

**REPORT ON EXPANDING ACCESS
TO HIGHER EDUCATION THROUGH STATE-FUNDED
DISTANCE EDUCATION PROGRAMS**

**Submitted in response to North Carolina Session Laws 1998, chapter 212,
section 11.7 of the North Carolina General Assembly**

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**Board of Governors
The University of North Carolina**

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Executive Summary

The 1998 legislation providing enrollment funding for UNC distance education requires submission of a biennial report that addresses the impact of these programs on access to higher education. As with the four preceding biennial reports, this report provides substantial information that documents the growth of UNC distance education programs and their role in meeting the high priority education and economic development needs of the State.

- State funding for UNC off-campus (distance) education degree-credit instruction, first provided in FY 1999, is achieving the intended legislative goal of expanding access to higher education opportunities for North Carolinians who otherwise would be unable to obtain an undergraduate degree, graduate degree, or licensure in a teaching specialty. High quality degree programs are being developed and offered throughout the state in subject areas that are responsive to the workforce and economic development needs of North Carolina; for example, almost a third of all distance education instruction is related to K-12 teacher education.
- The unduplicated number of individuals enrolled in UNC distance education courses (including students enrolled in on-campus programs who choose to take an online course) increased by 538 percent from fiscal year 1999 to fiscal year 2007—from 6,929 individuals to 44,225. Distance education course offerings increased 572 percent from fall 1998 (the first year distance education enrollment funding was provided) to fall 2007—from 412 course sections to 2,767.
- UNC constituent institutions offer 266 site-based degree programs in 53 North Carolina counties, which are taught at 28 North Carolina Community College campuses, public school settings, Area Health Education Centers and other health care settings, UNC graduate centers, and North Carolina military bases.
- UNC online degree programs are rapidly increasing, growing from 6 online programs in spring 2000 to 167 online degree, certificate, and licensure programs listed on The University of North Carolina Online in spring 2008. Online enrollments are increasing in proportion of overall distance education student credit hours (SCH's) taught. For fall 2007, out of 126,864 total distance education SCH's, 89,471 (70.5 percent) were delivered online.
- In spring 2007, students who are 26 and older accounted for 82.3 percent of distance education enrollments compared to only 23.3 percent of on-campus enrollments. This indicates that UNC distance education programs are reaching non-traditional higher education audiences who otherwise would not have access to these programs.
- A growing percentage of distance education enrollments are minority students; from 2003 to 2007 the percentage of African-American students increased from 14.5 percent to 19.1 percent.
- UNC-General Administration e-learning grants have supported faculty development, collaborative online courses and degree programs, and development of distance

degree programs that are responsive to critical needs of the state. UNC-GA is coordinating a number of initiatives related to online teacher education support, development of articulated 2+2 degree programs with the community colleges, coordination of information resources infrastructure, degree consortia and joint degree programs, outreach to NC military bases, and the Teaching and Learning with Technology Collaborative.

