ANALYSIS OF ORGANIZATION, STRUCTURE, AND FUNDING OF INSTRUCTIONAL AND ADMINISTRATIVE SUPPORT IN THE NORTH CAROLINA COMMUNITY COLLEGE SYSTEM

SUBMITTED TO:

Joint Legislative
Education Oversight Committee

and the

State Board of Community Colleges
North Carolina Community College System

SUBMITTED BY:

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TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

1.0 INTRODUCTION

1.0 INTRODUCTION

This report has been developed in fulfillment of Section 8.7(a) of Senate Bill 1115 as enacted by the North Carolina General Assembly in 2002. Section 8.7(a) called for a study of various administrative issues in the North Carolina Community College System. This chapter provides an overview of the System and its funding policies related to administrative activities. It concludes with more specific details of the legislative special provision and the requirements for the study.

1.1 Profile of the North Carolina Community College System

Higher education officials across the country regard the North Carolina Community College System (NCCCS) as one of the nation's leading two-year college systems. Within the state, the System and its member colleges are widely appreciated for their success in fulfilling their missions to provide low-priced access to higher education opportunities and to support economic development through workforce training programs. In each of the past several years, almost 800,000 North Carolina citizens have been served by the NCCCS.

The NCCCS is comprised of 58 accredited, degree-granting colleges located across the state and the North Carolina Center for Applied Textile Technology, which provides non-degree programs for occupational preparation and skills upgrading in the textile industry.[1] Through a combination of main campuses, multi-campuses and off-campus centers, the 58 colleges operate permanent instructional sites in 89 of the state's 100 counties.

[1] Although the textile center has been granted institutional recognition as the 59th college in the NCCCS, most of the analyses in this report will refer to the 58 regionally accredited institutions that award degrees, certificates and diplomas.

The NCCCS is governed by the State Board of Community Colleges (SBCC), a 21-member lay body. Ten members are appointed by the Governor, with six appointments each representing one of the state's six Trustee regions and four from the state at-large. Eight members are appointed by the General Assembly (four each by the Senate and the House). The remaining three members are ex-officio (the Lieutenant Governor, State Treasurer, and President of the State Student Government Association). Systemwide administration of the NCCCS is the responsibility of the Department of Community Colleges, which is headed by a System President.

1.2 Types of Instructional Locations

As the value of postsecondary education has become more widely recognized and as increasing numbers of North Carolina residents have sought access to the colleges, the NCCCS has responded over the past two decades by authorizing additional instructional sites beyond the main campuses of the 58 colleges.[2] These additional sites are intended to provide convenient geographic access for students who would otherwise find it difficult to attend more distant colleges due to their other responsibilities such as full-time employment and/or parenthood. For the purposes of this report, the NCCCS can be viewed as operating three types of permanent instructional facilities:

- The original or main campus of each of the 58 colleges,
- Additional campuses of a multi-campus college,
- Off-campus centers.

SBCC policy distinguishes the three types of sites primarily by enrollment size and the extent of support services that are offered.

The main campus typically is the original location of the college and serves the most students. The offices of the president and most other senior administrators are

[2] The last separately accredited community college in North Carolina opened in 1979.

usually found at the main campus. As shown in Exhibit 1-1, approximately 120,000 of the System's 137,000 FTE students (88%) in FY2002 were enrolled at a main campus location.

A branch or multi-campus location often rivals its main campus counterpart in size and level of services. Indeed, the major difference among campuses for several of the multi-campus colleges is the location of the president's office. In general, a multi-campus usually enrolls fewer students in a more limited array of programs. Importantly, however, a full array of student support programs is available. For designation as a multi-campus location, the SBCC policy requires a minimum budgeted FTE enrollment of 300 students and that "comprehensive instructional support functions, including areas such as libraries, student development services, etc., are part of the operation." As listed in Exhibit 1-1, the NCCCS currently enrolls nearly 10,000 FTE students at multi-campus locations (or 7.3% of all students). Thirteen colleges are considered as multi-campus colleges. Some of these campuses are in a different county than the original campus while other multi-campus locations are in the same county as the main campus and permit shorter commuting times for students.

A center focuses on providing direct instructional services, usually in a limited number of program areas. Program offerings mostly take the form of individual courses instead of complete program sequences, particularly at the associate degree level. According to SBCC policy, an instructional site must enroll 50 budgeted FTE students to be designated as an off-campus center. Overall, 38 colleges enroll 6,551 students at off-campus centers as listed in Exhibit 1-1.

EXHIBIT 1-1
ENROLLMENT BY COLLEGE BY TYPE OF LOCATION
FY2001-02

	ENROLLMENT BY INSTRUCTIONAL SITE				DISTRIBUTION OF ENROLLMENT			
COLLEGE	Main Campuses	Multi-College Campuses	Off-Campus Centers	GRAND TOTAL	Main Campuses	Multi-College Campuses	Off-Campus Centers	GRAND TOTAL
Alamance CC	2,635	0	130	2,765	95.3%	0.0%	4.7%	100.0%
Asheville-Buncombe TCC	3,870	0	80	3,950	98.0%	0.0%	2.0%	100.0%
Beaufort County CC	1,224	0	0	1,224	100.0%	0.0%	0.0%	100.0%
Bladen CC	1,033	0	101	1,134	91.1%	0.0%	8.9%	100.0%
Blue Ridge CC	1,351	0	283	1,634	82.7%	0.0%	17.3%	100.0%
Brunswick CC	878	0	87	965	91.0%	0.0%	9.0%	100.0%
Caldwell CC & TI	1,738	669	80	2,487	69.9%	26.9%	3.2%	100.0%
Cape Fear CC	4,567	29	168	4,764	95.9%	0.6%	3.5%	100.0%
Carteret CC	1,257	0	0	1,257	100.0%	0.0%	0.0%	100.0%
Catawba Valley CC	3,144	0	6	3,150	99.8%	0.0%	0.2%	100.0%
Central Carolina CC	2,111	972	195	3,278	64.4%	29.7%	5.9%	100.0%
Central Piedmont CC	6,784	2,667	68	9,519	71.3%	28.0%	0.7%	100.0%
Cleveland CC	2,294	0	0	2,294	100.0%	0.0%	0.0%	100.0%
Coastal Carolina CC	2,972	0	0	2,972	100.0%	0.0%	0.0%	100.0%
College of The Albemarle	1,267	305	96	1,668	76.0%	18.3%	5.8%	100.0%
Craven CC	1,652	304	0	1,956	84.5%	15.5%	0.0%	100.0%
Davidson County CC	2,297	0	132	2,429	94.6%	0.0%	5.4%	100.0%
Durham TCC	3,051	0	229	3,280	93.0%	0.0%	7.0%	100.0%
Edgecombe CC	740	649	0	1,389	53.3%	46.7%	0.0%	100.0%
Fayetteville TCC	5,923	0	819	6,742	87.9%	0.0%	12.1%	100.0%
Forsyth TCC	3,790	0	829	4,619	82.1%	0.0%	17.9%	100.0%
Gaston College	3,189	437	0	3,626	87.9%	12.1%	0.0%	100.0%
Guilford TCC	5,262	677	518	6,457	81.5%	10.5%	8.0%	100.0%
Halifax CC	1,448	0	0	1,448	100.0%	0.0%	0.0%	100.0%
Haywood CC	1,166	0	215	1,381	84.4%	0.0%	15.6%	100.0%
Isothermal CC	1,498	0	40	1,538	97.4%	0.0%	2.6%	100.0%
James Sprunt CC	1,005	0	0	1,005	100.0%	0.0%	0.0%	100.0%
Johnston CC	1,895	0	0	1,895	100.0%	0.0%	0.0%	100.0%
Lenoir CC	2,048	0	208	2,256	90.8%	0.0%	9.2%	100.0%
Martin CC	712	0	95	807	88.2%	0.0%	11.8%	100.0%
Mayland CC	809	0	56	865	93.5%	0.0%	6.5%	100.0%
McDowell TCC	923	0	39	962	95.9%	0.0%	4.1%	100.0%
Mitchell CC	1,233	0	174	1,407	87.6%	0.0%	12.4%	100.0%
Montgomery CC	653	0	0	653	100.0%	0.0%	0.0%	100.0%
Nash CC	1,956	0	0	1,956	100.0%	0.0%	0.0%	100.0%
Pamlico CC	216	0	0	216	100.0%	0.0%	0.0%	100.0%
Piedmont CC	952	0	257	1,209	78.7%	0.0%	21.3%	100.0%
Pitt CC	4,251	0	0	4,251	100.0%	0.0%	0.0%	100.0%
Randolph CC	1,465	0	86	1,551	94.5%	0.0%	5.5%	100.0%
Richmond CC	1,206	0	183	1,389	86.8%	0.0%	13.2%	100.0%
Roanoke Chowan CC	784	0	0	784	100.0%	0.0%	0.0%	100.0%
Robeson CC	2,012	0	270	2,282	88.2%	0.0%	11.8%	100.0%
Rockingham CC	1,877	0	0	1,877	100.0%	0.0%	0.0%	100.0%
Rowan-Cabarrus CC	1,644	1,383	0	3,027	54.3%	45.7%	0.0%	100.0%
Sampson CC	1,179	0	0	1,179	100.0%	0.0%	0.0%	100.0%
Sandhills CC	2,624	0	96	2,720	96.5%	0.0%	3.5%	100.0%
South Piedmont CC	573	408	44	1,025	55.9%	39.8%	4.3%	100.0%
Southeastern CC	1,613	0	12	1,625	99.3%	0.0%	0.7%	100.0%
Southwestern CC	1,521	0	63	1,584	96.0%	0.0%	4.0%	100.0%
Stanly CC	1,223	0	0	1,223	100.0%	0.0%	0.0%	100.0%
Surry CC	2,844	0	25	2,869	99.1%	0.0%	0.9%	100.0%
Tri-County CC	909	0	131	1,040	87.4%	0.0%	12.6%	100.0%
Vance-Granville CC	1,948	701	124	2,773	70.2%	25.3%	4.5%	100.0%
Wake TCC	5,477	780	245	6,502	84.2%	12.0%	3.8%	100.0%
Wayne CC	2,354	0	23	2,377	99.0%	0.0%	1.0%	100.0%
Western Piedmont CC	2,138	0	0	2,138	100.0%	0.0%	0.0%	100.0%
Wilkes CC	1,662	0	292	1,954	85.1%	0.0%	14.9%	100.0%
Wilson TCC	1,592	0	52	1,644	96.8%	0.0%	3.2%	100.0%
TOTAL, NCCCS	120,439	9,981	6,551	136,971	87.9%	7.3%	4.8%	100.0%

Source: NCCCS budget workpapers

1.3 Formula Treatment for Different Types of Instructional Locations

Over the years, a package of several different funding formulas has been used by the NCCCS to present the funding requirements of the colleges to the Governor and General Assembly. The two major formulas – those for Curriculum Instruction and for Instructional and Administrative Support – both have features that are intended to recognize the effects of economy of scale. In general, the concept of economy of scale is founded on the belief that the unit cost of producing a good or service declines as the volume of production increases. In terms of community colleges, the application of this concept is that a larger college can serve its students at a lower *per-student* cost than a smaller college, assuming the same quality of service.

