

**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
May 2004**

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

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Preface

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 and the educational attainment levels of North Carolina residents. As with the two 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.

The second biennial report, submitted in May 2002, recognized that some of the most effective documentation would be for General Assembly members to read verbatim comments from their constituents who have benefited from these programs. This third biennial report follows that example by providing a few representative quotes on the following two pages about UNC's distance education programs. Additionally, the printed information contained in this report is supplemented by a companion compact disc (CD) that will enable the viewer to see some distance education students and their learning environments and to hear their comments. The CD, which will be available from the UNC Office of the President, contains the following elements:

- A 25-minute video, *Dreams to Degrees*, that contains an introduction by UNC President Molly Broad and four vignettes of distance education students who are earning their degrees from UNC constituent institutions. The filmed vignettes describe the educational experiences of:
 - A registered nurse who is obtaining her BS in Nursing degree at a distance from Winston-Salem State University;
 - Three teachers in Rutherford County who have earned their baccalaureate teaching degrees from an Appalachian State University program offered at a local community college and who are now working on their master's degrees in an ASU off-campus program;
 - A single working mother who is earning her baccalaureate degree through online courses offered by NC State University; and,
 - An information technology worker (Cisco) from Wilmington who is enrolled in an online master's program in Industrial Technology (computer networking concentration) offered by East Carolina University.
- A Powerpoint presentation that provides an overview of UNC distance education.
- Separate sections for each UNC constituent institution that offers distance education programs. Each institution describes its mission and goals in providing distance education and highlights major distance education emphases of the institution. Each UNC institution also provides an inventory of its currently authorized distance education degree programs and a statement on how it ensures quality assurance in distance education offerings. Many institutions' sections will also include student quotes (in addition to those presented on the following pages) as well as supplementary information such as Powerpoint presentations and video clips.

Quotes:

*Speaking on behalf of the Greater Hickory Metropolitan area, we have been very pleased about our association with the folks from Appalachian State and the course offerings they have brought to our citizens who need and deserve access to a variety of programs. Our education attainment here in the Greater Hickory Metro is at or near the lowest level in the state. And, were it not for Appalachian and the efforts they're making, along with the efforts of Lenoir Rhyne College, Catawba Valley Community College, NC State and UNC-Charlotte, unfortunately I think that trend might continue. I know our continued association with Appalachian, as well as the other institutions, through course delivery at the Hickory Metro Higher Education Center will make a significant difference for the people in this area. **Rudy Wright, Mayor of Hickory, commenting on Appalachian State University site-based distance education programs.***

*I had never taken an online course until this year, and I wasn't sure how effective it would be. Class discussions in a chatroom? A professor hundreds of miles from many of his students? How would we all communicate? But so far, I've been pleased with the quality of instruction and online interaction between the students. We challenge and are challenged every day. Moreover, the program brings in a diversity of mature students whose work and family commitments keep them off campus. **Student obtaining her distance education master's degree in Technical & Professional Communication from East Carolina University.***

*I am a mother of three children who is graduating from ECSU. I have taken as many courses through distance learning as possible. The advantages of the courses are: being able to access courses 24/7, which makes it possible to work on course work when you can find time in your schedule; not having to find child care because you can work from home/work on courses; learning new computer skills; immediate feedback when taking tests and quizzes; being more cost effective because you don't have to spend money on food and gas associated with traveling to the campus.... The support from the technology support is phenomenal. I have gained tremendous knowledge and support from instructors in the technology support department. **Elizabeth City State University online course student.***

*Students generally like online courses. Online courses are convenient, even if there is a lot of work involved in them... . As a faculty member, I enjoy online teaching.... As I plan my teaching for online courses, the planning makes me more aware of my teaching. I find myself planning more activities and since online courses are continually changing, I am constantly learning as well. **Fayetteville State University online class instructor.***

The online pursuit of my education has been interesting, intriguing, and challenging. It has allowed me the flexibility of scheduling my time and daily routines to meet all requirements. This process has required discipline to handle my 8-hour work schedule, family commitments, and excel in the online program. [The program] has proven to be multifaceted with chats, reference sources, projects, and tests. I have now come to the completion of my undergraduate studies. I am experiencing emotions of great

accomplishment and satisfaction having reached this goal. I can also say confidently with Aggie Pride, "you're never too old." **First graduate of N.C. A&T State University's online B.S. in Occupational Safety & Health program.**

I am a full time teacher in my first year. I not only had to adjust to working full time, I had to adjust to learning the curriculum and the everyday schedule of teaching. I have two children and I am the basketball/dance/gymnastics/guitar lessons/tae kwon do 'give somebody a ride' mom. That keeps me pretty busy when I am not at work. The Distance Learning class has been a blessing. I can do my work at home, at my convenience. The instructor and the technical guru have been able to answer all my questions on-line.... The weekly discussion with the classmates is quite interesting as you get everyone's viewpoints. If you were sitting in a classroom you may only hear one or two responses. I feel that I actually get more insight about the topics as everyone has to respond to the questions. **North Carolina State University teaching licensure student.**

