PRELIMINARY REPORT ON EXPANDING ACCESS TO HIGHER EDUCATION THROUGH UNC OFF-CAMPUS/ DISTANCE EDUCATION PROGRAMS

April 2000

Submitted by The University of North Carolina Board of Governors in response to North Carolina Session Laws 1998, chapter 212, section 11.7 of the North Carolina General Assembly

Table of Contents

I. Executive Summary

This report provides the General Assembly with a preliminary accounting of progress achieved in UNC off-campus (distance) education in response to enrollment funding first authorized in fiscal year 1998-1999 by the following legislation:

North Carolina Session Laws 1998, chapter 212, section 11.7
(UNC Distance Education)

> *This act provides funding to The University of North Carolina Board of Governors for degree-related courses provided away from the campus sites of the constituent institutions of The University of North Carolina. The intent of this commitment is to provide expanded opportunities for higher education to more North Carolina residents, including nontraditional students, and to increase the number of North Carolina residents who earn post-secondary degrees.*
>
> *These funds shall be used for the provision of off-campus higher education programs, including the costs for the development or adaptation of programs for this purpose, and the funds may be used for the costs of providing space and services at the off-campus sites....*
>
> *The Board of Governors shall track these funds separately in order to provide data on the costs of providing these programs, including the different costs for various methods of delivery of educational programs. The Board of Governors shall provide for evaluation of these off-campus programs, including comparisons to the costs and quality of on-campus delivery of similar programs, as well as the impact on access to higher education and the educational attainment levels of North Carolina residents. The Board shall provide a preliminary report to the General Assembly by May 1, 2000, and subsequent evaluations, including recommendations for changes, shall be made at least biennially to the Joint Legislative Education Oversight Committee.*

Findings of this preliminary report are as follows:

1. Impact on access to higher education

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 or graduate degree. This expanded availability of distance education programs is also helping to alleviate some of the demand for on-campus enrollment growth. Degree programs are being developed and offered throughout the state in subject

areas that are directly relevant to individuals who wish to advance in their chosen careers in their home communities. Illustrative examples of such initiatives are offered for each UNC campus in this report. Other data supporting this conclusion include the following:

- Authorized UNC off-campus degree programs increased by 45 percent during the 1998 and 1999 calendar years, from 107 to 155. These programs were generally designed for students to work on degrees in their home community and to maintain or obtain degree-related jobs in their home community (*e.g.*, teacher education, nursing, engineering).
- These programs were offered at sites in 51 North Carolina counties. As of spring 2000, six programs are offered entirely on-line throughout the state and region.
- Students from every county in North Carolina were enrolled in these degree programs. From fall 1998 to fall 1999 there was an increase of over 13 percent in the number of individuals registered for one or more UNC off-campus courses, from 5,198 to 5,988. Of the 5,988 students, 4,954 were in courses funded by the distance education enrollment funding model.
- At least 70 percent of distance education students were 26 or older, and more than 25 percent were 41 or older. (On campus, less than 30 percent of students are 26 or older, and only about five percent are 41 or older.) Thus these programs are reaching "non-traditional-age" higher education students who might not be able to relocate to a UNC campus.
- At least 60 percent of enrolled distance education students were female. Approximately one-quarter or more were minority students.
- Only 22 percent of students surveyed in off-campus graduate degree programs indicated they would have pursued a graduate degree on a UNC campus if the off-campus program were not available. About half of off-campus baccalaureate degree students (48.6 percent) indicated it is likely or probable that they would have enrolled on a UNC campus if the off-campus program had not been available. This demonstrates that funding provided for UNC off-campus programs is having its intended effect of providing higher education opportunities for students unable to enroll on a UNC campus.
- On the other hand, 408 students surveyed indicated that it is likely or probable that they would have enrolled on a UNC campus if the off-campus program had not been available. Thus, the off-campus programs are also achieving their intended effect of relieving some of the pressure for accommodating enrollment growth on campus.
- Over 57 percent of off-campus graduate students indicated they planned to continue their current job during the next year, compared to 17 percent of on-campus graduate

students. Again, this demonstrates that off-campus degree programs are meeting the needs of students who cannot relocate to a UNC campus.

- (See Section III below for additional information.)

2. Quality of comparable off-campus and on-campus programs

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 are generally similar to those of on-campus students. Student written comments, some of which are included in this report, support this finding. UNC campuses ensure that comparable standards of quality are maintained in on- and off-campus programs and generally use similar evaluation procedures (as well as additional evaluation designed specifically to address distance education issues). In general, faculty teaching off-campus classes have found their students to be motivated and to perform at comparable (or higher) levels of achievement as compared to their on-campus students.

- In general, undergraduate students enrolled in comparable on-campus and off-campus programs had similar opinions about the quality of their education. Over 90 percent of both groups gave their instructors an overall rating of excellent or good on a set of eight measures of faculty teaching effectiveness. Similarly, over 90 percent of both groups rated the quality of instruction in their major as excellent or good.
- Off-campus undergraduate students were more likely to rate campus technology services as either excellent or good (*e.g.*, over 80 percent of off-campus students rated access to trained staff for help as either excellent or good compared to 64 percent of on-campus students).
- On-campus undergraduate students were more likely to rate services as excellent or good that are traditionally offered on campus, such as employment search assistance.
- The great majority of students in both groups believed that their undergraduate experience contributed to their knowledge, skills, and personal development on a variety of dimensions, including writing, mathematical, and speaking skills.
- Graduate students, both on and off campus, were similarly positive about the quality of their instruction, with 94.7 percent of off-campus students and 95.0 percent of on-campus students rating their instruction as excellent or good. Comparable percentages (81.1 percent off-campus, 81.5 percent on campus) said they would still choose to enroll in the program if they could start over again.
- Although graduate student ratings of advising and support services were generally comparable, off-campus student ratings were slightly higher in all five advising categories.

- When asked to rate their satisfaction with various methods of off-campus instructional delivery, 97.1 percent of off-campus graduate students were very or generally satisfied with the face-to-face instruction compared to 89.7 percent for videocassette instruction, 87.2 percent for e-mail exchanges, and 77.7 percent for both web-based instruction and two-way interactive video.
- (See Section IV below for additional information and Attachments 1 and 2 for full survey results.)

3. Comparison of costs of comparable off-campus and on-campus programs

Preliminary findings on off-campus course costs are that they are generally greater than on-campus costs for comparable classes. These findings should be viewed with some caution because North Carolina is one of the first states to attempt such a comprehensive analysis, and little national data are available for comparison. Costs of off-campus courses that rely heavily on information technology (*e.g.*, web-based or two-way interactive video) are greater than the costs of either on-campus or off-campus face-to-face instruction, although some of these costs reflect "up front" expenses related to initial development. To the extent that development of on-line courses enables UNC institutions to collaborate in offering a diverse array of courses with little duplication, this up-front investment may prove to be cost effective in the long run. Benefits related to these costs are also achieved by providing the only means some North Carolinians may have to increase their earnings and improve their lives through higher education.

- Appropriations for UNC distance education were expended in the following manner: 51 percent for salaries and contracted support and development services, 35 percent for information technology purchases, and 14 percent for libraries, instructional supplies, and faculty travel.
- On average, off-campus courses were found to cost more than comparable on-campus courses. Primarily, this can be attributed to the fact that a larger percentage of the off-campus courses were heavily technology-mediated and incurred higher development and technology costs.
- On average, traditional "face to face" off-campus instruction was the least expensive method of off-campus delivery, costing about as much as the average on-campus course. Internet and web-based instruction was almost 44 percent more expensive, and two-way interactive video was the most expensive form of instruction, exceeding traditional instructional costs by 77.5 percent.
- Differences in costs were mainly attributable to the instructional delivery mode employed. The high cost of course development for technology-mediated courses was a large component of this cost differential.

- (See Section V below for additional information.)

[Note: The cited legislation provides enrollment funding for UNC degree-related courses and programs that are offered either at off-campus sites or to students who are at a distance from the campus offering the instruction. Such instruction is categorized in the legislation as "distance education," and in this report "off-campus education" and "distance education" will be used interchangeably and include instruction where the faculty member goes to an off-campus site to teach the class in person. It should be noted that in other contexts, the term "distance education" may refer only to instruction where the instructor and the student are at different locations.

The focus of this report is on UNC off-campus/distance education activities that are supported by enrollment funding provided by the General Assembly in the legislation cited at the beginning of this document. Thus, the student surveys and cost analyses presented in this report are limited to students and courses in programs funded by the distance education enrollment model, and unless otherwise noted, the descriptive data below refer to off-campus programs on the distance education funding model. Student credit hours that were not supported by the funding model include the following:

- Instruction delivered to non-North Carolina residents receiving the instruction outside of North Carolina
- Instruction that receives other state support. In fall 1999, several off-campus programs (remaining off-campus pilot site programs, the N.C. Consortium for Distance Education in Communication Sciences and Disorders) received other state funding in lieu of enrollment model funding. All remaining pilot site funding will be incorporated into the enrollment model by fiscal year 2002.
- Instruction that is customized for a specialized audience, such as the UNC-Chapel Hill Kenan-Flagler School of Business Executive MBA Program.]

II. Background: North Carolina General Assembly and UNC Initiatives in Distance Education in Recent Years

The Plan for Continued and Expanded Availability of Higher Education in North Carolina

The legislation funding UNC off-campus degree-related instruction is one outcome of ongoing General Assembly interest in expanding access to higher education that has been expressed in recent years. Senate Bill 393 of the 1993 Session Laws called upon the Board of Governors of The University of North Carolina to:

> *...develop a plan for the continued and expanded availability of higher education for all citizens, focusing on the availability of opportunities in underserved areas.... The expanded use of video and audio distance learning technology, the expanded use of graduate centers to avoid program duplication, the potential for expanded funding of extension instruction, and increased cooperative programs with the community college system should all be considered in developing this plan.*

The outcome envisioned by that legislation paralleled the commitment made by the Board of Governors in its long-range planning to "provide opportunities for all North Carolinians to participate in higher education, consistent with their abilities and needs" by improving "access to higher education for students who, because of their location, family or work responsibilities, cannot participate in on-campus regular term instruction."

On November 8, 1996, the Board of Governors responded to the 1993 legislation by approving *A Plan for Continued and Expanded Availability of Higher Education in North Carolina*. The plan reported the outcomes of four extensive surveys conducted to ascertain the level of demand for off-campus programs and citizen preferences for instructional delivery. Among other findings, responses from a telephone survey of a random sample of 1,200 adults suggested that thousands of North Carolinians with educational backgrounds that would suggest readiness for a baccalaureate completion degree or master's degree were interested in taking coursework toward such a degree – if the coursework were offered at a convenient time and location. Other surveys (mailed responses from newspaper inserts in underserved areas, community college student surveys, and K-12 teacher surveys) also indicated strong interest in off-campus degree programs. A later UNC-GA survey of community college presidents about most needed degree programs for their communities (August 1998) confirmed earlier findings about the need for such programs and the types of programs (business administration, computer science/information systems, criminal justice, early childhood education, elementary education, nursing) most requested.

The University's response presented in the 1996 *Plan* included the following statement:

> At present UNC off-campus instruction (whether delivered on-site or by distance learning technologies) does not receive state-appropriated support, as is provided for regular term on-campus instruction. Consequently, each constituent institution offering off-campus instruction is required to set its charges at a level sufficient to cover direct instructional costs. This has greatly limited the outreach of UNC institutions in the past. (Within the 15-state Southern Regional Education Board [SREB] region, only North Carolina fails to provide full or partial state funding for off-campus instruction.) However, the legislation

> mandating this study, as well as special provisions enacted in 1995, instruct the University to address this issue by recommending funding for off-campus instruction and distance learning. In response, the University has proposed in its 1997-99 biennial budget request that state funding comparable to that provided for regular-term instruction be provided for off-campus and distance learning instruction.

