



THE UNIVERSITY OF NORTH CAROLINA

OFFICE OF THE PRESIDENT

POST OFFICE BOX 2688, CHAPEL HILL, NC 27515-2688

RUSS LEA, Ph. D., *Vice President for Research and Sponsored Programs*

Telephone: (919) 962-4623 Fax: (919) 843-4942 E-mail: rlea@northcarolina.edu

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TO: UNC Board of Governors Committee on Planning, Policies, and Programs

FROM: Russ Lea, Vice President for Research & Sponsored Programs

DATE: October 13, 2005

RE: FY2004 Biennial Report on UNC Inter-institutional Centers & Institutes

Centers and institutes of the University of North Carolina make extensive contributions to the state through research, public service, outreach, and training. Such activities cover fields as diverse as agriculture, the arts and humanities, economic and business development, education, the environment, extension services, health sciences, and technology. Through multi-disciplinary, collaborative organizational structures, these centers address a variety of complex interdisciplinary issues.

There are currently 20 inter-institutional centers approved by the UNC Board of Governors. This review included 16 of these centers, which were active during the 2003-2004 reporting period (approved prior to July 2003). These centers received nearly \$40 million during FY 2003-2004. A total of \$16.4 million was provided by state funds (appropriations, contracts, and grants) to leverage the remainder of funding from non-state sources, such as the federal government and the private sector. The economic impact of this external funding, combined with the employment of professionals, support staff, and student trainees; community development and outreach; and technical assistance and training for the private sector, is critically important to North Carolina.

The UNC Board of Governors and the UNC Office of the President have established policies and procedures regarding the planning, establishment, and evaluation of centers, which are detailed in Chapter 400.5 [R] of the *University of North Carolina Policy Manual*. In accordance with these regulations, this report is compiled biennially in conjunction with the update of the University Long-Range Plan. It encompasses only the *inter-institutional* centers and institutes of the University. Institutional centers – those which involve only a single campus – are reviewed separately by the institution. As with previous reports, data collection and reporting of center activities was compiled electronically and details of each center's activities are available online through the University of North Carolina web site at http://www.northcarolina.edu/content.php/apps/research_cil/.

The following report details the activities of the inter-institutional UNC centers and recommends the continuation of all 16 centers reviewed. Additionally, it recommends confirmation of the planning authorizations which were previously granted to three proposed new centers. All centers are listed in the attached appendices.

**Report on Inter-institutional
Centers and Institutes
The University of North Carolina
FY 2003-2004**



**Submitted to the Board of Governors of the University of North Carolina
Committee on Educational Planning, Policies and Programs
October 13, 2005**

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I. INTRODUCTION

One important means to address the diverse mission of the University of North Carolina is through cooperative ventures with private or corporate entities, educational institutions, and government agencies. A wealth of effective partnerships involving UNC institutions have been developed under the rubric of centers and institutes. Such units are usually multidisciplinary, have an important educational component, and are established when long-term funding is secured to pursue unique research or public service activities. They provide faculty and staff, as well as undergraduate, graduate, and postdoctoral students, with expanded research and outreach opportunities, facilities, and support. The units have a strong positive impact on the economic development of the state by providing job opportunities, supplying technical assistance and training, fostering community development and outreach programs, and enhancing the transfer of new technologies. Centers and institutes are one of the most effective means of organizing unique talents, facilities, and equipment within UNC to address research and public service needs that extend beyond the range or capacity of traditional academic departments or programs.

II. REGULATIONS & PROCEDURES

A. Regulations

For the purposes of this report, "centers and institutes" (hereafter, "centers") refers to research or public service units that have been formally authorized by the UNC Board of Governors under the procedures outlined in the *UNC Policy Manual*. The regulations governing the establishment, discontinuation, and biennial review of centers and institutes of the University of North Carolina were amended on May 6, 2004, and reassigned to Chapter 400.5[R] of the *UNC Policy Manual*. The revision of these regulations – originally adopted in January 1981 – allows each campus more flexibility in managing its institutional centers (those units that involve only a single campus of the UNC system). Specific types of centers, as well as policies and procedures pertaining to those individual types, are defined in this document.