I've been a participant in the writing program for about two years. I want you to know it provides exceptional instruction in addition to building a support structure for writers in the community. I have attended other writing programs not affiliated with UNCA in the past, but they just don't have the academic excellence that I've found in the Great Smokies program. Most of us are not able, because of jobs and family commitments, to attend daytime classes at the UNCA campus. I wish you could experience the high quality of instruction that Tommy Hays and his staff offer. There is nothing to replace it in Asheville. **Student in UNC-Asheville off-campus writing program.**

The on-line program has given me an opportunity to seek a quality education. Without this program, I would have been unable to obtain my BSN from Carolina. Due to the distance that I live from the campus, my family, and my current position as a registered nurse at a local hospital, my goal of obtaining my BSN from a highly acclaimed nursing program would have been impossible. The on-line program has certainly challenged me academically and exposed me to many experts in the field of nursing. The staff has been outstanding to work with. They are always accessible to the students. I feel that I have been very fortunate to have participated in this quality program. **UNC-Chapel Hill nursing student who lives and works in Princeton, North Carolina.**

I am a first-year lateral-entry teacher and the opportunity to take all my licensure courses online was too good to pass up. The online courses were very convenient for me and I like being able to work ahead in my classes. The coursework is appropriate and useful and pertains to what I am doing in the classroom. This is a great program and I appreciate all of the support I've been given. **Language Arts/Social Studies teacher in Morganton, after her first semester in the UNC-Charlotte online program.**

Just wanted to send you a note letting you know how much I enjoyed the Educational Psychology online class. What's more, taking an online course is very convenient for mothers with small children such as myself. I enjoyed the faculty member's outlook on things as well as teaching. **Teacher taking UNC-Pembroke online education courses to complete her certification**

Expanding Access to Higher Education Through State-Funded UNC Distance Education Programs

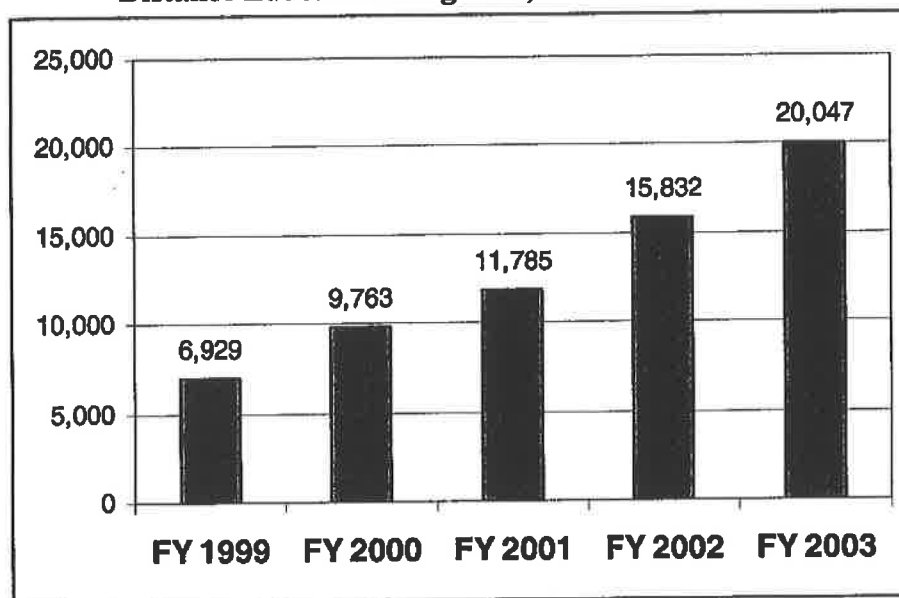
Executive Summary

- State funding for UNC off-campus (distance) education degree-credit instruction 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.
- The unduplicated number of individuals enrolled in UNC distance education programs increased by 198 percent from FY 1999 to FY 2003—from 6,929 individuals to 20,047.
- Distance education course offerings increased 258 percent from fall 1998 (the first year distance education enrollment funding was provided) to fall 2003, from 412 course sections to 1,473.
- UNC constituent institutions offer 167 site-based degree programs in 53 North Carolina counties, including 83 degree programs taught at 28 North Carolina Community College campus locations. Other distance education sites include 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 67 online degree programs in spring 2004.
- In fall 2003, students who are 26 and older comprised 81.3 percent of distance education enrollments as compared to only 22.1 percent of regular term (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.
- The UNC Office of the President's e-Learning Initiative is intended to increase the number of online "anytime, anywhere" courses and degree programs that can be accessed from any county in the state. Funding 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. An e-Learning Policy Group has been established to address coordination issues.
- 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.
- Instructional salary costs continue to be the single greatest cost factor for both on-campus and distance education courses. When these costs are deducted from the total distance course cost, traditional "face to face" instruction is the least expensive per student FTE, followed by online instruction, and, third, streaming video instruction.