The 1998 Reconvened Session of the General Assembly, in the legislation cited at the beginning of this report, addressed this request by providing enrollment funding for UNC off-campus programs at a level equivalent to the funding that would be provided for on-campus enrollment expansion.

Related Distance Education Initiatives

In addition to developing the plan called for in the above legislation, the board authorized several initiatives during the last half of the 1990s to emphasize this commitment. Using $1,000,000 in special funding appropriated by the 1995 Session of the General Assembly, the Board of Governors authorized the following UNC institutions to offer baccalaureate completion programs on community college campuses and military bases in the counties indicated: UNC Wilmington (Onslow County), East Carolina University (Carteret and Craven Counties), Appalachian State University (Burke, Rutherford, and Cleveland Counties), and UNC Pembroke (Moore and Richmond Counties). These off-campus pilot degree programs offered the following majors: education of young children, elementary education, middle grades education, nursing, business administration, social work, computer science, criminal justice, sociology, industrial technology, and business/information processing.

In 1996, the General Assembly appropriated additional funds to support pilot programs that utilized a variety of distance learning technologies. The Board of Governors authorized approximately $850,000 for the following programs that commenced in 1997: UNC Charlotte (baccalaureate in engineering technology, master's in special education), East Carolina University (master's in speech pathology; baccalaureate in nursing), NC Central University (baccalaureate in nursing), UNC Wilmington (expansion of baccalaureate in elementary education program, addition of secondary education licensure), and UNC-CH (master's in public health practice and leadership). Community colleges serving as sites for these programs included Forsyth Technical Community College, Gaston College, Mitchell Community College, Rowan-Cabarrus Community College, Wake Technical Community College, Halifax Community College, Coastal Carolina Community College, and Montgomery Community College.

In addition to the pilot projects in distance education listed above, special funding was provided to North Carolina State University to introduce two-plus-two baccalaureate

degree programs in engineering at East Carolina University and UNC-Wilmington, with connections to nearby community colleges (agreements are being negotiated with Lenoir Community College and Coastal Carolina Community College). NCSU also received funding to expand other engineering distance learning initiatives statewide.

The UNC Board of Governors also provided funding in 1997 for the first UNC consortium of campuses to offer a distance education degree program. The North Carolina Consortium for Distance Education in Communication Sciences and Disorders, comprising five UNC campuses (ASU, NCCU, UNC-CH, UNCG, and WCU), makes it possible for currently practicing public school speech-language pathologists throughout the state to upgrade their credentials to the master's degree without interrupting their service to the schools. The program was developed in response to a federal requirement that all public school speech-language pathologists have the master's credential by 2005.

In all of the above activities, UNC constituent institutions learned valuable lessons about instructional delivery and student support at a distance. For instance, the value of a program coordinator, located either on a UNC campus or at a distant site, was underscored, and the need to coordinate programs well in advance to enable students to make their educational plans accordingly became evident.

UNC Response to Distance Education Enrollment Funding

In response to the provision of off-campus enrollment funding, a number of activities were conducted during 1998-1999 to assist UNC campuses prepare for this increasingly important aspect of their missions. Frequent systemwide meetings and videoconferences were held to discuss common issues such as student support, software systems, and appropriate uses of the distance education funding. Campuses developed new systems for billing off-campus students and for keeping track of financial, student, and other data, and UNC General Administration developed a detailed manual to assist campuses in addressing a variety of funding and record-keeping issues. An agreement was reached with the North Carolina Community College System on fees to be charged in exchange for the use of their facilities and needed services at community college sites, and a policy was developed to reimburse the four UNC graduate centers for programs offered at their sites. Additional systemwide meetings and videoconferences were held to develop a UNC response to the legislatively-required comparisons of on- and off-campus programs.

In February 1999, UNC chief academic officers acted to ensure quality in distance education offerings by adopting a "vision and values" statement to guide campuses in developing off-campus programs. Among the principles set forth in the document are the following:

- Constituent institutions will be encouraged to develop courses and programs in areas that focus on their existing strengths.
- The quality of courses and programs offered through distance education will be comparable to those taken on campus.
- Students enrolled in distance education courses and programs will receive appropriate student and academic services (*e.g.*, admissions, registration, financial aid, advising, library, computing, etc.) as needed to promote student success in the course and/or program.
- Students enrolled in distance education courses will be held to course and program standards and performance expectations comparable to those for on-campus students.
- In planning distance education courses and programs, faculty will take care to develop opportunities for interaction with and among students.
- Institutions will provide adequate training and support for faculty using technology to deliver distance education.
- Teaching by distance education should be considered an important part of faculty professional responsibilities and should be given full consideration in the reward structure.

III. The Impact on Access to Higher Education

Examples of UNC responses to North Carolina's distance education needs.

Careful needs assessments are conducted and reviewed before any off-campus degree program is authorized, and UNC constituent institutions have been active in reaching out to their regions to identify these needs. UNC off-campus and distance education programs have been developed to serve the needs of a wide array of North Carolina's citizens, including:

⇒ the school teacher who wishes to obtain a master's degree that conforms to the state's recent advanced competencies requirements;

⇒ the person who wants to become a teacher but lacks the appropriate undergraduate courses;

⇒ the registered nurse who wishes to advance to a position requiring a baccalaureate (or even a master's) degree;

⇒ the community college student who hopes to earn a business, social work, criminal justice, or other baccalaureate degree in his/her home community;

⇒ the industry manager who wants to obtain a master's degree in business, industrial technology, project management, engineering, textile chemistry, computer science, or some other professional area;

⇒ the health department director or hospital administrator who wishes to upgrade his/her skills with a master's degree in public health or health administration; and

⇒ the community college faculty member who must obtain the master's or doctoral degree in response to new accreditation requirements.

The following examples indicate the diversity of ways in which UNC's constituent institutions have responded to the distance education needs of the state during the first two years of off-campus enrollment funding.

Appalachian State University:

- The Appalachian Learning Alliance was formed in 1999 with the goal of adding at least one baccalaureate degree-completion program at each of the nine community colleges in Appalachian's traditional service region. Programs, which will be jointly identified by the community college and Appalachian, will emphasize areas where there are jobs available in the communities of place-bound students. Current programs are offered in elementary education, social work, and business, and plans include programs in secondary education and criminal justice.
- A Master's in Computer Science program is being offered at Wilkes Community College, in part because of the need of Lowes Corporation (a major employer in the area and state) for workers with these advanced skills.
- Appalachian offers master's degrees (*e.g.*, school administration, educational media, special education, middle grades education, and business administration) in several counties in western North Carolina for individuals who are unable to further their education in an on-campus program.

East Carolina University:

- In spring 1999 East Carolina University hosted 17 community colleges at a day-long meeting to discuss needed programs and collaboration opportunities. The fall meeting was cancelled due to flooding, but the colleges will participate in ECU's Teaching and Technology Conference in April 2000.
- ECU has worked closely with the Area Health Education Centers (AHEC) Program to identify areas in eastern North Carolina where nursing baccalaureate (RN to BSN) and master's programs are needed. These areas currently include Carteret, Cumberland, Halifax, New Hanover, and Pasquotank counties. The RN/BSN

programs have graduated 199 nurses to date, and the MSN programs have graduated 62 nurses to date.

- On-line master's degree programs in industrial technology (the first completely on-line program developed by a UNC campus) and occupational safety have been developed to prepare workers for new roles as the changing economic base of North Carolina continues to emphasize the need for professionals with advanced technical and management skills. These programs are particularly useful for industry and business employees who live at a distance from the ECU campus, who have demanding travel schedules, and who may relocate during the course of their program. Building on this success, an on-line baccalaureate program in Industrial Technology has also been established.

Elizabeth City State University

- Elizabeth City State has established the Virtual College, a collection of on-line undergraduate courses designed to extend access to prospective students who are geographically isolated or time-constricted.

Fayetteville State University:

- Fayetteville State University continues to serve the needs of its community by offering nine baccalaureate completion programs at its Fort Bragg/Pope Air Force Base center. In fall 1999, 820 individuals were registered for courses at this location.

North Carolina A&T State University:

- North Carolina A&T State University also serves the needs of the Fort Bragg/Cumberland County region by offering master's degrees in health and physical education and architectural engineering/facilities engineering. The latter program is designed to meet the needs of personnel involved in the management of medium to large complex military, industrial, and manufacturing facilities.
- In response to requests from community college faculty, local businesses, and human resources personnel, NCA&T also offers master's programs in adult education and vocational-industrial education in Gaston and Mecklenburg counties.

North Carolina Central University:

- In March 1999, Chancellor Julius Chambers welcomed representatives from a number of community colleges in central North Carolina to a conference to discuss seamless transition of community college students to NCCU. As one outcome, in August 1999, 15 specific articulation agreements were signed with the presidents of eight community colleges. Many of these colleges are or will be sites for NCCU distance education programs.

- NCCU offers baccalaureate nursing programs in Person and Wake counties. Registered nurses without baccalaureate degrees constitute the largest category of nurses practicing in North Carolina. The shift to a managed care environment requires a greater number of highly trained nursing professionals.

North Carolina State University:

- The Master of Engineering program was developed 20 years ago to meet the education needs of engineering professionals in North Carolina. Admissions into the program have grown at an average annual rate of 26 percent since program inception. Enrollments exceed 1,000 course registrations per year.
- A baccalaureate degree in engineering is offered on the UNC-Asheville campus in response to needs expressed by citizens and industry in that area.
- A doctorate in adult & continuing education is also offered in Asheville to serve adult and higher education professionals in western North Carolina. The NC Community College System expressed a great need for this program and provided some financial resources during the first four years of operation.
- Two on-line masters programs (computer & information sciences, wood and paper sciences) were established in 1999 to respond to identified needs of approximately 3,000 individuals employed in the paper and allied industries in North Carolina.
- A Master of Textiles degree is offered for the thousands of individuals working in the textile industries of North Carolina. A wide variety of courses are offered via videocassette, and programs are tailored to meet individual student needs.

UNC-Asheville

- UNCA is exploring possibilities for off-campus educational offerings and has developed a draft distance education philosophy statement that emphasizes the campus's strong commitment to high instructional quality.

UNC-Chapel Hill:

- The Executive Master's Program in Healthcare Administration offers the Master of Public Health (MPH) and the Master of Healthcare Administration (MHA) to full-time working healthcare professionals at five sites across the state. One of the UNC system's oldest off-campus programs, the Executive Master's Program, has graduated over 600 students in its three decades.
- The Master of Social Work degree has been offered at UNC graduate center locations in Asheville and Charlotte in direct response to requests from local agencies for a program for working professionals.

- Baccalaureate completion programs (BSN) are offered at community college sites in Johnston and Montgomery counties in response to the need to upgrade the qualifications of nurses in those regions.
- Carolina Courses On-line is a collection of courses developed for Internet access both by students on campus and at a distance.

UNC-Charlotte:

- A Graduate Certificate in Supported Employment and Transition is offered to meet the statewide need for educational and community agency personnel who serve North Carolina citizens requiring special assistance in making the transition to independent living and gainful employment.
- An on-line baccalaureate program in engineering technology (fire safety) will begin in fall 2000 in response to the need cited by the state's association of fire chiefs for a baccalaureate completion program to prepare firefighters (and those employed in fire and safety/security positions in industry) for their increasingly complex service and leadership responsibilities.
- A site-based (Gaston, Forsyth, and Wake counties) baccalaureate degree in engineering technology (electrical engineering) will be expanded to a statewide on-line program in fall 2000. Electrical engineering technology graduates are in high demand within a core of high-tech industries that have been targeted as important to the economic future of the state.
- A master's degree program in nursing will be offered in Rowan and Gaston counties beginning in fall 2000. UNC-Charlotte is the only institution in its 13-county region offering a graduate program in nursing.