Stated conversely, the economy of scale concept implies that a smaller college would need to spend more per student to provide the same quality of service as its larger counterparts. This argument is particularly persuasive when considering the funding needs covered by the Instructional and Administrative Support formula, where many of the positions are one-of-a-kind. For instance, both a large college and a small college need one president. The cost per student for the president's salary is much lower at a college with 10,000 students than at one with 2,000 students.

To incorporate the concepts of economy of scale and the companion notions of fixed and variable costs, the NCCCS formula for Instructional and Administrative Support provides funding for a fixed complement of 30 positions for each of the 58 colleges, regardless of enrollment. Known as the "base allotment," the provision of salaries and benefits for these 30 positions currently amounts to about $1.56 million per college.[3] For budgeted enrollment levels greater than 750 full-time-equivalent (FTE) students,

[3] Funding rates described here were in effect for FY2003.

additional funding (known as the "enrollment allotment") is provided at the rate of $1,093 per FTE student.

The need for some type of recognition of the fixed costs of administering multi-campus colleges and off-campus centers has been addressed in recent years. The SBCC has recommended supplemental funding for these sites based on the rationale that the colleges need to duplicate certain functions and positions in serving additional sites. To date, the General Assembly has not endorsed the specific formulas recommended by the SBCC but has provided approximately $1.65 million in additional funding to be distributed among the multi-campus colleges.

1.4 Special Provision for Study of Administrative Issues

In recent years, the continued validity of the current funding formula for Instructional and Administrative Support has come into question for several reasons, including:

- *Underlying rationale* – Some observers believe that the current funding strategy, which in effect provides more funding to smaller colleges on a per-student basis than to larger colleges, serves to perpetuate a perceived problem of having too many colleges that are too small to operate efficiently. At a minimum, they believe that current funding policy does not provide sufficient incentives for small colleges to find more efficient ways to deliver administrative services.

- *Equity* – Other observers believe that the current funding strategy makes an artificial (and inappropriate) distinction between the funding needs for administration of a small, stand-alone college and a multi-college campus of the same size.

- *Adequacy* – Still other observers support the broad design of the current models, but question technical details such as how to count enrollments or whether the funding rates and structure accurately mirror the economy of scale phenomenon and provide adequate funding.

To address these and related concerns, the General Assembly enacted a special provision during its 2002 session that called for a study of funding for community college administration. Section 8.7(a) of Senate Bill 1115 states:

> *The Joint Legislative Education Oversight Committee, in conjunction with the State Board of Community Colleges, shall hire an outside consultant to consider:*
>
> 1. *The organization and structure of the Community College System, the number of colleges within the System, the location and size of the colleges, and whether the State could realize any administrative savings from the consolidation of some colleges or programs;*
>
> 2. *The formula used to fund administration at the colleges, appropriate funding levels for administration of the various colleges, and the appropriate number of administrative staff members for colleges of different sizes; and*
>
> 3. *The funding of multicampus colleges and off-campus centers, including the appropriate number of administrative staff members, and an appropriate funding mechanism for administration and for other purposes.*

After enactment of the special provision, staff members of the Committee and State Board worked together to further define the requirements for the study and develop a Request for Proposals, which was issued on November 14, 2002. The RFP provided a "Project Description and Scope" that included five interrelated components.

> *(1) The organization and structure of the NCCCS including recommendations regarding organization and structure.*
>
> *(2) The size (full-time equivalent students and headcount) and number of colleges, (including campuses and off-campus centers) within the NCCCS; their proximity to one another; and whether or not the consolidation of two or more colleges or the administrations of two or more colleges, is feasible.*
>
> *(3) The basic elements of administration required to effectively operate a college or a subset of colleges:*
>
> *(a) Direct and indirect costs;*
> *(b) Staffing requirements; and*
> *(c) Appropriate levels of funding for administration at a college.*
>
> *The consultant may categorize colleges according to similar relevant characteristics which affect administrative needs, and may*

sample different types of colleges to determine the basic elements of administration required for each category.

(4) The current administrative formula:

(a) Whether the current formula adequately provides for administration at each college;

(b) Whether the current formula should be revised to reflect enrollment differences; and

(c) Whether other factors should be considered in the current administrative formula to reflect administrative requirements at different colleges; and

(d) Recommendations for other changes needed in the administrative formula.

(5) MCCs and Off-Campus Centers:

(a) Whether MCCs have special administrative funding requirements and if so, recommendations as to appropriate funding mechanisms to address those special requirements; and

(b) Whether there are additional costs associated with the operation of off-campus centers and if so, recommendations as to appropriate funding mechanisms to address those additional costs.

1.5 Overview of Report

This report has been prepared by MGT of America, Inc., in fulfillment of the requirements of the special provision and the request for proposals. Chapter 1.0 has introduced the purpose of the report. The remaining chapters are as follows:

- Chapter 2.0 provides additional context for the study of administrative costs, including further information on economy of scale research, the state's economic condition, and funding and enrollment trends in the NCCCS.
- Chapter 3.0 describes the evolution of the organization and structure of the colleges and the role and functions of the SBCC and local boards of trustees.
- Chapter 4.0 addresses the basic elements of administration, including core staffing requirements.

- Chapter 5.0 reviews opportunities for consolidation, especially the potential for colleges to combine resources in delivering certain administrative support services.

- Chapter 6.0 focuses on the continued appropriateness of the current formula for Instructional and Administrative Support, especially the amount provided as the base allotment.

- Chapter 7.0 considers the need for separate formula treatment to provide resources for administrative functions at multi-campus colleges and off-campus centers.

2.0 PROJECT BACKGROUND AND CONTEXT

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To provide additional context for the issues surrounding the study, this chapter explores the concept of economy of scale as well as provides background information on funding and structural issues affecting state government and community colleges in North Carolina and other states.

2.1 Economy of Scale in Higher Education

As introduced in Chapter 1.0, a commonly seen phenomenon in industry, or in any enterprise that produces goods or services, is economy of scale. In the broadest sense, the enterprise achieves greater efficiency as its scale of production increases. Thus, larger enterprises tend to be more efficient than their smaller counterparts within the same industry. The economy of scale phenomenon helps to explain the emergence of super-center type shopping over mom-and-pop stores, interstate-banking chains taking over local banks, and even school consolidation efforts.

Determining the existence and extent of economy of scale in higher education has long been a topic of interest among economists who study higher education. Bowen[1] noted in 1980 that the primary factors that drive the per-student costs of higher education down as enrollment increases is what he calls the "lumpiness" of many of the resources used. For a college or university to operate at all, it must have some faculty, a few administrative officers, some buildings and grounds, books, and equipment whether the college enrolls five students or 5,000. These costs to operate an institution or program no matter how many students are involved are called "fixed costs." The cost per student for these initial overhead items (or fixed costs) decreases as the number of

[1] Bowen, Howard R. 1980. *The Costs of Higher Education*. San Francisco, CA: Jossey-Bass, Inc.

students increases, until a point is reached when the initial staff and facilities are fully employed and an additional student would require the college to deploy additional resources. The costs that are added for additional students or additional outputs are called "variable costs." As the institution expands further, more resources would be added in the lumpy fashion, with costs continuing to be spread over additional students, and unit costs again would fall.

Bowen was not the first economist to study economies and diseconomies of scale in higher education. Early studies were completed in the 1920s, but the first studies of note were completed in the 1960s. All showed that certain economies of scale did exist for colleges and universities.[2]

In 1972, the Carnegie Commission on Higher Education determined that there was a definite relationship between size of an institution and cost per student. For public community or junior colleges, cost reductions occurred at the breaking point between 600 and 800 full-time equivalent students and among research and doctoral granting universities between 5,000 and 5,500 students.[3] Earlier work by the Commission had resulted in these recommendations for optimal college/university size:

	Minimum	**Maximum**
Doctoral universities	5,000	20,000
Comprehensive universities	5,000	10,000
Liberal arts colleges	1,000	2,500
Community colleges	2,000	5,000[4]

[2] See for example, Hungate, Meeth and O'Connell, "The Quality and Cost of Liberal Arts College Programs" in E.J. McGrath *Cooperative Long Range Planning in Liberal Arts Colleges.* 1964. New York, Columbia University; Hawley, Boland and Boland, "Population Size and Administration in Institutions of Higher Education," *American Sociological Review,* 30 (April 1965): pp. 252-255.

[3] Carnegie Commission on Higher Education. 1972. *The More Effective Use of Resources.* New York: McGraw-Hill.

[4] Carnegie Commission on Higher Education. 1971. *New Students and New Places.* New York: McGraw-Hill.

In his seminal work on university costs, Bowen concluded the following about the relationships between college size and expenditure patterns:

- Large institutions spend a substantially smaller percentage of their educational expenditures for institutional support and student services than do small institutions.
- Most large institutions spend relatively less per student for plant operation and maintenance than do small institutions.
- Large institutions spend a greater percentage of their resources for teaching than do comparable small institutions.
- Size appears to have no consistent effect on the percentages spent for scholarships and fellowships and for academic support. However, large institutions spend relatively less on libraries than do small institutions.[5]

Bowen concluded that economies of scale appear to be most pronounced for institutional support, student services, and plant.

Brinkman and Leslie completed a meta-analysis on 60 years of research on economies of scale in higher education.[6] The literature in the review included books, dissertations, reports, and journals dating from the 1920s. For two-year institutions, their review of the studies found that the largest portion of any size-related economies is realized by the time institutional enrollment reaches 1,000 to 1,500 FTE students. Data for larger institutions was inconclusive, but Brinkman and Leslie noted that "only small institutions seem to need to be concerned with possible effects of overall institutional effects of size on per-student costs."

Given the focus of the current project on the cost of college administration, we compiled a database of enrollments and administrative expenditures for all public community colleges in the nation. The data come from the U.S. Department of Education's IPEDS reports on Fall Enrollment and Finance for the 2001 fiscal year. For

[5] Bowen, op. cit., p. 182.
[6] Brinkman, Paul and Leslie, Larry. 1986. "Economies of Scale in Higher Education: Sixty Years of Research," *Review of Higher Education.* Association for the Study of Higher Education, v. 10, no. 1.

the purpose of this analysis of national data, we have defined administrative expenditures to be those associated with the following programmatic or functional areas:

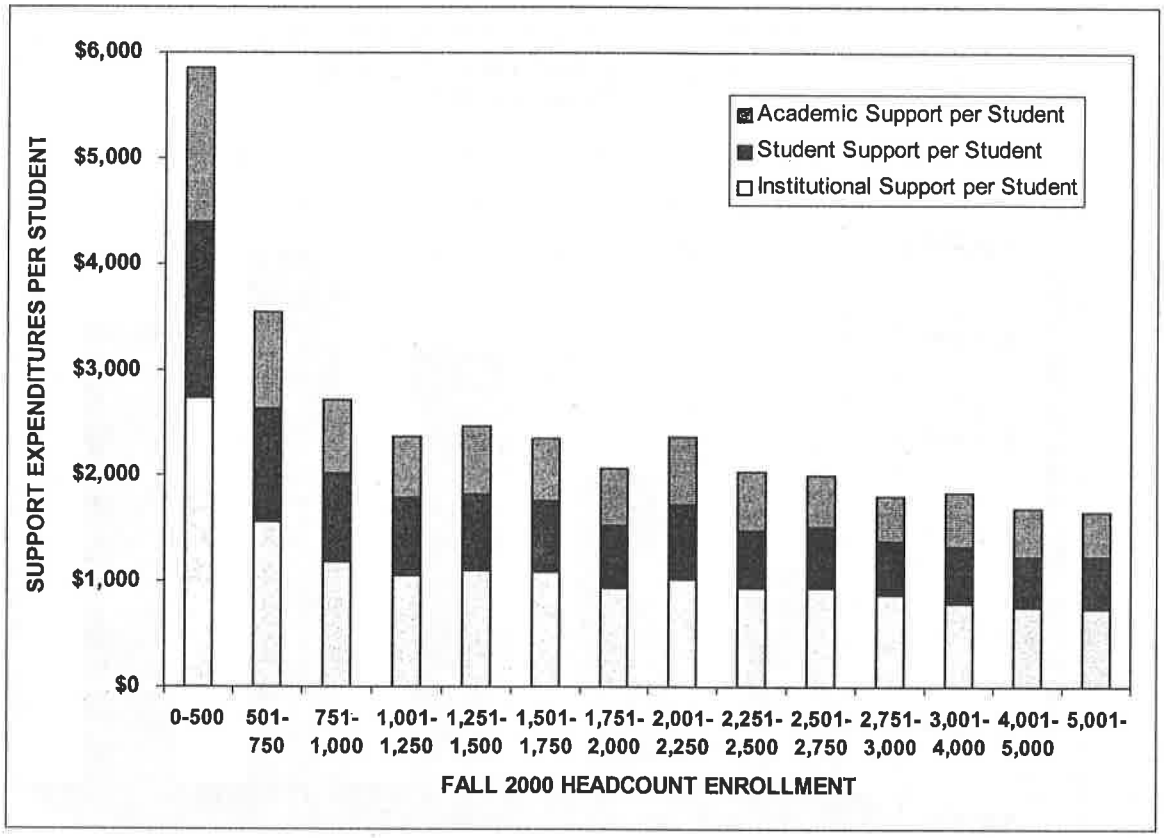
- *Academic support* – defined as support services that are an integral part of the institution's primary mission of instruction, research, or public service, such as libraries, museums, galleries, audio/visual services, academic computing support, academic administration, and course and curriculum development.

- *Student services* – defined as funds expended for admissions, registrar, career guidance, counseling, financial aid administration, and activities whose primary purpose is to contribute to students' emotional and physical well-being and to their intellectual, cultural and social development outside the context of the formal instructional program.

- *Institutional support* – defined as day-to-day operational support of the institution, including general administrative services, executive direction and planning, legal and fiscal operations, and development.

Exhibit 2-1 shows the administrative expenditures per headcount student for all community colleges nationally according to enrollment size category. As seen, the costs per student for administration are highest in smaller colleges and drop rapidly until enrollment reaches approximately 1000 students. This analysis of FY2001 data generally confirms the conclusions of Brinkman and Leslie that the breaking point for economy of scale occurs at approximately 1000 students.

EXHIBIT 2-1
ADMINISTRATIVE COSTS PER STUDENT
IN COMMUNITY COLLEGES NATIONALLY
FY2000-01



Source: National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), 2000-01 Fall Enrollment and Finance Surveys.

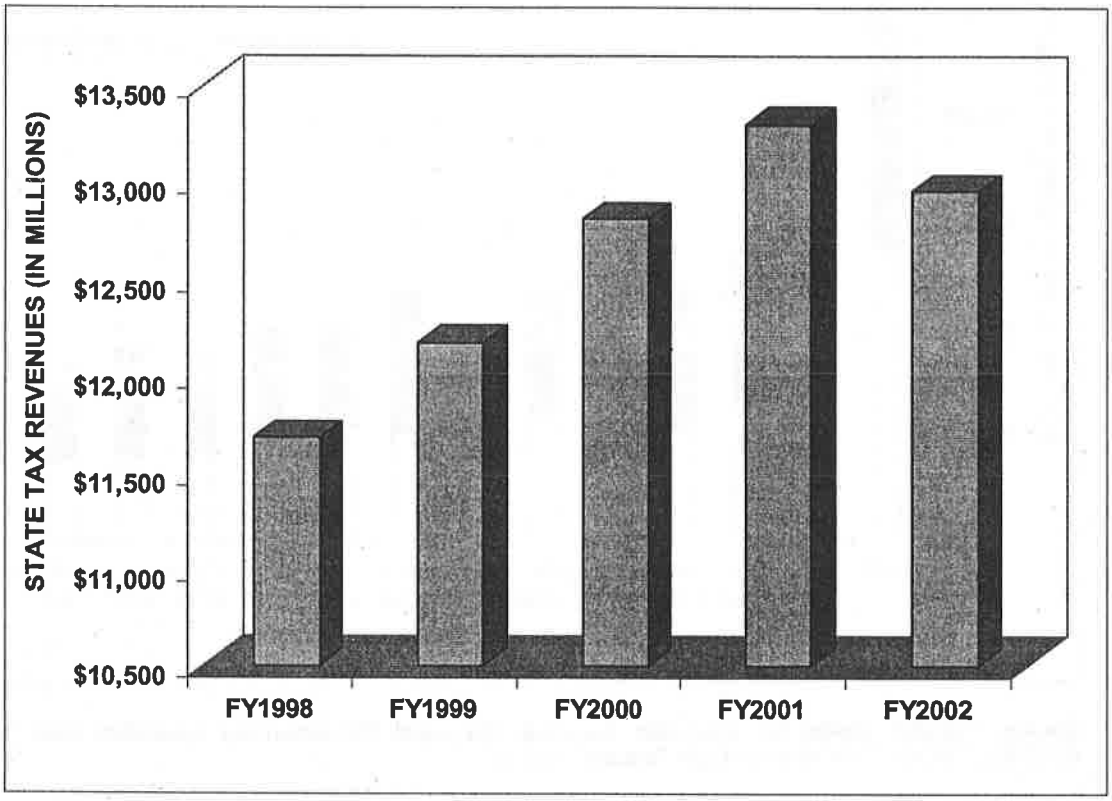
2.2 State Economic Profile

Although North Carolina was among the more prosperous states during much of the 1990s, it has experienced economic challenges in the past few years. This economic slowdown, along with competing state priorities, has adversely affected the amount of state revenue available to support the NCCCS.

As seen in Exhibit 2-2, the state experienced a significant dip in general fund tax revenues in FY2002. After four years of steady growth, tax revenues dropped more than

2.6% in FY2002. Decreases in collections for the individual and corporate income taxes accounted for most of the decline.

EXHIBIT 2-2
TRENDS IN STATE TAX COLLECTIONS
STATE OF NORTH CAROLINA
FY1998-FY2002



Coupled with the slowdown in tax collections is strong demand for state support for various programs and services. This point can be seen when comparing the Governor's recommended budget for FY2004 with the FY2003 appropriation. After restoring the budget reserve, just under $400 million in additional funding was available for the Governor's recommendation for FY2004. Of this amount, 93% was proposed for four functions (Corrections, Public Education, Health and Human Services, and Debt Service), as seen in Exhibit 2-3. The NCCCS was recommended for an increase in appropriations of 0.7%, while the average increase across all functions was 2.8%.

EXHIBIT 2-3
RECOMMENDED BUDGET ADJUSTMENTS BY FUNCTION
GOVERNOR'S RECOMMENDED BUDGET
FY2004

FUNCTION	BUDGET		DIFFERENCE		% OF INCREASE
	CURRENT FY03	RECOMMENDED FY04	DOLLARS	PERCENT	
General Assembly	$36,899,614	$41,561,463	$4,661,849	12.6%	1.2%
Judicial	$371,923,070	$376,365,264	$4,442,194	1.2%	1.1%
Gen Government	$326,024,049	$312,401,633	($13,622,416)	-4.2%	-3.5%
Public Safety & Reg	$128,667,981	$128,663,519	($4,462)	0.0%	0.0%
Correction	$880,054,808	$940,718,058	$60,663,250	6.9%	15.4%
Juvenile Justice	$128,984,633	$131,262,105	$2,277,472	1.8%	0.6%
Public Education	$5,894,553,493	$5,998,996,820	$104,443,327	1.8%	26.6%
Community Colleges	$669,281,390	$673,956,026	$4,674,636	0.7%	1.2%
Universities	$1,768,097,109	$1,796,470,696	$28,373,587	1.6%	7.2%
Transportation	$10,902,500	$11,429,525	$527,025	4.8%	0.1%
Health & HS	$3,596,428,649	$3,663,770,914	$67,342,265	1.9%	17.1%
Envir & Nat Resources	$148,818,587	$146,430,988	($2,387,599)	-1.6%	-0.6%
Agri & Consumer Services	$50,445,582	$48,756,978	($1,688,604)	-3.3%	-0.4%
Debt Service	$255,672,808	$388,941,868	$133,269,060	52.1%	33.9%
Reserves and Transfers	$0	$0	$0	#DIV/0!	0.0%
Total Current Operations	$14,266,754,273	$14,659,725,857	$392,971,584	2.8%	100.0%

2.3 Recent Trends in Funding and Enrollment for NCCCS

The state budget difficulties come at an inopportune time for the NCCCS, since its workload has been increasing during the same period. This divergence of trends in state revenue and college workload is no accident, since community college enrollments tend to run counter-cyclical to the economy. That is, the demand for community college programs, especially workforce training, is the strongest when workers are being laid off and find difficulty in getting re-employed in the same occupation. Another factor in the growing workload for community colleges is the increase of traditional-aged college students who are part of the "baby boom echo" generation.

Summary information about enrollments and budgets in the NCCCS between FY1996 and FY2003 is displayed in Exhibit 2-4. At first glance, it appears that the

NCCCS is in a period of strong revenue growth. As seen in the exhibit, there has been growth in all three major sources of revenue throughout the past eight-year period:

- Revenue for the colleges from state tax sources grew from just under $460 million in FY96 to over $641 million in FY03, including an estimated 6.4% increase during the past fiscal year. Clearly, the General Assembly has placed a high priority on funding for the NCCCS over the past eight years.
- Revenue from county sources has grown at a steady rate, increasing at an average of 6.6% annually over the same period of time.
- Tuition and fee revenue has grown at the fastest rate, more than doubling since FY96.

Overall, the NCCCS has budgeted nearly 50% more revenue in FY03 than it had available for expenditure in FY96.