Increasing Access to Higher Education

In response to the enrollment funding provided by the General Assembly for UNC distance education programs, the number of students enrolled in these programs has increased significantly in recent years. Fall 2003 distance education-only enrollments increased from the previous fall's 8,473 to 9,884, a growth of 16.7 percent. In fall 2003, an additional 4,545 students enrolled in distance education courses while taking courses on-campus, for a total of 14,429 students enrolled in such courses that semester. Unduplicated headcount enrollments increased by more than 198 percent from Fiscal Year 1999 to Fiscal Year 2003—from 6,929 individuals to 20,047 (Figure 1). A comparable increase is expected for Fiscal Year 2004.

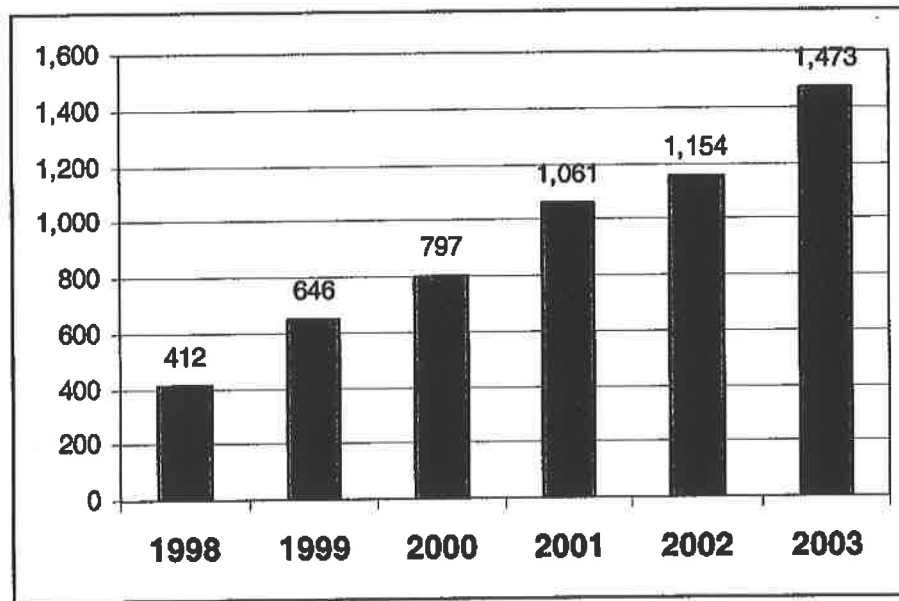
Figure 1. Growth in Unduplicated Headcount Enrollment in UNC Distance Education Programs, FY 1999 – FY 2003



[Note: Throughout this report, data generally 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 (4,014 individuals in FY 2003) for whom UNC does not receive distance education enrollment funding. Typically these are either non-NC residents receiving distance instruction out of state, or they are students enrolled in specially funded contract or customized distance programs that do not receive enrollment funding.]

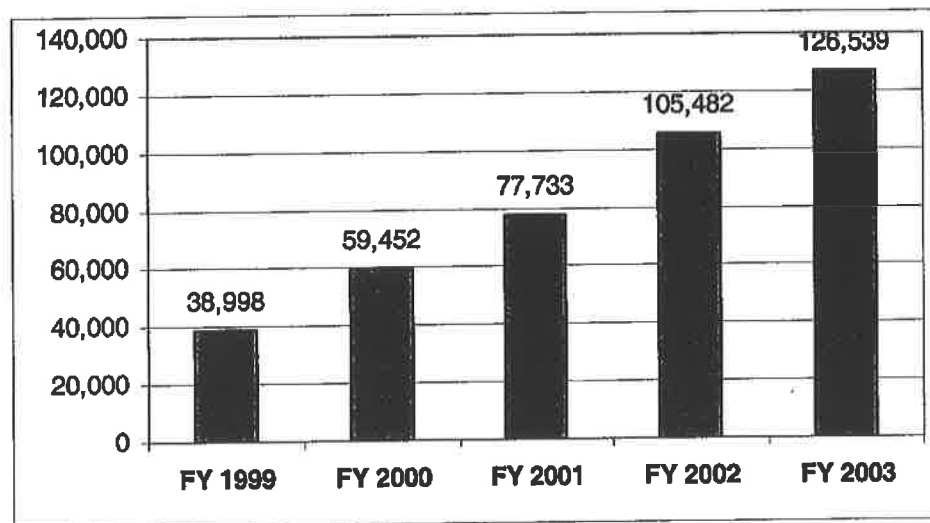
Annual growth in distance education can also be measured by the number of distance courses offered each semester. As Figure 2 illustrates, fall semester distance education courses increased from 412 in fall 1998 to 1,473 in fall 2003, an increase of 258 percent. [Note: Fall 2003 number may change slightly as data are updated from campus reports.]