UNC-Greensboro:

- The Master of Library and Information Studies program has been offered at the Charlotte and Asheville graduate centers since 1992, helping to address the shortage of trained professionals in media and information sciences. Evidence of the need for the programs is documented in requests from the public schools and in strong enrollments at both locations.
- The BS and MS in Nursing have been offered in Catawba County since 1988 and 1992 respectively. They were developed to train health care professionals and reduce the shortages of such professionals in this area.
- A master's degree program in liberal studies serves students from throughout the Piedmont Triad area at a convenient central location. Many individuals seek such a degree to "round out" their job-related professional training.

- A BS in community health education offered in Wake County enables human services professionals to complete a baccalaureate degree. This degree is one of the unique "2 plus UNCG" articulation agreements that incorporate the community college AAS degree into the completion of the baccalaureate degree. (Most AAS degrees do not transfer to universities, but the "2 plus UNCG" agreements give students the chance to build upon their professional training.)

UNC-Pembroke:

- To this point, UNCP has focused its off-campus instruction on Richmond and Sandhills community colleges in Richmond and Moore counties respectively. Its baccalaureate programs in business, nursing, and sociology at these sites were in the first group of off-campus pilot site programs funded in 1997. To these programs have been added baccalaureate programs in criminal justice at Richmond Community College and public management at Sandhills Community College.

UNC-Wilmington:

- The primary location for the UNCW distance education program is Coastal Carolina Community College in Onslow County. Onslow County has one of the highest concentrations of North Carolina residents who live at a distance from a UNC campus and was one of the original off-campus pilot program sites. Coastal Carolina has allocated administrative and classroom space for the UNCW programs, and the university also has an agreement with Camp Lejeune Marine Corps Base for use of base facilities. UNCW, in return, has made a substantial investment in Coastal Carolina's two-way video facility. Current offerings by UNCW include baccalaureate degree programs in business administration, criminal justice, education of young children, elementary education, and nursing.
- The UNCW Division of Information Technology Systems convened a meeting of area community college presidents in October 1999 to discuss partnerships in web development, common courses, web-course articulation, and economic impact particular to the area, and an agenda for ongoing collaboration was developed.

Western Carolina University:

- Western Carolina offers a variety of degree programs in counties throughout its service region, including a master's program in educational administration (two-year college) and baccalaureate programs in birth-kindergarten education, middle grades education, clinical laboratory sciences, industrial technology, and nursing developed in response to needs identified through consultation with representatives of targeted audiences.

- Western Carolina developed one of the first completely on-line degree programs in the UNC system, the Master of Project Management. One of only a few similar programs in the US, the program is designed to reach a worldwide audience of working, mid-career professionals.

Winston-Salem State University:

- Winston-Salem State's focus in off-campus has been on health sciences programs. The university offers baccalaureate completion programs in nursing at community college and AHEC locations in five counties (Davidson, Rowan, Surry, Watauga, and Wilkes) based on needs assessments of the profession and of those communities.
- WSSU has recently implemented its first completely on-line program, a baccalaureate degree in clinical laboratory science. The program targets associate degree medical laboratory technicians who have full-time jobs and family responsibilities that make it difficult to attend on-campus classes.

Growth of UNC Off-Campus/Distance Education Programs.

In response to the enrollment funding provided by the General Assembly for UNC off-campus programs, the number of programs and the number of North Carolina students enrolled in these programs have increased significantly in the last two years. Authorized off-campus degree programs increased by 45 percent during the 1998 and 1999 calendar years, from 107 to 155. In spring 2000, six programs were entirely on-line and available to citizens across the state, and several others were available in certain regions of the state. The remaining programs were offered at sites in 51 counties throughout North Carolina.

Figure 1. North Carolina Counties *(shaded)* with Sites for UNC Off-Campus Degree Programs: Fall 1999

One or more UNC distance education programs were delivered at these sites:

- 25 North Carolina Community College System campuses
- 12 AHEC or other health-related locations
- 10 North Carolina public schools
- 4 UNC graduate centers
- 3 military bases

A total of 738 funding-model distance education courses were offered in fall 1999, a 91 percent increase over the 387 courses funded in fall 1998. Part of this growth is explained by the shift of off-campus programs offered at UNC graduate centers and by former pilot site programs onto the distance education enrollment funding model in fiscal year 2000. Overall growth in off-campus courses from fall 1998 to fall 1999 was 29 percent, from 652 to 838. Students from every county in North Carolina were enrolled in UNC off-campus courses in 1999.

Example of UNC Distance Education Delivered to an Underserved Region.

The North Carolina Department of Commerce has divided the state into seven economic development regions. One of the most disadvantaged of these regions in terms of educational attainment and per capita income is North Carolina's Northeast, a 16-county area that has only one UNC constituent institution, Elizabeth City State University, within its boundaries. However, in addition to on-line degree programs and courses from UNC institutions (including ECSU's Virtual College – a collection of on-line undergraduate courses), residents of that region have access to on-site master's degree programs in school administration, special education (two specializations), elementary education, speech communication disorders, public health, and health administration and baccalaureate degree programs in nursing (two sites) and business education. Although many of the programs are offered at ECSU's graduate center in Pasquotank County, there are also program sites located in the Northeast's Dare, Halifax, and Northampton counties.

Characteristics 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. A rapidly expanding inventory of off-campus degree programs is providing access to higher education for these students. In the fall 1999 semester, 4,954 individuals registered for one or more UNC funding-model off-campus courses, an increase of 72 percent compared to the 2,874 individuals who registered for courses funded by the enrollment model in fall 1998. Overall, there was a 15 percent increase of individuals

registered in off-campus courses, from 5,198 to 5,971, during that period. In fall 1999, the 4,954 students in funding model-supported courses had the following characteristics:

Race/ethnicity:

- American Indian: 0.7 percent
- Asian: 2.0 percent
- Black: 16.9 percent
- Hispanic: 1.2 percent
- White: 70.8 percent
- Not reported/Other: 7.5 percent

These percentages appear comparable to the overall composition of UNC students enrolled in on-campus programs.

Gender:

- Female: 63.3 percent
- Male: 30.2 percent
- Not reported: 6.5 percent

A higher percentage of women are enrolled in off-campus programs than is the case for on-campus degree programs (55.6 percent female). Because of the generally older age of off-campus students, these women are likely to be unable to relocate to a UNC campus for work or family reasons. Thus, off-campus programs are achieving their intended effect of reaching "non-traditional" higher education students.

Age:

- 21 or younger: 10.4 percent
- 22 – 25: 12.2 percent
- 26 – 40: 42.6 percent
- 41 – 64: 26.6 percent
- 65 or older: 0.2 percent
- Not reported: 8.0

On campus, less than 30 percent of students are 26 or older, and only about five percent are 41 or older. Again, the above data demonstrate that UNC off-campus

programs are reaching non-traditional-age students who are often unable to travel to or relocate to a UNC campus.

Degree level of student:

- Undergraduate: 28.2 percent
- Graduate: 47.2 percent
- Unclassified/Missing: 24.6 percent

Although data are incomplete (off-campus data reporting systems are still being developed), it appears that a much higher percentage of off-campus students are enrolled in post-baccalaureate programs. Undergraduates comprise about 81 percent of on-campus enrollments.

Residency:

- North Carolina 86.7 percent
- Non-North Carolina 13.3 percent

As noted above, 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.

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. However, a majority of courses still conduct some instruction in the traditional or "face to face" manner, with faculty instructors travelling to the instructional site. As shown in Table 1, undergraduate programs are more likely to maintain this instructional approach, whereas graduate programs are relying more on other means such as two-way interactive video, on-line instruction, and videocassettes. (Many programs use more than one primary mode of delivery.)

Table 1. UNC Off-Campus Programs by Degree Level and Delivery Mode: 1999-2000

Level	Number	Primary Mode of Instructional Delivery			
		Traditional	2-way TV	Web	Taped
Baccalaureate	63	50	12	18	0
Graduate	92	59	33	34	9
TOTAL	155	109	45	52	9

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 sites in their service area (*e.g.*, a community college, school district, or AHEC), and traditional face-to-face instruction has been offered at those sites. This instruction has often 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 courses are being offered on-line, and several completely on-line degree programs have been developed. Although the "start up" costs for developing such programs may be substantial, the on-line delivery of instruction enables programs to avoid costly site rental fees and allows access to the instruction and course materials at a time and location most convenient for the student. Further, such on-line availability of courses will enable UNC campuses to share courses to the extent feasible, thus reducing the overall number of on-line courses than any single campus would have to develop.

For an example of a successful completely on-line program, one can get an overview of Western Carolina University's Master of Project Management program at this site: http://cess.wcu.edu/cobmpm/. For an example of the types of students who enroll in these on-line courses, the following site provides a class roster for one of East Carolina University's on-line Industrial Technology courses: http://www.sit.ecu.edu/itecdept/courses/dr_duvall/dtec6850s00/classpicts.html. It is particularly noteworthy that a significant number of students are female in this technical course, and the age ranges and professional backgrounds are diverse as well.

IV. Ensuring Quality in UNC Off-Campus/Distance Education Programs

Examples of Campus Assessment Activities

As described further below, uniform student surveys were conducted specifically for this report that enabled comparison of undergraduate and graduate student educational experiences both on and off campus and across all programs. However, it should be emphasized that these surveys are supplemental to the extensive evaluation activities that UNC campuses already conduct on the course and program level. Some brief examples of these activities follow.

Appalachian State University

- Program assessment is generally done on a course by course basis, both on- and off-campus by the department or school offering the courses. Evaluations of pilot site programs at community college sites, which have had sufficient

time to produce graduates in these off-campus programs, indicate that off-campus students are at least as successful as the on-campus students, with many off-campus students graduated "with honors." Post-program surveys have also indicated student success in obtaining employment.

East Carolina University

- Off-campus programs employ a variety of methods (student opinion surveys each semester, overall program assessment upon program completion, analysis of student performance and demographic data, interviews, and on-line questionnaires). Courses and programs have been redesigned when necessary based on the feedback received. An external review by peer institutions of the on-line MS in Industrial Technology concluded, "The MSIT program is, to our knowledge, the most unique and innovative master's degree program in Industrial Technology in the country, due primarily to its on-line delivery modality, but also due to the quality and industrial capability of its faculty."

Fayetteville State University

- University surveys are completed each term at FSU's Fort Bragg site and are shared with the program and the campus administration, with changes made as needed.

North Carolina A&T University

- Instructor evaluation is conducted on-site in mid-semester by the Office of Continuing Studies and Distance Learning to determine students' perceptions of course quality and to assist the instructor in making any needed changes in teaching style relative to the needs of adults. Each semester a university-wide instructor evaluation survey is conducted, and annual surveys are conducted to assess student satisfaction with service areas such as registration and library access. Faculty, students, and alumni of off-campus programs have been surveyed regarding program quality. Of particular significance is the fact that 90 percent of faculty respondents agreed that the same academic standards are maintained in off-campus and evening classes as in regular daytime classes.

North Carolina Central University

- The School of Library and Information Sciences will include its off-campus students in the same cycle of program assessment surveys with its on-campus students and graduates. Faculty performance is assessed annually through peer review using the University's approved faculty evaluation process. The Department of Nursing evaluates its off-campus programs through student

ratings of instruction in each course (with on-campus comparisons where appropriate), comparisons of on- and off-campus student grades, and program completion rate. Of seven students graduated in the off-campus Wake cohort in December 1999, five graduated with honors.

North Carolina State University

- The doctoral program in adult and continuing education (offered in Asheville) is advised by a program advisory council and receives feedback from the professional education community in the region. Regular course evaluations, employer surveys, and meetings with representatives of the North Carolina Community College System also inform the evaluation of this off-campus program. For NCSU programs delivered via the Video-Based Engineering Education (VBEE) office, each student is surveyed by VBEE on quality of instruction, quality of delivery, and quality of support. As with on-campus courses, student satisfaction surveys are administered each semester.

