



## North Carolina Tomorrow Video Fact Citations

*Introduction: The following text is featured in the “North Carolina Tomorrow” video produced for The University of North Carolina Tomorrow Commission, and highlights major trends and challenges facing North Carolina. Sources for these facts are provided below.*

### North Carolina Tomorrow

- In 2006, the Charlotte, Research Triangle, and Piedmont Triad regions accounted for nearly 62% of the state’s population and 64% of all jobs in the state

[Source: US Census Bureau and US Bureau of Labor Statistics; Debbage, K. (2007). Regional Differences in North Carolina. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- In 2005, average annual wages were highest in the Charlotte and Research Triangle regions (above \$40,000), and lowest in the Northeast region (under \$27,000)

[Source: NC Department of Commerce; Debbage, K. (2007). Regional Differences in North Carolina. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- In the last 15 years, the Research Triangle region’s population grew at the fastest rate in the state: 59%. The Northeast Region grew the slowest: 13%

[Source: US Census Bureau; Debbage, K. (2007). Regional Differences in North Carolina. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- In the last 15 years, North Carolina’s Hispanic population has grown by almost 600%. White and African American populations have grown by about 20%

[Source: 1990 Census Summary Tape File 3, Census 2000 Summary File 3, and 2005 American Community Survey; Johnson, J. (2007). North Carolina’s Higher Education Demographic Challenges. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

### Jobs of Tomorrow

- In the future, North Carolina’s workforce will grow the most in two areas – highly skilled (college graduates) and



low skilled (high school dropouts)

The middle class is shrinking

[Source: Walden, M. (2007). Economic Change in North Carolina: Implications for Workforce Development. Prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- The fastest growing high-wage job sectors in North Carolina include medical professions and computer engineers

[Source: Walden, M. (2007). Economic Change in North Carolina: Implications for Workforce Development. Prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- The fastest shrinking job sectors include farmers, word processors, and computer operators

[Source: Walden, M. (2007). Economic Change in North Carolina: Implications for Workforce Development. Prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- By 2014, North Carolina will need:
  - 41,000 more nursing professionals
  - 34,000 more public school teachers
  - 23,000 more computer and technology professionals
  - 10,000 more accountants and auditors
  - 3,300 more Social Workers

[Source: Derived from the State of the North Carolina Workforce Report, The North Carolina Commission on Workforce Development, January 2007]

- By 2014, North Carolina will need:

Over 400,000 new workers with at least a bachelor's degree

North Carolina's colleges and universities (both public and private) are expected to produce only 254,000 of these workers

Higher education would have to produce over 15,000 more graduates each year to fill this gap

[Source: Derived from the State of the North Carolina Workforce Report, The North Carolina Commission on Workforce Development, January 2007]

- Baby Boomers are aging . . .

Today, in North Carolina's non-immigrant workforce:  
1 out of every 5 workers is over age 61

Today, in North Carolina's public universities:  
1 out of every 5 faculty members is over age 61



This year, in America:  
Over 10,000 people will turn 55 . . . every day  
[Source: US Census Bureau, 2005 American Community Survey, and UNC General Administration; Johnson, J. (2007). North Carolina's Higher Education Demographic Challenges. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

## Skills of Tomorrow

- About 60% of available jobs in the US require skills possessed by only 20% of the workforce

[Source: U.S. Department of Education. (2000). Before It's Too Late National Commission on Mathematics and Science Teaching for the 21st Century, McEwen, B. (2007). Workforce Readiness and Global Competitiveness. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

. . . almost 50% of US high school students lack basic competence in math  
[Source: National Association of Manufacturers. (2005). The looming workforce crisis: Preparing American Workers for 21st Century Competition; McEwen, B. (2007). Workforce Readiness and Global Competitiveness. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- By 2012, more than 40% of manufacturing jobs will require post-secondary education

[Source: National Association of Manufacturers. (2005). The looming workforce crisis: Preparing American Workers for 21st Century Competition; McEwen, B. (2007). Workforce Readiness and Global Competitiveness. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- By 2015, about 85% of new jobs in the US will require education beyond high school

[Source: Gunderson, K., Jones, S., & Scanland, K. (2005). *The jobs revolution: Changing how America works*. Chicago, IL: Copywriters Incorporated, A Division of the Greystone Group, Inc.; McEwen, B. (2007). Workforce Readiness and Global Competitiveness. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- By 2020, the shortage of workers with college-level skills in the US will increase to over 14 million

[Source: Economic Development America. (Fall 2006). Building a 21st Century, World-Class Workforce; McEwen, B. (2007). Workforce Readiness and Global Competitiveness. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- Writing skills are essential, in today's economy . . .