Inter-institutional Centers

Inter-institutional centers (those units that significantly involve more than one UNC campus in activities or administration) are subject to oversight by the UNC Board of Governors, and must provide detailed status reports on a biennial basis. As in the past, Chapter 400.5 [R] of the *UNC Policy Manual* specify that the director of each center shall prepare a status report (see Appendix A for required data elements) which is electronically submitted to the UNC Office of the President upon approval of the Chief Academic Officer from the lead administrative campus. These reports are reviewed by UNC-OP and compiled in this biennial report to the Board.

Institutional Centers

Oversight for institutional centers is now provided solely by the Board of Trustees of the administering campus. The Board of Trustees, upon recommendation of the chancellor, may make decisions about the establishment or discontinuation of centers on their campus without requiring further approval from the UNC Board of Governors. Each campus has established policies and procedures governing review of these units and submits a listing of all active and planned institutional centers on a biennial basis (see Appendix C). The details of these centers' activities are not included in this report.

B. Goals and Scope

The review of all centers strives to accomplish the following:

- It provides an opportunity for UNC or campuses to demonstrate that effective practices are in place to oversee the planning, establishment, review, and termination of such units.
- It gives an additional stimulus for planning and evaluation within UNC or campuses to assure appropriate and effective uses of state resources.
- It serves as a means to highlight the benefits of centers to North Carolina in research and public service, and to document their success in leveraging external support for the University.

The scope of this review included 16 inter-institutional centers formally approved by the Board of Governors prior to July 2003. Twelve of these centers focus their activities primarily on research, and four designate public service as their primary mission (see Appendix B). A new designation of 'instructional' was added in the recent revision of the regulations, however no inter-institutional units are designated as instructional at this time. Three additional inter-institutional centers have been granted approval to plan by the President and are actively engaged in the planning process (see Appendix B). Reconfirmation of these planning authorizations for a period of two years is requested.

Additionally, three new inter-institutional centers have been established since July 1, 2003. As these units were not yet active during the period of review, they were excluded from the performance measures analyzed in this report. Also excluded from this report are the activities of the Center for School Leadership and its component programs (NC Mathematics and Science Education Network, Principals Executive Program, and NC Center for the Advancement of Teaching). Instead, these units are reviewed by the Vice President for University School Programs and an in-depth report is separately provided to the President and Board.

C. Requested Data Elements

In order to effectively address the above stated goals, both quantitative and qualitative summary data are requested from the centers' directors based on activities during the most recent fiscal year (2003-2004). Appendix A details the data elements and format of these reports, which are then submitted and approved via a web-based form on the Centers and Institutes website (http://www.northcarolina.edu/content.php/apps/research_cil/). Selected information from each center report is also available at this site via the "Current Listings" hyperlink.

III. FINDINGS

A. Research Centers

The 12 inter-institutional research centers of UNC (see Appendix B) allow researchers from across the state to collaborate on research topics of great importance to the state and nation. These centers are highly productive in the generation and dissemination of new knowledge, and foster multi-institutional and inter-disciplinary partnerships that both enrich the work being conducted and maximize resources. The research centers are also valuable for the training of students at all degree levels, and they have a positive economic impact through employment of

faculty and staff, the attraction of the majority of operating funds from non-state sources, and through the commercialization of new technologies.

Personnel

The UNC research centers provide extensive support for faculty and staff participants, employing more than 200 Full Time Equivalents (FTEs) in 2003-2004 (FY 2004). Three centers employed a particularly large number of faculty and staff (>30) during FY 2004:

- Institute for Transportation Research and Education: 46
- Science and Technology Center for Environmentally Responsible Solvents and Processes: 36
- Highway Safety Research Center: 33

The research centers also provide important academic training and research opportunities, as well as assistantship support, for students at all degree levels. A total 156 FTE students were employed during FY 2004, including 75 doctoral students, 34 masters-level students, 47 undergraduates.

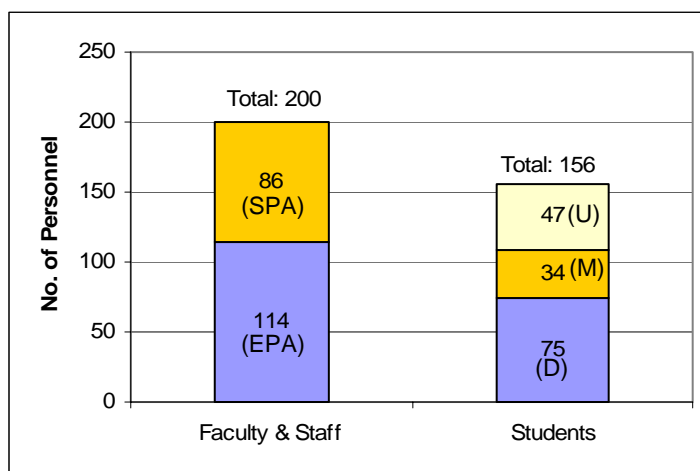


Figure 1: Personnel employed by UNC research inter-institutional centers and institutes (FY 2003-2004)