EXHIBIT 2-4
RECENT ENROLLMENT AND FUNDING TRENDS

Data Element	Fiscal Year							
	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003
Enrollment								
Unduplicated Headcount	779,956	795,425	710,681	759,936	757,745	772,280	775,418	N/A
Budgeted FTE	138,867	137,383	137,868	138,548	144,283	150,884	153,985	169,924
Unrestricted Revenue by Source								
State	459,920,166	483,077,593	517,078,900	544,032,029	558,452,131	598,657,073	602,467,576	641,121,504
County	81,518,302	87,736,380	94,145,802	102,766,427	108,912,466	115,890,163	123,433,923	127,414,446
Tuition and Fees	66,082,371	66,177,307	65,625,714	70,698,928	94,216,782	101,003,181	124,200,887	140,775,483
Total	607,520,839	636,991,280	676,850,416	717,497,384	761,581,379	815,550,417	850,102,386	909,311,433
Revenue per Budgeted FTE								
State	3,312	3,516	3,751	3,927	3,871	3,968	3,913	3,773
County	587	639	683	742	755	768	802	750
Tuition and Fees	476	482	476	510	653	669	807	828
Total	4,375	4,637	4,909	5,179	5,278	5,405	5,521	5,351
Impact of Inflation								
Consumer Price Index	154.4	159.1	161.6	164.3	168.8	175.8	177.8	183.1
Deflation Factor	118.6%	115.1%	113.3%	111.4%	108.5%	104.2%	103.0%	100.0%
Inflation Adjusted Revenue per FTE								
State	3,928	4,047	4,250	4,376	4,198	4,132	4,029	3,773
County	696	735	774	827	819	800	825	750
Tuition and Fees	564	554	539	569	708	697	831	828
Total	5,188	5,336	5,563	5,771	5,726	5,630	5,685	5,351

Source: NCCCS budget office

When enrollment growth is taken into account, however, the interpretation of change in financial condition is not as positive. FTE enrollment has grown by over 22% over the eight-year period and, as seen in the Exhibit, nearly half that growth occurred

during the past year. As a result, the revenue per student has declined in the past few years for colleges in the NCCCS.

Another factor contributing to the financial stress facing the community colleges is the cumulative impact of inflation. Even though the annual inflation rates in recent years have been relatively modest, the cumulative rate between FY96 and FY03 is 18.6%. When this cumulative inflation rate is combined with the enrollment growth, we see in Exhibit 2-4 that the effective rate of revenue per student has been drifting downward since a peak in FY99. On a per-student, inflation-adjusted basis, the colleges only have 93% of the revenue available now as four years ago.

2.4 Conditions in Other States

North Carolina is not alone in dealing with state budget pressures, and many other states are re-examining their funding commitment to colleges and universities as a result. Higher education has long been the biggest discretionary item in the budget of most states, and colleges and universities also have been perceived as having greater access to other sources of funds (e.g., tuition and private gifts) than most state programs – thus providing a rationale for reducing their appropriations from state tax funds.

The cost of administration is a recurring concern for state budget-makers and one that becomes especially acute when enrollment demand is growing faster than tax receipts. A common strategy at the state-level is to attempt to fund the direct costs of instruction related to enrollment growth through cost reductions in other components of the college budget, primarily administration.

In Massachusetts, the new governor has recommended administrative savings through merger of several colleges. In Kentucky, three community colleges are merging with nearby technical colleges. In Virginia, the Community College System is planning a

study similar to the current NCCCS study of administrative costs. The Georgia Board of Regents is currently completing a study that explored consolidation of administrative functions of colleges in the same regions. In each of these states, the emphasis has been on providing administrative services more efficiently.

2.5 National Funding Comparisons

Two final points of background information for considering the appropriateness of the current levels of administrative costs in the NCCCS are provided by comparisons with expenditure patterns at similar colleges in other states. Two common measures are per-student funding rates for administrative functions and distributions of expenditures across functions.

As seen in Exhibit 2-5, the cost per student for administrative functions in North Carolina's community colleges trails the national average by $51 per student, or 3%. Academic program costs per student in the NCCCS are 17% greater than the national average. When the percentage distribution of expenditures across functions is considered, the NCCCS institutions report 32.9% being expended on administrative functions compared to 37.5% nationally.

EXHIBIT 2-5
COMPARISON OF ADMINISTRATIVE EXPENDITURE RATES
NCCCS AND COMMUNITY COLLEGES NATIONALLY
FY2001

Function	Expenditures per Headcount Student				Distribution of Expenditures		
	Average		Difference		Average		Percent
	NCCCS	National	Dollars	Percent	NCCCS	National	Difference
Instruction	2,911	2,290	621	21.3%	56.1%	48.8%	12.9%
Research/Service	35	138	(103)	-294.5%	0.7%	2.9%	-336.8%
Subtotal, Programs	2,946	2,428	518	17.6%	56.7%	51.8%	8.7%
Academic Support	462	451	12	2.5%	8.9%	9.6%	-7.9%
Student Services	383	532	(149)	-38.8%	7.4%	11.3%	-53.7%
Insitutional Support	864	778	86	10.0%	16.6%	16.6%	0.3%
Subtotal, Administration	1,709	1,761	(51)	-3.0%	32.9%	37.5%	-14.0%
Operation and Maintenance	537	501	36	6.7%	10.3%	10.7%	-3.3%
Total	5,192	4,690	502	9.7%	100.0%	100.0%	0.0%

Source: National Center for Education Statistics, Integrated Postsecondary Education Data Survey (IPEDS), 2000-01 Fall Enrollment and Finance Surveys.

3.0 ORGANIZATION AND STRUCTURE OF THE NORTH CAROLINA COMMUNITY COLLEGE

3.0 ORGANIZATION AND STRUCTURE OF THE NORTH CAROLINA COMMUNITY COLLEGE SYSTEM

This chapter discusses the development and describes key aspects of the organization and structure of the North Carolina Community College System. Specific topics include:

- development of the current array of 59 colleges;
- two-tiered governance of the NCCCS;
- significance of local funding of the NCCCS;
- rationale for local governance of NCCCS institutions; and
- an analysis of the size and distance between NCCCS institutions.

3.1 Establishment and Number of Current Institutions

This current system of 59 colleges evolved from uncoordinated efforts over several decades, without strict adherence to a comprehensive master plan to guide development and ensure optimum strategic deployment of the colleges. As a result, some existing colleges are the result of political decisions and may not contribute to optimal access or efficiency of operations. Major junctures in the historical development of the college system include the following:

- In 1952, a Community College Study Commission, chaired by Dr. Allan Hurlburt, recommended establishment of a comprehensive community college system that would provide North Carolina residents access to a low cost quality education within a 25-mile commuting radius, subject to existence of sufficient student demand. The study eventually led to adoption of the Community College Act in 1957, which initially precluded multi-county colleges. Some colleges were established that did not meet the Study Commission's criteria.

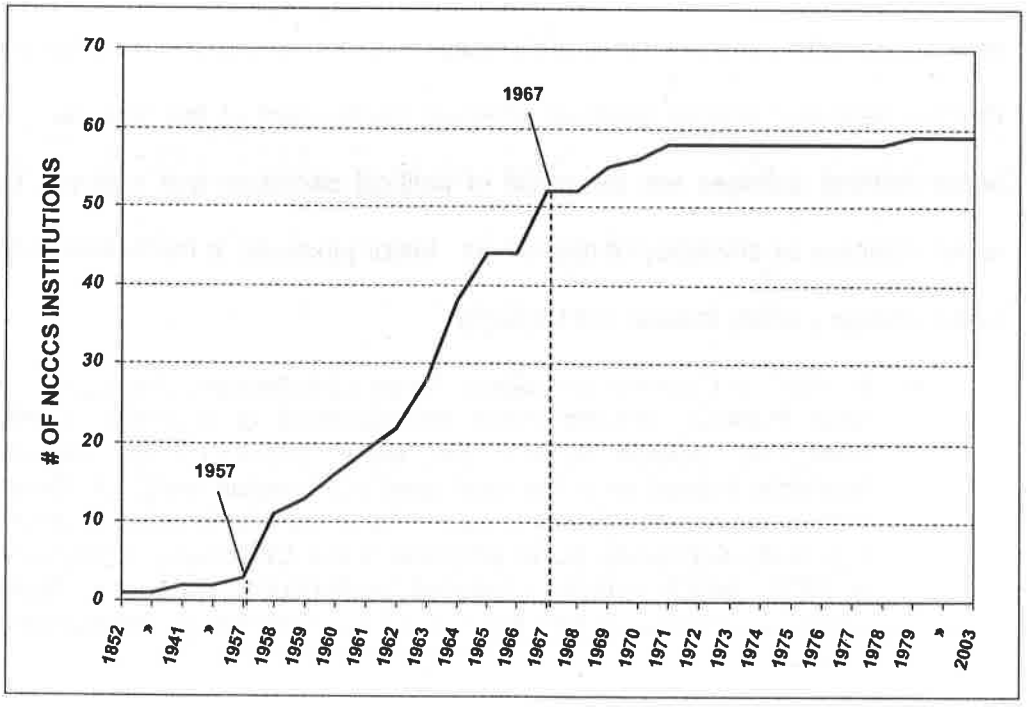
- In 1957, an Industrial Education Centers Study was authorized by the General Assembly and conducted by Dr. Dallas Herring. The study led to establishment of 18 centers across the state under supervision of the State Board of Education.

- The Carlyle Commission, in 1961 recommended that administration of community colleges and industrial education centers be joined under governance of the State Board of Education and local boards of trustees. The study report established ideal commuting distance of 30 miles and minimum enrollments of 400 students.

- In 1979, the State Board of Community Colleges was established, and took over the role of the State Board of Education for state-level governance of community colleges.

At the same time that the various study commissions were debating potential state policies and criteria for establishment of community colleges, a number of colleges were being authorized. As shown in Exhibit 3-1 below, over 50 of the state's colleges had been established by 1967, which allowed minimal time for the Carlyle Commission's accessibility guidelines to have an impact.

EXHIBIT 3-1
TIMELINE OF ESTABLISHMENT OF
NORTH CAROLINA COMMUNITY COLLEGES



3.1.1 National Comparisons of Size and Colleges Per Capita

Exhibit 3-2 provides a listing of the numbers of community colleges by state and by per capita in each state. North Carolina ranks quite high among the states in terms of the number of community colleges per 1,000 square mile unit (ranks sixth) and number of community colleges per 100,000 population (ranks eighth). On the other hand, North Carolina ranks 37th in average headcount enrollments per college indicating a much higher than average number of smaller institutions and, hence, a system that does not fully capture the economies of scale possible for systems with higher proportions of colleges with headcount enrollments over 2,000.

Although this dispersion of smaller institutions may not be the most economical arrangement, it has led to commendable participation rates among state citizens. As indicated in Exhibit 3-3, among the 50 states, North Carolina ranks 13th in enrollments per 100,000 of the total population and 14th in the number of enrollments per 100,000 of the population between 18 and 44.

