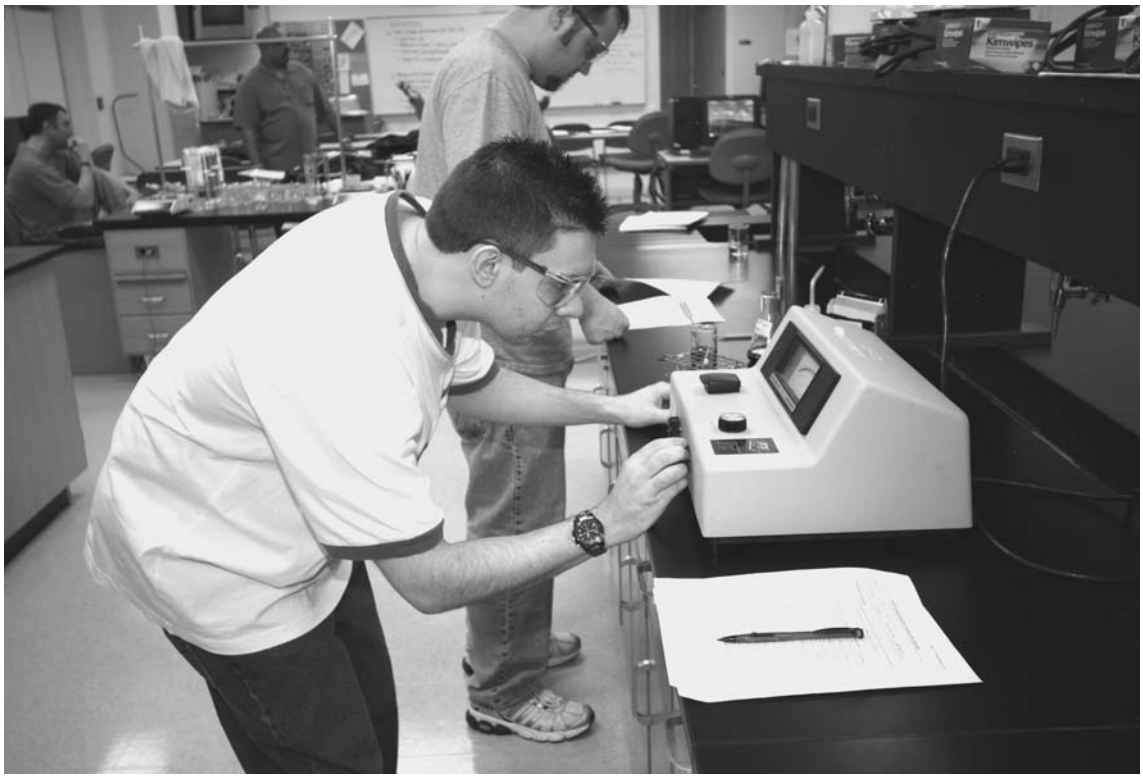
for the program but were not served because the program lacked sufficient funding.

Representative Deborah Ross (D-Wake) introduced legislation in 2007 to increase funds for the child care grants, but the budget remained at $1.9 million.[23] "Many community college students are working adults who would not be able to further their education and skills without child care," says Ross. "This is true particularly for single mothers."

6. The Dreamkeepers and Angel Fund Emergency Financial Aid

The Dreamkeepers and Angel Fund Emergency Financial Aid programs are a national pilot project that offers emergency funds to community college students facing financial crises that could force them to drop out of school. The programs are managed locally but administered by two national organizations, the American Indian College Fund and Scholarship America. Both efforts are operating in the third year of a three-year grant from the Lumina Foundation for Education of Indianapolis, Indiana.

The project is functioning at 37 community and tribal colleges across the country. Three of those 37—Durham Technical Community College, Martin Community College, and Wayne Community College—are North Carolina community colleges that participate in Lumina's Dreamkeepers project. The three North Carolina colleges were chosen because they enroll large numbers of African American and low-income students, groups that have historically low college completion rates. Colleges in the project are allowed to design their emergency aid program to offer grants and/or loans in a manner that best meets the needs of their students. The colleges also must provide data for the project's evaluation, effectively administer the program, and raise matching funds (see Table 6).



Sam Watts

Table 6. Dreamkeepers and Angel Fund Emergency Financial Aid: Characteristics of Award Payments and Recipients at Colleges in North Carolina, January—December 2005

Location	Durham Technical Community College, Durham	Martin Community College, Williamston	Wayne Community College, Goldsboro
Number of awards	33	23	50
Number of recipients [a]	29	22	50
Female	72.4%	68.2%	76.0%
Male	27.6%	27.3%	24.0%
African-American	69.0%	59.1%	70.0%
Native American	0.0%	0.0%	4.0%
White	27.6%	36.4%	26.0%
Multi-racial	3.4%	0.0%	0.0%
Number of students receiving multiple awards	4	1	0
Minimum aid received	$36	$50	$83
Maximum aid received	$2,286	$600	$400
Average aid received	$744	$290	$206
Reasons for requesting aid [b]			
Books	6.1%	13.0%	22.0%
Child care	6.1%	0.0%	0.0%
Housing	48.5%	17.4%	42.0%
Meals	9.1%	0.0%	2.0%
Transportation	39.4%	34.8%	32.0%
Tuition	3.0%	17.4%	0.0%
Other	60.6%	17.4%	4.0%

Notes: MDRC calculations based on data collected by Scholarship America. Calculations for this table used available data for those students who received a Dreamkeepers grant from their respective college. The Scholarship America database does not include records for those students who applied but were denied funding. The database contains records on payments made between 01/03/2005 and 12/15/2005. Percentage totals may not add to 100%.

[a] Differences between the number of awards and recipients are attributed to some students having received multiple payments. The row "Number of students receiving multiple awards" indicates to whom this applies. Percentage totals may not add to 100% because of missing data.

[b] Percentage totals may exceed 100% because students may request Dreamkeepers aid for multiple needs.

Source: Lande Ajose, Casey MacGregor, and Leo Yan, with Michael Pih, *Emergency Financial Aid for Community College Students: Implementation and Early Lessons from the Dreamkeepers and Angel Fund Programs—Interim Report*, MDRC, New York, N.Y., Feb. 2007, pp. 9–10.

Education is not the filling of a pail, But the lighting of a fire.

—William Butler Yeats

The three goals of the national project are "to support the development of an infrastructure to offer emergency financial aid at the participating colleges; to learn whether and to what extent emergency assistance helps students stay enrolled in college; and to promote the long-term sustainability of an emergency aid program at the participating colleges." The project is being evaluated by MDRC (formerly Manpower Demonstration Research Corporation) of New York City and Oakland, California, a nonprofit, nonpartisan social policy research organization. MDRC's interim evaluation was released in February 2007, and its final report will be available in Spring 2008.[24]

The interim evaluation, which found that the programs were successful at providing emergency assistance to students, primarily focused on ways to improve implementation and management of the programs. The interim report had only one year of data available to evaluate. For that one year (2005), the pilot project made 106 awards to 101 North Carolina students totaling $41,522 at the three participating community colleges in the state.

Since community colleges serve a disproportionate share of working poor students, unanticipated financial setbacks such as a car repair bill or a medical expense can negatively impact a student's ability to complete a program of study. Says Briggs, "We've heard lots and lots of testimonies from students with financial aid packages that if something changes—their car breaks down, and they get a $500–$1,000 repair bill, or if it means they have to choose between groceries and school—they stop-out of school."

Vickie Call, the financial aid director at Wilkes Community College, agrees that emergency financial aid can make a difference. "We have had several students enrolled here that have lost their jobs due to plant closings. The unemployment that they are drawing may, and often does, run out before they can finish their degree and graduate. Sometimes they may only need two or three months of help and then they will graduate. Emergency funds would help these students graduate and give them hope of getting a new job and starting a new career."

Staffing of Community College Financial Aid Offices

The legislature's 2006 budget added one staff member to the student services division at each of the state's 58 community colleges. Financial aid offices at each institution are located in these divisions. The legislature recommended but did not require that the positions be placed in each school's financial aid office.

"Some schools, however, did not get to take advantage of this new money to hire financial aid staff because of greater needs or priorities in other areas of [student] service," says Call. "Now with new financial aid programs being added and increased needs for verifications, the workload in financial aid keeps increasing."