Funding

Total FY 2004 funding for research centers was \$31.6 million. Total state funding (appropriations, contracts and grants) amounted to \$13.6 million (43%). In turn, this funding was leveraged to attract more than \$18 million of additional support from sources such as the federal government (\$11.5M), industry (\$500,000), and foundations or gifts (\$6M).

The research centers receiving the most extensive funding (>\$3 million) during FY 2004 were the following:

- Institute for Transportation Research and Education: \$5.8 million
- Highway Safety Research Center: \$4.2 million
- Science and Technology Center for Environmentally Responsible Solvents and Processes: \$3.3 million

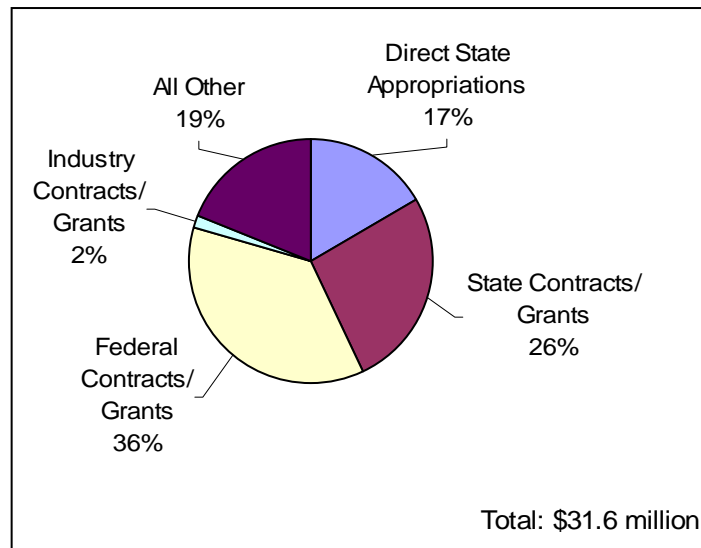


Figure 2: Funding to UNC research inter-institutional centers and institutes (FY 2003-04)

Publications

One important measure of the productivity of research centers is their contributions to scholarly works in their respective fields. Figure 3 illustrates the breakdown of the 521 research publications produced by these centers in FY 2004.

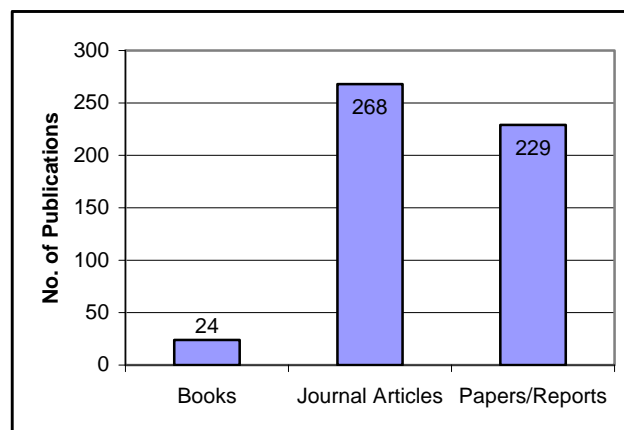


Figure 3: Publications produced by UNC research inter-institutional centers and institutes (FY 2003-2004)

Examples of Contributions and Services to North Carolina

The UNC research centers provide a diverse resource to address state needs and priorities and often have missions that encompass education and community service as well. In addition to their primary emphasis on basic or applied research, many of the research centers provide direct services to government organizations, businesses, and/or individual citizens of the state.

For instance, the Highway Safety Research Center (HSRC) and Institute for Transportation Research and Education (ITRE) serve policy makers in the North Carolina General Assembly and the federal government. HSRC is involved in both the research and development of new safety programs and policies and in the evaluation of state and national data to define problem areas. ITRE pursues local, regional, and national solutions to transportation challenges facing state and local agencies, providing technical assistance and training for many departments within NCDOT, especially in traffic operations and roadway maintenance.