EXHIBIT 3-2
NATIONAL COMPARISON OF NUMBERS OF COMMUNITY COLLEGES BY STATE

State	# of Community Colleges	Average Headcount Enrollment		Community Colleges per 100K Population		Community Colleges per 1000 Square Miles	
		Average	*Rank*	Rate	*Rank*	1000 Sq Mile	*Rank*
Alabama	29	2,446	*41*	0.65	*9*	0.57	*16*
Alaska	2	582	*50*	0.32	*32*	0.00	*50*
Arizona	19	9,314	*5*	0.37	*22*	0.17	*36*
Arkansas	20	1,567	*44*	0.75	*6*	0.38	*23*
California	106	12,783	*3*	0.31	*34*	0.68	*14*
Colorado	15	5,316	*19*	0.35	*24*	0.14	*38*
Connecticut	12	3,401	*31*	0.35	*23*	2.48	*2*
Delaware	3	4,006	*28*	0.38	*20*	1.54	*4*
Florida	28	11,383	*4*	0.18	*44*	0.52	*17*
Georgia	27	2,694	*39*	0.33	*28*	0.47	*19*
Hawaii	7	3,397	*32*	0.58	*10*	1.09	*7*
Idaho	3	3,365	*33*	0.23	*40*	0.04	*48*
Illinois	48	7,091	*7*	0.39	*19*	0.86	*11*
Indiana	14	3,593	*30*	0.23	*41*	0.39	*22*
Iowa	15	4,383	*25*	0.51	*17*	0.27	*30*
Kansas	20	3,300	*34*	0.74	*7*	0.24	*33*
Kentucky	14	3,120	*36*	0.35	*26*	0.35	*25*
Louisiana	45	953	*48*	1.01	*3*	1.03	*8*
Maine	7	1,081	*47*	0.55	*11*	0.23	*34*
Maryland	15	5,680	*17*	0.28	*36*	1.53	*5*
Massachusetts	15	5,114	*20*	0.24	*39*	1.91	*3*
Michigan	28	6,846	*9*	0.28	*37*	0.49	*18*
Minnesota	26	3,597	*29*	0.53	*13*	0.33	*27*
Mississippi	15	4,039	*27*	0.53	*14*	0.32	*28*
Missouri	18	4,401	*24*	0.32	*31*	0.26	*31*
Montana	7	611	*49*	0.78	*5*	0.05	*46*
Nebraska	7	5,082	*21*	0.41	*18*	0.09	*42*
Nevada	3	14,984	*2*	0.15	*47*	0.03	*49*
New Hampshire	4	2,620	*40*	0.32	*30*	0.45	*21*
New Jersey	19	6,557	*10*	0.23	*42*	2.56	*1*
New Mexico	19	2,701	*38*	1.04	*2*	0.16	*37*
New York	39	5,993	*14*	0.21	*43*	0.83	*12*
North Carolina	**58**	**2,896**	***37***	**0.72**	***8***	**1.19**	***6***
North Dakota	5	1,471	*45*	0.78	*4*	0.07	*43*
Ohio	37	4,248	*26*	0.33	*29*	0.90	*10*
Oklahoma	12	4,514	*22*	0.35	*25*	0.17	*35*
Oregon	13	6,270	*11*	0.38	*21*	0.14	*39*
Pennsylvania	16	5,954	*15*	0.13	*49*	0.36	*24*
Rhode Island	1	15,583	*1*	0.10	*50*	0.96	*9*
South Carolina	21	3,250	*35*	0.52	*16*	0.70	*13*
South Dakota	4	1,181	*46*	0.53	*12*	0.05	*45*
Tennessee	14	6,146	*12*	0.25	*38*	0.34	*26*
Texas	64	6,861	*8*	0.31	*35*	0.24	*32*
Utah	3	9,100	*6*	0.13	*48*	0.04	*47*
Vermont	1	4,412	*23*	0.16	*46*	0.11	*41*
Virginia	24	5,752	*16*	0.34	*27*	0.61	*15*
Washington	31	5,624	*18*	0.53	*15*	0.47	*20*
West Virginia	3	2,056	*43*	0.17	*45*	0.12	*40*
Wisconsin	17	6,002	*13*	0.32	*33*	0.31	*29*
Wyoming	7	2,425	*42*	1.42	*1*	0.07	*44*
Total	980	5,661		0.35		0.28	

Notes: 1) Enrollment data derived from Fall 2000 IPEDS data. Nebraska data from Fall 1999.
2) Due to limitations in national data bases, the average headcount enrollment in this exhibit does not include continuing education students, which is a significant program in the NCCCS.

EXHIBIT 3-3
NATIONAL COMPARISON OF PARTICIPATION RATE IN COMMUNITY COLLEGES BY STATE

State	# of Community Colleges	Community College Participation Rate			
		Enrollment per 100 K Total Population		Enrollment per 100K 18-44 Year Olds	
		Rate	*Rank*	Rate	*Rank*
Alabama	29	1,595	*24*	4,095	*23*
Alaska	2	186	*50*	444	*50*
Arizona	19	3,449	*2*	8,697	*3*
Arkansas	20	1,172	*36*	3,089	*33*
California	106	4,000	*1*	9,567	*1*
Colorado	15	1,854	*21*	4,339	*21*
Connecticut	12	1,199	*35*	3,119	*32*
Delaware	3	1,534	*26*	3,846	*26*
Florida	28	1,994	*15*	5,379	*12*
Georgia	27	889	*40*	2,077	*42*
Hawaii	7	1,963	*16*	4,962	*16*
Idaho	3	780	*43*	2,008	*44*
Illinois	48	2,741	*6*	6,778	*6*
Indiana	14	827	*42*	2,087	*41*
Iowa	15	2,247	*10*	5,937	*9*
Kansas	20	2,455	*7*	6,298	*7*
Kentucky	14	1,081	*38*	2,704	*38*
Louisiana	45	959	*39*	2,419	*39*
Maine	7	594	*47*	1,595	*47*
Maryland	15	1,608	*23*	4,015	*25*
Massachusetts	15	1,208	*34*	2,978	*35*
Michigan	28	1,929	*18*	4,917	*17*
Minnesota	26	1,901	*20*	4,745	*19*
Mississippi	15	2,130	*11*	5,394	*11*
Missouri	18	1,416	*30*	3,656	*30*
Montana	7	474	*48*	1,289	*48*
Nebraska	7	2,079	*14*	5,372	*13*
Nevada	3	2,250	*9*	5,531	*10*
New Hampshire	4	848	*41*	2,163	*40*
New Jersey	19	1,481	*29*	3,760	*28*
New Mexico	19	2,821	*5*	7,366	*4*
New York	39	1,232	*32*	3,069	*34*
North Carolina	**59**	**2,090**	***13***	**5,074**	***14***
North Dakota	5	1,145	*37*	2,966	*36*
Ohio	37	1,385	*31*	3,579	*31*
Oklahoma	12	1,570	*25*	4,050	*24*
Oregon	13	2,382	*8*	6,142	*8*
Pennsylvania	16	776	*44*	2,066	*43*
Rhode Island	1	1,486	*28*	3,735	*29*
South Carolina	21	1,701	*22*	4,270	*22*
South Dakota	4	626	*46*	1,661	*46*
Tennessee	14	1,512	*27*	3,788	*27*
Texas	64	2,106	*12*	5,033	*15*
Utah	3	1,222	*33*	2,882	*37*
Vermont	1	725	*45*	1,891	*45*
Virginia	24	1,950	*17*	4,719	*20*
Washington	31	2,958	*4*	7,309	*5*
West Virginia	3	341	*49*	915	*49*
Wisconsin	17	1,902	*19*	4,846	*18*
Wyoming	7	3,437	*3*	8,970	*2*
Total	981	1,976		4,941	

3.2 Two-Tiered Governance and Funding

Governance of the NCCCS consists of two tiers: a State Board of Community Colleges and local boards of trustees specific to each college.

3.2.1 Composition and Duties of State and Local Boards

The state board consists of 21 members, who fall into one of seven categories of membership:

- Six appointees of the Governor (one per Trustee Region);
- four at large appointees of the Governor;
- four appointments by the State Senate;
- four appointments by the State House of Representatives;
- the Lieutenant Governor;
- the State Treasurer; and
- the President of the State Student Government Association.

Responsibilities of the State Board span programmatic, personnel, finance and facilities issues, and include the following:

- establishment of standards for curricula, admissions, and graduation along with regulating the awarding of degrees, diplomas, and certificates;
- approval of college president selections and establishment of standards for professional personnel;
- establishment of student tuition and fees including financial accounting procedures and equitable distribution of state funds; and
- approval of sites, buildings, plans, and budgets.

The second tier of college governance includes local boards of trustees for each individual college. These local boards typically are comprised of 13 members including:

- Four appointments by the local board of education;
- four appointments by the local board of county commissioners;
- four appointments by the Governor; and
- the president of student government for the college.

Responsibilities of the local boards of trustees include:

- providing instructional services and applying standards and requirements of the state board;

- electing a president subject to state board approval;
- delegating functions to the president or employing necessary personnel to perform functions in support of board responsibilities;
- accepting gifts, adopting budgets, investing idle funds, purchasing goods and services, and securing local funds; and
- purchasing and holding title to land and facilities.

3.2.2 Funding From State and Local Sources

The influence of local involvement in community colleges is not limited to the role that local boards of trustees play in the governance. County governments provide a significant share of funding for the NCCCS (approximately 14 percent). According to state law, county governments are expected to pay the costs of operation and maintenance of facilities at the colleges in their respective counties. Some counties go beyond this minimum requirement and provide supplements for programs and support functions as well.

Serious concern has been expressed by numerous college administrators that this considerable source of funding could be jeopardized if mergers or consolidations diminish the presence of local administration and the resulting sense of local autonomy and ownership that stimulates local support for colleges. Were this to occur with any magnitude, any savings realized from consolidation of administration could be offset by diminished local funding that would have to be picked up by the state in order to prevent a decline in programs or services.

3.3 Rationale for Local Administration

Many local leaders fear that the special provision leading to the current study is the first step toward merger, if not closure, of colleges in their communities. Although any possible mergers of administrative functions presumably would not result in loss of access to instructional programs, some of these local leaders suggest that loss of local

administration would harm their campuses and communities. This section discusses arguments offering rationale for localized administration of community colleges.

Cohen and Brawer (1989) raise three concerns that bring into question the viability of removing or altering the local administration of community colleges (p 126):

- Can the anarchical elements of collegiality coexist with contracts negotiated by distant representatives?
- How can the college maintain consistent direction when numerous organized groups within and outside the institution all demand to participate in governance?
- How can staff members be held responsible for their actions when most of the decisions that affect them are beyond their control?

Community colleges engage in a vast array of activities and efforts that meet needs of the local communities within which they reside. Solutions to many community problems are achieved through the convener function served by community colleges in hosting summits or mediation groups intended to resolve conflicts. Along with promoting civic and leadership development, community colleges serve as a conduit for art and cultural opportunities.

Facilities and resources shared by community colleges not only promote economic development and opportunities, but also foster a climate for lifetime learning. This vast array of functions and services of community colleges is dependent upon partnerships with local government and other civic, social, private sector, and cultural entities. The optimum setting is created through students, faculty, and administrators forming strong connections with their local communities. Hence, some writers assert that displacing local administration would weaken these crucial partnerships and likely diminish the abilities of colleges to effectively serve a central role in community development (Phinney, Schoen, and Hause, 2003).

Testimony at six regional workshops and supporting documentation offered strong support for the current governance arrangements, and stressed the importance of the local role and autonomy of community colleges.[1] These arguments included:

- *Responsiveness to local education and training needs.* Local administrators who are connected with their communities best understand the needs of local industry along with the direction of local education and training needs. These local officials are best equipped to direct colleges in responding quickly and effectively to emerging and changing needs within their communities.

- *Critical resource for local economic development.* Community colleges for many communities are the engine that drives economic development. Local administrators with established connections to industry and economic development planners are best equipped to position local colleges to perform this role.

- *Community leadership.* Community colleges serve a leadership role for many communities. That is, the college charts the course for community development and speaks and interrelates with other government entities (county and state government) on behalf of the community. The local community college president is viewed as the community spokesperson in many communities.

- *Center of community life.* As noted earlier, community colleges serve as convener of various civic, social, and government groups for many communities. In addition, they often serve as the cultural center of the community and provide a forum for numerous volunteer and personal enrichment activities. These important functions are much better served by local administrators steeped in the community rather than distant administrators lacking essential relationships.