Conclusions and Recommendations

In order to maintain and expand access to the state's community colleges for low-income North Carolinians, the North Carolina Center for Public Policy Research makes the following recommendations based on our research:

(1) The N.C. General Assembly should appropriate additional funding for the N.C. Community College Grant Program so that more community college students have access to financial aid. The Center recommends that the maximum grant be raised to $1,250 per year, an amount that would allow the working poor to qualify for grants and an amount more closely correlated to the average cost of in-state tuition and fees at community colleges.

The N.C. Community College Grant Program, started in 1999, is the state's primary higher education, sector-specific need-based grant program for community

college students. In 2006–07, a total of $10,463,547 in state funds was awarded through the program to 12,641 community college students. With the goal of serving 15,000 students at up to $1,250 per year, the legislature should raise this appropriation to $18,750,000. By contrast, the state's companion aid program for public universities, the UNC Need-Based Grant, served 33,929 students in 2005–06 with an appropriation of $58,071,081, an average of $1,712 per student. That same year, a parallel program for private colleges and universities in North Carolina, the need-based State Contractual Scholarship, received $35,148,247 from the legislature to provide 14,531 residents attending private institutions with an average grant of $2,419. Each year in undergraduate degree or certificate-track programs, the state's private institutions serve 51,000 North Carolinians, while the UNC system serves 195,000, and the community colleges serve more than 268,000 residents. As a matter of fairness and efficiency in encouraging students to further their education, the average appropriation for community college students should be closer to the amount granted to public university students.

The new N.C. Education Lottery Scholarship and the new state EARN Grant are providing additional student aid for North Carolina community college students. However, the N.C. Community College Grant is the program best designed meet the needs of community college students, and it has fallen behind in funding relative to the state's parallel programs for public and private colleges and universities.

Many of the students served by the N.C. Community College Grant Program do not qualify for traditional aid programs such as Pell Grants, which are the baseline federal program to serve the nation's neediest students. This is because as working community college students, they earn too much money to get help but too little money to afford school. Kennon Briggs, vice president for business and finance for the N.C. Community College System, says, "Financial aid eligibility formulas do a disservice to the working poor. People who work make a little too much to get a Pell Grant." This would ensure that the working poor of North Carolina have access to the financial aid they need to acquire the skills necessary to succeed in our changing economy.

(2) The N.C. General Assembly should move to put the Community College Grant Program on more solid financial footing by shifting its funding source from escheats to the state's General Fund.

The Community College Grant Program is funded in North Carolina with escheats, a source of funding that is unstable and may not be able to sustain current or future funding levels. The state's escheats account is comprised of abandoned and unclaimed money and property—for example, money that is left in safe deposit boxes. This type of funding is not stable because the total receipts for the state's escheats account varies greatly from year to year. In fiscal year 2002–03, total receipts for the account were $72.5 million, and in fiscal year 2006–07, total receipts were $159 million. The interest earned on the account varies greatly as well. In 2002–03, the interest spent for student aid programs was $36.4 million, and in 2006–07, the interest was $22.7 million. The stability of escheats funding worries community college administrators. "It's all escheats, and that's a concern for us," says Kennon Briggs, vice president for business and finance of the N.C. Community College System.

Currently, the state's escheats account is being used to fund six different student aid programs: The Community College Grant Program, the Child Welfare Postsecondary Support Program, the Education Access Rewards North Carolina Grant, the Millennium Teaching Scholarship Loan Program, the UNC Need-Based Grant, and the state's Veterans Scholarship. The escheats account will not be able to meet projected funding needs.

The provision of the state budget that funds these six programs with the escheats account allows the programs to spend the interest generated by the State Treasurer's investment of the escheats as well as some of the principal—the actual escheats—as

long as the balance of the escheats fund does not dip below $400 million. Prior to fiscal year 2003–04, only interest earned on the account was spent, but since then, the state has used principal and interest from the escheats account to fund student aid.

The stability of the escheats fund and its sustainability in meeting current and future funding levels needs to be considered in light of two factors. First, even though the balance of the escheats account has increased in each of the last 10 years, the amount of interest spent on student aid from the fund has decreased during each of the last three years: In 2004–05, the interest spent totaled $27.3 million; in 2005–06, $24.7 million was spent; and in 2006–07, $22.7 million was spent. Second, the $400 million floor may be too low to sustain current and future funding levels. If the principal of the escheats account is reduced to $400 million as allowed, it would only be possible to generate the average amount of escheats interest spent on student aid for the last three years if the annual investment earnings exceeded 6.2 percent. The 10-year average of earnings on the fund is 6.04 percent.

The North Carolina General Assembly should move to put the Community College Grant Program on more solid financial footing by shifting its funding source from escheats to the state's General Fund, a more stable and predictable source of funding.

(3) (a) The N.C. Community College System and the State Education Assistance Authority should help community colleges develop default management initiatives so that they can participate in federal student loan programs. (b) The N.C. General Assembly should provide the funding and personnel for the state system and local community colleges to develop successful default management programs.

All community college students in North Carolina should have access to federal loan programs. The loans often provide access to higher educational opportunities for students who are otherwise ineligible for need-based aid. "A loan program is worth it because it's access," says Monty Hickman, the community college system's associate director for financial aid. When students do not have access to federal loan programs, they may "resort to riskier, more expensive forms of debt, such as credit cards or private student loans, when they need help bridging the gap between available grant aid and college costs," according to the Project on Student Debt.[25]

Currently, only 23 of the 58 community colleges in North Carolina offer access to all of the need-based, low-interest loan programs offered by the federal government. Many community colleges do not participate in all federal government loan programs because a high default rate on the loans would put the schools at risk of losing access to Pell Grants and all other federal aid programs. Community colleges need to develop default management initiatives, including entrance and exit counseling for students, financial literacy training for borrowers, counseling for those most at-risk for default, and many other campus-based tools to ensure lower default rates.

At some institutions, loan vendors have provided default management training for students. However, new federal guidelines have altered the relationship between loan vendors and colleges, and loan vendors are no longer going to provide assistance on default management training. States are going to have to assume this role.

The state agency responsible for managing most student aid in North Carolina is willing to help community colleges solve this problem. "The State Education Assistance Authority will be happy to serve as a resource for our community colleges in North Carolina in developing default management programs for campuses to use," says Steve Brooks, director of the Authority. "We have good experience in the area as a guarantor of federal loans, and I believe that we can offer solid advice and support under current law."

The North Carolina Community College System President needs to determine and request the system personnel and appropriation that would be needed to provide

adequate assistance and expertise to local community colleges so that all 58 community colleges are able to develop default management initiatives for students. Once that is done, the General Assembly should provide the funds to ensure that all community college students have access to federal student loan programs.

(4) The N.C. General Assembly should increase the annual appropriation to the N.C. State Child Care Grant Program.

This financial aid grant program is a need-based program that provides child care services to community college students who also are parents. To be eligible, students must enroll at least half-time in a community college curriculum program and make satisfactory academic progress. Payments are made directly to local child care vendors.

In 2005–06, the child care grant program received $1,792,533 in state appropriations, and it served 1,146 students, an average grant of $1,564 per student or $174 per month for child care assistance. According to the N.C. Division of Child Development, the cost of child care across the state in 2007 varied between $214 and $1,009 per month depending on location, level of care, and age of the child.[26] The 2007–08 budget passed by the N.C. General Assembly adopted the Governor's recommendation for increased funding for this program, raising the appropriation to $1,923,016 for fiscal year 2007–08. House Bill 391 of the 2007–08 legislative session, introduced by Representatives Deborah Ross, Margaret Dickson, Angela Bryant, and Jean Farmer-Butterfield, would have increased the annual appropriation for the child care program by $2,100,000. "Many community college students are working adults who would not be able to further their education and skills without child care," says Ross. "This is particularly true for single mothers."

In 2005–06, when 1,146 students were served by the child care grant program, an additional 1,396 qualified students *applied* for the program but *were not served* because the program lacked sufficient funding. The N.C. General Assembly should meet this need by appropriating $4 million for the N.C. State Child Care Grant program so that all qualified applicants can receive child care assistance. Wanda White, director of Student Development Services for the community college system, says, "If there is money for child care programs, students will graduate sooner, enter the work force sooner, and the number of people on public assistance will decrease."