The Water Resources Research Institute also serves the state by conducting research to improve water resource management in North Carolina. The Institute's research agenda is shaped by an Advisory Committee, composed of state, local and federal agency officials; representatives of business and industry; and representatives of environmental and citizen groups who identify and prioritize local and state water issues.

The UNC Institute on Aging works to enhance the well-being of older people in North Carolina. The Institute provides research findings and information to policy makers, program managers, service providers, clinicians, and the general public to inform policy recommendations, professional practice, and the health and human service systems serving the needs of older adults and their families. During 2003-2004, the Institute expanded its successful WIN-A-STEP program, a training partnership with the NC Office of Long Term Care aimed at reducing the high turnover rate among nursing assistants.

Several of the research centers have developed new technologies of economic benefit to the state and nation. In FY 2004, three new patent applications were filed by UNC inter-institutional research centers and five new patents were received. These activities were conducted by the Kenan Center for the Utilization of Carbon Dioxide in Manufacturing and the Science and Technology Center for Environmentally Responsible Solvents and Processes. These centers seek to develop 'green' engineering principles based on carbon dioxide processes to build better, less polluting, less expensive, and less toxic manufacturing processes. They have forged partnerships with a wide variety of businesses and government agencies, enabling student and faculty researchers to collaborate on patentable technologies and products. These discoveries have been instrumental in attracting interest in North Carolina from companies such as DuPont Corporation and MiCell Technologies.

Summaries highlighting further details of activities and accomplishments of each of the UNC research centers can be accessed at the UNC Centers and Institutes website (http://www.northcarolina.edu/content.php/apps/research_cil/) at either the "Current Listings" hyperlink or the "Search Listings" hyperlink.

B. Public Service Centers

Four inter-institutional public service centers were included in this review (see Appendix B). As public service centers are more frequently created in response to a specific state or community need, there are notable differences in the quantifiable productivity of these units. However, the following details illustrate the important and broad statewide impact these centers have in North Carolina.

Personnel

In FY 2004, the public service centers provided support for 94 faculty and staff FTEs. The centers also provided important academic training and some research opportunities for 260 students. In particular, the Small Business and Technology Development Center employed 75 FTEs and 250 students.

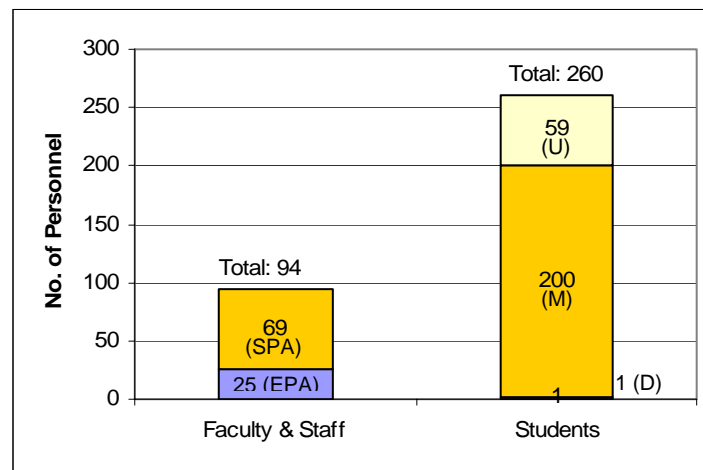


Figure 5: Personnel employed by UNC public service inter-institutional centers and institutes (FY 2003-2004)

Funding

Total FY 2004 funding for public service centers was over \$8 million. Similar to the research centers, these units significantly leverage state resources to attract federal and other external funding. As illustrated in Figure 6, federal support to the inter-institutional public service centers accounted for 40% (\$3.2M) of total funding, and 25% (over \$2M) came from other non-state external grants and contracts. Clearly, SBTDC received the most funding (\$5.1M), however, it is also notable that the Hunt Institute generated nearly \$1 million in private external funding during FY 2004, which entirely supported the operations of this unit.