- *County funding of facilities-related costs and other local government funding (approximately 14 percent of college operating costs).* Local governments are a key source of funding for community colleges both with facilities and ongoing operations. Administrators fear that removing local administration and the sense of connection and ownership by local government will threaten or diminish this important source of funding.

- *Private giving from local sources.* Locally established relationships over time encourage local gifts to colleges which becomes even more important in times of limited state budget resources. Removal of local administration would likely diminish this key source of support for programs and facilities. The prospect of consolidation

[1] A listing of the six regional workshops is included as Appendix A. Correspondence from local government officials and association spokesmen is included as Appendix B.

> dampens private giving since donors are likely to support institutions that are unstable or lacking steadfast ownership and identity.

Some of the testimony, of course, can be challenged since there are a number of successful examples of counties in North Carolina that take pride in being the site of one of the extended campuses of a multi-campus college. Local leaders in those counties might testify that their multi-campus college provides the same advantages that were cited above for single-county colleges. Nonetheless, the testimony does serve to illustrate the strong support in some circles for the current organizational patterns.

3.4 Analysis of Commuting Distances to Colleges

This section provides an analysis of the size and distance between community colleges in the NCCCS. As a basis for evaluating the reasonableness of commuting distances to colleges, separate campuses or off-campus centers, it is helpful to consider typical commute times to employment among the working public in North Carolina. Exhibit 3-4 shows average commute time to work by the number of counties in each range of times. Although in some counties the average commute is 30 minutes or more, the average commute statewide is 24 minutes.

EXHIBIT 3-4
AVERAGE COMMUTING TIMES TO EMPLOYMENT IN NORTH CAROLINA COUNTIES

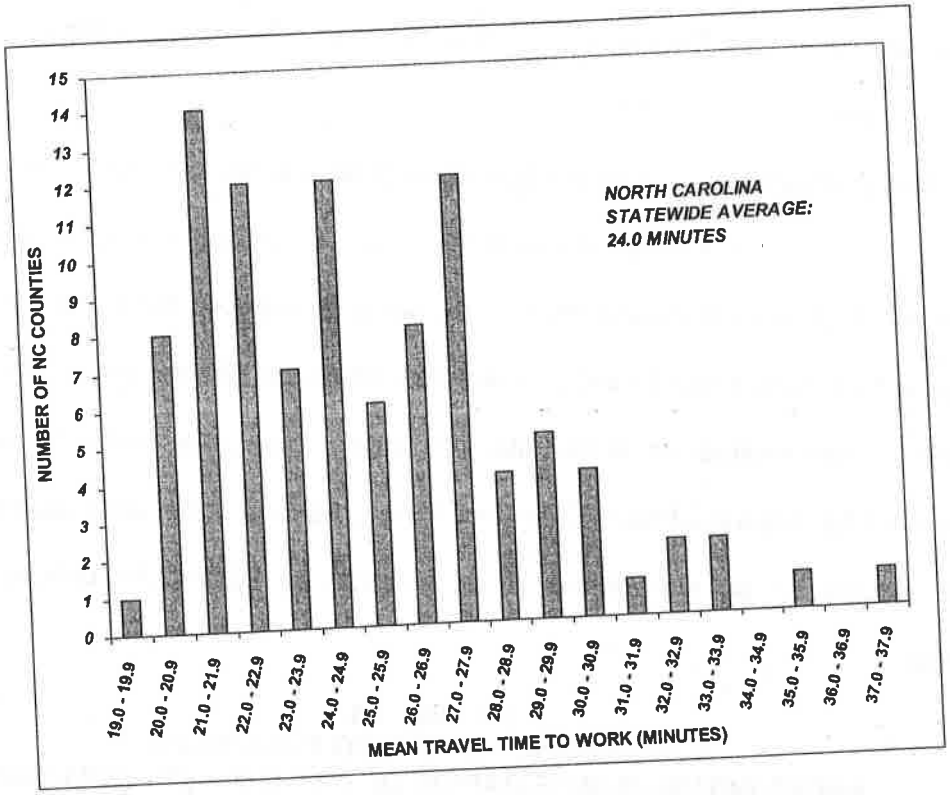


Exhibit 3-5 shows the geographic dispersion of community colleges in the state and illustrates a 25-mile radius (the standard recommended in the original Hurlburt report) surrounding each college, multi-campus college, and off-campus center. This graphic display shows a reasonably balanced dispersion of colleges throughout the state in spite of the previously mentioned absence of a strategic plan during the formative years of the community college system. The vast majority of state territory is within 25 miles of a community college or multi-campus site as shown by the radius indicators.

To further analyze the geographic coverage of campuses and centers, three additional exhibits are included:

- Regions 1 and 2 are the focus of Exhibit 3-6.
- Regions 3 and 4 are shown in Exhibit 3-7
- Regions 5 and 6 are seen in Exhibit 3-8.

For regions 1-4, the combination of colleges, campuses and centers effectively cover all areas of the applicable counties. In Exhibit 3-8, a small area in the far eastern portion of the state (primarily Hyde County) is not within a 25-mile radius of any permanent NCCCS instructional site.

When considering information from all of these exhibits, the maximum commuting distance of 25 miles for most citizens to reach a college campus compares favorably with the typical 24-minute commuting time of the working public in North Carolina. These commuting distances might be more challenging for those citizens living either in highly congested urban regions or in mountainous areas, especially during winter months. However, for the majority of North Carolina citizens, required commuting distances should not be viewed as an impediment to participation in community college education programs.