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State-funded, need-based financial aid to community college students is an area of North Carolina's financial aid policy that has received less attention than the provision of aid to traditional students in four-year colleges and universities. Many existing state aid programs are designed to alleviate work force shortages by providing money for college in exchange for an individual's commitment to work in occupations where there is a shortage or in regions that have difficulty attracting employees. While many of these programs, such as the Teacher Assistant Scholarship Program, are available to community college students, some, such as the N.C. Teaching Fellows Program, are not. Still others, such as the Prospective Teacher Scholarship-Loan, are competitively awarded based on academic merit—a process that usually precludes participation by community college students. Most community college students who need financial assistance were not high academic achievers in high school or are not coming directly to college from high school. Financial aid programs that best serve community colleges take into account the facts that the demographics of the student population are not the same as at traditional colleges and that students receiving aid typically are those not given an opportunity to attend the state's four-year institutions.

"The state is making great strides in serving graduating high school students," says the community college system's Kennon Briggs. "But it is not doing enough for the working poor, and that's really who we serve in community colleges."

Footnotes

[1] *A Matter of Facts: The North Carolina Community College System Fact Book 2007*, The North Carolina Community College System, Raleigh, N.C., 2007, p. 72. On the Internet at *http://www.ncccs.cc.nc.us/Publications/docs/Publications/fb2007.pdf*

[2] 20 U.S.C. § 1070a. The Pell grant was named for former U.S. Senator Claiborne Pell (D-Rhode Island) and originally instituted in 1965. The program provides means-tested subsidies directly to students enrolled in college.

[3] *Statistical Abstract of Higher Education in North Carolina*, Research Report 1-07, University of North Carolina, Chapel Hill, N.C., May 2007, pp. 143–44. The federal Pell Grant and Veterans benefits programs account for $218,026,156, or 77 percent of the $321,915,077, in student financial aid awarded to community college students in North Carolina.

[4] *Community College Facts at a Glance 2007*, American Association of Community Colleges, Washington, D.C., p. 4. On the Internet at *http://www2.aacc.nche.edu/pdfs/factsheet07.pdf*

[5] *Fact Book on Higher Education: 2007*, Southern Regional Education Board, Atlanta, Ga., July 2007, pp. 136–37.

[6] *Joint Conference Report on the Continuation, Expansion, and Capital Budgets: House Bill 1473*, North Carolina General Assembly, Raleigh, N.C., July 27, 2007, p. F-23. The cost estimates for tuition and fees for independent students for 2006–07 are based on a minimum course load of 12 credit hours. The legislature enacted a 6.3 percent tuition increase in its 2007–09 budget, which was signed by the Governor and enacted into law on July 31, 2007. With the tuition increase, a North Carolina resident taking 12 credit hours would pay $1,008 per year in tuition, or $42 per credit hour for up to 16 hours per semester. Fees vary by institution and statewide estimates from the community college system office are provided for information only.

[7] N.C. Gen. Stat. § 115D-40.1.

[8] N.C. Const. Art. IX, § 10(2).

[9] N.C. Session Laws 2007-323 § 9.3a (H.B. 1473).

[10] *Joint Conference Report*, note 6 above, p. F16. The legislature funds a separate grant program for the state's private colleges and universities called the Legislative Tuition Grant that provides $1,950 for each North Carolina student in a private institution regardless of the student's financial need.

[11] The community college system granted tuition waivers to 25,434 students in 2005–06, while the UNC System granted waivers to 1,522 that same year according to the *Statistical Abstract of Higher Education in North Carolina,* note 3 above, pp. 143–44.

[12] *Joint Conference Report on the Continuation, Expansion, and Capital Budgets: Senate Bill 1741*, North Carolina General Assembly, Raleigh, N.C., June 30, 2006, p. F-13.

[13] Editorial calculation based on average teacher-to-student ratios provided by Scott Douglass with N.C. Department of Public Instruction's school business division and *July 1, 2007 County Total Age Groups-Children* and *July 1, 2020 County Total Age Groups-Children*, N.C. State Data Center, Raleigh, N.C. Accessed Nov. 9, 2007, on the Internet at *http://demog.state.nc.us/*

[14] *Report and Recommendations from the State Board of Education Task Force on Teacher Retention*, State Board of Education, Raleigh, N.C., Feb. 2005, p. 2.

[15] North Carolina Commission on Workforce Development, *State of the North Carolina Workforce: An Assessment of the State's Labor Force Demand and Supply 2007-2017*, N.C. Department of Commerce, Raleigh, N.C., 2007, pp. 46–47.

[16] *Task Force on the North Carolina Nursing Workforce Report*, N.C. Institute of Medicine, Durham, N.C., May 2004, p. ix.

[17] Editorial calculation from *North Carolina Trends in Nursing Education: 2003–06,* N.C. Center for Nursing, Raleigh, N.C., Aug. 2007, pp. 35–36. On the Internet at *http://www.ga.unc.edu/NCCN/research/Trends2007/final%20report%20schools%202007.pdf*

[18] Task Force on the North Carolina Nursing Workforce Report, note 16 above, pp. 46–47.

[19] No further information is available on whether the individual students obtained funding from other sources after the program was discontinued.

[20] *Denied: Community College Students Lack Access to Affordable Loans,* Project on Student Debt issue brief, Berkeley, Cal., Apr. 2008, p. 1. On the Internet at *http://projectonstudentdebt.org/pub_view.php?idx=329*

[21] Kay Jacks, *Default Prevention and Management: A Plan for Student and School Success*, U.S. Department of Education, Office of Federal Student Aid, Washington, D.C., Sept. 30, 2005, pp. 1–9.

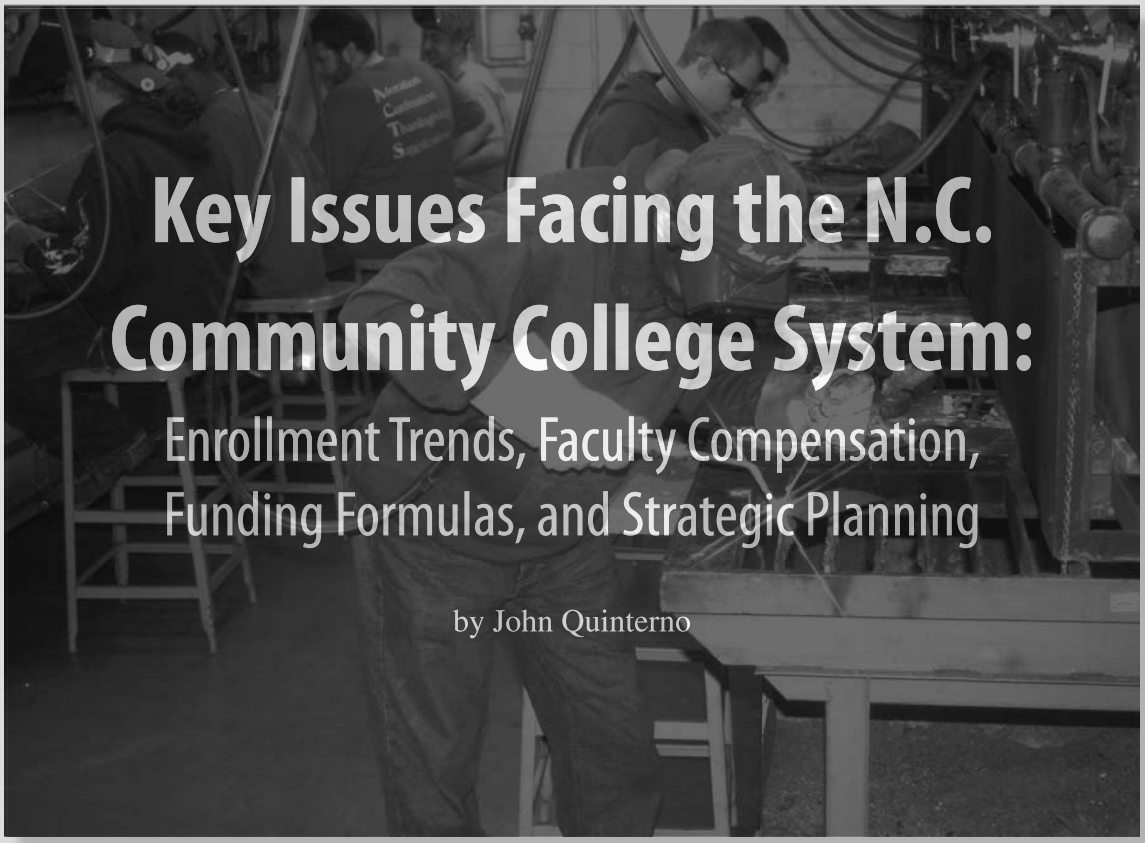
[22] Robert B. Archibald, "Let's Make a Deal: Colleges Should Guarantee Student Loans," *The Chronicle of Higher Education Review*, Washington, D.C., Feb. 14, 2003, p. B0.