Writing weaknesses of incoming students cost American campuses  
\$1 billion a year



## Writing weaknesses of professional employees cost American businesses \$3.1 billion a year

[Source: Bosley, D. (2007). The Impact of “Soft Skills” in the Information - Knowledge Management Economy and the UNC System. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- 63% of employers nationally think most college graduates lack skills needed to succeed in today’s global economy . . .61% of college graduates nationally think their college education did not prepare them for success in today’s global economy

[Source: Peter D. Hart Research Associates, Inc. (2006). *How should colleges prepare students to succeed in today’s global economy?* Washington, DC: Author; McEwen, B. (2007). *Workforce Readiness and Global Competitiveness*. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

## Competing in the Global World of Tomorrow

- In China, more than 50% of undergraduate degrees are in fields of science, technology, engineering, and math . . .In the US, only 16% of degrees are awarded in these fields

[Source: Kuenzi, J. J., Mathews, C. M. & Mangan, B. F. (2006). *Science, Technology, Engineering, and Mathematics (STEM) Education Issues and Legislative Options*. CRS Report for Congress, May 2006; McEwen, B. (2007). *Workforce Readiness and Global Competitiveness*. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- About 33% of North Carolina’s college aged students are enrolled in college – only 69% of the rate in Korea . . .North Carolina also lags behind Greece, Finland, Belgium, Ireland, and Poland

[Source: The National Center for Public Policy and Higher Education (2006). *Measuring Up 2006: The State Report Card on Higher Education in North Carolina*; McEwen, B. (2007). *Workforce Readiness and Global Competitiveness*. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- Foreign students make up 27% of all US graduate students . . .And 41% of all science and engineering majors

[Source: Harewood, K. and Carbonell, R. (2007). *Research, Technology Innovation, Universities and Global Competitiveness*. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- 90% of employers think colleges and universities need to improve the quality of student achievement to ensure the US’s global competitiveness

[Source: Peter D. Hart Research Associates, Inc. (2006). *How should colleges prepare students to succeed in today’s global economy?* Washington, DC: Author; McEwen, B. (2007). *Workforce Readiness and Global Competitiveness*. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]



## Our Environment Tomorrow

- North Carolinians spent \$23.2 billion on energy in 2004  
7% of total state economic activity - \$16 billion of this was shipped  
to other states/nations . . . benefiting *their* economies

[Source: [www.eia.doe.gov/emeu/states/sep\\_prices/eu/pr\\_eu\\_nc.html](http://www.eia.doe.gov/emeu/states/sep_prices/eu/pr_eu_nc.html),  
[www.bea.gov/newsreleases/regional/gdp\\_state/2006/gsp0606.htm](http://www.bea.gov/newsreleases/regional/gdp_state/2006/gsp0606.htm); Grady, D. (2007). Energy and Environment Challenges Confronting the University of North Carolina System. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- NC is particularly vulnerable to effects of climate change  
80% of NC's greenhouse gases come from energy sources  
1 foot rise in sea level would devastate eastern NC with up to tens  
of billions of dollars in total losses

[Source: EPA, State CO2 Emissions from fossil fuel combustion, 1990-2002, Bin, Okmyung, Chris Dumas, Ben Poulter, and John Whitehead. /Measuring the Impacts of Climate Change on North Carolina Coastal Resources/. National Commission on Energy Policy, Washington, DC. 2007; Grady, D. (2007). Energy and Environment Challenges Confronting the University of North Carolina System. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- NC water demand is expected to grow 36% over next two decades  
\$17 billion in additional water and sewer infrastructure will be required to  
meet this demand – almost all by local governments

[Source: Krews-Cline, Jean. /Water 2030: North Carolina Water Supply and Demand Overview./ North Carolina Rural Economic Development Center. Raleigh, NC. 2006; Grady, D. (2007). Energy and Environment Challenges Confronting the University of North Carolina System. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- The UNC system is the single largest user of electricity and water in NC  
70% - 80% of state government energy use is by UNC institutions –  
almost \$14 million a month for power and water in FY 05-06

[Source: NC Dept. of Administration, State Energy Office, Utility Savings Initiative Energy Use Spreadsheet, 2006; Grady, D. (2007). Energy and Environment Challenges Confronting the University of North Carolina System. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

## Health Care Tomorrow

- Every day in North Carolina, 2,300 people are admitted to a hospital . . .  
279 of those are AVOIDABLE by preventative care, self-care or timely  
primary care



[Source: North Carolina Discharge Database, Cecil G. Sheps Center for Health Services Research, Unpublished calculations and "The State of Allied Health in North Carolina" May 2005]

- Every day in North Carolina, 28 new jobs are created in health care . . . and 16 manufacturing jobs disappear

[Source: North Carolina Employment Security Commission as reported in "Carolina Context" October 2006, Number 2 and North Carolina Commission on Workforce Development. The State of the North Carolina Workforce. January 2007]

- Every day in North Carolina, 2 new doctors, 8 new nurses and 2 other licensed health practitioners start practice in the State . . . We need 3 new doctors and 10 new nurses to keep up with what we have

[Source: Ricketts, TC. Unpublished calculations from the North Carolina Health Professions Database, 2007 and "Providers in Demand: North Carolinas Primary Care and Specialty Supply" North Carolina Institute of Medicine, June 2007]

- Every day 3 North Carolina University graduates leave for medical school in another state and 2 of those will not return

[Source: Ricketts, TC. Unpublished calculations from the North Carolina Health Professions Database, 2007 and "Providers in Demand: North Carolinas Primary Care and Specialty Supply" North Carolina Institute of Medicine, June 2007]

## The Children of Tomorrow

- Out of every 100 8<sup>th</sup>-graders in North Carolina:
  - 58 graduate from high school
  - 38 attend college
  - 28 return for a second year
  - 18 graduate from college

[Source: The North Carolina Statistical Profile]

- There are 200,000 students enrolled in UNC Campuses . . .