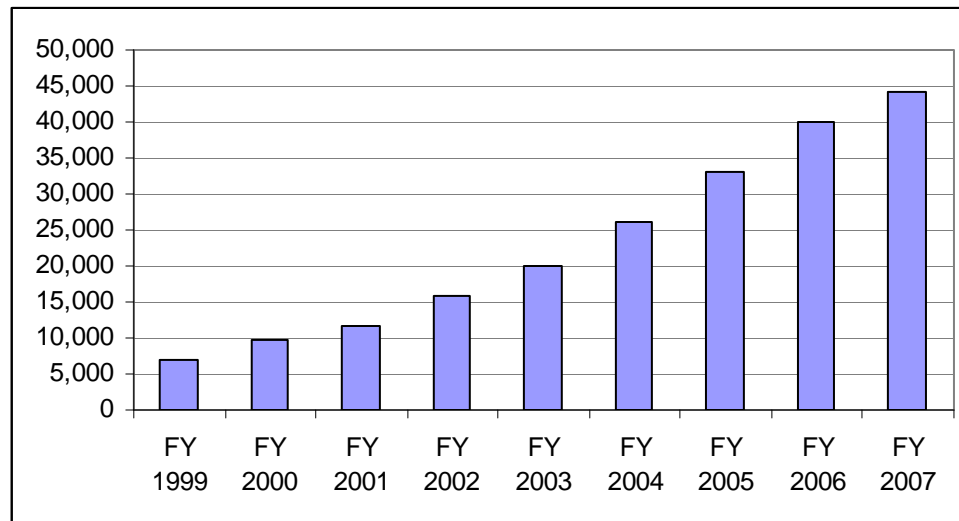
- UNC constituent institutions ensure that they provide the same quality of instruction to distance education students as to on-campus students through a variety of assessment and evaluation procedures. Each UNC campus chief academic officer has appointed a representative to serve on a UNC Online Quality Council that meets periodically to discuss online quality standards, faculty development activities, student support services, and other relevant topics.
- An Office of State Budget and Management study of UNC online courses found little duplication of online degree programs. In the few areas where there was duplication, the study noted that these programs have different areas of specialization and were developed collaboratively between the campuses to maximize resources during the development phase. A number of program consortium arrangements have been developed to enable students to take courses for their degree programs from other UNC campuses.
- Both the OSBM study and UNC campus studies have found that course development costs comprise a significant part of the costs measured for those courses delivered via Internet. The additional costs of technical expertise (often in the form of instructional technology specialists), training, hardware and software required to adapt courses for technology-mediated delivery add further to course development costs. This represents a new category of costs not present in traditionally-taught courses.
- Careful needs assessments are conducted before programs are developed, and programs authorized are those that would be most beneficial for the economic growth and vitality of North Carolina communities. Consultation with other state partners (*e.g.*, the North Carolina Community College System, public school systems, Area Health Education Centers [AHEC], and professional associations) in planning and delivering quality distance education programs is a high priority. The current UNC Tomorrow initiative will have important implications for UNC distance education in the areas of priority setting and resource efficiency and will guide continued expansion of higher education access made available to North Carolina's citizens.

Expanding Access to Higher Education through UNC Distance Education Programs

Enrollment Growth

In response to the enrollment funding provided by the General Assembly for UNC distance education programs (both site-based and online), the number of students enrolled in these programs has increased steadily every year since this funding was first provided in FY 1999. Unduplicated headcount enrollments over the course of a full year (Fall, Spring, and Summer sessions) increased by more than 37,000 from Fiscal Year 1999 to Fiscal Year 2007—from 6,929 individuals to 44,225 (Figure 1).

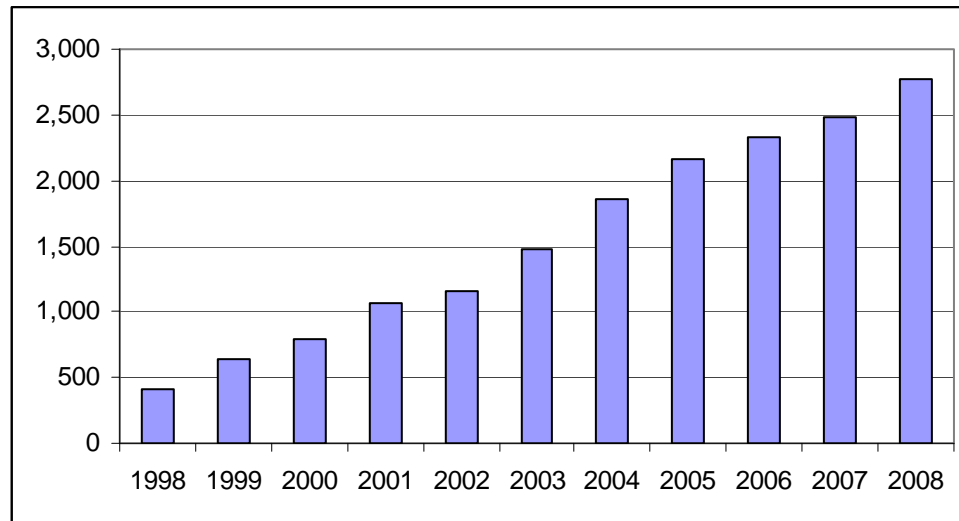
Figure 1. Growth in Unduplicated Headcount Enrollment in UNC Distance Education Programs, Fiscal Years 1999 – 2007



[Note: Throughout this report, data will be presented for distance education instruction funded by the UNC enrollment funding model because this is the focus of the legislation mandating this report. UNC distance programs also enroll a number of individuals (4,611 unduplicated headcount in FY 2007) for whom UNC does not receive distance education enrollment funding. Typically these are either non-NC residents receiving distance instruction out of state (including foreign countries), or they are students enrolled in specially funded contract or customized distance programs that do not receive enrollment funding.]