EXHIBIT 3-5
GEOGRAPHIC ACCESS TO THE NCCCS
AREAS WITHIN 25-MILE RADIUS OF A COMMUNITY COLLEGE
ALL REGIONS

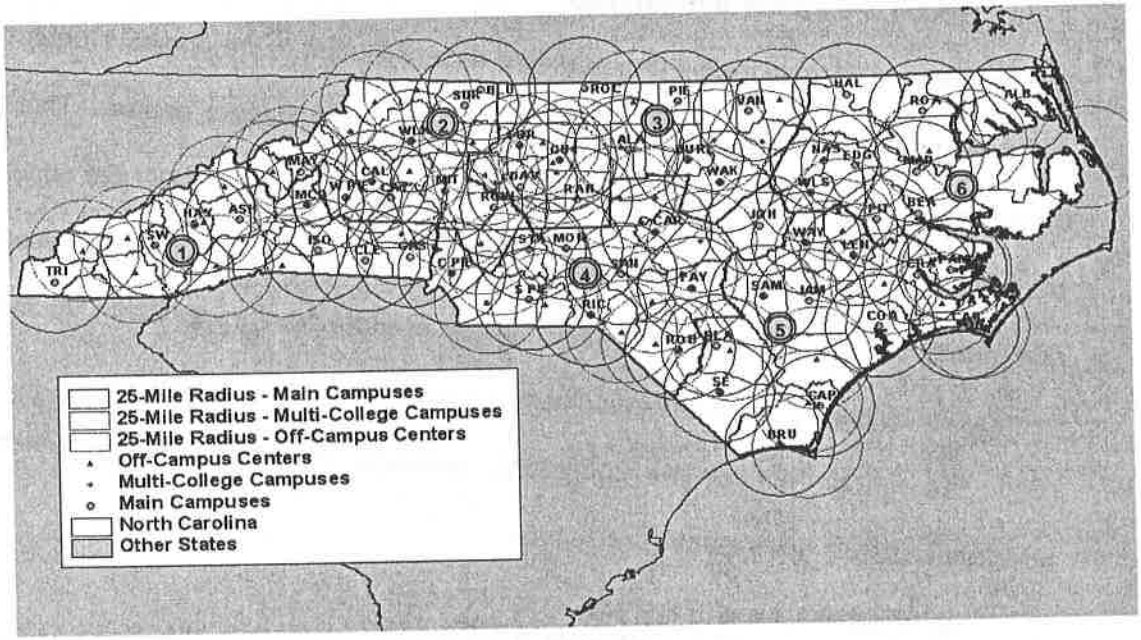


EXHIBIT 3-6
GEOGRAPHIC ACCESS TO THE NCCCS
AREAS WITHIN 25-MILE RADIUS OF A COMMUNITY COLLEGE
TRUSTEE REGIONS 1 & 2

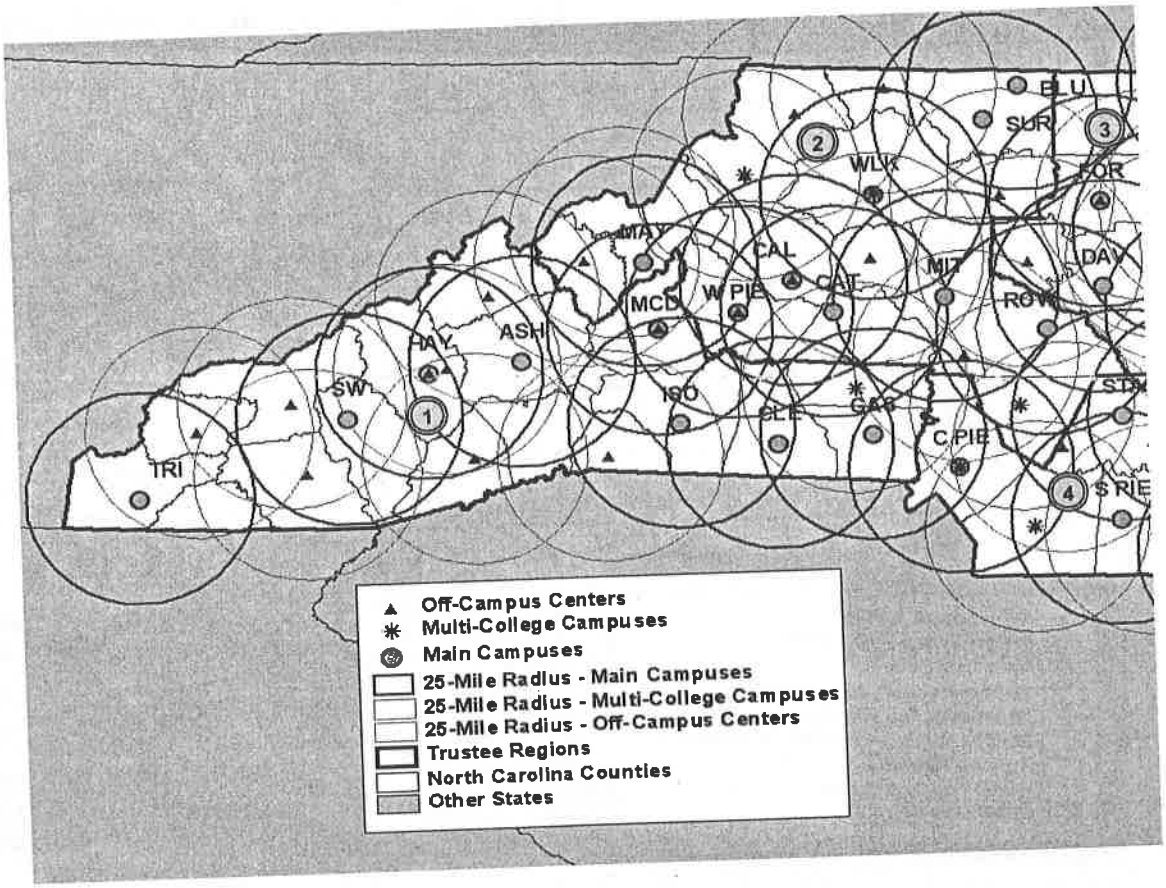


EXHIBIT 3-7
GEOGRAPHIC ACCESS TO THE NCCCS
AREAS WITHIN 25-MILE RADIUS OF A COMMUNITY COLLEGE
TRUSTEE REGIONS 3 & 4

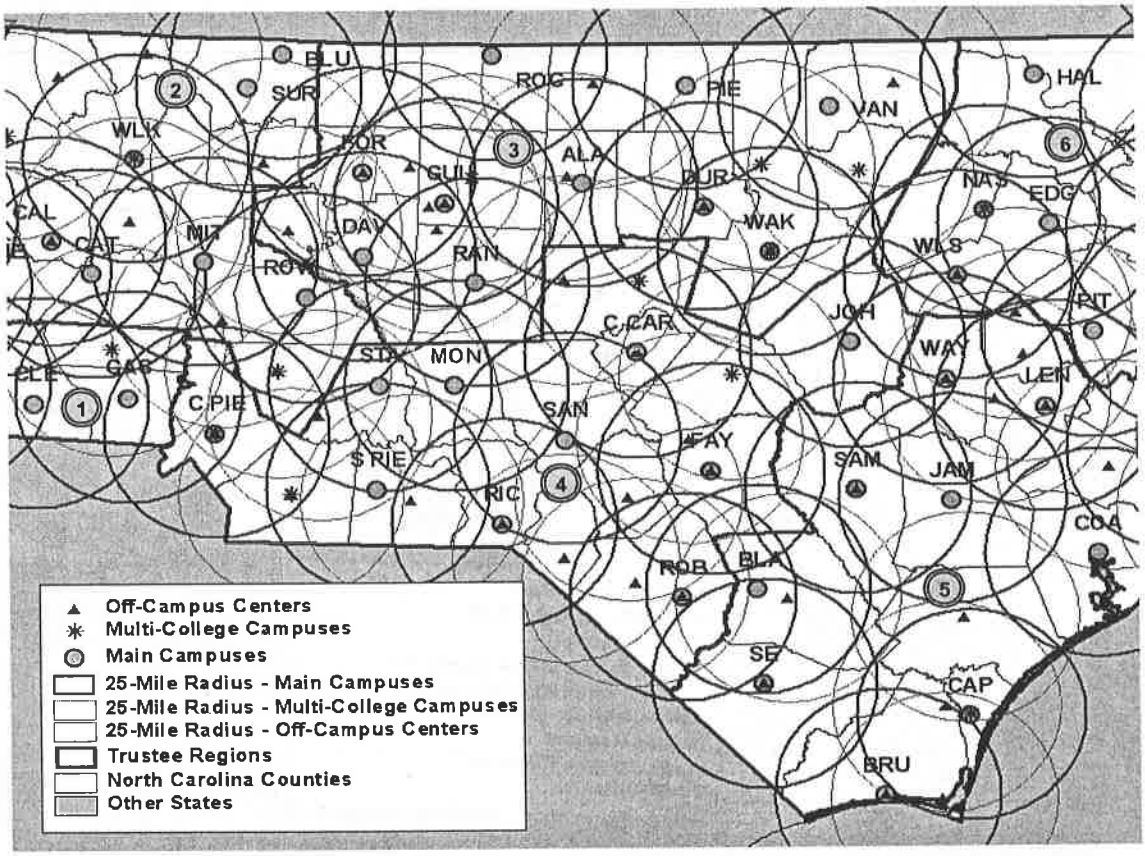
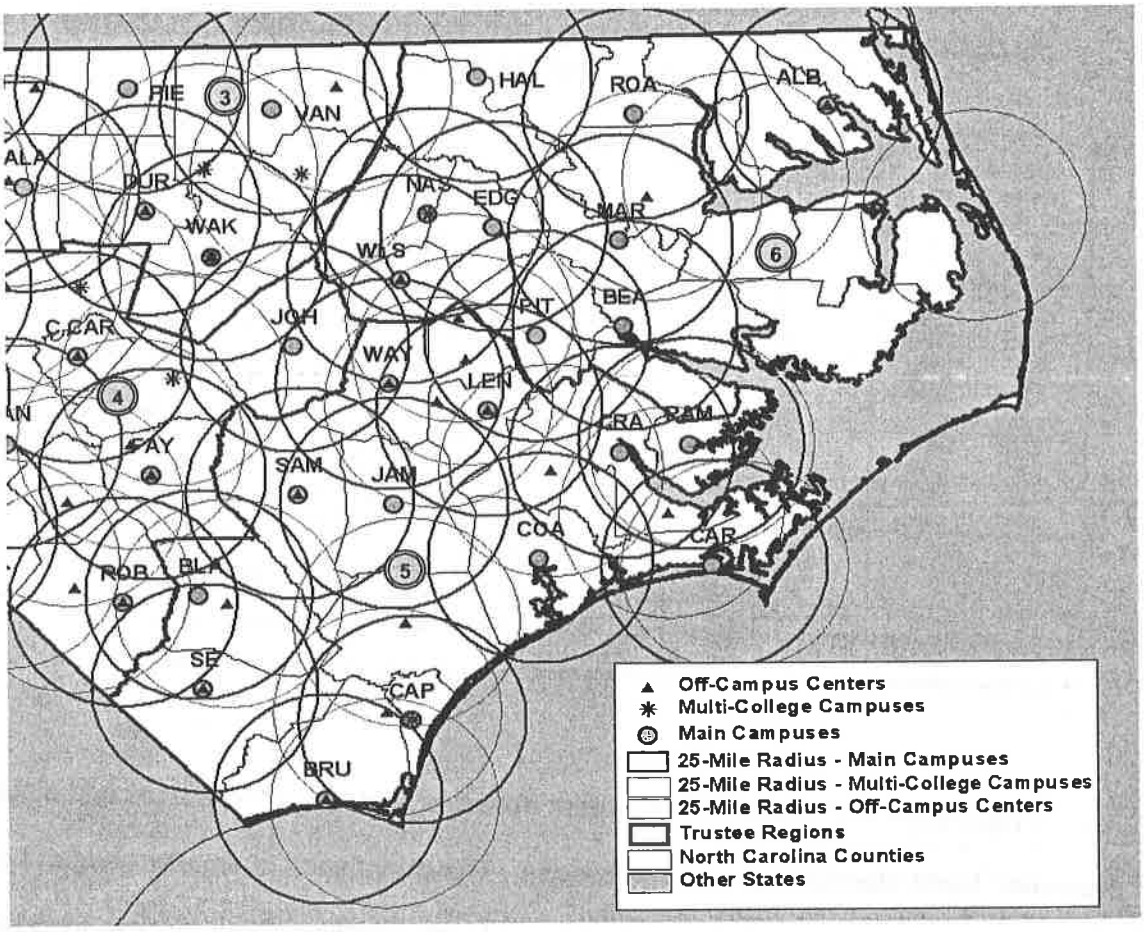


EXHIBIT 3-8
GEOGRAPHIC ACCESS TO THE NCCCS
AREAS WITHIN 25-MILE RADIUS OF A COMMUNITY COLLEGE
TRUSTEE REGIONS 5 & 6



In comparison with other states and national averages, the NCCCS has a much higher proportion of community colleges with relatively smaller headcount enrollments. Exhibit 3-9 compares headcount enrollment ranges for the NCCCS, member states of the Southeast Regional Education Board (SREB) excluding North Carolina, and national averages excluding North Carolina. The ascending headcount enrollment ranges are compared according to institution count, percentage of total, and cumulative percentage. A telling observation from the cumulative percentage column is that 50 percent of North

Carolina colleges have headcount enrollments of 2,000 or less compared to 38.2 percent of the SREB states and only 27% nationally.

EXHIBIT 3-9
SIZE COMPARISONS OF NORTH CAROLINA COMMUNITY COLLEGES TO REGIONAL AND NATIONAL DISTRIBUTIONS

HEADCOUNT ENROLLMENT RANGE	NORTH CAROLINA			SREB STATES EXCLUDING NC			NATIONAL EXCLUDING NC		
	Count	% of Total	Cumul. %	Count	% of Total	Cumul. %	Count	% of Total	Cumul. %
0 - 500	1	1.7%	1.7%	29	8.7%	8.7%	42	4.6%	4.6%
501 - 750	2	3.4%	5.2%	14	4.2%	12.8%	27	2.9%	7.5%
751 - 1,000	4	6.9%	12.1%	21	6.3%	19.1%	37	4.0%	11.6%
1,001 - 1,250	2	3.4%	15.5%	20	6.0%	25.1%	32	3.5%	15.0%
1,251 - 1,500	6	10.3%	25.9%	14	4.2%	29.3%	36	3.9%	19.0%
1,501 - 1,750	4	6.9%	32.8%	9	2.7%	31.9%	31	3.4%	22.4%
1,751 - 2,000	10	17.2%	50.0%	21	6.3%	38.2%	43	4.7%	27.0%
2,001 - 2,250	5	8.6%	58.6%	13	3.9%	42.1%	29	3.2%	30.2%
2,251 - 2,500	2	3.4%	62.1%	16	4.8%	46.9%	31	3.4%	33.6%
2,501 - 2,750	1	1.7%	63.8%	15	4.5%	51.3%	41	4.5%	38.1%
2,751 - 3,000	3	5.2%	69.0%	11	3.3%	54.6%	27	2.9%	41.0%
3,001 - 4,000	7	12.1%	81.0%	42	12.5%	67.2%	110	12.0%	53.0%
4,001 - 5,000	5	8.6%	89.7%	27	8.1%	75.2%	73	8.0%	61.0%
Greater than 5,000	6	10.3%	100.0%	83	24.8%	100.0%	358	39.0%	100.0%
TOTAL	**58**	**100.0%**		**335**	**100.0%**		**917**	**100.0%**	

NOTE: Excludes some institutions that did not report these data to IPEDS. Fall 2001 data utilized for S. Piedmont CC.

Source: National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Fall 2000 Enrollment Survey.

Significant implications are apparent from this analysis of the size of and distance between North Carolina community colleges. The prevalence of smaller geographically dispersed institutions throughout the state of North Carolina opens access to citizens, particularly those in rural areas. However, the relatively large number of smaller institutions results in reduced efficiency gained from economies of scale possible with larger institutions and typical of other state systems.

4.0 CORE STAFFING REQUIREMENTS FOR ADMINISTRATION

4.0 CORE STAFFING REQUIREMENTS FOR ADMINISTRATION

This chapter considers the basic elements of administration that are required to effectively operate a college. In particular, it analyzes the number of core staff that are needed for effective operations of colleges of all sizes. Included is consideration of staffing levels by type of position. Also included are analyses of the System's current base allotment of positions and earlier proposals for an expanded number of core positions.

4.1 Definition of Administration

Administrative positions can be defined according to the *function* they perform or the *type* (level) of position. In Chapter 1.0, we introduced and defined the three functions that are typically regarded nationally as comprising the administrative elements of a college:

- Academic support
- Student services
- Institutional support

These functional categories are commonly used for reporting expenditures, but are not seen as often as a framework for analyzing staff information.