One-third of these students come from just four counties: Wake, Mecklenburg, Guilford, and Forsyth

[Source: Derived from UNC General Administration Data; Debbage, K. (2007). Regional Differences in North Carolina. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- By 2017, there will be 80,000 more students enrolled in UNC campuses
- [Source: UNC General Administration]

- Minority students make up 43% of total public school enrollment in our state. . .and 85% of the enrollment in North Carolina's 50 lowest performing public schools



[Source: US Census Bureau, 2005 American Community Survey, and NC Schools Report Card 2005-06; Johnson, J. (2007). North Carolina's Higher Education Demographic Challenges. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- Over half of minority children in North Carolina live in households earning less than \$30,000 per year

[Source: US Census Bureau, 2005 American Community Survey, and NC Schools Report Card 2005-06; Johnson, J. (2007). North Carolina's Higher Education Demographic Challenges. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- African American males make up 14% of total public school enrollment in our state . . . and
  - 22% of high school dropouts
  - 30% of special education students
  - 8% of Honors students
  - 9% of full-time college students

[Source: North Carolina Department of Public Instruction; Johnson, J. (2007). North Carolina's Higher Education Demographic Challenges. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- A black male high school dropout will earn \$620,000 less in his lifetime than a black male college graduate

[Source: Kasarda and Johnson, 2007; Johnson, J. (2007). North Carolina's Higher Education Demographic Challenges. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- In the past four years, over half of the new students in North Carolina's public schools were Hispanic

[Source: North Carolina Department of Public Instruction, 2005; Johnson, J. (2007). North Carolina's Higher Education Demographic Challenges. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- By 2017, 30,000 more students will graduate from North Carolina public high schools . . . 22,000 of them will be Hispanic

[Source: UNC General Administration]

- The majority of Hispanic children in North Carolina live in households:
  - Earning less than \$30,000 per year
  - That don't own their home
  - Whose parents don't have a college education

[Source: US Census Bureau and 2005 American Community Survey; Johnson, J. (2007). North Carolina's Higher Education Demographic Challenges. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- 83% of all public school elementary and secondary teachers in North Carolina are white



[Source: Oxendine, D. (2007). Student Diversity: Why the Public School Pipeline is Failing Our Colleges and Universities. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

78% of all public university faculty in North Carolina are white  
[Source: UNC General Administration]

- In the last 5 years, real wages for college graduates have grown by 4% . . . and those of high school dropouts have fallen by 10%

[Source: Walden, M. (2007). Economic Change in North Carolina: Implications for Workforce Development. Prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- High school dropouts earn \$800,000 less than college graduates over their lifetime

[Source: Harvey, A. (2007). Effect of High School Dropouts on the Workforce of the Future. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- High School Dropouts make up almost half of  
Heads of households on welfare  
Prison populations

[Source: Harvey, A. (2007). Effect of High School Dropouts on the Workforce of the Future. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- 50% of all teen mothers drop out of high school and never return

[Source: Harvey, A. (2007). Effect of High School Dropouts on the Workforce of the Future. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- Teen fathers are 40% less likely to graduate from high school than other students

[Source: Harvey, A. (2007). Effect of High School Dropouts on the Workforce of the Future. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- Each teen birth in North Carolina costs taxpayers \$18,000 per year

[Source: Harvey, A. (2007). Effect of High School Dropouts on the Workforce of the Future. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- From 1999-2004, gang activity grew in North Carolina . . .  
To 387 gangs  
With 8,500 members  
Some are as young as 8 years old

[Source: Harvey, A. (2007). Effect of High School Dropouts on the Workforce of the Future. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

- This year, North Carolina taxpayers will spend about  
\$ 5,300 educating one public school student  
\$10,000 educating one public university student  
\$ 25,000 housing one inmate in prison



\$ 92,000 housing one juvenile offender in a Youth Development Center  
[Source: NC Legislative Fiscal Research Division, 2007]

However, a full four year scholarship to UNC Chapel Hill for one student  
will cost \$60,000.  
[Source: University of North Carolina at Chapel Hill]

- A child's ability to achieve academically is influenced by
  - Income
  - Region
  - Parents' education level
  - Community resources
  - Social influences
  - . . .not the color of her skin or gender

[Source: Oxendine, D. (2007). Student Diversity: Why the Public School Pipeline is Failing Our Colleges and Universities. Paper prepared for The University of North Carolina Tomorrow Commission, Chapel Hill, NC.]

## **How Can We Transform Tomorrow?**

- Deliver 21<sup>st</sup> century education at all levels
- Stimulate economic transformation
- Fuel research and development innovations
- Provide support to businesses
- Grow high-quality, healthy, attractive communities
- Inspire leaders and citizens of Tomorrow

**Tomorrow Starts Today.**

## **How Can The University of North Carolina Help?**