Annual growth in distance education can also be measured by the number of distance courses offered each semester. As Figure 2 illustrates, Fall Semester distance education courses increased from 412 in fall 1998 to 2,767 in fall 2008.

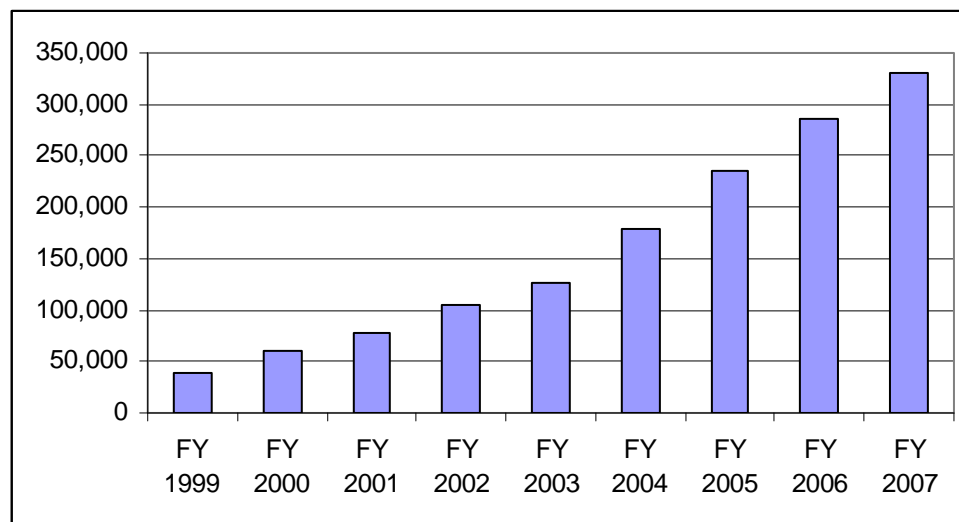
**Figure 2. Growth in Distance Education Course Sections:
Fall 1998—Fall 2008**



Average distance education class sections are getting larger, meaning that there is greater efficiency in delivering this instruction. In fall 2003, for instance, distance education courses averaged 38.2 student credit hours (SCHs) per section. By fall 2008 this average of SCHs per course section had increased to 45.8.

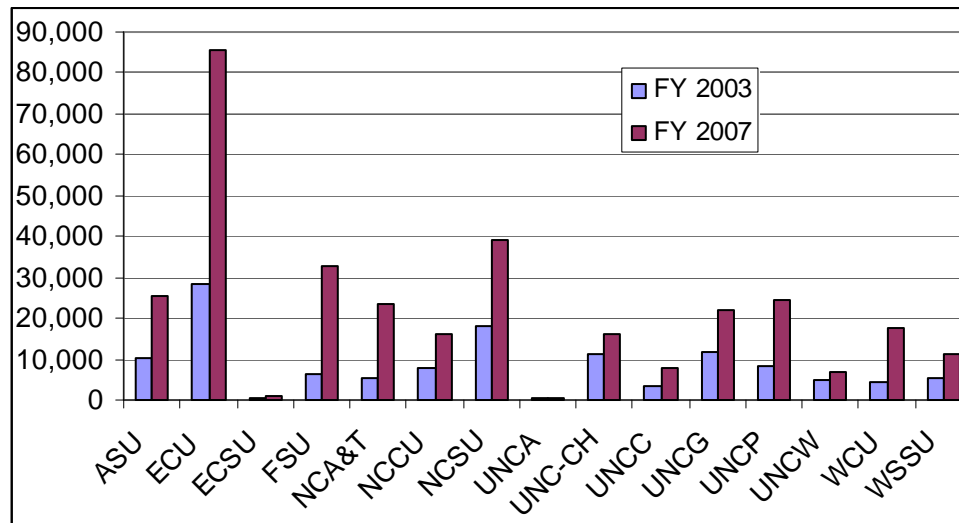
Another indication of growth in UNC distance education activity is the increase in student credit hours (SCHs) taught in each fiscal year. These SCHs increased from 38,998 in FY99 to 330,039 in FY07 (Figure 3).