[23] House Bill 391 of the 2007 Session of the General Assembly. The legislation would have increased the annual appropriation for the child care program by $2,100,000. The budget that passed the legislature did not adjust the Governor's recommendation of $1,923,016. The bill's prime sponsors were Representatives Deborah Ross, Margaret Dickson, Angela Bryant, and Jean Farmer-Butterfield.

[24] Lande Ajose, Casey MacGregor, and Leo Yan, with Michael Pih, *Emergency Financial Aid for Community College Students: Implementation and Early Lessons from the Dreamkeepers and Angel Fund Programs—Interim Report*, MDRC, New York, N.Y., Feb. 2007, pp. 1–49.

[25] *Denied: Community College Students Lack Access to Affordable Loans,* note 20 above, p. 1.

[26] *Subsidized Child Care Rates for Child Care Centers—Partial Implementation of 2007 Market Rate Survey*, N.C. Division of Child Development, Raleigh, N.C., Aug. 16, 2007, pp.1–3.



Russell A Wahrman, Wake Technical Community College

Key Issues Facing the N.C. Community College System:

Enrollment Trends, Faculty Compensation, Funding Formulas, and Strategic Planning

by John Quinterno

Executive Summary

Founded in 1963 to help North Carolina transition from an agricultural to an industrial economy, the N.C. Community College System offers work force education, economic development services, and community enrichment programs across the state. Key issues facing the system include those related to enrollment trends, faculty compensation, funding formulas, and strategic planning.

Some 800,000 individuals walked through the open doors of North Carolina's community colleges during the 2005–06 academic year—a headcount four times greater than that of the University of North Carolina. Thirty-three percent of all community college students were in curriculum programs leading to an academic credential, while the balance were taking non-credit, continuing education courses. During 2005–06, the N.C. Community College System enrolled 47.4 percent of all the college students in North Carolina seeking academic degrees, according to the Southern Regional Education Board (SREB). SREB data also show that the system enrolled more students and conferred more associate's degrees than its counterparts in virtually every other southern state.

Enrollment Trends

Between the 1994–95 and 2005–06 academic years, the N.C. Community College System's full-time equivalent (FTE) enrollment grew by 54 percent. Both curriculum and continuing education programs posted sizable increases. On

one level, recent enrollment growth testifies to the power of the N.C. Community College System's open door policy. On another level, adding the equivalent of almost 20,000 full-time students between 2002 and 2006 exacerbated many of the serious personnel, financial, and planning issues that long have confronted the system.

Faculty Compensation

Like any large service organization, the N.C. Community College System devotes the bulk of its budget to personnel costs. During the 2006–07 academic year, the N.C. Community College System's colleges employed 14,151 full-time faculty, administrative, professional, and support personnel. The rapid enrollment growth of recent years has necessitated the hiring of additional faculty members. The system's colleges added some 1,176 full-time faculty members between 2000–01 and 2006–07.

Local colleges employ faculty members whose salaries are supported by state appropriations. During the 2005–06 academic year, the average full-time N.C. Community College System faculty member earned $40,989. The average full-time faculty member at the University of North Carolina, by contrast, was paid $80,784, ranking 13th in the nation for public university faculty pay. The average North Carolina public school teacher salary is $46,410, ranking 27th in the nation.

Community college faculty in North Carolina also earn less than their peers at two-year institutions across the nation and region. Average N.C. Community College System salaries equaled 74 percent of the 2005–06 national average of $55,405 for community college faculty. That year, average community college salaries in North Carolina ranked 46th in the nation.

Low pay is not a new issue for the N.C. Community College System. Over the past 15 years, incremental steps to improve faculty salaries have been taken. Recent budget proposals by Gov. Mike Easley and spending plans adopted by the 2007 N.C. General Assembly, for example, raised faculty salaries by 5 percent. The State Board of Community Colleges also has offered incentives for campuses to better salaries. These modest steps, however, have been offset by the N.C. Community College System's need to hire more faculty to meet enrollment growth and to keep pace with retirements and attrition.

Poor pay is especially problematic for high-cost programs like nursing, a well-paying field that is facing a shortage of qualified personnel. Yet the N.C. Community College System struggles to attract instructors because the pay is not competitive, and a qualified nursing instructor can earn considerably more in a clinical setting. This same problem afflicts a variety of high-demand fields and hinders the system's ability to train workers for lucrative jobs vital to the state's well-being.

Funding Formulas

A mix of state appropriations, local government funds, and tuition revenues, along with some federal funds and private fundraising, funds North Carolina's community colleges. The N.C. Community College System depends upon the state for 69.1 percent of its budget, local governments for 12.7 percent, tuition receipts for 12.5 percent, and other sources for the remaining 5.7 percent. State dollars generally bankroll current operating expenses, while local governments support the operation and maintenance of physical plants.

The funding model that supports the community college system contains four significant flaws. First, the full-time equivalent

(FTE) calculation is ill-suited for periods of rapid enrollment growth. Second, the current funding formula fails to account for differences in program costs. All FTEs earned by the N.C. Community College System carry the same financial value, yet some programs are more expensive to operate—for instance, allied health programs. Third, the existing funding model provides no resources to start or expand new programs. Fourth, current funding formulas inadequately address equipment and facility needs. The N.C. Community College System currently receives the equivalent of $214 per FTE for equipment funding. In light of the fact that the system requires $47 million per year for the next few years just to maintain existing equipment, current funding appears inadequate to meet system needs. Limited resources, in turn, have forced the elimination of 98 programs with expensive equipment needs. (See Scott Ralls, "Facing Brutal Facts: North Carolina Community Colleges in the New Economic Landscape," p. 4).

Strategic Planning

Addressing the long-term challenges facing the community college system in light of existing resource constraints requires the N.C. Community College System and its member colleges to think systematically about critical issues and potential solutions. Such long-term planning, however, is complicated by the relationship between the statewide system and the individual campuses. Unlike the University of North Carolina System, the N.C. Community College System is organized as a federation of quasi-independent institutions, meaning that the State Board of Community Colleges acts more as a coordinating body than as a governing one.

The N.C. Community College System currently relies upon a two-tiered strategic planning process: one for the statewide system, another for the individual colleges. On the state level, the central office in Raleigh sponsors a biennial planning process that aims to identify critical issues, develop adequate responses, and acquire needed resources. Individual colleges, meanwhile, are required to prepare regular institutional effectiveness plans. To improve college accountability, the legislature required institutional effectiveness plans to incorporate the data needed to measure progress towards certain "critical success factors." Those 42 factors fall into five broad areas: core indicators of student success, work force development, diverse population learning needs, resources, and technology. Out of those 42 factors, the 12 that are most closely related to academic performance are used to award performance funding to local colleges, while the other measures are used to inform the statewide strategic planning process.

The establishment of critical success factors that reflect the N.C. Community College System's core mission focuses the attention of the individual colleges on essential functions, highlights success in achieving goals vital to individual students and local communities, and offers incentives for outstanding performance. At the same time, the relative autonomy of the individual campuses means that the quality and usefulness of the college-level planning processes may vary greatly.

While the events of the past several years have demonstrated the power and potential of individual colleges, recent events also have exacerbated serious enrollment, personnel, financial, and planning challenges. Meeting these four challenges is key to the ability of North Carolina's community colleges to connect individual residents to opportunities and help transform North Carolina into a more prosperous state.

Nestled alongside the Durham Freeway, a few miles southeast of the central city, sit a dozen or so nondescript, low-rise buildings. To a casual passer-by, the simple structures would appear indistinguishable from several neighboring industrial facilities, even though they serve a radically different purpose. Taken together, those structures form the main campus of Durham Technical Community College, or Durham Tech.

An approximately $30 million annual operation, Durham Tech offers academic, vocational, basic education, continuing education, and customized training to individuals in Durham and Orange counties.[1] During the 2005–06 academic year, Durham Tech served more than 25,000 individuals through courses offered at the main campus, two satellite centers, community sites, and via distance learning technologies.[2] Durham Tech's services likely will expand significantly once construction of a second campus in Orange County is completed in 2008.