**Figure 2. Growth in Distance Education Course Sections:
Fall 1998—Fall 2003**



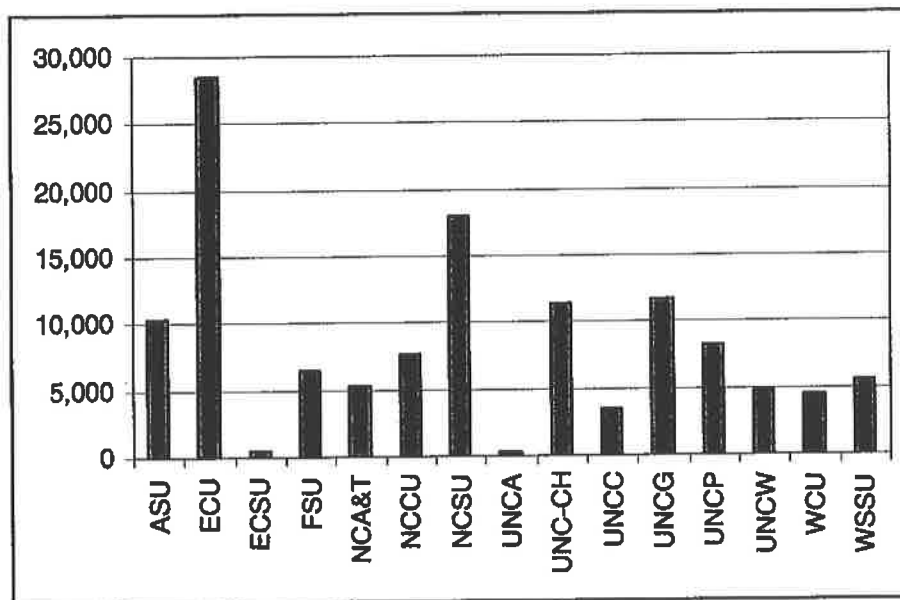
Another indication of growth in UNC distance education activity is the increase in student credit hours (SCHs) taught in each fiscal year. These SCHs increased by 224 percent from FY 1999 to FY 2003, from 38,998 to 126,539 SCHs (Figure 3).

**Figure 3. Total UNC Funding Model Distance Education
Student Credit Hours: FY 1999—FY 2003**



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 Year 2003 is presented in Figure 4.

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



As of spring 2004, UNC constituent institutions offer a total of 234 distance education degree programs. Of these, 167 are offered on location at sites in 53 North Carolina counties, five more counties than reported in the 2002 biennial report. With this level of outreach, citizens of other nearby or adjacent counties are brought within driving distance of UNC degree programs. Figure 5 shows the presence of these programs in counties throughout the state.

Figure 5. UNC Degree Programs by County Location, Spring 2004



Of the 131 site-based distance programs noted above, 83 degree programs are offered at 28 North Carolina Community College System (NCCCS) campus sites. (An additional 17 community colleges have UNC courses offered at their sites.) These programs enable community college graduates to complete their baccalaureate degrees in their home communities and enable community college faculty to obtain needed graduate degrees. Other site-based UNC distance education programs are located throughout the state at public school locations, Area Health Education Center (AHEC) and other health care sites, UNC graduate centers, and North Carolina military bases.

Perhaps the greatest progress in recent years in expanding access to higher education to North Carolina residents is represented by the rapidly increasing number of online distance education programs that are available online via the Internet. In spring 2000, six UNC distance programs were on-line. By spring 2004, 67 UNC distance programs existed with instruction available online, an increase in online degree programs of over 1,000 percent in four years.

Overview of UNC Distance Education Students and Programs

Analysis of the characteristics of UNC distance education students confirms that many non-traditional higher education students are enrolling in distance education programs. In fall 2003, students in funding model-supported 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 fall 2003 enrollments for students only enrolled in on-campus (regular term) courses, students only enrolled in distance education (DE) classes, and students in enrolled in both regular term and distance classes.

Table 1. Fall 2003 UNC Enrollment by Gender

	<u>Only Reg. Term</u>	<u>Only in DE</u>	<u>Reg. Term & DE</u>
Female:	55.9 percent	66.2 percent	68.4 percent
Male:	44.1 percent	33.8 percent	31.6 percent

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 fall 2003 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 and Native American students, it is interesting to note that although the percentages of these students taking only distance education courses is lower than the percentages of these students enrolled

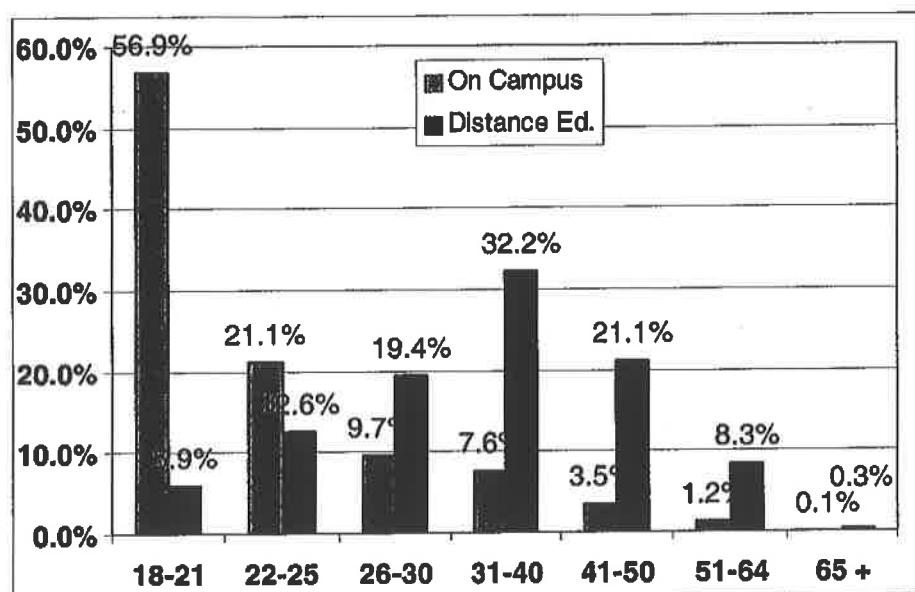
only in regular term courses, the percentages of these students enrolled *both* in regular term and distance courses is substantially higher than their percentages for only regular term.