**Figure 3. Total UNC Funding Model Distance Education
Student Credit Hours: FY 1999—FY 2007**



Production of these distance education SCHs varies by UNC constituent institution, with some institutions more active in offering distance education programs than others. SCH production by UNC constituent institution for Fiscal Years 2003 and 2007 is presented in Figure 4.

**Figure 4. Funding Model Distance Education Student Credit Hours (SCHs)
Produced by UNC Institutions: FY 2003 & FY 2007**



**Figure 5. Percentage by Institution of Total UNC On-Campus and
Distance Education Headcount Enrollments: Spring 2007**

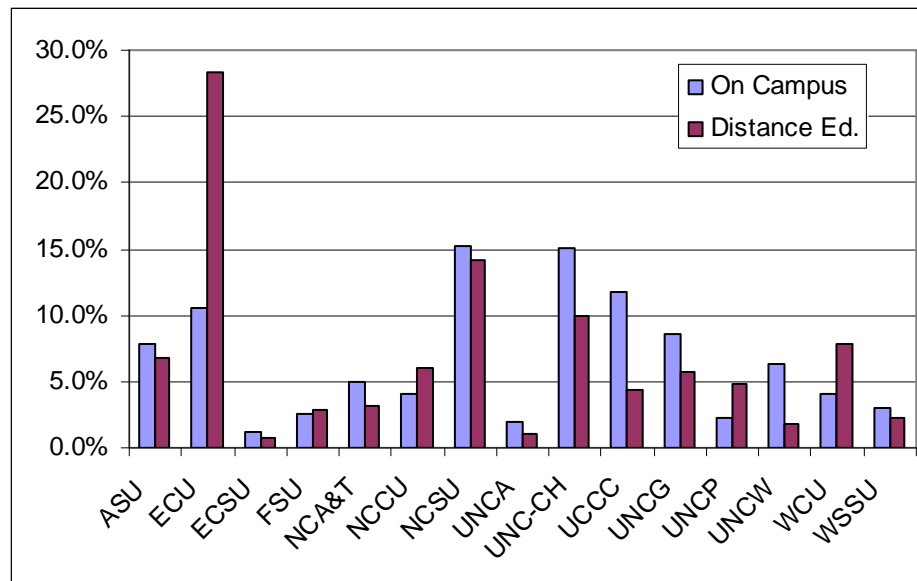
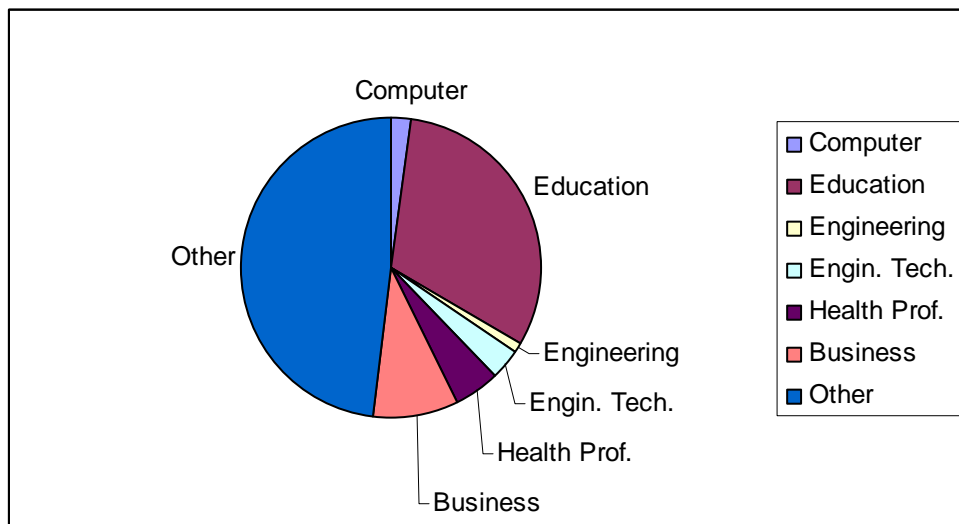


Figure 5 on the previous page compares the percentage share of overall UNC enrollments each campus has for its on-campus and distance education enrollments.