Based on a quick glance, a passer-by never would suspect that Durham Tech's simple buildings along Lawson Street constitute a complex, multi-million dollar operation. Nor would a visitor guess that Durham Tech itself is part of the larger N.C. Community College System. The N.C. Community College System is a $1 billion-plus annual enterprise that in 2005–06 provided educational services to some 800,000 students—12 percent of the state's adult population.[3]

Founded in 1963 to help North Carolina transition from an agricultural to an industrial economy, the N.C. Community College System offers work force education, economic development services, and community enrichment programs across the state. Key issues facing the system include those related to enrollment trends, faculty compensation, system funding, and strategic planning.

"Founded in 1963 to help North Carolina transition from an agricultural to an industrial economy, the N.C. Community College System offers work force education, economic development services, and community enrichment programs across the state. Key issues facing the system include those related to enrollment trends, faculty compensation, system funding, and strategic planning."

Enrollment Trends: The Promise and Problems of the Open Door

Speaking in 1964, W. Dallas Herring, a driving force behind the N.C. Community College System's founding, said, "The doors to the institutions of North Carolina's system of community colleges must never be closed to anyone of suitable age who can learn what they teach." An unwavering commitment to Herring's "open door" policy has become the defining characteristic of the N.C. Community College System. To that end, state statutes require the system to admit all students who have completed high school or who are beyond the age range of the public school system.[4] Further evidence of the open door policy is reflected in the fact that every state resident lives within commuting distance (generally 30 miles) of a community college or can access programs via distance learning technologies.[5]

Some 800,000 individuals walked through the open doors of North Carolina's community colleges during the 2005–06 academic year—a headcount four times greater than that of the University of North Carolina. Thirty-three percent of all community college students were in curriculum programs leading to an academic credential, while the balance were taking non-credit, continuing education courses. During 2005–06, the N.C. Community College System enrolled 47.4 percent of all the college students in North Carolina seeking academic degrees, according to the Southern Regional Education Board (SREB), a nonprofit compact of 15 southern states that helps shape education policy.[6] SREB data also show that the system en-

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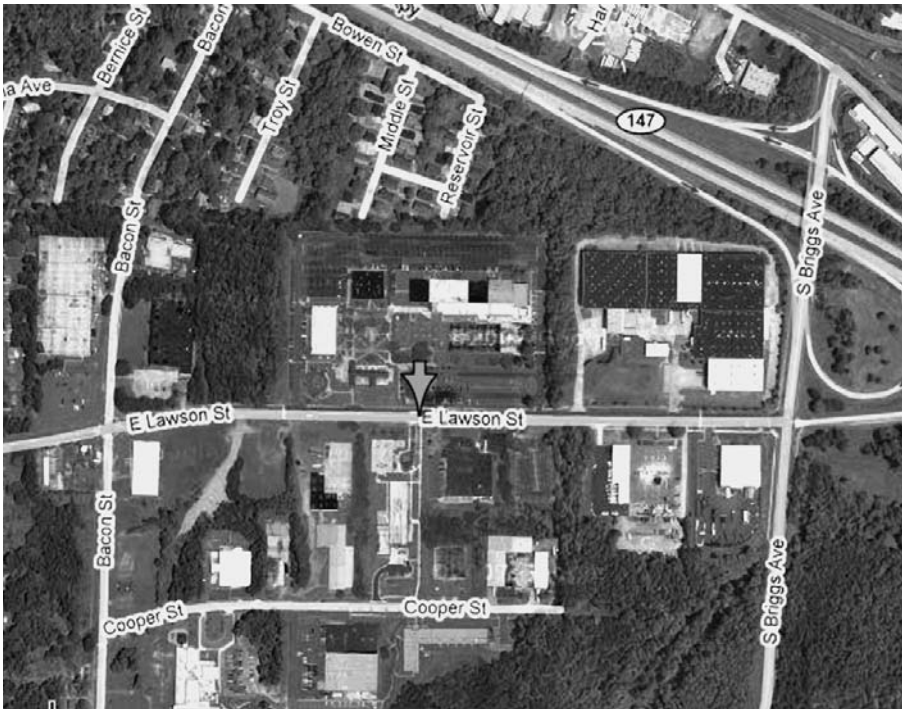

Durham Tech's original campus in downtown Durham has grown to accommodate 25,000 students

rolled more students and conferred more associate's degrees than its counterparts in virtually every southern state.[7]

Demand for community college programs has surged in recent years due to the growth of North Carolina's population, increases in the number of high school students attending college, and the restructuring of the state's economy. Between the 1994–95 and 2005–06 academic years, the N.C. Community College System's full-time equivalent (FTE) enrollment grew by 54 percent. Both curriculum and continuing education programs posted sizable increases.[8] Demand was especially strong in the years following the 2001 recession, which triggered an influx of displaced workers into the community colleges. Between 2001–02 and 2005–06, FTE enrollment in curriculum programs swelled by 12 percent, while continuing education programs expanded by 14 percent.[9] Today, community college enrollments appear to have leveled off at least temporarily, but these levels still represent historic highs.[10] And, Martin Lancaster, President of the N.C. Community College System, says, "With more stringent admission requirements and with higher costs at four-year institutions, enrollment increases are expected to grow in the college transfer programs."

> *"People who have lost jobs or who are working in declining industries frequently turn to community colleges for the cost-effective education and training needed to prepare for new opportunities."*

On one level, recent enrollment growth testifies to the power of the N.C. Community College System's open door policy. Because community colleges are closely tied to local labor markets, they function as counter-cyclical institutions, meaning that enrollment rises when economic conditions deteriorate. People who have lost jobs or who are working in declining industries frequently turn to community colleges for the cost-effective education and training needed to prepare for new opportunities. As open door institutions, North Carolina's community colleges are obligated to accept any such individuals who can benefit from education and training.

On another level, adding the equivalent of almost 20,000 full-time students between 2001–02 and 2005–06 exacerbated many of the serious personnel, financial, and

planning issues that long have confronted the system.[11] Large enrollment increases have necessitated the hiring of additional faculty, compounded equipment and facility needs, and strained financial resources. Such problems are particularly acute for high-cost, high-demand programs like those in allied health. Moreover, the counter-cyclical nature of the N.C. Community College System's services means that system costs rise at the same time that state budgeters are grappling with revenue shortfalls and looking to trim or at least not expand public investments.

"... the counter-cyclical nature of the N.C. Community College System's services means that system costs rise at the same time that state budgeters are grappling with revenue shortfalls and looking to trim or at least not expand public investments."

Projections compiled by the N.C. Community College System suggest that, absent change, future enrollment growth will intensify existing pressures. FTE enrollment is anticipated to grow by 38 percent between 2004 and 2014 because of a variety of factors, including population growth, changes in the economy, increasing skill requirements for jobs, and high school dropout rates. All instructional areas are expected to post sharp gains, with continuing education programs growing the fastest. These projections, however, may understate growth, as they neither assume any changes in current enrollment patterns or student demographics, nor do they account for economic downturns that might spark enrollment increases. Furthermore, the N.C. Community College System only generates projections for the statewide system, not for individual colleges.[12] This shortcoming not only limits the ability of local institutions to address regional economic needs, but also prevents individual campuses from adequately evaluating their main cost driver: student enrollments, which dictate staffing, equipment, and resource needs.

Faculty Compensation: Staffing the Open Door

Like any large service organization, the N.C. Community College System devotes the bulk of its budget to personnel costs. At Durham Technical Community College, for instance, salaries and benefits accounted for two-thirds of total operating expenses in 2004–05.[13] Without skilled faculty, administrators, and staff, community college students would not receive the instruction and guidance needed to complete a course of study. During the 2006–07 academic year, the N.C. Community College System's colleges employed 14,151 full-time faculty, administrative, professional, and support personnel. Although all of these employees contribute to the system's mission, the 6,244 full-time faculty members play a pivotal role, for they provide the instruction that draws students to the colleges.[14]

The rapid enrollment growth of recent years has necessitated the hiring of additional faculty members. The system's colleges added some 1,176 full-time faculty members between 2000–01 and 2006–07. This 23 percent expansion, however, did not alter the general demographic composition of the system's faculty.[15] Women comprised 58 percent of the full-time faculty in 2005–06, while whites held nearly nine out of every 10 faculty posts. In terms of educational qualifications, 54 percent of faculty members possessed master's degrees; 22 percent had earned bachelor's degrees; and six percent had completed doctoral degrees. Some 44 percent of the faculty members had worked for the N.C. Community College System for fewer than six years.[16]