UNC-Chapel Hill

- School of Public Health programs have a full-time evaluation specialist on the staff, and each off-campus program is evaluated in the same manner as the on-campus programs. Social work programs analyze instructor evaluations, syllabi, course assignments, and student performance in classroom and field assignments. Field agencies and on-site administrators provide ongoing feedback. The School of Nursing uses standardized instruments to assess the progress of its off-campus students, including the California Critical Thinking Skill Test, the NLN Comprehensive Achievement Test, and ETS Undergraduate and Faculty Program Assessments.

UNC-Charlotte

- In all off-campus courses, students complete a standard course evaluation instrument adopted by the academic department teaching the course. In addition, a supplemental questionnaire focuses on the effectiveness of the instructional delivery system and the adequacy of student and administrative services. In general, there is no significant difference in the performance of off-campus versus on-campus students.

UNC-Greensboro

- Each academic department performs its own end-of-course assessment. Student comments have generally been favorable about the technology component of the instruction, with one student commenting, "Overall, I have been surprisingly pleased with the sense of 'closeness' in the cohort classes in

relation to the actual distance." The campus is considering developing a brief course for off-campus students that would cover the technology of distance learning, electronic access to library holdings, and other issues.

UNC-Pembroke

- Programs are evaluated in the same manner as on-campus programs. Students in off-campus programs tend to have higher grade point averages, suggesting that working adults take their coursework very seriously.

UNC-Wilmington

- Both on- and off-campus programs survey students and faculty each year to determine their overall perception of the program and to obtain suggestions for improvement. Measures of effectiveness analyzed include: student success and satisfaction assessments, student perception of teaching, course grade comparisons, faculty satisfaction, and a graduating senior survey. The findings indicate that the performance and satisfaction of off-campus students equals or exceeds that of on-campus students.

Western Carolina University

- Off-campus students use the standard course evaluation forms used on campus to assess all of WCU's distance learning programs. Retention of students and other indicators are analyzed to assess overall program productivity and success.

Winston-Salem State University

- Distance learning sites are evaluated each year with students evaluating both courses and instructors. Evaluations address program quality and relevant resources that support the learning environment.

Student Ratings of Comparable On-Campus and Off-Campus Degree Programs: Purpose/Methodology

(See Attachments 1 and 2 for complete graduate and undergraduate ratings.)

The purpose of this special study was to compare off-campus programs funded by the new distance education funding model to comparable on-campus programs. The two survey instruments used were adaptations of the "Graduating Senior Survey," which has been used for several years to collect information from graduating seniors concerning a variety of criteria relative to the undergraduate experience. This instrument (retitled "1999-2000 Undergraduate Distance Education Survey") was administered to all fall 1999 and spring 2000 off-campus undergraduate students. The responses of these students (N=644) were compared with those of on-campus respondents (N=9,903) to the

"1997-98 Graduating Senior Survey." The 1997-98 data served as an existing comparable database, providing an excellent benchmark against which the current distance education survey results could be evaluated.

A modified version of this instrument (titled "1999-2000 Graduate Education Survey") was also administered to all graduate students enrolled in off-campus programs, as well as to graduate students enrolled in comparable on-campus programs. The survey was administered during the fall 1999 and spring 2000 semesters. The responses of the off-campus graduate students (N=361) were compared with the responses of their on-campus counterparts (N=261).

Graduate Off-Campus Survey Results

Off-campus student survey results indicate that only 22 percent of the respondents would have obtained a graduate degree at a UNC campus if the off-campus program had not been available. The data displayed in Attachment 1 indicate that both on- and off-campus graduate students were positive regarding faculty contribution to the graduate program experience. However, on-campus graduate students were slightly more positive than off-campus students on opportunities for feedback and interaction with the instructor and other students. Although the majority of students expressed satisfaction with their program-related academic advising, off-campus students expressed the greater level of satisfaction relative to these criteria. On-campus students were slightly more positive toward library services than were their off-campus counterparts; the groups hardly differed regarding technology services.

A fairly small percentage of graduate students used campus employment-related services. Those who did were only marginally satisfied with those services. In fact, only 61 percent of the off-campus graduate students included in this study rated overall employment search assistance as "excellent" or "good." (However, it should be noted that 57 percent of off-campus students intended to remain in their current job compared to only 17 percent of on-campus students. Thus, off-campus students may have perceived less of a need for these services.)

Over 90 percent of both groups believed that their graduate education contributed to their knowledge, skills, and personal growth. Most of the students were fairly satisfied with registration, financial aid, and business services. However, except for financial aid services, off-campus students were more positive toward these areas than their on-campus cohort. The overwhelming majority of both groups (95 percent) believed the quality of instruction in their program to be "excellent" or "good." And over 80 percent of both groups indicated that if they could start over they would choose to enroll in their current program of study.

A higher proportion (97 percent) of off-campus graduate students were either "very" or "generally" satisfied with on-site (face-to-face) instruction as compared to other electronic modes of instructional delivery (web-based, e-mail, two-way video, videocassette). There are indications, however, that as both faculty and students become more accustomed to "technology-mediated" instructional delivery and as improvements in this delivery are made, the level of satisfaction increases. For instance, at the end of the first year of the UNC-Charlotte engineering technology pilot program, 64 percent of the students reported that two-way interactive classes were as effective as or more effective than traditional face-to-face classes. At the end of the second year, this had increased to 71 percent. Similar increases in student satisfaction (from 71 to 93 percent) were documented with the UNC-Charlotte two-way video special education program. Further, when student ratings are compared campus by campus, it appears that campuses that have greater experience in offering on-line education receive higher marks.

In conclusion, the data suggest that both groups were very satisfied with most facets of their graduate educational experience. This was particularly true for the cognitive and affective domains. Additionally, both groups expressed a high regard for faculty and the instructional process and were generally very satisfied with their choice of programs. Finally, the data show very clearly that the graduate off-campus programs provide many students an opportunity to earn a degree that they otherwise could not or would not pursue.

Undergraduate Distance Education Survey Results

The data shown in Attachment 2 suggest that both groups of undergraduate students were extremely satisfied with the faculty contribution to their educational experience. In fact, over 90 percent of both groups rated instructors as "excellent" or "good." Most students in both groups were also generally satisfied with the academic advising, library, technology, and career-related services offered by the institutions. Distance education students were only marginally satisfied with employment search assistance activities. In fact, only 64.1 percent of distance education students who responded to this question rated the service as "excellent" or "good," while 75.7 percent of their on-campus counterparts believed that the career counseling office service was "excellent" or "good."

The vast majority of students in both groups believed that their undergraduate experience contributed to their knowledge, skills, and personal development on a variety of dimensions, including writing, mathematical, and speaking skills. Both groups believed they had opportunities to participate in community service projects and to develop leadership skills. In fact, the distance education students expressed a higher level of satisfaction in these areas than did the on-campus students. Neither group gave the campus intellectual environment ratings as high as those ratings given for personal

educational growth. However, over 90 percent of both groups considered the overall quality of instruction and instruction in the major to be "excellent" or "good." Furthermore, the majority of students in both groups indicated that if they could start over they would choose to attend the same institution or enroll in the same program.

Finally, less than half of the off-campus students (48.6%) indicated they would have obtained a degree on a UNC campus if the off-campus program had not been available. In conclusion, the data suggest that both groups were very satisfied with their undergraduate experience. This was particularly true for faculty contribution to student knowledge and skill development and for personal growth. Additionally, both groups expressed a high regard for the instructional process and were generally very satisfied with their choice to attend a UNC campus or enroll in their program. The data also show that the off-campus program afforded undergraduate students an opportunity to earn a degree that many would otherwise not obtain.

Students' Written Comments

The survey forms used with off-campus graduate and undergraduate students also gave them the opportunity to offer written comments about their educational experiences. A wide variety of comments were offered, including suggestions for improvements in services or responsiveness for some programs. Overwhelmingly, however, the comments were positive about teaching and advising and highlighted students' gratitude for the opportunity to pursue degree programs in their home communities. As examples of this positive feedback, comments from students in two degree programs at opposite ends of the state are presented below.

> *NC State University's doctoral program in Adult and Community College Education offered at the UNC-Asheville Graduate Center:*
>
> Student 1: The [program]... has been a superb learning experience. Every aspect of this program & topics, coursework, faculty, residencies, scheduling and advising, has been planned with the student in mind, creating a learning environment that is inviting, intriguing, and totally relevant to the field of Adult and Community College Education and in preparing future leaders of North Carolina's academic community. ...[T]he faculty has been outstanding in every aspect. Their knowledge of academic content areas is remarkable and their experience... is uniquely diverse... [T]he cohort concept has made me increase my commitment to the program and to my fellow students. Coming from diverse backgrounds and current professional positions, we all benefit from each other's skills and knowledge. We also persist as a group, sharing the burden of difficult coursework by tutoring each other outside of class...

Student 2: ...By taking this program in Asheville, my future opportunities in the community college system have greatly increased... Having a family and a full-time job as a department head, it is not possible to move 300 miles from home and pursue a degree.... Not only is the NCSU program convenient, but I feel it is one of the best available in the nation.... The Director of the Asheville cohort... is exceptional in providing assistance in our progression through the program, as well as being an excellent instructor...

Student 3: In my job..., I see the difference that education and training make in the lives of average citizens. This program has allowed me to use the knowledge and skills gained to better serve the citizens of Region A. The quality of the instruction and the relevance of the coursework is a tremendous asset to me and my job.... Having the opportunity to participate in a program of this quality and still be able to live and work in this area is a great blessing for me....

East Carolina University's Bachelor's of Nursing (RN to BSN) program offered at locations in eastern North Carolina:

Student 1: I would not have been able to complete my BSN without the outreach program! Thank you! My original goal was to become an FNP [family nurse practitioner]. I of course could not do that without first obtaining my BSN. My rural residence complicated obtaining any advanced practice in nursing so the outreach program was my only hope. Now please consider a MSN/FNP outreach. I'm taking a break for about a year and will be ready to start again. Please help me keep reaching my goals.

Student 2: Without the RN/BSN outreach program, I would not be able to consider furthering my career for yet another 5 years, and here I am a graduate. I am very proud of completing the BSN program. I feel the faculty at ECU School of Nursing went far "above and beyond" to help me accomplish this goal. You are all to be commended for your dedication to your profession and your students.

Student 3: The program certainly broadened my horizons as to what is available in the health care setting for nurses, and to what degree the health care profession is changing. I feel better prepared to understand or even consider entering into a management or leadership role.

V. Cost Tracking and Cost Comparisons

Framework for Analysis

A two-part approach was taken to satisfy the cost-related reporting requirements of the legislation. First, each campus provided a report detailing expenditures of the 1998-99 appropriation for degree-related distance education instruction. Next, costs were measured for a sample of instruction offered both on- and off-campus during the spring and fall 1999 semesters.

Part I: Costs of Providing Programs for Fiscal Year 1998-99

Methodology

Each campus provided a report of total expenditures related to degree-related distance education that indicates that, at a minimum, the amount expended in support of this instruction was equal to the appropriation received. A copy of the campus instructions and report format is included as Attachment 3.

Results

Total appropriated funds being accounted for included $12,890,335 for base funding, $3,895,187 for the FY 1998-99 increment, and 1,712,476, which is a reallocation of funding originally provided for cooperative doctoral programs and graduate centers. This total of $18,497,998 represents total state funding provided in support of for-credit distance education.

Each campus expended the amount of its respective state appropriation in support of degree-related distance education. $338,773, or approximately 1.8% of these funds, was carried forward for expenditure in fiscal year 1999-2000. A narrative expenditure summary is included as Attachment 4, while a summary of expenditure detail is appended as Attachment 5.

Conclusions

All of the appropriations received for distance education instruction was used for that purpose; of the total amount expended, 51% was spent for salaries, wages, benefits and contracted services related to instruction, course development and student services; another 35% purchased necessary information technology and instructional equipment; while the remaining 14% supported libraries, purchased instructional supplies, and enabled faculty members to travel to deliver off-site instruction.