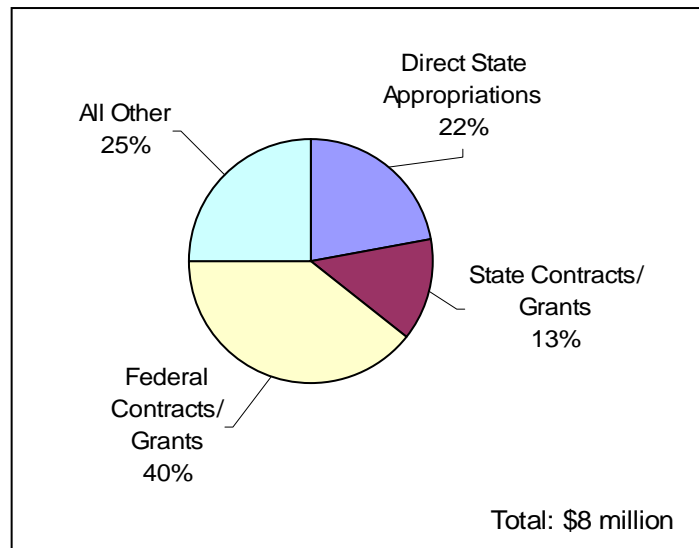


Figure 6: Funding to UNC public service inter-institutional centers and institutes (FY 2003-04)

Publications

UNC public service centers generated 23 new publications – primarily papers or reports – during FY 2004. In comparison to the research centers, there are less scholarly publications such as journal articles. This reflects the greater emphasis of these units on providing direct services and information to the general public.

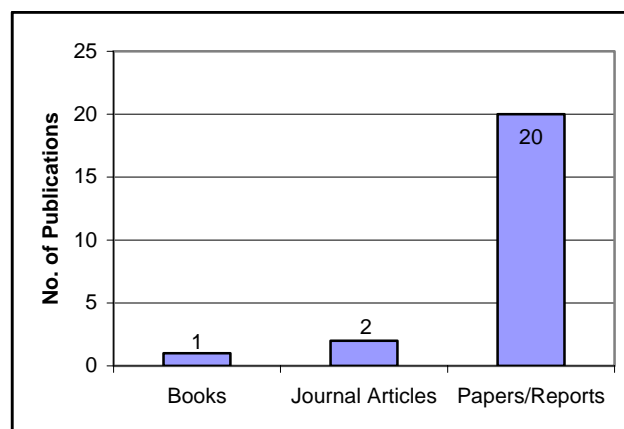


Figure 7: Publications produced by UNC public service inter-institutional centers and institutes (FY 2003-2004)

Examples of Contributions and Services to North Carolina

The UNC public service centers greatly impact citizens across North Carolina, with activities spanning economic development, educational outreach, cultural enrichment, extension programs, and health services. For instance, the SBTDC – which provides management counseling, executive education, applied research, publications and advocacy to small and medium sized firms – reports over 20,000 North Carolinians served, boasting a 96%+ client satisfaction rate. The Center logged more than 60,000 of business management counseling during this fiscal year.

The Center for Craft, Creativity, and Design (CCCD) and the Agromedicine Institute have been successful in serving specific industries in the state. CCCD supports and advances craft, creativity and design – a \$127 million per year industry in Western North Carolina – through exhibits, community collaborations, and support for leaders and professionals in the fields. The Agromedicine Institute reaches out to the agriculture, fisheries, and forestry industries, to promote health care access and safe practices among professionals in those fields.

The Hunt Institute continues its work to raise awareness of and stimulate discussion around pressing education leadership and policy issues affecting North Carolina. This year, two conferences were held for North Carolina legislators and two additional conferences for governors from around the nation.

The UNC public service centers reported no new patent or licensure activity during FY 2004. Although some opportunities may exist for public service units to participate in technology transfer activities (eg, learning materials, curricula, technologies), it is reasonable to expect that their focus would instead be service and outreach.

Additional details of activities and accomplishments for each of the UNC public service centers can be found at the UNC Centers and Institutes website (http://www.northcarolina.edu/content.php/apps/research_cil/) at either the "Current Listings" hyperlink or the "Search Listings" hyperlink.

IV. RECOMMENDATIONS

Each of the centers reviewed in this report showed continuing progress toward their stated goals, in keeping with their overall mission and that of the University as a whole. Upon acceptance of this report, the Educational Planning, Policies and Programs Committee of the Board of Governors endorses the following actions:

- The continued operation of the 16 centers approved by the Board of Governors prior July 1, 2003 (Appendix B).
- The reconfirmation of the three current authorizations to plan as approved by the President and supported by the respective institutions that will serve as the administrative units (Appendix B).