The N.C. Community College System faculty faces different expectations than their counterparts at the state's four-year institutions. First, community college faculty serve primarily as teachers, not researchers. Second, instructors, particularly those in technical and vocational fields, must possess an extensive knowledge of private industry in order to train individuals who can meet industry standards. Finally, community college instructors teach students who, on average, are less academically prepared than their counterparts at four-year institutions.[17]

Local colleges employ faculty members whose salaries are supported by state appropriations.[18] During the 2005–06 academic year, the average full-time N.C. Community College System faculty member earned $40,989. The average full-time faculty member at the University of North Carolina, by contrast, was paid $80,784, ranking 13th in the nation for public university faculty pay. The average North Carolina public school teacher salary is $46,410, ranking 27th in the nation.[19]

Community college faculty in North Carolina also earn less than their peers at two-year institutions across the nation and region. Average N.C. Community College System salaries equaled 74 percent of the 2005–06 national average of $55,405 for community college faculty. That year, average community college salaries in North Carolina ranked 46th in the nation.[20]

Low pay is not a new issue for the N.C. Community College System. Writing in 1989, the Commission on the Future of the North Carolina Community College System lamented "a crisis in instructional and non-instructional salaries" and warned that "low salaries … have contributed to an erosion in faculty morale in the system and losses of talented faculty to industry." At the time, average faculty salaries were lower than those paid in all but two states in the country. The commission consequently called on the State Board of Community Colleges to raise faculty pay to the top quartile of southeastern states by 1995 and to prevent campuses with below-average pay from diverting money from salaries to other purposes.[21]

Over the past 15 years, incremental steps to improve faculty salaries have been taken. Recent budget proposals drafted by Gov. Mike Easley and spending plans adopted by the N.C. General Assembly, for example, have raised faculty salaries slightly.[22] The State Board of Community Colleges also has offered incentives for campuses to better salaries. These modest steps, however, have been offset by the N.C. Community College System's need to hire more faculty to meet enrollment growth

"During the 2005–06 academic year, the average full-time N.C. Community College System faculty member earned $40,989, ranking 46th in the nation. The average full-time faculty member at the University of North Carolina, by contrast, was paid $80,784, ranking 13th in the nation."

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Laboratory at Wake Technical Community College

Sam Watts

and to keep pace with retirements and attrition.[23] In fact, Southern Regional Education Board data show that, after adjusting for inflation, average faculty pay at the N.C. Community College System only rose by 28.6 percent between 1995–96 and 2005–06.[24] Providing competitive salaries for community college personnel, consequently, has become a top priority for the State Board of Community Colleges. In fact, the Board's most recent budget request to Gov. Easley asked for $77 million over the 2007–09 biennium to bring faculty salaries to the national average by 2010.[25] The final state budget authorized a 5 percent pay raise for faculty.

Poor pay is especially problematic for high-cost programs like nursing. Nursing is a well-paying field that is facing a shortage of qualified personnel. Yet the N.C. Community College System struggles to attract instructors because the pay is not competitive, and a qualified nursing instructor can earn considerably more in a clinical setting. This problem will worsen if new accreditation standards that require community college instructors to have higher levels of qualifications take effect in 2014.[26] To compete, the N.C. Community College System has tried to find some stopgap solutions like offering scholarships to nursing students who agree to teach for two years, but such steps fail to change the fact that nursing faculty salaries simply are uncompetitive. This same problem afflicts a variety of high-demand fields and hinders the system's ability to train workers for lucrative jobs vital to the state's well-being.

I stand in front of my students
telling them about sentence fragments.
I ask them to find the ten fragments
in the twenty-one-sentence paragraph on
page forty-five.
They've come from all parts
of the world—Iran, Micronesia, Africa,
Japan, China, even Los Angeles—and they're still
eager to please me.
...
I sit down on my desk to wait,
and it hits me from nowhere—a sudden
sweet, almost painful love for my students.

—Al Zolynas
"Love in the Classroom"
The Bond between Teacher and Students

Funding Formulas and Four Flaws

A mix of state appropriations, local government funds, and tuition revenues, along with some federal funds and private fundraising, funds North Carolina's community colleges. The N.C. Community College System depends upon the state for 69.1 percent of its budget, local governments for 12.7 percent, tuition receipts for 12.5 percent, and other sources for the remaining 5.7 percent. State dollars generally bankroll current operating expenses, while local governments support the operation and maintenance of physical plants.[27]

The N.C. Community College System received more than $934 million in state appropriations during the 2006 fiscal year, most of which was distributed to the individual campuses according to a funding formula linked to full-time equivalent (FTE) enrollment.[28] For curriculum programs, community colleges earn one FTE for every 32 credit hours completed by students over a two-semester period. FTEs also are awarded, though at a lower rate, for enrollment in continuing education courses. *FTEs are calculated on the basis of the prior year's enrollment and are the same for all programs, regardless of cost*. By contrast, the UNC system earns one FTE for every 24 credit hours generated over a two-semester period with the value of an FTE varying by program.[29] Tom Houilhan, executive director of the Education Leadership Institute, illustrates the discrepancy between the N.C. Community College and UNC systems saying, "Under the current 'Learn and Earn' initiative of Governor Easley, where high school students can take a course online and receive college credit, there

are 44 community colleges participating and one higher education institution—UNC-Greensboro. The community colleges receive approximately $4,700 in FTE funds for students who take the courses and the one university received $10,000 for the exact same scenario."

The funding model that supports the community college system contains four significant flaws. First, the FTE calculation is ill-suited for periods of rapid enrollment growth. As mentioned previously, community college programs are counter-cyclical institutions with enrollments that typically rise during economic downturns. State funding, however, is allocated according to the prior year's enrollment. This means that if enrollment rises too quickly, the N.C. Community College System is obligated to serve students for whom no state dollars are available. Moreover, the chances of obtaining additional funding during such periods are slim because these often are periods in which state budgeters are facing shortfalls and are looking to trim spending.

This dynamic recently occurred in North Carolina. The 2001 recession resulted in an increase in N.C. Community College System enrollment at the same time that the state faced one of its worst financial situations in recent memory.[30] As a result, between 2000–01 and 2005–06, the system saw its state funding decline by 9.4 percent, or $473, per FTE student even though FTE enrollment rose by 22 percent.[31] This imbalance led to tuition increases.

Although tuition at North Carolina's community colleges remains low by national standards (a median tuition of $1,324 annually for full-time students in 2006), it increased by 44 percent between the 1999–2000 and 2004–05 academic years. These increases are especially burdensome for low-income students—the people most likely to be hurt by an economic downturn and most likely to turn to the N.C. Community College System.[32] In 2006, tuition charges amounted to more than 12 percent of the income earned by a North Carolina family in the lowest income quintile ($10,900), up from about eight percent in 2001.[33] Ann Britt, president of Martin Community College, says, "The impact of increased tuition on low-income students is more serious for economically depressed counties in North Carolina than it is for more affluent counties." To further complicate matters, these tuition increases occurred at the same time that the federal government permitted inflation to erode the value of Pell Grants, the nation's main source of financial aid for poor students.[34]

According to Kennon Briggs, vice president of the business and finance division of the N.C. Community College System, "For fiscal year 2007–08, the Assembly appropriated $2 million in non-recurring funds for a 'Reserve for Enrollment Growth.' The system needed $12 million."

Second, the current funding formula fails to account for differences in program costs. All FTEs earned by the N.C. Community College System carry the same financial value, yet some programs are more expensive to operate. This is especially true for programs in the health sciences. Compared to other fields, allied health programs cost $1,520 more per FTE. Because colleges receive no additional funding for such high-cost programs, they often are forced to limit program enrollments, divert resources from other areas, or eliminate other high-cost programs. In response, the State Board of Community Colleges has identified the establishment of differentiated funding as an essential priority.

No one wants a good education. Everyone wants a good degree.

—Lee Rudoplh

Kennon Briggs says, "The 2007 session appropriated $5.6 million for this purpose. The system needs $31 million."

Third, the existing funding model provides no resources to start or expand new programs. The N.C. Community College System estimates that it costs a college $151,000 to start a new curriculum program.[35] The absence of start-up funds means that local colleges wishing to start a new initiative must save the needed money over a period of several years or take money from existing programs. This tradeoff often

Sam Watts

Simulation and game development class at Wake Technical Community College

prevents colleges from establishing programs that would serve emerging industries—a reality that presents a conflict with the N.C. Community College System's economic development mission.