Part II: On-Campus to Off-Campus Comparison

Methodology

The course was selected as the unit of analysis, since there are very few programs that are delivered in their entirety both on- and off-campus, or which conclude within the course of a single year. The appropriateness of this choice is echoed by the methodology proposed by the National Center for Higher Education Management Systems' "Procedures for Calculating the Costs of Alternative Modes of Instructional Delivery (preliminary draft dated August 1999)," which points out that, though previous cost work disaggregated overall cost data to the level of discipline and course level, allowing the calculation of the cost per student credit hour for teaching a particular course, the necessity of looking at the costs of varying delivery methods which is now needed to create managerially useful information dictates a deviation from that traditional methodology.[1]

In order to satisfy the reporting deadline, the calendar year 1999 was chosen as the measurement period. Courses taught in either spring 1999 or fall 1999 qualified for measurement. The methodology was designed to capture total costs. Where possible, actual costs were used; for allocation of indirect (overhead) 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 copy of the forms and instructions provided for campus use in gathering these costs is included as Attachment 6.

A sample of "course pairs" was selected to compare an on-campus course to a similar off-campus course. Similarity was defined to mean courses of the same general course type, discipline and instructional level with comparable enrollments, and which were taught by an instructor on a similar level. The overwhelming majority of the course pairs selected (see Attachment 7) were separate sections of the same course taught during the same time period.

Composition of Sample

- 35 course "pairs" were selected for study (35 on-campus, 35 off-campus).
- Each institution receiving state distance education funding for FY 1998-99 participated.
- The sample was chosen to include courses with variations in :
  - Methods of instructional delivery
  - Instructional level (both undergraduate and graduate)
  - Discipline

Sample Breakdown

The following tables profile the sample courses by breaking down the 70 courses studied based on several different criteria. An equal number of on- and off-campus courses (35 each) were selected in "pairs" for purposes of comparison. Some level of distance education has historically been carried out at each of our campuses. Our sample of courses reflects the general population in that much of our off-campus instruction continues to be done in a traditional, face-to-face mode; however, we continue to see this mix shift as we integrate available and useful technologies into our instructional repertoire.

Table 2. Sample Courses by Primary Delivery Method

	On-Campus Courses	Off-Campus Courses
Traditional (Face-to-Face)	33	17
Internet/Web-based	1	9
Interactive TV	1	9

Course in the sample are arrayed by discipline below:

Table 3. Sample Courses by Discipline

	On-Campus Courses	Off-Campus Courses
Agricultural Science	1	1
Behavioral Science	4	4
Business	3	3
Communications	2	2
Education	11	11
Engineering	1	1
Library Science	2	2
Mathematics	1	1
Nursing	6	6
Public Health	4	4

Each institution that received state funding for distance education for the fiscal year 1998-99 participated in the comparison of on- to off-campus courses.

Summary of Results

The following tables present summary cost results. On average, we found on-campus courses to cost approximately two-thirds as much as the comparable courses taught at a distance. The primary differentiating factor was course development costs; because we are in the early stages of adapting many of our courses for technology-mediated delivery, up-front development costs are often substantial. To a lesser extent, facility charges for distance courses, whether taught face-to-face at a site which requires direct payment for space used or technology costs associated with receive sites, are often significantly higher than those attributable to classroom space for on-campus courses.

Table 4. Costs of Courses by Location

	Lowest Instance	Highest Instance	Average
On-Campus	$9,207	$67,906	$20,174
Off-Campus	$12,049	$85,602	$29,510

Not surprisingly, when we analyzed costs based on primary delivery method, we discovered that those courses taught in a traditional, face-to-face manner are less costly than those for which more reliance is placed on technology to deliver instruction. Internet/WEB-delivered courses are, on average, 45% more expensive than traditional instruction, while courses delivered via interactive video cost 23% more than Internet courses, and almost 78% more than those courses delivered in a face-to-face fashion.

Table 5. Course Costs by Primary Delivery Method

	Lowest Instance	Highest Instance	Average
Traditional (Face-to-Face)	$9,207	$67,906	$21,074
Internet/WEB-Based	$14,312	$77,764	$30,341
Interactive Video	$13,275	$85,602	$37,397

Course costs arrayed by disciplines which were represented in the sample confirm that instruction in disciplines such as engineering and public health is significantly more expensive than that delivered in disciplines such as the behavioral sciences and business.

Table 6. Course Costs by Discipline

	Lowest Instance	Highest Instance	Average
Agricultural Science	$26,455	$26,557	$26,506
Behavioral Science	$10,747	$18,795	$13,448
Business	$14,312	$19,999	$16,348
Communications	$15,927	$42,475	$29,048
Education	$9,207	$80,888	$23,493
Engineering	$19,700	$85,602	$52,651
Library Science	$15,341	$30,362	$21,545
Mathematics	$25,809	$34,726	$30,268
Nursing	$17,744	$39,828	$24,400
Public Health	$12,613	$77,764	$38,554

Costs of courses tended to be tied much more closely to primary delivery method and discipline than to the institution offering the course:

Table 7. Course Costs by Type of Institutional Classification

	Low Occurrence	High Occurrence	Average
Research I	$12,613	$77,764	$37,017
Doctoral I	$20,200	$31,922	$24,559
Doctoral II	$12,944	$22,569	$16,611
Comprehensive	$9,207	$85,602	$21,186
Baccalaureate	$25,239	$42,474	$34,676

Conclusions

Due to the limited size and time period studied, caution is urged in extrapolating the results obtained in this sample to the expected costs of future on- and off-campus courses. This preliminary exercise can, however, provide us with information that should be useful as we move forward in refining our cost methodology for future measurements.

In general, courses taught off-site tended to be more expensive than those taught on campus. This appears to be directly related to the percentage of off-campus courses employing other than traditional delivery methods ("face-to-face", i.e., instructor in the same physical location at the same time with students). As concluded by Dr. Frank Jewett in the 1998 BRIDGE project[2], our findings indicate that technology-mediated instruction has a much higher start-up cost than does traditional instruction and that these higher costs are a significant factor in explaining the higher cost of off-site courses. The differential costs of instruction appear to depend much more heavily upon the technology employed than whether the course is delivered on- or off-site.

Based on our experience with this study, as well as a survey of current literature on the subject, we believe that the most material 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 largest part of the course development, delivery and administration is done by the primary faculty member, although this may change somewhat when non-traditional delivery methods are employed.

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 was much less of a factor than 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. As we refine our methodology, and separate out the components of a direct charge, which may be attributable to a set of services provided in addition to physical space, we believe we will find that the cost of the physical facility will become even less significant. Please note that no attribution of the capital costs associated with the infrastructure required to enable courses to be taught at a distance has been made.

Our total cost approach does not, however, tell the full story of probable costs of technology-mediated instruction. We looked at a limited sample of courses, which reflect our current position in terms of instructional delivery, i.e., we are still teaching a large

number of courses using the traditional, face-to-face teaching method. Numerous studies[2,3,4,5] done in a cost-benefit mode indicate that cost per student in those courses taught in technology-mediated courses will decline steadily as enrollment in the courses grows; what we have established in our total cost approach is basically the fixed cost of the course at lower levels of enrollment. Therefore, we believe that Dr. Jewett's observation that "the economic rationale is that change in technology allows the resources, including faculty resources, to be used more efficiently as enrollment increases" will be the case as the UNC system develops more for-credit distance education courses delivered in other than traditional modes. Continuation of state funding for distance education instruction is critical if we are to reap the eventual rewards of the investment already made. The overriding point to keep in mind, however, as we consider how best to employ various instructional technologies is how well they accomplish our goal of providing access to educational opportunities for those students who would not have the option of on-campus instruction and the extent to which they may offset some of the demand for physical facilities to serve the projected increase in on-campus enrollment.

VI. Conclusions

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.

Although the North Carolina Community College System was already receiving enrollment funding for distance education instruction, 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 before this funding was provided. 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. Future reports will provide more information on distance education developments as students progress through and graduate from off-campus programs and as data on various trends are accumulated over time. Both off-campus degree program offerings and off-campus enrollments have increased sharply during the first two 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.

Table 1. 1999-2000 Graduate Distance Education

Section A. Faculty Contribution	Off-Campus		On-Campus	
Please evaluate how well faculty members in your graduate program do each of the following.	Excellent or Good %	Number	Excellent or Good %	Number
1. Set high expectations for you to learn	97.2	357	96.2	261
2. Respect the diverse talents and ways of learning of you and your classmates	92.1	356	92.7	260
3. Encourage you to be an actively involved learner	93.5	355	95.4	261
4. Encourage student-faculty interaction	82.4	353	87.3	260
5. Give you frequent and prompt feedback	73.1	357	80.3	259
6. Encourage you to devote sufficient time and energy to your coursework	93.5	354	91.6	261
7. Develop opportunities for you to learn cooperatively with fellow students	85.2	352	92.7	261
8. Care about your academic success and welfare	87.1	350	88.4	258
9. In general, how would you evaluate your instructors on these eight measures?	91.9	356	95.0	261
Section B. Advising and Support Services	**Off-Campus**		**On-Campus**	
During your time in this program, how would you evaluate each of the following? (If you have not had enough experience with a service to evaluate it, please mark "Don't know/did not use," then skip to the next service.)	Excellent or Good %	Number	Excellent or Good %	Number
1. Academic advising in your program				
a. Access to program advisor	82.5	280	80.1	241
b. Responsiveness of advisor	88.3	274	80.8	239
c. Accurate information about degree requirements and course sequencing	83.3	317	76.9	242
d. Knowledge of university policies and procedures	83.2	304	78.5	223
e. Academic advising services overall	84.2	291	78.2	243
2. Library services				
a. Hours of operation	89.1	183	90.8	239
b. Guidance in finding appropriate resources	84.4	192	93.5	231
c. Access to databases and collections	88.3	205	92.7	233
d. Library services overall	88.2	204	95.0	241
3. Technology services				
a. Access to the Internet	93.0	200	94.7	225
b. Hours of operation for computer center, labs, and help desks	83.1	148	83.3	203
c. Access to up-to-date facilities	88.6	166	91.0	210
d. Access to trained staff for help	77.2	167	76.2	206
e. Technology training	75.7	140	77.7	157
f. Technology services overall	89.5	191	90.5	222
4. Career-related services				
a. Scope and quality of career assistance and counseling	72.2	79	72.4	98
b. Scope and quality of non-academic career information	70.4	71	72.1	86
c. Career-related services overall	72.2	79	72.3	101
5. Employment search assistance				
a. Resumé preparation	68.8	32	72.2	61
b. Interview preparation and skills	56.7	30	60.7	56
c. Access to employment opportunities (e.g., career fairs, interviews, job listings, etc.)	69.6	46	77.0	100
d. Employment search assistance overall	61.0	41	74.4	82

Section C. Knowledge, Skills, and Personal Growth	Off-Campus		On-Campus	
To what extent do you think **your graduate education contributed** in each of the following areas?	Very Much/Some		Very Much/Some	
	%	Number	%	Number
1. Knowledge in your program	99.1	346	99.2	257
2. Analytic skills	95.7	347	94.6	259
3. Technical skills	88.9	343	87.0	254
4. Communication skills	91.3	346	94.1	256
5. Personal development	94.3	351	95.3	256

Section D. Other Offices That Serve You	Off-Campus		On-Campus	
Based on your time in this program, how would you evaluate each of the following services? (If you have not had enough experience with a service to evaluate it, please mark "Don't know/ did not use," then skip to the next service.) These services require interaction with university offices or units (secretaries, tutors, counselors, office workers, etc.); please rate how responsive the staffs in those offices or units were to your needs.	Excellent or Good		Excellent or Good	
	%	Number	%	Number
1. Registration process	87.5	319	88.9	243
Staff responsiveness	88.9	243	89.0	209
2. Financial aid services	66.2	68	75.2	137
Staff responsiveness	72.0	75	80.5	133
3. Business services/cashier/student accounts	80.3	188	75.3	215
Staff responsiveness	83.5	158	74.2	198