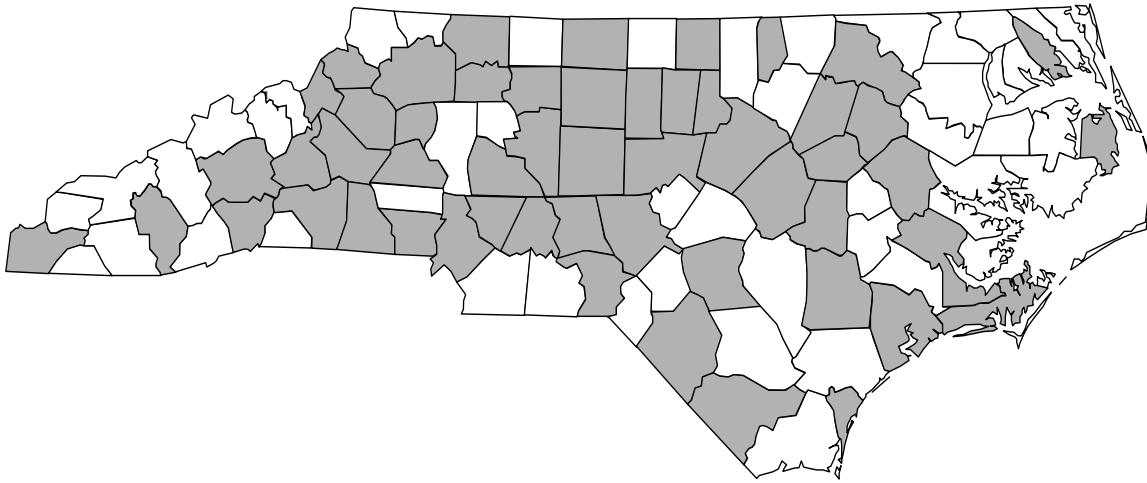
UNC has 420 authorized distance education degree programs at these levels: 172 baccalaureate, 232 masters, 7 intermediate (post-master's) and 9 doctoral. Although programs are offered in 22 of the National Center for Educational Statistics' CIP (Classification of Instructional Programs) content areas, 6 of those 22 content areas account for more than half of UNC distance education activity (Computer and Information Sciences, Education, Engineering, Engineering Technologies, Health Professions, and Business and Management (Figure 6). This indicates that UNC distance education programs are addressing high priority workforce development and economic transformation needs of North Carolina. Teacher education accounts for nearly one-third of UNC distance education activity.

Figure 6. Student Credit Hour Percentages by High Needs Content Areas



Site based programs account for 266 of UNC's distance education programs, which are offered at 28 community colleges as well as at public school locations, military bases, health care settings, regional centers, and graduate centers. Although these programs are site-based (as requested by community colleges, military bases, hospitals, and public school systems), many of them use blended instruction with some online or two-way video components. UNC off-campus degree programs are increasingly incorporating technological modes of instructional delivery, and almost all use some form of e-mail or web-based sites for information and communication. A majority of courses still conduct some instruction in the traditional or "face to face" manner, with faculty instructors traveling to the instructional site. Figure 7 shows the presence of these programs in counties throughout the state. In 2007-08 individuals in every county in North Carolina were enrolled in site-based or online distance programs offered by UNC campuses.

Figure 7. UNC Degree Programs by County Location



Online Education

The University of North Carolina Online

In July 2007, UNC launched The University of North Carolina Online (<http://online.northcarolina.edu/>), the official online site (Figure 8) providing organization and integration services and activities to assist UNC institutions in increasing access to high quality degree-credit online programs for North Carolina residents. It also provides coordinated outreach to national and international audiences. The site reflects the tradition of The University of North Carolina in enabling each campus to emphasize its unique strengths and distinguishing features while providing coordinated functions and services that are efficiently addressed at the system level. The University of North Carolina Online is part of a UNC strategy to increase educational attainment in North Carolina and prepare the state's workforce for high-growth, knowledge-intensive occupations.

The site enables individuals to search for online offerings and establish ongoing communication with campuses and degree programs. Program-specific online and print brochures are sent to prospective students requesting information, and each UNC campus maintains a database of inquiries. Additional Web pages accessible from this site provide information to assist specific groups of learners such as teachers, community college students, and military personnel and their dependents.