Table 2. Fall 2003 UNC Enrollment by Race/Ethnicity

	<u>Only Reg. Term</u>	<u>Only in DE</u>	<u>Reg. Term & DE</u>
African American	22.1 percent	14.5 percent	34.2 percent
Native American:	1.1 percent	1.0 percent	4.0 percent
Asian:	3.2 percent	2.1 percent	2.1 percent
Hispanic:	1.7 percent	1.6 percent	1.6 percent
White:	68.0 percent	76.5 percent	55.6 percent

Age: Another important goal for UNC distance education is to reach older place-bound and working adults in North Carolina. While the majority (56.9 percent) of regular term students are in the traditional college age range of 18-21, Figure 6 illustrates that UNC distance education programs are succeeding in reaching the non-traditional college-age population. Students who are 26 and older account for 81.3 percent of distance education enrollments compared to only 22.1 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.

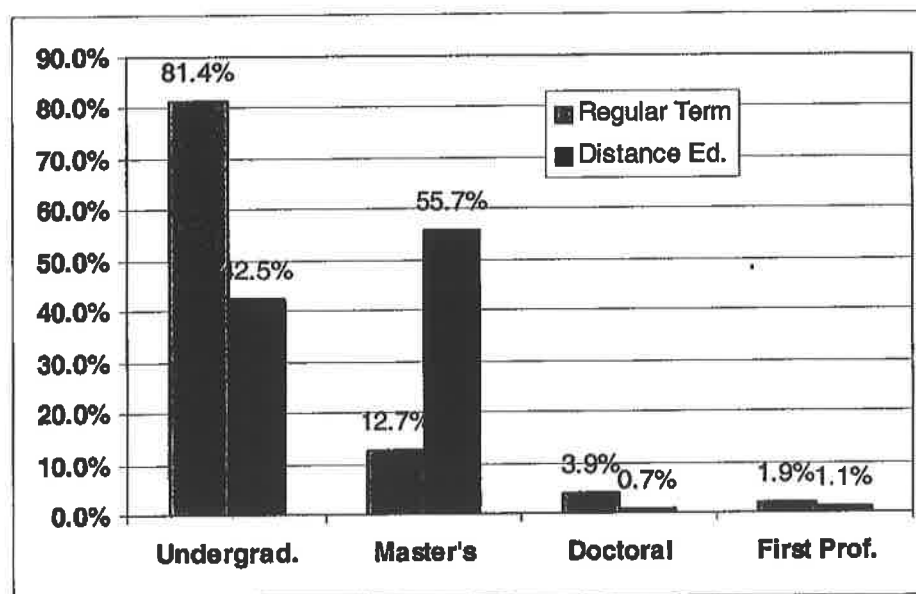
Figure 6. Age Distribution of UNC Students Enrolled in Regular Term and Distance Education Courses, Fall 2003



Residency: As with regular term (on campus) degree programs, students enrolled in state-funded distance education programs are largely North Carolina residents. In fall 2003, 89.5 percent of UNC distance education students were North Carolina residents compared to 85.6 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. 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 schoolteachers, nurses, and others who wish to pursue advanced degrees without leaving their home community. Thus, as Figure 7 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.) The UNC Office of the President 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 7. Distribution of UNC Regular Term and Distance Education Students by Program Level, Fall 2003



Methods of Instructional Delivery: 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. A number of factors influence the instructional delivery mode used by a particular program. In the past, UNC campuses have often responded to requests for off-campus programs from specific agencies (e.g., a community college, school district, or AHEC), and traditional face-to-face instruction has been offered at those sites. Much of this instruction has made a full or partial transition to two-way interactive video as additional "information highway classrooms" have been built at locations throughout the state.

As Internet technology becomes increasingly available and affordable, many online courses have been developed. As noted above, by spring 2004, UNC constituent institutions have developed 67 on-line degree programs. Although "start up" costs for developing such programs may be substantial, the on-line delivery of instruction enables programs to avoid site rental fees and allows access to instruction and course materials at a time and location most convenient for the student. Further, such on-line availability of courses enables UNC campuses to share courses, and a number of distance education degree consortia are being developed among UNC institutions to take advantage of this opportunity.