Section E. Your Conclusions	Off-Campus		On-Campus	
	Excellent or Good		Excellent or Good	
	%	Number	%	Number
1. All things considered, how would you evaluate the quality of instruction in your program?	94.7	356	95.0	261
	Yes		Yes	
	%	Number	%	Number
2. If you could start over again, would you still choose to enroll in this program?	81.1	359	81.5	260

Section F. Your Plans for Next Year	Off-Campus		On-Campus	
Please indicate the best description of your plans following graduation by marking the one most appropriate:	Each Option		Each Option	
	%	Number	%	Number
1. I don't know yet.	9.5	34	10.9	28
2. I have accepted a job.	3.1	11	4.3	11
3. I plan to continue in my current position.	57.3	205	17.5	45
4. I will be going to a graduate or professional school full-time next year.	3.6	13	25.7	66
5. I will be going to a graduate or professional school part-time next year **and** working part-time.	7.3	26	7.8	20
6. I am still seeking employment.	4.2	15	18.7	48
7. I am not currently seeking employment **and** do not plan to attend school next year.	0.3	1	3.1	8
8. Other (please specify)	14.8	53	12.1	31
[Total responses to Section F]	100.0	358	100.0	257

Section G. Students in Off-Campus Programs	Off-Campus		On-Campus	
Please respopnd **only if** you are earning your graduate degree in an "off-campus" program (that is, **the majority of your instruction occurs away from your degree-granting campus**).	9 or more		9 or more	
	%	Number	%	Number
1. How many courses in your program have you **taken away from your degree-granting campus** (even if you had an instructor at your location)?	98.0	361	N/A	N/A
2. Please evaluate each mode of **instructional delivery** that is used in your program. (If you have not had enough experience with a mode of delivery to ealuate it, or a mode was not used, please mark "Don't know/was not used," then skip to the next mode.)	Very or Generally		Very or Generally	
	%	Number	%	Number
a. Face-to-face instruction	97.1	273	N/A	N/A
b. Web-based instruction and activities	77.7	220	N/A	N/A
c. E-mail exchanges with instructor and other students	87.2	313	N/A	N/A
d. Two-way interactive (live) video	77.7	184	N/A	N/A
e. Videocassette or CD-ROM instruction	89.7	97	N/A	N/A
	Very Likely/Probabl		Very Likely/Probabl	
	%	Number	%	Number
3. How likely is it that you would have obtained your graduate degree on a UNC campus **if the off-campus program had not been available?**	21.6	352	N/A	N/A

1999-2000 Undergraduate Distance Education

Section A. Faculty Contribution	2000 Off-Campus		1998 On-Campus	
Please evaluate how well faculty members **in your major department** do each of the following.	Excellent or Good %	Number	Excellent or Good %	Number
1. Set high expectations for you to learn	93.7	639	94.6	9,751
2. Respect the diverse talents and ways of learning of you and your classmates	90.5	640	84.2	9,752
3. Encourage you to be an actively involved learner	93.4	637	88.4	9,745
4. Encourage student-faculty interaction	86.6	626	79.7	9,744
5. Give you frequent and prompt feedback	86.7	639	83.3	9,574
6. Encourage you to devote sufficient time and energy to your coursework	94.4	638	91.3	9,734
7. Develop opportunities for you to learn cooperatively with fellow students	88.4	639	86.3	9,720
8. Care about your academic success and welfare	87.1	638	82.1	9,722
9. In general, how would you evaluate your instructors on these eight measures?	93.1	640	90.8	9,725
Section B. Help Outside the Classroom	**2000 Off-Campus**		**1998 On-Campus**	
Based on your time in this program, how would you evaluate each of the following? (If you have not had enough experience with a service to evaluate it, please mark "Don't know/did not use," then skip to the next service.)	Excellent or Good %	Number	Excellent or Good %	Number
1. Academic advising in your major				
a. Access to advisor	70.6	503	75.2	9,456
b. Sufficient time with advisor	65.7	490	70.8	9,409
c. Accurate information about degree requirements and course sequencing	73.5	528	73.5	9,550
d. Knowledge of campus policies and procedures	72.5	454	72.6	9,281
e. Academic advising services overall	73.3	498	72.5	9,524
2. Library services				
a. Hours of operation	88.2	322	86.5	9,485
b. Staff responsiveness	86.9	337	82.7	9,301
c. Access to databases and collections	85.3	320	82.0	9,301
d. Library services overall	85.8	324	85.7	9,484
3. Technology services				
a. Access to the Internet	88.0	299	88.5	9,087
b. Hours of operation for computer center, labs, and help desks	85.8	274	73.4	9,181
c. Access to up-to-date facilities	86.3	277	81.5	9,094
d. Access to trained staff for help	80.3	279	64.2	8,908
e. Technology training classes	82.0	239	65.6	6,478
f. Technology services overall	85.0	287	81.1	9,038
4. Career-related services				
a. Opportunity for career assistance	76.9	225	82.5	6,104
b. Information on internships, co-op, or other career-related experiences	70.5	217	73.1	5,559
c. Resources available to explore career options	68.6	220	76.2	6,109
d. Information available through computers/Internet and other technology	79.1	230	72.8	5,200
e. Career-related services overall	76.2	239	78.0	6,510
5. Employment search assistance				
a. Resumé preparation	66.4	122	80.2	6,119
b. Interview preparation and skills	65.9	123	74.3	5,350
c. Access to employment opportunities (e.g., career fairs, interviews, job listings, etc.)	67.4	132	79.3	6,448
d. Employment search assistance overall	64.1	131	75.7	6,445

Section C. Knowledge, Skills, and Personal Growth	2000 Off-Campus		1998 On-Campus	
	Very Much/Some		Very Much/Some	
1. To what extent do you think **your college education contributed** to your knowledge, skills, and personal development in each of the following areas?	%	Number	%	Number
a. Writing skills	93.9	622	93.2	9,666
b. Listening skills	93.8	630	92.8	9,653
c. Speaking skills	92.9	622	90.8	9,663
d. Comprehension skills (written information)	93.1	620	93.8	9,646
e. Using mathematics skills	84.1	590	77.5	9,531
f. Applying scientific methods of inquiry	87.6	580	85.9	9,502
g. Enhancing analytic skills	89.7	602	94.1	9,588
h. Developing computer skills	82.4	595	88.2	9,633
i. Ability to function as part of a team	85.5	615	90.8	9,641
j. Ability to work with people from diverse backgrounds	87.1	611	89.2	9,615
k. Recognizing and acting on ethical principles	82.1	602	85.9	9,535
l. Appreciating racial equity	79.9	597	82.1	9,457
m. Appreciating gender equity	80.0	599	83.4	9,476
n. Personal growth	92.7	614	94.3	9,619
	Yes		Yes	
2. Did your major include a co-op, internship, practicum, student teaching, or other field experience?	%	Number	%	Number
	294	596	5,407	9,469
	Excellent or Good		Excellent or Good	
If yes, how would you evaluate this experience in terms of its contribution to your personal and professional growth?	%	Number	%	Number
	88.9	198	93.2	5,450
Section D. Other Offices That Serve You	**2000 Off-Campus**		**1998 On-Campus**	
	Excellent or Good		Excellent or Good	
Based on your time in this program, how would you evaluate each of the following services? (If you have not had enough experience with a service to evaluate it, please mark "Don't know/ did not use," then skip to the next service.) For those services that require interaction with university offices or units (secretaries, tutors, counselors, office workers, etc.), please rate how responsive the staffs in those offices or units were to your needs.	%	Number	%	Number
1. Registration process	76.7	567	68.0	9,414
Staff responsiveness	80.1	316	70.3	7,355
2. Financial aid services	61.7	313	63.0	6,153
Staff responsiveness	65.2	161	62.3	5,082
3. Campus food services	68.7	99	48.8	7,001
Staff responsiveness	79.2	53	57.9	5,871
4. Campus health services	70.4	71	68.6	7,366
Staff responsiveness	82.6	46	70.5	6,130
5. Campus counseling (not career) services	73.3	101	70.5	3,302
Staff responsiveness	77.6	58	70.3	2,585
6. Business services/cashier/student accounts	70.2	275	72.9	7,456
Staff responsiveness	68.9	135	71.5	6,122
7. Campus residence life programs for students living in university-owned housing	83.8	37	65.9	4,603
Staff responsiveness	78.1	32	66.9	3,764
8. Opportunities to participate in campus recreational and other extra-curricular or co-curricular activities	73.3	75	82.9	6,500
9. Opportunities to participate in community service projects	80.0	95	73.2	5,727
10. Opportunities to develop leadership skills	88.2	204	81.1	7,033

Section E. Your Conclusions	2000 Off-Campus		1998 On-Campus	
	Very Strong/Strong		Very Strong/Strong	
	%	Number	%	Number
1. All things considered, how would you characterize the intellectual environment on this campus?	65.1	588	64.7	9,627
	Excellent or Good		Excellent or Good	
	%	Number	%	Number
2. All things considered, how would you evaluate the quality of instruction:				
a. In your major?	92.4	616	92.3	9,690
b. Overall?	90.1	576	86.2	9,452
3. All things considered, how would you evaluate the overall education that you are receiving at this institution?	91.5	610	92.4	9,608
	Yes		Yes	
	%	Number	%	Number
4. If you could start over again, would you still choose to enroll at this institution?	76.8	628	72.1	9,201
	Very Likely/Probably		Very Likely/Probably	
	%	Number	%	Number
5. If you are earning your degree through an off-campus degree program, how likely is it that you would have obtained this degree on a UNC campus if the off-campus program had not been available?	48.6	592	Not asked in 1998	0
Section F. Your Plans for Next Year	**2000 Off-Campus**		**1998 On-Campus**	
	Each Option		Each Option	
Please indicate the best description of your plans following graduation by marking the one most appropriate:	%	Number	%	Number
1. I don't know yet.	14.6	90	10.6	1,019
2. I have accepted a job.	1.6	10	14.7	1,415
3. I plan to continue in my current position.	29.4	181	4.0	382
4. I will be going to a graduate or professional school full-time next year.	6.7	41	16.4	1,580
5. I will be going to a graduate or professional school part-time next year **and** working part-time.	8.6	53	5.7	551
6. I will take more undergraduate courses.	23.9	147	1.8	174
7. I am still seeking employment.	6.2	38	36.0	3,470
8. I am not currently seeking employment **and** do not plan to attend school next year.	0.6	4	3.2	309
9. I am entering military service.	0.6	4	1.2	112
10. Other (please specify)	7.8	48	6.5	626
[Total responses to Section F]	100.0	616	100.0	9,638

_____

Institution

1998-99 Annual Report of Results
Funded Distance Education Activity
covering the period of July 1, 1998 through June 30, 1999

This report is a summary of all fiscal year activity related to funded distance education activities. Allocations were made from this office directly into the new 107 purpose code For Degree Credit Distance Education. Campuses were instructed to identify these accounts to facilitate reporting of these funded activities, and this report should NOT include non-funded activities that are classified under the 107 purpose code. It should include funded distance education activity which have been accounted for by the institution in other purpose codes.

Please follow the format outlined in preparing the formal response.

Section I

Section I should be a general narrative describing funded activities. Format for this response is narrative in nature (no example is attached); however, at a minimum, the following should be included:

- A general description of funded activities, categorized by subject area.
- An estimate of the number of students served.
- An estimate of the Semester Credit Hours delivered.
- A statement as to how the state funding has impacted the distance education activities at the campus.

Section II

Section II reports financial activity. The format, attached, is a summary in matrix form by purpose code and by expenditure/revenue object. The format does not attempt to be exhaustive in object classifications listed. Please use the same level of detail required for monthly BD701 reporting, and include only those objects where activity actually occurred (i.e., do not include lines where there is no activity). The "XXX" column headings refer to purpose codes other than 107 where activity may have taken place. You need not include these columns if all your campus' activity for funded distance education occurred within the 107 purpose code.

Please note that the appropriation amount in the Total column on the final page "Summary" should agree with the total of original base allocations from the Board of Governors for Distance Education, and any other appropriations allocations you may have received for this purpose.