As of April 2008, 167 online degree, certificate, and licensure programs were offered through The University of North Carolina Online as well as more than 2,000 individual online courses. In March 2008, more than 16,000 individuals visited the Web site. Assurance of quality in online offerings is a high priority, and each UNC campus chief academic officer has appointed a representative to serve on an Online Quality Council that meets periodically to discuss online quality standards, faculty development activities, student support services, and other relevant topics.

Figure 8. Home Page of The University of North Carolina Online



A number of activities are currently underway or are envisioned for the coming year that will add to the utility of The University of North Carolina Online, including:

- Development of an inter-institutional course registration system that will enable a student at one UNC institution to easily register for an online course offered by another UNC institution. This will help students obtain needed courses in order to graduate on time, it will increase the efficiency of online courses that can gain increased enrollments, and it will help institutions avoid duplication of online courses. This system should be in operation for the Fall 2008 semester.
- Production of shared online teacher education courses. The teacher education majors in high need areas are being put online. Mathematics secondary and the mathematic concentration for Middle Grades are well along in development, and the various science teacher education programs are under development. These are being developed collaboratively by campus faculty from across the system. Programs are also available online in Birth to Kindergarten, Special Education, and Middle Grades under this 2 + 2 development program.
- Proposed development of a state-wide network of online learning center sites that would help students who need assistance in operating in an online

environment, provide test proctoring locations, and other student support services.

- Expansion of university courses offered to high school students at locations throughout the State.
- Support of additional online programs that address high priority needs of North Carolina as identified in the UNC Tomorrow initiative.

Although site-based distance education will continue to be an important way by which UNC serves the higher education needs of North Carolina, online enrollments are increasing in their proportion of overall distance education student credit hours (SCH's) taught. For fall 2007, of 126,864 total distance education SCH's taught, 89,471 (70.5 percent) were delivered online.

Office of State Budget and Management Study

In April 2006, the Office of State Budget and Management, as directed by Session Law 2005-276, Section 9.7, produced a report reviewing UNC distance education to identify any duplication in course and program offerings and identify the cost of developing online courses. Of the 127 authorized programs existing at the time, OSBM identified duplications among eight areas (Instructional Technology, Agricultural Education, Library Science, Gerontology certificate, and four Nursing areas). OSBM concluded, however, that:

Although duplication in programs occurs, some of these programs have different curricular emphasis and/or specialty concentrations. However, it should be noted that all of these programs were developed collaboratively between the campuses offering the program to maximize resources during the development phase. This process of collaboration facilitates resource sharing which should aid in the development of the best statewide E-Learning programs possible. In addition to sharing mutually developed material, some campuses allow students to obtain credit for E-Learning courses taken at other campuses, even emphasizing enrolling at other campuses with mutually developed programs.

The report further noted that course sharing occurred with all of the duplicated programs and sharing of students occurred with half of the programs.

For ascertaining cost of developing online courses, OSBM took a random sample of 40 online courses developed by 13 UNC institutions. The overall average cost to develop an online course was \$7,742. OSBM noted that, "Some reasons for the cost differences include subject matter, the uniqueness of a course, age of a course, method used to pay instructors, and the use of consultants or experts. The Health Professions area averaged the highest cost at \$18,281, more than twice the average cost. The most expensive component related to developing all online courses is the instructor and/or consultant costs. OSBM found that the average cost of \$7,742 to develop an online course was substantially higher than the average of \$2,331 to develop a comparable face-to-face course.

These findings are consistent with UNC studies that indicate the greatest direct costs of traditional ("face-to-face") instruction, whether on- or off-campus, are in the instructional salary costs, primarily related to the delivery and administration of the

course. Course development costs are a significant part of the costs for online courses. The additional costs of technical expertise (often in the form of instructional technology specialists), training, hardware and software required to adapt courses for technology-mediated delivery add to course development costs. This represents a new category of costs not present in traditionally-taught courses.

Overview of UNC Distance Education Students

Analysis of the characteristics of UNC distance education students confirms that many non-traditional higher education students are enrolling in distance education programs. In spring 2007, students in distance courses had the following characteristics:

Gender: Due to work and family obligations, many women are likely to be unable to relocate to a UNC campus. UNC distance education programs are achieving their intended effect of reaching these non-traditional higher education students in their home communities. Women are enrolling in UNC distance education programs at a higher rate than for on-campus programs. Table 1 shows the gender distribution of UNC spring 2007 enrollments for students only enrolled in on-campus courses, students only enrolled in distance education (DE) classes, and students in enrolled in both on-campus and distance classes.