UNC Office of the President e-Learning and Outreach Initiatives

UNC e-Learning Initiative: In July 2003 the Office of the President developed a White Paper on e-Learning that describes issues, opportunities, and priorities for UNC progress in e-Learning and distance education. Major points of the document include the following:

- At the baccalaureate level, UNC would expect to cooperate with community colleges to identify and offer a select number of degrees online. This would require joint agreements for degree programs and student support, as well as a set of standards for various aspects of the degree offerings.
- Emphasis would be given to developing degree programs in the health professions, particularly Nursing; teacher education; information technology; business; and liberal arts (humanities, social sciences, or interdisciplinary).
- Master's degree e-Learning programs may have some subsets of the courses that can be used for credit certificate programs and for non-credit offerings. As with baccalaureate programs, online master's programs may include some activities such as proctored exams, internships, or lab experiences that require the student to have some site-based interaction, preferably arranged locally for the student.
- Online courses will also be attractive to on-campus students, who can get courses not available otherwise, take courses from home in the summer, supplement their schedule while studying abroad, or who to participate in the online learning experience. Instruction will increasingly be "blended," involving both online and face-to-face activities.
- Collaboration among campuses will be important, enabling degree programs to share courses and thus avoid unnecessary duplication. Joint degrees shared by institutions will become more common.

The White Paper also identified a number of issues to be addressed as the above initiatives are pursued. These issues include: differences in how on-campus and distance education tuition and fees are charged, tuition arrangements for multi-campus courses and programs, cost and revenue sharing in multi-campus collaborations, articulation with community college degree programs, registration, admission, and payment issues involved with taking a course from another campus, technological support for students and faculty, assuring library access for online students, and reviewing residency requirements.

To address these issues, in 2003-04 the Office of the President established the e-Learning Policy Group, comprising campus chief academic, finance, and information technology officers or their designees. One of the first activities of the Policy Group was to survey UNC constituent institutions regarding a range of campus practices, issues, and resources, some of which are noted above. Responses from the campuses have been assembled and distributed to the Policy Group. E-Learning Policy Group members and other selected individuals from campuses and the Office of the President have formed four subcommittees to address the following topics: tuition and fees, multi-campus programs and residency issues, infrastructure and standards, and faculty support.

UNC Office of the President e-Learning grants: To advance the development of e-learning programs, the UNC Office of the President (UNC-OP) has provided a number of grants to UNC constituent institutions in recent years. Grants made prior to fiscal year 2003 are described in the previous biennial report. Based on a state-wide needs analysis by the UNC Office of the President, three academic areas were selected for emphasis in the development of online degree programs: teacher education, health professions education, and technology. Based on these priorities, in FY 2003 UNC-OP renewed grants to UNC institutions to complete planning and development of online degree programs and related licensure and certification courses in the following areas:

ECU: BS in Elementary Education, BS in Middle Grades Education, BS in Birth-Kindergarten Education, RN to BSN Nursing, BSBE in Information Technology, and BS in Industrial Technology

ECSU: BS in Teacher Education

FSU: BS in Elementary Education

NCA&T: BS in Agricultural Teacher Education, MS in Technology Education, BS in Business Education, BS in Occupational Safety and Health, and Licensure in Elementary and Special Education

NCCU: BS in Information Sciences, BS in Early Childhood Education

NCSU: Licensure in Science Education and English as a Second Language, BS in Agricultural Education, and three online Engineering courses

UNCA: Development of labs for information technology courses

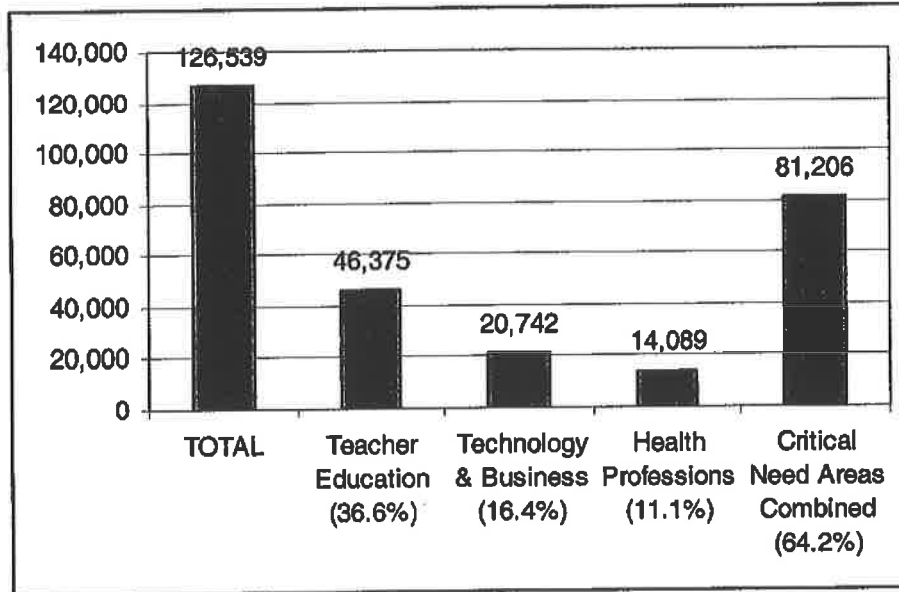
UNC-CH: Licensure in School Library Media, Licensure in Middle Grades Education, and a data skills module for online Master of Public Health program