Britt, president of Martin Community College, says, "It is very difficult, if not impossible, for community colleges to squirrel away money to start new programs. Some equipment and library book funds may carry over, but generally unexpended state funds revert at the end of the year. That means we cannot squirrel away operating funds. If we can save equipment funds, that is always at a cost to other programs and services. This impacts students. Instructional and related costs for a new program have to be taken from other programs because a new program does not generate funds until FTEs are earned."

Finally, current funding poorly addresses equipment and facility needs. While the provision of industry-caliber training often requires advanced equipment and training space, state funding for equipment and facilities is modest at best. The N.C. Community College System currently receives the equivalent of $214 per student for equipment funding.[36] In light of the fact that the system requires $47 million per year for the next few years just to maintain existing equipment, current funding appears inadequate to meet system needs. Limited resources, in turn, have forced the elimination of programs with expensive equipment needs. For example, according to Kennon Briggs, 98 vocational programs—in construction technologies (26), engineering technologies (17), industrial technologies (45), and transport technologies (10)—were terminated between 2002 and 2007. [37] (For more information, see Scott Ralls, "Facing Brutal Facts: North Carolina Community Colleges in the New Economic Landscape," p. 4).

A similar situation applies to the facility needs of the 58 community colleges. Current estimates suggest that the N.C. Community College System faces $1.4 billion in long-term renovation and expansion needs.[38] While the system did receive $600 million from the higher education bonds approved in 2000, those funds were

authorized before recent enrollment surges exacerbated space needs, and increases in the cost of construction materials reduced the number of projects that the bond proceeds could support. Though helpful, the bond proceeds will not solve long-term needs.

> *"Inadequate funding has always been the 'elephant in the room' for North Carolina's community colleges."*
>
> **Eric McKeithan,**
> **president, Cape Fear Community College**

None of these financial challenges are new to the N.C. Community College System. In fact, the Commission on the Future of the North Carolina Community College System raised these very concerns in its 1989 report. While both the executive and legislative branch subsequently have championed improvements, those steps have been incremental ones that generally have taken the form of one-time fixes rather than permanent solutions. For example, the N.C. General Assembly created a small enrollment reserve fund in 2005 that disburses additional funds to campuses that experience unexpected enrollment growth.[39] This helpful measure, however, fails to address the larger flaws in the funding model used to support the N.C. Community College System. Moreover, the sizable and unexpected enrollment growth of recent years has reversed much of the progress that had been made.

Eric McKeithan, president of Cape Fear Community College, says, "Inadequate funding has always been the 'elephant in the room' for North Carolina's community colleges. An increasing divide drawn among North Carolina's citizens—those who at least have a chance to earn an affordable baccalaureate degree and those who do not—could become the 'herd of elephants in the room' for the entire state in terms of our competitiveness with other states and with the world."

Strategic Planning Within a System That Has High Local Autonomy

Addressing the long-term challenges facing the community college system in light of existing resource constraints requires the N.C. Community College System and its member colleges to think systematically about critical issues and potential solutions. Such long-term planning, however, is complicated by the relationship between the statewide system and the individual campuses. Unlike the University of North Carolina System, the N.C. Community College System is organized as a federation of quasi-independent institutions, meaning that the State Board of Community Colleges acts more as a coordinating body than as a governing one.

In its 1989 report, the Commission on the Future of the North Carolina Community College System argued that "allocation of resources in the system and in most of the colleges is hampered by the absence of well-developed, long-range plans tied to clear strategic goals on both the state and local levels." The Commission therefore called for the State Board of Community Colleges to improve the system-wide planning process, encourage a biennial planning process at each college, and better incorporate data into planning and accountability systems.[40] Over the ensuing years, the N.C. Community College System, individual colleges, the office of the governor, and the General Assembly have strengthened the planning and accountability processes used by the state's community colleges.

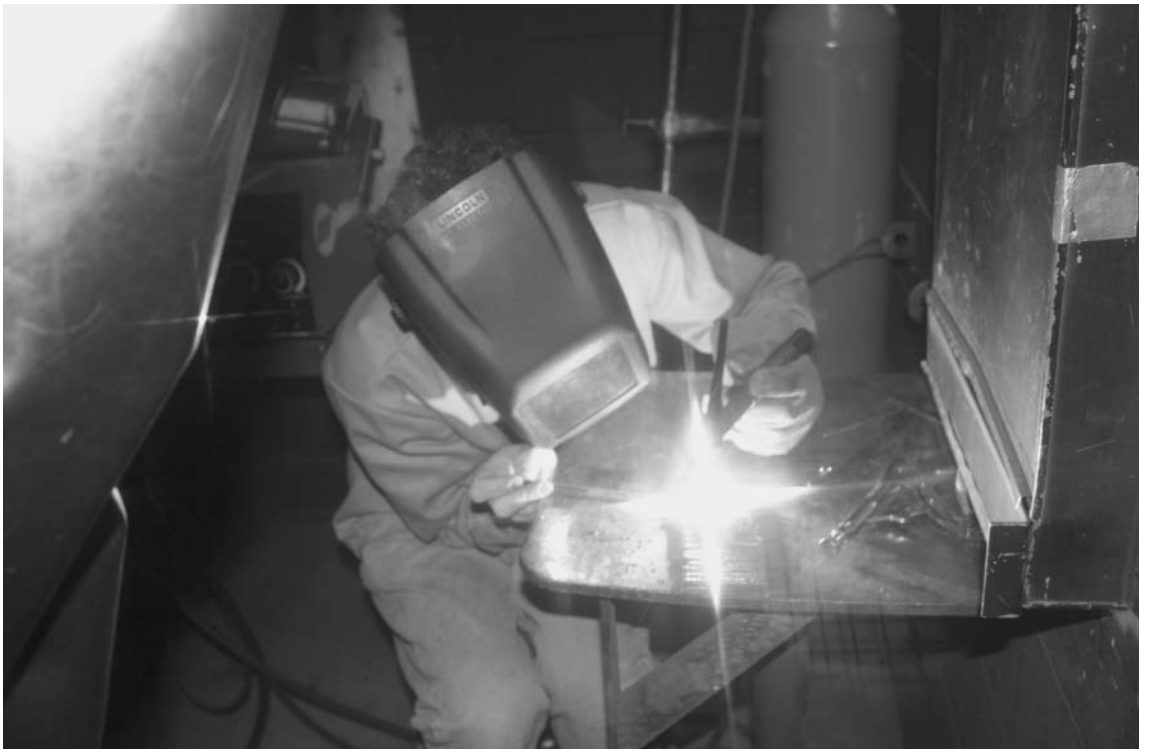
Learning is what most adults will do for a living in the 21st century.

—Bob Perelman

The N.C. Community College System currently relies upon a two-tiered strategic planning process: one for the statewide system and another for the individual colleges. On the state level, the central office in Raleigh sponsors a biennial planning process that aims to identify critical issues, develop adequate responses, and acquire needed resources.[41] The most recent planning process, which developed a strategy for the period 2007–09, involved a variety of internal and external stakeholders.[42] As a result of that process, the N.C. Community College System identified five key challenges: responding to changing demographics, securing adequate financial resources, addressing personnel needs, managing technology needs, and reacting to an increasingly competitive educational market place.[43] These findings, in turn, shaped the budget request developed by the State Board of Community Colleges and submitted to the office of the governor.

Overall, the latest planning process identified key issues facing the N.C. Community College System, and system leaders used those findings to establish goals and inform funding priorities. The findings also proved remarkably consistent with a variety of other studies conducted by nonprofit and public bodies interested in the N.C. Community College System.[44] While the system has flagged and prioritized the key challenges, its ability to meet those challenges ultimately will depend upon the availability of financial resources. Until that problem is addressed, the N.C. Community College System likely will make only limited progress towards the challenges identified through its comprehensive planning process.

Individual colleges, meanwhile, are required to prepare regular institutional effectiveness plans. The General Assembly established this requirement in 1989, but owing to the quasi-independent nature of the colleges, each institution was allowed to develop those plans in ways best suited to local needs, provided that the plans satisfied general requirements set by the legislature, the State Board of Community Colleges, and the regional accreditation agency.[45] To improve college accountability, the legislature required institutional effectiveness plans to incorporate the data needed to measure progress towards certain "critical success factors." Those 42 factors fall into five broad areas: core indicators of student success, work force development, diverse population learning needs, resources, and technology. Out of those 42 factors, the 12 that are



Russell A Wahrman, Wake Technical Community College

Welding class at Wake Technical Community College

most closely related to academic performance are used to award performance funding to local colleges, while the other measures are used to inform the statewide strategic planning process.[46]

> *"The relative autonomy of the individual campuses means that the quality and usefulness of the college-level planning processes may vary greatly."*

The establishment of critical success factors that reflect the N.C. Community College System's core mission focuses the attention of the individual colleges on essential functions, highlights success in achieving goals vital to individual students and local communities, and offers incentives for outstanding performance. At the same time, the relative autonomy of the individual campuses means that the quality and usefulness of the college-level planning processes may vary greatly.