Table 1. Spring 2007 Enrollment in Types of Courses by Gender

	<u>Taking Only On-Campus Courses</u>	<u>Taking Only DE Courses</u>	<u>Taking Both On-Campus & DE</u>
Female:	56.1 percent	68.8 percent	69.1 percent
Male:	43.9 percent	31.2 percent	30.9 percent

Note: Increasingly, students choose to take a mix of on-campus and distance (online) courses. Tables 1 and 2 show that higher percentages of female and some minority students choose to do this.

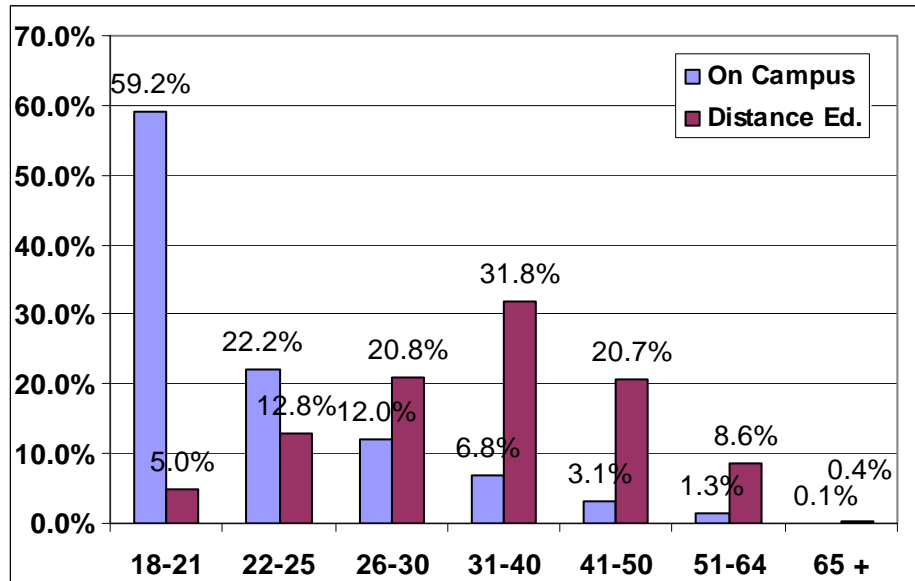
Race/ethnicity: It is important for UNC distance education to make higher education opportunities available for all racial and ethnic groups of North Carolina. Table 2 shows the racial and ethnic distribution of spring 2007 UNC enrollments for students enrolled only in regular term courses, only in distance education courses, and in both regular term and distance courses. For African American students, it is interesting to note that although the percentages of these students taking only distance education courses is slightly lower than the percentages of these students enrolled only in regular term courses, the percentages of these students enrolled *both* in regular term and distance courses is substantially higher than their percentages for only regular term. The percentage of minority students participating only in distance education is also increasing; from 2003 to 2007 the percentage of African-American students increased from 14.5 percent to 19.1 percent.

Table 2. Spring 2007 UNC Enrollment by Race/Ethnicity

	<u>Only Reg. Term</u>	<u>Only in DE</u>	<u>Reg. Term & DE</u>
African American	22.3 percent	19.1 percent	39.9 percent
Native American:	1.1 percent	1.1 percent	2.8 percent
Asian:	3.2 percent	1.9 percent	1.9 percent
Hispanic:	2.4 percent	2.0 percent	2.0 percent
White:	65.7 percent	70.6 percent	50.9 percent

Age: Another important goal for UNC distance education is to reach older place-bound and working adults in North Carolina. While the majority (59.2 percent) of on-campus students is in the traditional college age range of 21 or younger, Figure 9 illustrates that UNC distance education programs are succeeding in reaching the non-traditional college-age population. Students who are 26 and older account for 82.3 percent of distance education enrollments compared to only 23.3 percent of regular term enrollments. US Census Bureau projections indicate that the older population in North Carolina will grow rapidly over the next decade; thus this trend regarding older distance education students is likely to continue.