On the reconciliation required on the final page of the report, the "Total Spent During FY 1998-99" should equal the "Appropriation" amount in the "Summary" section, which represents the total allocations received from the Board of Governors during the fiscal year for distance education activities.

Institution Name

Annual Report of Funded Distance Education Activities
For Fiscal Year Ending June 30,
1999

Object/Description	Purpose Code 107	XXX	XXX	Totals
Personnel Compensation				
1110 EPA Regular Salaries	0	0	0	0
1140 EPA Employee On Loan	0	0	0	0
1210 SPA Regular Salaries	0	0	0	0
1220 SPA Overtime Payment	0	0	0	0
1230 SPA Premium Payment	0	0	0	0
1240 SPA Employee on Loan	0	0	0	0
1250 SPA Severance Wages	0	0	0	0
1270 SPA Longevity Pay	0	0	0	0
1310 EPA Academic Salary	0	0	0	0
1340 EPA Teachers On Loan	0	0	0	0
1410 Nonstudent Regular Wages	0	0	0	0
1420 Nonstudent Overtime Pay	0	0	0	0
1430 Nonstudent Premium Pay	0	0	0	0
1450 Student Regular Wage	0	0	0	0
1470 Student Premium Pay	0	0	0	0
1550 Unemployment Compensation	0	0	0	0
1560 Workers Compensation Benefit	0	0	0	0
1570 Retirement Supplement	0	0	0	0
1580 Disability Benefit	0	0	0	0
1590 Other Personnel Payments	0	0	0	0
1700 Board Member Compensation	0	0	0	0
1810 Social Security	0	0	0	0
1820 State Retirement	0	0	0	0
1830 Medical Insurance	0	0	0	0
1870 TIAA Optional Retirement	0	0	0	0
1880 Law Officer Retirement	0	0	0	0
1910 Legal and Accounting Fees	0	0	0	0
1930 Medical Fees	0	0	0	0
1950 Honorariums	0	0	0	0
1970 Academic Services	0	0	0	0
1990 Other Contracted Services	0	0	0	0
Total Personnel Compensation	0	0	0	0

Institution Name
Report of Activity Related to Funded Distance Education Activities
For Fiscal Year Ending June 30, 1999

Object/Description	Purpose Code 107	XXX	XXX	Totals
2000 Supplies and Materials				
2100 Household Supplies	0	0	0	0
2300 Educational Supplies	0	0	0	0
2400 Repair Supplies	0	0	0	0
2500 Motor Vehicle Supplies	0	0	0	0
2600 Office Supplies	0	0	0	0
2900 Other Supplies	0	0	0	0
Total Supplies and Materials	0	0	0	0
3000 Current Services				
3110 Travel				
3111 In-State Trans-Air	0	0	0	0
3112 In-State Trans-Ground	0	0	0	0
3113 In State Trans-Other	0	0	0	0
3114 In State Subsistence-Lodging	0	0	0	0
3115 In State Subsistence--Meals	0	0	0	0
3116 In State Other Travel	0	0	0	0
3119 In State Registration Fee	0	0	0	0
3121 Out of State Trans-Air	0	0	0	0
3122 Out of State Trans-Ground	0	0	0	0
3123 Out of State Trans-Other	0	0	0	0
3124 Out of State Subsistence-Lodging	0	0	0	0
3125 Out of State Subsistence-Meals	0	0	0	0
3126 Out of State Other Travel	0	0	0	0
3129 Out of State Registration Fee	0	0	0	0
3131 Out of Country Trans-Air	0	0	0	0
3132 Out of Country Trans-Ground	0	0	0	0
3133 Out of Country Trans-Other	0	0	0	0
3134 Out of Country Subsistence-Lodging	0	0	0	0
3135 Out of Country Subsistence-Meals	0	0	0	0
3136 Out of Country Other Travel	0	0	0	0
3139 Out of Country Registration Fees	0	0	0	0
3141 Board/Nonemployee Travel-Trans	0	0	0	0
3144 Board/Nonemployee Travel-Subsistence	0	0	0	0
Total Travel	0	0	0	0

Institution Name
Report of Activity Related to Funded Distance Education Activities
For Fiscal Year Ending June 30, 1999

Object/Description	Purpose Code 107	XXX	XXX	Totals
3200 Communications	0	0	0	0
3300 Utilities	0	0	0	0
3400 Printing and Binding	0	0	0	0
3500 Repairs and Maintenance	0	0	0	0
3600 Freight and Express Charges	0	0	0	0
3700 Advertising	0	0	0	0
3800 Data Processing	0	0	0	0
3900 Other Current Services	0	0	0	0
Total Current Services	0	0	0	0
4000 Fixed Charges				
4100 Rental of Real Property	0	0	0	0
4200 Rental of EDP Equipment	0	0	0	0
4300 Rental of Other Equipment	0	0	0	0
4400 Maintenance Contracts	0	0	0	0
4500 Insurance and Bonding	0	0	0	0
4900 Other Fixed Charges	0	0	0	0
Total Fixed Charges	0	0	0	0
5000 Capital Outlay				
5100 Office Equipment	0	0	0	0
5200 EDP Equipment	0	0	0	0
5300 Educational Equipment	0	0	0	0
5400 Motor Vehicles	0	0	0	0
5500 Other Equipment	0	0	0	0
5600 Library Books	0	0	0	0
Total Capital Outlay	0	0	0	0
Aids and Grants				
6510 Appropriated Grants	0	0	0	0
6520 Minority Presence Grants	0	0	0	0
6580 Incentive Scholarships	0	0	0	0
6590 Educational Awards -Other	0	0	0	0
6990 Other Aids and Grants	0	0	0	0
Total Aid and Grants	0	0	0	0

Institution Name
Report of Activity Related to Funded Distance Education Activities
For Fiscal Year Ending June 30, 1999

Object/Description	Purpose Code 107	XXX	XXX	Totals
Transfers and Reserves				
NOTE: Use specific descriptions				0
8100 Intraentity Transfer Out	0	0	0	0
8200 Interentity Transfer Out	0	0	0	0
8300 Reserves	0	0	0	0
8400 Transfer to Next Fiscal Year	0	0	0	0
8500 Petty Cash Funds	0	0	0	0
Total Transfers and Reserves	0	0	0	0
Total Non-Personnel	0	0	0	0
Total Expenditures	0	0	0	0
Receipts by Source				
0100 Tuition and Fee Revenue				
0111 Resident Tuition	0	0	0	0
0121 Nonresident Tuition	0	0	0	0
0185 Educational Technology Fee	0	0	0	0
Total Tuition and Fee Revenue	0	0	0	0
0790 Miscellaneous Income	0	0	0	0
0840 Other Intratransfers	0	0	0	0
Total Receipts	0	0	0	0

Institution Name
Report of Activity Related to Funded Distance Education Activities
For Fiscal Year Ending June 30, 1999

Object/Description	Purpose Code 107	XXX	XXX	Totals
Summary				
Total Expenditures	0	0	0	0
Total Receipts	0	0	0	0
Appropriation	0	0	0	0

Total should agree with total of original base allocations from the Board of Governors for Distance Education, and other appropriations allocations. Please provide a reconciliation as identified below:

Original Base*	$ xxx,xxx
Distance Education Allocation	xx,xxx
Other Appropriation (Net)	xx,xxx
Amount of Distance Education Appropriation Carried Forward	xx,xxx
Total Spent During FY 1998-99	$ xxx,xxx

Must be within 2.5% allowable carryforward.

**Original base refers to the allocation, if any, received by the institution into purpose code 103 at the beginning of the 1998-99 FY.*

Narrative Summary of Expenditures
Related to Degree- Credit Distance Education
Fiscal Year 1998-99

ASU

- In fall 1999 taught 711 students (unduplicated) in funding model courses.
- Installed three new two-way audio-video classrooms on ASU campus
- Collaborated with WSSU Graduate Center to outfit classroom with required computer technology for new MBA cohort
- Provided faculty training in new instructional technologies
- Furnished computers for WSSU Graduate Center computer lab

ECU

- In fall 1999 taught 682 students (unduplicated) in funding model courses.
- Additional degree programs being planned for off-campus delivery
- Collaborative efforts with 17 community colleges formally explored through day-long symposium

ECSU

- In fall 1999 taught 19 students (unduplicated) in funding model courses.
- Faculty training in new instructional technologies
- Increased participation of faculty in developing Web-enhanced courses

FSU

- In fall 1999 taught 488 students (unduplicated) in funding model courses.
- Increased faculty training in new technologies

NC A&T

- In fall 1999 taught 184 students (unduplicated) in funding model courses.
- Worked with contractors (eCollege) to redesign courses for internet delivery
- Established second teleconference classroom on campus
- Contracted to offer courses via NCIH throughout the state

NCCU

- In fall 1999 taught 299 students (unduplicated) in funding model courses.
- Faculty Web development workshop conducted
- Computer hardware obtained for a University Faculty Distance Education Den, Faculty/Staff Computer Lab, and electronic classroom

NCSU

- In fall 1999 taught 1,045 students (unduplicated) in funding model courses.
- Expanded and improved marketing, student services, program evaluation, cost analysis, and development and delivery of distance learning programs through instructional technologies
- Two new degree program have been approved for distance delivery; two additional are currently in the approval process

- Renovations to distance learning classrooms
- Expanded technical capabilities including linkage to NCREN, gateway services for IP-based videoconferencing, enhancement to security and redundancy for Web services
- Libraries materially upgraded to support distance education

UNCA

- Prepare on-line course in reading difficulties

UNCCH

- In fall 1999 taught 489 students (unduplicated) in funding model courses.
- Expanded web site development
- Required hardware to deliver course offerings

UNCC

- In fall 1999 taught 60 students (unduplicated) in funding model courses.
- Able to employ interactive TV to reach teachers in Fayetteville, Durham and Elizabeth City areas

UNCG

- In fall 1999 taught 405 students (unduplicated) in funding model courses.
- Increased degree programs offered off-campus from three to eight
- Contracted with eCollege to design Web courses
- Expanded library's capability to serve distance education students
- Integration of support services for off-campus students underway

UNCP

- In fall 1999 taught 128 students (unduplicated) in funding model courses.
- Four additional programs recently added to distance education opportunities

UNCW

- In fall 1999 taught 226 students (unduplicated) in funding model courses.
- Began collaborative effort with three Tokyo universities to provide on-line for-credit courses

WCU

- In fall 1999 taught 124 students (unduplicated) in funding model courses.
- Initiated UNC system's first degree program via the Internet
- Program partnerships established with three community colleges

WSSU

- In fall 1999 taught 94 students (unduplicated) in funding model courses.
- Expanded faculty development through training in instructional technologies
- Investment in infrastructure positions WSSU for greater instructional opportunities in the future
- Adaptation of courses to technology-mediated delivery

Summary of Expenditures
Related to Degree-Credit Distance Education
Fiscal Year 1998-99

Salaries, Wages and Benefits	$ 9,552,445
Contracted Services	531,019
Supplies	1,664,721
Travel	469,136
Current Services	2,389,307
Fixed Charges	151,637
EDP Equipment	2,392,311
Other Equipment	950,454
Library Books	432,116
Aids & Grants	2,416
Total Expenditures	18,535,562
Carried Forward to 1999-2999	338,773
Total Expended or Carried Forward	$18,874,335

NOTE: Total appropriations for distance education were $ 18,497,998 and included $1,712,476 reallocated from old graduate center and cooperative doctoral program funds.

Attachment 6

MEMORANDUM

TO: Chief Fiscal Officers
FROM: Laura Young
SUBJECT: Distance Education Preliminary Report Data Collection
DATE: November 5, 1999

The legislation that provided state funding for distance education to the university system required that we produce a preliminary report to the Joint Legislative Education Oversight Committee in the spring of 2000. Part of the report will compare the costs of providing distance education courses to the costs of their on-campus counterparts. We have communicated with your campus distance education directors and budget officers to identify an appropriate sample of course pairs that satisfies the legislative requirement, and will be measuring the costs of the selected courses.