Conclusion

Owing to the modest physical appearance of many of North Carolina's community colleges, casual observers often fail to grasp the scope, complexity and importance of the state's two-year institutions. North Carolina's 58 community colleges provide services vital to the economic well-being and growth of both individual citizens and the state as a whole. While the events of the past several years have demonstrated the power and potential of individual colleges, recent events also have exacerbated serious enrollment, personnel, financial, and planning challenges. Meeting these four challenges is key to the ability of North Carolina's community colleges to connect individual residents to opportunities and help transform North Carolina into a more prosperous state.

Footnotes

[1] *Financial Statement Audit Report of Durham Technical Community College for the Year Ended June 30, 2005*, Office of the State Auditor, Raleigh, N.C., Apr. 4, 2006, p. 4. On the Internet at *www.ncauditor.net/EPSWeb/Reports/Financial/FIN-2005–6828.pdf*

[2] *A Matter of Facts: The North Carolina Community College System Fact Book 2007*, North Carolina Community College System, Raleigh, N.C., May 2007, pp. 56, 71, and 73. On the Internet at *http://www.ncccs.cc.nc.us/Publications/docs/Publications/fb2007.pdf*

[3] *Ibid.*, pp. 2–4, 51, and 78, and author's calculation.

[4] N.C. Gen. Stat. § 115D-1.

[5] Jon Lee Wiggs, *The Community College System in North Carolina: A Silver Anniversary History, 1963–1988*, University Graphics, North Carolina State University, Raleigh, N.C., 1989, pp. 7–8 and 13.

[6] *Fact Book on Higher Education 2007,* Southern Regional Education Board, Atlanta, Ga., June 2007, p. 77.

[7] *Fact Book 2007*, note 2 above, p. 78.

[8] Author's calculation based upon *Fact Book 2007*, note 2 above, p. 77, and *Fact Book 1997: The North Carolina Community College System Fact Book*, North Carolina Community College System, Raleigh, N.C., 1997, p. 75. On the Internet at *http://www.ncccs.cc.nc.us/Publications/archivedFactBooks.htm*

[9] Author's calculation based upon *Fact Book 2007*, note 2 above, p. 79.

[10] Ben Fountain and Michael Latta, *The Community College System in North Carolina, A Brief History*, State Advisory Council on Vocational Education, Raleigh, N.C., 1990, p. 11. See also *Fact Book*, various years.

[11] Author's calculation based upon *Fact Book 2007*, note 2 above, p. 79.

[12] *Staying A Step Ahead: Higher Education Transforming North Carolina's Economy: Interim Final Report*, Pappas Consulting Group, Inc., Stamford, Conn., May 2005, pp. 87–88.

[13] *Financial Statement Audit Report of Durham Technical Community College*, note 1 above, p. 8.

[14] *Fact Book 2007*, note 2 above, p. 86.

[15] Author's calculation based upon *Fact Book 2007*, note 2 above, p. 86, and upon *Fact Book 2001: The North Carolina Community College System Fact Book*, North Carolina Community College System, Raleigh, N.C., 2001, p. 84. On the Internet at *http://www.ncccs.cc.nc.us/Publications/archived-FactBooks.htm*

[16] *Fact Book 2007*, note 2 above, pp. 86–88.

[17] Arthur Cohen and Florence Brawer, *The American Community College*, 4th edition, Jossey-Bass, San Francisco, Cal., 2003, p. 46.

[18] Keith Brown, *Faculty Salaries and Employment 2003–04 and 2004–05*, North Carolina Community College System, Raleigh, NC.

[19] "The Nation," *The Chronicle of Higher Education Almanac Issue 2007–08*, Vol. LIV, No. 1, Washington, D.C., Aug. 31, 2007, p. 8.

[20] *Ibid*. According to preliminary 2006–07 data released from IPEDS, N.C. Community College System faculty salaries rank 41st out of the nation's 49 community college systems.

[21] *Gaining the Competitive Edge: The Challenges to North Carolina's Community Colleges*, Commission on the Future of the North Carolina Community College System, Raleigh, N.C., Feb. 1989, pp. 6, 13, and 18.

[22] *2007–09 Consensus Budget Request*, N.C. Community College System, Raleigh, N.C., Nov. 2006, and *Recommended Operating Budget 2007–2009,* North Carolina Office of State Budget and Management, Vol. 1, Raleigh, N.C., Feb. 2007. See N.C. Session Laws 2007-323 (H.B. 1473).

[23] *Ibid.*, p. 15.

[24] *Fact Book on Higher Education 2007*, note 6 above, p. 180.

[25] *2007–09 Consensus Budget Request*, note 22 above, p. 15. See N.C. Session Law 2007-323 (H.B. 1473).

[26] *Ibid*., p. 22.

[27] *Fact Book 2007*, note 2 above, p. 9.

[28] *Ibid*., pp. 48 and 51.

[29] John Quinterno, *North Carolina's Unfinished Transformation: Connecting Working Families to the State's Newfound Prosperity,* North Carolina Budget and Tax Center, Raleigh, N.C., 2007, p. 22 and *Staying A Step Ahead*, note 12 above, pp. 22 and 138.

[30] Kevin Dougherty, Monica Reid, and Kenny Nienhusser, *State Policies to Achieve the Dream in Five States: An Audit of State Policies to Aid Student Access to and Success in Community Colleges in the First Five Achieving the Dream States*, Community College Research Center, New York, N.Y., Feb. 2006, p. 147. The countercyclical enrollment pattern is evident when looking at shifts in data that occur in recession years. For example, between 2000–01, the year before the most recent recession, and 2002–03, the year after, total full-time enrollment (FTE) jumped from 158,399 to 176,743. *Fact Book 2007,* note 2 above, p. 78. Virtually all of that increase occurred between 2001–02 and 2002–03. For spending, the pattern is evident if you look at total state appropriations and/or per FTE spending data. North Carolina state appropriations per FTE fell by -0.5 percent between 2001–02 and 2005–06. When combined with the enrollment data, this suggests that dollars were being stretched to cover more students. *Fact Book on Higher Education 2007*, note 6 above, summary tables 75–77.

[31] *Fact Book on Higher Education 2007*, note 6 above, p. 210 and editorial calculation based on *Fact Book on Higher Education 2007*, note 6 above, p. 75 and *A Matter of Facts: The North Carolina Community College System Fact Book 2002*, North Carolina Community College System, Raleigh, N.C, p. 77. On the Internet at *http://www.ncccs.cc.nc.us/ Publications/docs/Publications/fb2000.pdf*

[32] *Fact Book on Higher Education 2007*, note 6 above, p. 134.

[33] *Ibid.*, pp. 129 and 134–35.

[34] Gwen Rubinstein and Andrea Mayo, *Training Policy in Brief* (2nd ed.), The Workforce Alliance, Washington, D.C., 2007, p. 37. On the Internet at *http://www.workforcealliance.org/atf/cf/%7B93353952-1DF1-473A-B105-7713F4529EBB%7D/2BB%20Chpt_4.pdf*

[35] *2007–09 Consensus Budget Request*, note 22 above, pp. 21–22 and 36.

[36] *Ibid*., p. 65.

[37] *Ibid*., p. 23.

[38] *Ibid*., p. 73.

[39] *Ibid*., p. 26.

[40] *Gaining the Competitive Edge*, note 21 above, pp. 13 and 22.

[41] *2007–09 Consensus Budget Request*, note 22 above, p. 16.

[42] See official web site of N.C. Community College System at *http://www.ncccs.cc.nc.us/Planning/index.html*

[43] *2007–09 Consensus Budget Request*, note 22 above, pp. 4–5.

[44] See, for example, Quinterno, note 29 above, and *Staying A Step Ahead*, note 12 above.

[45] *Fact Book 2007*, note 2 above, pp. 16–17.

[46] *2007 Critical Success Factors*, North Carolina Community College System, Raleigh, N.C., June 2007, pp. 1–3. On the Internet at *http://www.ncccs.cc.nc.us/Publications/index.html*