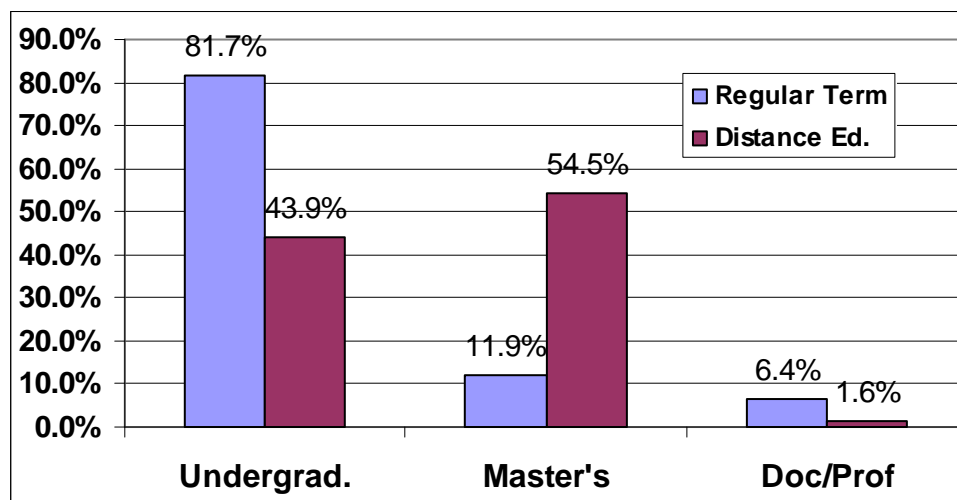
Figure 9. Age Distribution of UNC Students Enrolled in Regular Term and Distance Education Courses, Spring 2007



Residency: As with regular term (on campus) degree programs, students enrolled in state-funded distance education programs are largely North Carolina residents. In spring 2007, 89 percent of UNC distance education students were North Carolina residents compared to 86.1 percent of the UNC regular term students. (Student credit hours produced by non-North Carolina residents taking UNC courses out-of-state are not counted for state enrollment funding and are not included in the data presented in this report. Non-North Carolina resident instruction taking place inside North Carolina does qualify for enrollment funding, but the non-residents must pay the regular out-of-state tuition that would be charged on campus.)

Degree level of student: Because many UNC distance education programs are designed to serve the higher education needs of working adults, many programs are offered at the graduate level for teachers, nurses, and others who wish to pursue advanced degrees without leaving their home community. Thus, as Figure 10 illustrates, a majority of UNC distance education students are enrolled in master's degree programs. (UNC distance programs offer only the final two years of baccalaureate degree programs off campus—one reason for the lower percentage of distance undergraduate students.) UNC General Administration has provided incentive grants to encourage development of a number of baccalaureate degree programs in critical need areas such as teacher education, health professions, and technology.

Figure 10. Distribution of UNC On-Campus and Distance Education Students by Degree Level, Spring 2007



Conclusion

As highlighted in the Executive Summary and documented throughout this report, state enrollment funding for UNC off-campus and distance education degree-credit instruction is achieving its intended effect of expanding access to higher education for North Carolina citizens unable to relocate or travel to a UNC campus and reducing the demand on limited on-campus enrollment capacity. Among other benefits, this funding enables distance education students to pay tuition rates at a level comparable to on-campus tuition rates, thus making higher education not only accessible but also affordable for these citizens.

Prior to the 1998 legislation referenced at the beginning of this report, North Carolina was the only state in the 16-state Southern Regional Education Board (SREB) region that did not provide distance education funding for its university system. The enrollment funding has enabled UNC campuses to make crucial investments in faculty training, staff support, and information technology that are needed to offer high-quality instruction in a rapidly evolving and expanding distance education environment.

Instructional quality is paramount in developing these distance education opportunities, and policies and assessment procedures are in place to assure this. Costs of instruction are monitored carefully, and ongoing attention is being given to developing cost-effective programs through efficient use of information technology and collaboration and coordination among UNC campuses. UNC distance education programs are planned with the goal of raising the educational attainment level of North Carolinians and thus improving their economic and social well being. Careful needs assessments are conducted before programs are developed, and programs authorized are those that would be most beneficial for the economic growth and vitality of North Carolina communities. Consultation with other state partners (*e.g.*, the North Carolina Community College System, public school systems, Area Health Education Centers [AHEC], and professional associations) in planning and delivering quality distance education programs is a high priority. The current UNC Tomorrow initiative will have important implications for UNC distance education in the areas of priority setting and resource efficiency and will guide continued expansion of higher education access made available to North Carolina's citizens.