The criteria for selecting courses included measures of comparability including similar disciplines, teaching methods, professorial levels, and enrollment levels. In addition, the sample was chosen to include examples of various methods of instructional delivery for the distance education courses, as specified by the legislation.

Enclosed you will find instructions and forms which will facilitate consistent measurement of relevant costs at all campuses. An electronic copy of this information is being forwarded to your budget officers, as well as our campus distance education contacts. Final reports from the campuses are due in this office no later than Friday, January 21, 2000 at 5pm.

Recognizing that this is a new undertaking and that there will likely be issues that need to be clarified for the group, we have scheduled a videoconference for all campuses on Wednesday, November 17 from 10am until noon. This will be an opportunity for campus personnel to ask questions regarding the process and definitions. Although attendance at this videoconference is not mandatory, we believe that it would be useful for budget officers, distance education/extension personnel, and other interested parties to participate.

We look forward to working with you and your staffs in this effort.

Enclosures

FORM A

Course Information

Course Descriptive Information

On Campus _____ Distance Education _____

Course Number _____

Course Title _____

General Course Description _____

_____

_____

_____

Primary Course Type _____

Primary Delivery Method _____

Number of Students Enrolled in Course/Section _____

Session Begin Date _____ Session End Date _____

Describe computing and telecommunications technology used in development of course

_____

_____

Describe computing and telecommunications technology used in delivery of course

_____

_____

FORM B
Course Development Costs

Direct Salary/Benefits

Instructor's Equated Hourly Rate* $ _____
X Number of Hours Spent _____

Total Instructor's Salary Cost $ _____

Add benefits @ .1501 $ _____

Total Cost of Instructor's Time $ _____

I/T Staff's Equated Hourly Rate* $ _____
X Number of Hours Spent _____

Total I/T Staff's Salary Cost $ _____

Add benefits @ .1615 $ _____

Total Cost of I/T Staff Time $ _____

Other Staff's Equated Hourly Rate* $ _____
X Number of Hours Spent _____

Total Other Staff's Salary Cost $ _____

Add benefits @ .1615 $ _____

Total Cost of Other Staff Time $ _____

Total Salaries, Wages & Benefits $ _____

Consultants $ _____

Other Direct Costs (Explain):

_____ _____
_____ _____

Total Direct Costs $ _____

Indirect Cost

Facility Costs, if applicable (worksheet 1) $ _____

Total Course Development Costs _____

Divided by Number of Estimated Uses of Course _____

Total Course Development Cost Allocation ***(to Form D)*** $ _____

Explain any extraordinary circumstances affecting course development costs:

_____

_____

_____

_____

_____

_____

*Applicable annual salary/2000 = equated hourly rate.

FORM C
Course Delivery Costs

Direct Salary/Benefits

Instructor's Annual Salary	$ _____		
/ Standard Course Teaching Load*	_____		
Instruction Salary per Course Taught	$ _____		
Add benefits @ .1501	_____		
Total Cost of Instructor's Time		$ _____	
Instructional Assistant's Hourly Rate**	$ _____		
X Number of Hours Spent	_____		
Total Assistant's Salary Cost	$ _____		
Add benefits @ .1615	_____		
Total Cost of Assistant's Time		$ _____	
Total Salaries, Wages & Benefits			$ _____
Consultants			_____
Other Direct Costs (Explain):			
_____			_____
_____			_____
Total Direct Costs			$ _____

*Number of courses that equal a standard teaching load/this will be both institution- and discipline-specific.

**For instructional assistant or other applicable staff: Hourly rate = annual rate/2000.

Form C Page 2

Indirect Cost

Facility Costs, if applicable (worksheet 1) $ _____

Administration Overhead Charge:

Indirect Cost Allocation Rate (calculated per instructions) _____%

X Total Direct Salary, Wage and Benefits (above) X_____ $ _____

Total Course Delivery Costs *(to Form D)* $ _____

Explain any extraordinary circumstances affecting course delivery costs:

_____

_____

_____

_____

_____

_____

FORM D

Summary of Course Costs

Total Course Development Costs (from Form B)	$ _____
Total Course Delivery Costs (from Form C)	_____
Other Costs (Explain) _____	
_____	_____
_____	_____
_____	_____
Total Course Costs	$ _____
Less: Course Revenues (below)	_____
Net Cost of Course	$ _____

Course Revenues

	In-State	Out-of-State
Tuition per Student	$ _____	$ _____
Required Fees per Student	_____	_____
Total Required Tuition & Fees/Student	$ _____	$ _____
TIMES Number of Students Enrolled	_____	_____
Total Course Revenues	$ _____	$ _____

FORM E

Cost of Course to Student

Required Tuition & Fees/Student $ _____

Required Textbook Costs/Student _____

Other Costs (Explain) _____

_____ _____

_____ _____

_____ _____

Total Cost of Course to Student $ _____

Worksheet 1

Facility Cost Allocation Calculation

Development ____ Delivery ____ On-Campus ____ Distance Edn ____

Name of Building Used _____

Classroom Number/Other Designation of Space Used _____

Square Footage of Area Used for Course _____

Capital Cost

Replacement Cost of Building* $ _____

/ Number of Square Feet in Building _____

Replacement Cost per Square Foot $ _____

X Number of Square Feet in Area Used _____

Cost of Square Footage Used by Course $ _____

/ Estimated Life in Years of Building _____

Annual Cost of Area Used by Course $ _____

Number of Room Hours Used for Course _____

/ Average Number of Room Hours Used** _____

Course Usage Rate _____%

Course Usage Rate X Annual Cost of Area Used by Course

Allocation of Capital Cost to Course $_____

Operations & Maintenance (@ __% of _____) $_____

Total Facility Cost Allocated to Course (to Form D) $_____

*Replacement cost per latest annual institutional amount reported to the North Carolina Commission on Higher Education Facilities

**Per Utilization Edit printout generated by Conflict program--please contact your campus Facilities Inventory Project Officer

Attachment 7

University of North Carolina
Distance Education Preliminary Cost Report
Detail of Course Pair Sample

Institution	Course Number	Course Discipline	On- or off-Campus?	Teaching Level	Delivery Method	Semester Taught
ASU	CI 3750	Communications	Off	Undergrad	Traditional	Spring 1999
			On	Undergrad	Traditional	Spring 1999
	MGT 4750	Business	Off	Undergrad	Traditional	Fall 1999
			On	Undergrad	Traditional	Fall 1999
	LIB 5190	Library/ Info Science	Off	Graduate	Traditional	Fall 1999
			On	Graduate	Traditional	Fall 1999
	SPE 5630	Education	Off	Graduate	Traditional	Fall 1999
			On	Graduate	Traditional	Fall 1999
ECU	SPED 6404	Education	On	Graduate	Traditional	Spring 1999
			Off	Graduate	Traditional	Spring 1999
	NURS 4601	Nursing	On	Undergrad	Traditional	Spring 1999
			Off	Undergrad	Traditional	Spring 1999
	CDFR 4306	Education	On	Undergrad	Traditional	Spring 1999
			Off	Undergrad	Interactive TV	Spring 1999
	EDUC 3200	Education	On	Undergrad	Traditional	Spring 1999
			Off	Undergrad	Internet	Spring 1999
ECSU	ENGL 425	Communications	Off	Undergrad	Internet	Fall 1999
			On	Undergrad	Traditional	Fall 1999
FSU	SOC 480	Behavioral Science	On	Undergrad	Traditional	Fall 1999
			Off	Undergrad	Traditional	Fall 1999
	PSYC 400	Behavioral Science	On	Undergrad	Traditional	Fall 1999
			Off	Undergrad	Traditional	Fall 1999
NC A&T	ADED 708	Education	On	Graduate	Traditional	
			Off	Graduate	Internet	
NCCU	NURS 4570	Nursing	Off	Undergrad	Traditional	Spring 1999
			On	Undergrad	Traditional	Spring 1999

Institution	Course Number		On- or off-Campus?	Teaching Level	Delivery Method	Semester Taught
	LSIS 4000	Library/ Info Science	Off	Graduate	Traditional	Fall 1999
			On	Graduate	Traditional	Fall 1999
NCSU	BUS 360	Business	Off	Undergrad	Internet	
			On	Undergrad	Internet	
	AEE 501	Agricultural Science	Off	Graduate	Internet	
			On	Graduate	Traditional	
	EAC 779	Education	Off	Graduate	Interactive TV	
			On	Graduate	Traditional	
UNC-CH	HPAA 250	Public Health	Off	Graduate	Internet	
			On	Graduate	Traditional	
	NUTR 112	Public Health	Off	Undergrad	Internet	
			On	Undergrad	Traditional	
	PUBH 247	Public Health	Off	Graduate	Internet	
			On	Graduate	Traditional	
UNC-C	ELET 3211	Engineering	On	Undergrad	Traditional	Fall 1999
			Off	Undergrad	Interactive TV	Fall 1999
	SPED 6130	Education	On	Graduate	Traditional	Spring 1999
			Off	Graduate	Interactive TV	Spring 1999
UNC-G	NUR 505	Nursing	On	Undergrad	Traditional	Fall 1999
			Off	Undergrad	Traditional	Fall 1999
	NUR 610	Nursing	On	Graduate	Traditional	Fall 1999
			Off	Graduate	Traditional	Fall 1999
	LIS 556	Education	On	Graduate	Traditional	Fall 1999
			Off	Graduate	Interactive TV	Fall 1999
			Off	Graduate	Interactive TV	Fall 1999
	HEA 308/80	Public Health	On	Undergrad	Traditional	Fall 1999
			Off	Undergrad	Traditional	Fall 1998
UNC-P	SOC 490	Behavioral Science	On	Undergrad	Traditional	Spring 1999
			Off	Undergrad	Traditional	Spring 1999
UNC-W	ECN 324	Business	On	Undergrad	Traditional	Fall 1999
			Off	Undergrad	Traditional	Fall 1999
	CFJ 495	Behavioral Science	On	Undergrad	Traditional	Spring 1999
			Off	Undergrad	Interactive TV	Spring 1999

Institution	Course Number		On- or off-Campus?	Teaching Level	Delivery Method	Semester Taught
	EDN 319	Education	On	Undergrad	Traditional	Fall 1999
			Off	Undergrad	Traditional	Fall 1999
	NSG 389	Nursing	On	Undergrad	Interactive TV	Fall 1999
			Off	Undergrad	Interactive TV	Fall 1999
WCU	BK 366	Education	On	Undergrad	Traditional	Fall 1999
			Off	Undergrad	Interactive TV	Fall 1999
	EDHE 605	Education	On	Undergrad	Traditional	Fall 1999
			Off	Undergrad	Interactive TV	Fall 1999
WSSU	NUR 3303 NUR 3203	Nursing	On	Undergrad	Traditional	Fall 1999
			Off	Undergrad	Traditional	Fall 1999
	MAT 2326	Mathematics	On	Undergrad	Traditional	Fall 1999
			Off	Undergrad	Traditional	Fall 1999

[1]National Center for Higher Education Management Systems, "Procedures for Calculating the Costs of Alternative Modes of Instructional Delivery (Preliminary Draft, August 1999).

[2]*Benefits and Costs of Mediated Instruction and the BRIDGE Project.* 1998. Network News. v. 17, No. 4.

[3]Whalen, Tammy and David Wright, 1999. *Methodology for Cost-Benefit Analysis of Web-Based Tele-Learning: Case Study of the Bell Online Institute.* The American Journal of Distance Education, v. 13, no. 1.

[4]Heretic, Robert C., James R. Mingle, and Carol A. Twig. *The Public Policy Implications of a Global Learning Infrastructure: A Report from a Joint NLII-SHEOO Symposium.* Denver, Colorado. November 13-14, 1997.

[5]State and System Tools for Success in the New Market Environment--A SHEEO Online Seminar. APD 6000. Cost Benefit Module.