UNCC: Licensure in Middle and Secondary Education

UNCG: Software license for Blackboard, Enterprise Edition

UNCP: Preschool licensure program

Figure 8. Distribution of UNC Distance Education Student Credit Hours (SCHs) by Area of Critical Need: FY 2003



UNC outreach to NC military bases: Another UNC distance education priority during the two years covered by this report is outreach by the Office of the President and individual UNC institutions to North Carolina's military bases. North Carolina has the third highest population of active duty military in the nation (behind California and Texas), and these individuals, their dependents, and their bases serve an important role in the economic life of the state. Two meetings of UNC-OP and UNC institution representatives have been held with military base education services officers and their commanding officers to review military base educational needs and issues, the first in July 2002 at the UNC-OP building and the second in May 2003 at Seymour Johnson Air Force Base in Goldsboro. Every military base in North Carolina was represented at these meetings (Fort Bragg, Pope Air Force Base, Camp Lejeune and New River Marine Base, Seymour Johnson Air Force Base, Cherry Point Marine Air and Naval Depot, and the Elizabeth City Coast Guard Station).

The outcome of these meetings and numerous visits by UNC-OP staff and UNC institution representatives to NC military bases has been greater communication and collaboration between UNC and the state's military bases than ever before. A number of military base—UNC institution relationships have been established, which will be ongoing as the bases identify educational needs and as North Carolina-based troops return to the state from deployments overseas. UNC-Wilmington has signed a Memorandum of Understanding (MOU) to serve the educational needs of Camp Lejeune/New River Marine base, and Fayetteville State has signed an MOU with Seymour Johnson Air Force Base. East Carolina University and NC State University

have marketed their online degree programs to the military bases, and ECU is establishing degree programs at Wayne Community College in close proximity to Seymour Johnson. Cherry Point Naval Depot and Marine Air Station has the largest civilian engineer workforce in eastern North Carolina, and NC State has enrolled a number of these engineers in its distance engineering master's programs. Fayetteville State continues to offer a number of degree programs at Fort Bragg that serve the needs of that base and Pope Air Force Base, and additional UNC institutions are seeking opportunities to serve these bases. The Elizabeth City State University Aviation Science program has a close working relationship with the nearby Coast Guard Station.

Assuring Quality in UNC Distance Education Programs

UNC constituent institutions are committed to providing the same level of quality instruction to students enrolled in distance education programs as for students in on-campus degree programs. In general, the same evaluation processes for course and instructor quality used on campus are used for distance programs as well. Program assessment is typically done on a course-by-course basis. Some of the approaches to ensuring quality include: student surveys on quality of course and instructor, analysis of student performance and demographic data, surveys of satisfaction with services such as registration and library access, peer evaluation of teaching, program advisory councils, use of evaluation specialists, and feedback from employers and internships. The companion CD that was produced to accompany this report, *Dreams to Degrees*, contains separate sections for every UNC institution offering distance courses or degree programs, and each institution's section contains a statement of how it ensures the academic quality of its distance offerings.

Another powerful indication of the quality of UNC distance education programs comes from comments offered by distance education students and others regarding their experiences with these programs. In addition to the quotes offered in the Preface of this report, many of the individual campus sections on the *Dreams to Degrees* CD contain many additional student comments about the contributions that UNC distance programs have made to their communities and the differences these programs are making in people's lives.

Each UNC distance education program must provide a variety of quality-related information to the Office of the President before the program is authorized for establishment, including: intended outcomes and learning objectives, curriculum and schedule, faculty and support staff, library and learning resources, physical resources, financial support, and evaluation and assessment. These requirements conform to standards established by the Southern Association of Colleges and Schools (SACS) Commission on Colleges (COC), which includes quality of distance education programs among the criteria that accredited institutions must address.

The UNC Office of the President also assesses perceived quality of distance education programs by comparing results of graduating senior surveys conducted with

students enrolled in comparable on campus and distance degree programs. Outcomes of the last round of surveys (summer 2002) indicated that the great majority of distance education students are very pleased with the quality of their education, and their ratings of their educational experiences and outcomes were generally similar to those of on-campus students. Over 90 percent of both undergraduate groups gave their instructors an overall rating of excellent or good on a set of eight measures of faculty teaching effectiveness. The great majority of undergraduates in both groups believed that their educational experience contributed to their knowledge, skills, and personal development on a variety of dimensions, including writing, mathematical, and speaking skills. When asked how they would evaluate the quality of instruction in their major, 92.3 percent of on-campus students rated the instruction as "good" or "excellent," compared to 92.8 percent of distance students. When distance education students were asked, "How likely would you have obtained your degree had the off-campus program not been available?," nearly half (48.3 percent) responded "not likely," or "probably not."

Graduate students, both on and off campus, were also surveyed in summer 2002, and both groups were similarly positive about the quality of their instruction, with approximately 95 percent of both groups of students rating their instruction as excellent or good. In general, faculty teaching distance education classes have found their students to be motivated and to perform at levels of achievement comparable to their on campus student counterparts.

Cost Analysis of Distance Education

Methodology: The costs analysis was measured for a sample of instruction of paired courses offered both on- and off-campus during the spring and fall 2003 semesters. The data collection method used the same methodology conducted in the previous reporting requirements. Course selection occurred as the unit of analysis, since there are very few programs that delivered in their entirety both on- and off-campus, or which conclude within a single year. In order to satisfy the reporting deadline, the calendar year 2003 was chosen as the measurement period. Courses taught in either spring 2003 or fall 2003 qualified for measurement. The methodology was designed to capture total costs. Where possible, actual costs were used; for allocation of indirect (facilities and administration) costs, a variation of the method used to charge indirect costs on federal contracts and grants was used. The standard formula was adapted to recognize the intent to capture total costs and was applied on an institutional basis. A sample of nine "course pairs" was selected to compare an on-campus course to a similar off-campus course. The sample was chosen to include courses with variations in methods of instructional delivery, course instructional level and discipline. The overwhelming majority of the course pairs selected were separate sections of the same course taught during the same time period.

Findings: In the current costs analysis, the total costs for funding distance education courses per course enrollment (*i.e.*, one student registration in one course) were 75 percent higher than funding for on-campus students. Study results yielded an average

total cost for distance education course delivery of \$1,219 per course enrollment. On-campus course delivery costs averaged \$310 per course enrollment.

The difference in costs per course enrollment between on-campus and distance education courses is mainly explained by the number of students enrolled in each course. (This finding is also supported by the UNC-Wilmington cost study described below.) Average costs for instructional delivery for on-campus and distance courses were generally similar (\$21,687 for distance classes and \$23,199 for on-campus classes). However, the average class size for the on-campus courses examined in this study was 77, compared to an average class size of only 20 for the distance education courses. Enrollments in two on-campus courses in the study exceeded 190, whereas the largest online distance class enrollment was 26.

The three biennial costs analyses performed to date all indicate that 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. At the present time, the primary faculty member does the largest part of the course development, delivery and administration, although this may change somewhat when non-traditional delivery methods are employed. In the current analysis, instructional salary costs accounted for 79 percent of the costs of traditional "face to face" distance education instruction and for 63 percent of technology-mediated courses (online, CD, and streaming video). When instructional salary costs were subtracted from the overall course costs, "face to face" courses cost \$326 per course enrollment, online (Internet) courses cost \$437 per course enrollment, and streaming video/CD classes cost \$470 per course enrollment.

Course development costs comprise a significant part of the costs measured for those courses delivered in a non-traditional manner (for our purposes, Internet or interactive video). 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 and not anticipated by our current funding model.

Allocated capital cost of physical facilities appears to be less of a factor than was originally anticipated. For the on-campus courses, a portion of the space used, taking both square footage and space utilization factors into account, produced a relatively small charge for virtually all on-site classes. While the costs of facilities for off-site courses taught in the traditional, face-to-face manner were usually higher, they still did not make up a significant portion of the total costs in most cases. It should be noted that no attribution of the capital costs associated with the infrastructure required to enable courses to be taught at a distance has been made.

Campus cost studies: In addition to the UNC-OP study described above, UNC institutions also conduct their own analyses of instructional costs of distance education programs. During 2003, UNC-Wilmington conducted a comprehensive financial analysis of on-line education that encompassed both direct (variable and fixed) and indirect costs. Faculty salaries, administrative support, start-up development costs, incremental web support costs, operating costs and a factor for institutional support were considered in the

analysis. Costs were aggregated from individual departments to college/school level for comparative purposes against traditional face-to-face delivery methods. Three years of historical data were used. The results indicated substantially higher costs for the development and ongoing delivery of on-line classes relative to face-to-face delivery systems. This was due almost entirely to the reduced number of student credit hours that could be accommodated by a single faculty member in on-line classes versus face-to-face. By attempting to balance class size with adequate communication and quality, on-line course student credit hour production was on average substantially lower than face-to-face. The outcomes have resulted in analysis and testing of new faculty work-load models and teaching methods to expand student credit hour production while assuring a quality education for all students. Results from these new methods will be assessed during the 2004-2005 year.

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.

UNC distance education funding is one of several steps taken by the General Assembly and the UNC Board of Governors in recent years to enhance educational access and efficient instructional delivery in the state, and it is likely that other initiatives

and developments will continue to advance this commitment in the future. Both off-campus degree program offerings and off-campus enrollments have increased sharply during the first six years of state funding, and there is every indication that this growth will continue if distance education enrollment funding increases proportionately to accommodate this growth.