As seen in Exhibits 4-1 through 4-3, which are abbreviated versions of sections of the NCCCS chart of accounts, we list and define three "purposes," which are essentially the same as the set of functions used nationally:

- Institutional support
- Academic support
- Student support.

The only notable difference between national and state reporting standards is that expenditures for clerical support personnel in instructional departments are reported

under the Instruction category for most national purposes, but under Academic Support for System-level information files.

EXHIBIT 4-1
DEFINITIONS AND EXAMPLES OF INSTITUTIONAL SUPPORT

1XX – INSTITUTIONAL SUPPORT

This purpose includes activities that involve the management and administration of the entire institution and includes the following purposes:

110 - Executive Management. Includes senior level executives with responsibilities for the management of the institution as a whole. These individuals include the president, chief academic officer, chief business officer, chief student affairs officer, and board of trustees. Other support or technical/paraprofessional personnel who support or assist these executives with no other responsibilities may be reported in this function.

120 - Financial Services. Includes activities involving all accounting, payroll, purchasing, auxiliary services and the general business office.

130 - General Administration. Includes expenditures for the college-at-large excluding the plant operation and executive management. This purpose will include human resources, communications, planning, institutional effectiveness, insurance, legal fees, court claims, dues and memberships, accreditation expense, public relations, advertising, marketing, printing catalogues, and the operation of print shops and other services that support the general institution.

140 - Information Systems (Administrative). Includes computer operations that serve the administrative activities of the entire institution.

150 - Staff Development. Contains the cost of providing activities for teaching faculty and non-teaching staff in the areas of technical content and skill upgrading. Expenditures in this purpose will be charged against separately budgeted funds approved by the State Board of Community Colleges.

EXHIBIT 4-2
DEFINITIONS AND EXAMPLES OF ACADEMIC SUPPORT

41X – ACADEMIC SUPPORT

Academic Support includes those activities that provide support for the institution's primary purpose of instruction. This category includes the following purposes:

410 -Library/Learning Center. Includes expenditures for organized activities that directly support the operation of a catalogued or classified collection of resource material. It also includes learning resource and educational media support services that aid in the transmission and collection of information in support of the institution's educational mission.

42X – 45X ACADEMIC ADMINISTRATION. Academic Administration includes expenditures for activities that provide administrative support to the academic programs, but excludes executive academic officers who are included under Executive Management (purpose 110). The following academic administration purposes include:

421 –Curriculum. Is the administration of curriculum instruction as a whole and includes related expenditures for all directors, deans, support personnel, etc. who supports and/or supervises curriculum programs. The chief academic officer shall not be coded to this purpose.

422 -Continuing Education. Will contain the cost of the administration of non-curriculum instruction as a whole. It should contain the expenditures of the deans and/or directors of non-curriculum programs and any others who provide non-teaching support for the non-curriculum programs. Individuals who are associated with a specific non-curriculum program should have their expenditures charged under their appropriate purpose unless otherwise stated.

423 -CED Special Allotment. Will contain the administrative and support cost associated with the Compensatory Education program of basic skills. Expenditures in this purpose will be charged against separately budgeted amounts approved by the State Board of Community Colleges.

430 -Information Systems (Academic). Includes current operating expenses incurred in operating all information systems that serve the instructional activities of the institution.

440 –Tech Prep. College Tech Prep is a seamless educational program that begins in the 9th grade and continues through high school into the community college and ends with a student obtaining a 2-year Associate Degree, 2-year Certificate, or completion of a 2-year registered apprenticeship. College Tech Prep combines a rigorous academic (Math, Science & Communication) core of courses with a focused sequence of technical courses in a career pathway.

450 –Technology – HB275. Will include the cost of instructional software. (Vocational Code 80) Funds may budgeted as part of House Bill 275 Non-reverting Equipment, Technology and MIS Reserve or transferred into purpose 450 from purpose 922.

EXHIBIT 4-3
DEFINITIONS AND EXAMPLES OF STUDENT SUPPORT

5XX – STUDENT SUPPORT

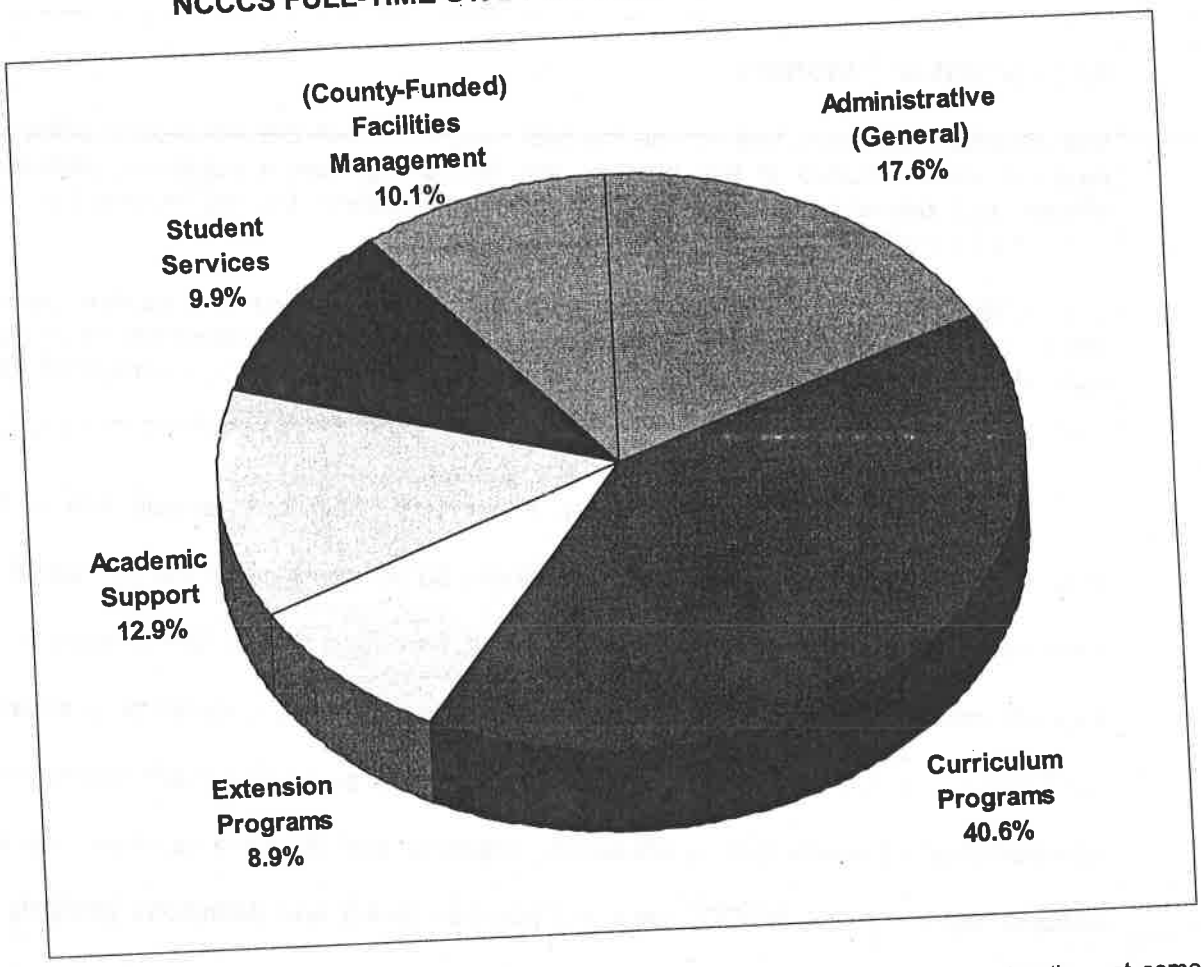
510 -Student Services. Will include the cost associated with the admissions office and registrar. Also included in this purpose are counseling, career guidance, placement officers and placement testing, financial aid administration. Do not include the chief student affairs officer.

530 –Childcare. Will contain costs for childcare services provided to student parents enrolled in a community college curriculum. Expenditures in this purpose will be charged against separately budgeted funds approved by the State Board of Community Colleges.

Careful interpretation of the chart of accounts definitions reveals that certain support-related expenditures for special purposes do not come under the purview of the Instructional and Administrative Support funding formula. Among the exclusions are expenditures for library books and related materials, which are covered by a separate funding formula, and separately budgeted funds for such activities as staff development, administration of compensatory education programs, and childcare services. As with national reporting, the NCCCS uses the purpose codes and definitions primarily for financial reporting, although the codes also serve as the secondary basis for classifying staff.

In Exhibit 4-4, the distribution of full-time staff by purpose is illustrated. Approximately half the staff are in either Curriculum Programs (40.6%) or Extension Programs (8.9%).

EXHIBIT 4-4
NCCCS FULL-TIME STAFF BY AREA OF RESPONSIBILITY



Source: NCCCS
Note: Data does not include employees of private vendors who perform outsourced functions at some colleges, e.g., security, food services.

4.2 Analysis of Current Staffing Levels in the NCCCS

The colleges report position information to the System office according to an eight-part typology that indicates level of staff:

- Senior administrator
- Other administrator
- Faculty
- Professional
- Clerical
- Technical / paraprofessional
- Skilled crafts
- Service / maintenance

As with the expenditure reporting categories described above, the categories used for reporting staff information closely mirror the reporting standards used for national data collection efforts. The major difference in System and federal reporting categories is that the NCCCS has subdivided the federal category "Executive-Administrative-Managerial" into "Senior Administrator" and "Other Administrator." The definitions for the eight NCCCS staff-level categories are listed in Exhibit 4-5.

EXHIBIT 4-5
SUMMARY DESCRIPTIONS OF POSITION LEVELS

Executive/Administrative/Managerial

Senior Administrators - Includes staff who are responsible for the overall executive and/or administrative direction of the college as a whole or of a major component of the college. Included in this category is the chief executive officer (president) and staff who normally report directly to the president and might have functional titles such as dean, vice president, executive vice president, or other titles.

Other Administrators - Includes staff whose major responsibility is administrative and whose major activities impact instructional or non-instructional programs. Staff in this category normally report to a senior administrator and have primary responsibility for either an instructional or non-instructional area. Some descriptive titles might include director, assistant/associate dean, associate vice-president, or other titles.

Instructional (Curriculum and Extension Faculty) - Includes staff whose primary responsibilities are instructional and involve guiding/directing the learning experience of pupils in an instructional environment.

Professional (Non-Teaching) – Includes staff who are assigned to manage non-teaching functions. Staff in this category would normally report to an administrator of an instructional or non-instructional program and some functional titles might include coordinator of ABE, computer systems analyst, recruitment coordinator, registrar, counselor, librarian, equipment/purchasing agent, facilities coordinator, etc.

Clerical (Secretarial/Clerical) - Includes staff whose assignments typically are associated with duties which are clerical/secretarial in nature. Staff in this category are responsible for internal and external communications, recording and retrieval of information, and other office work, such as bookkeeper, typist, data entry operator, bookstore clerk, library clerk, secretaries, etc.

Technical/Paraprofessional - Includes staff whose assignments require specialized knowledge or skills which may be acquired through experience or education at an associate degree level. Staff in this category normally report to an administrative-level or professional-level person. Job titles may include, but are not confined to: administrative assistant, library assistant, accounting technician, admissions assistant, computer operations assistant, audiovisual coordinator, etc.

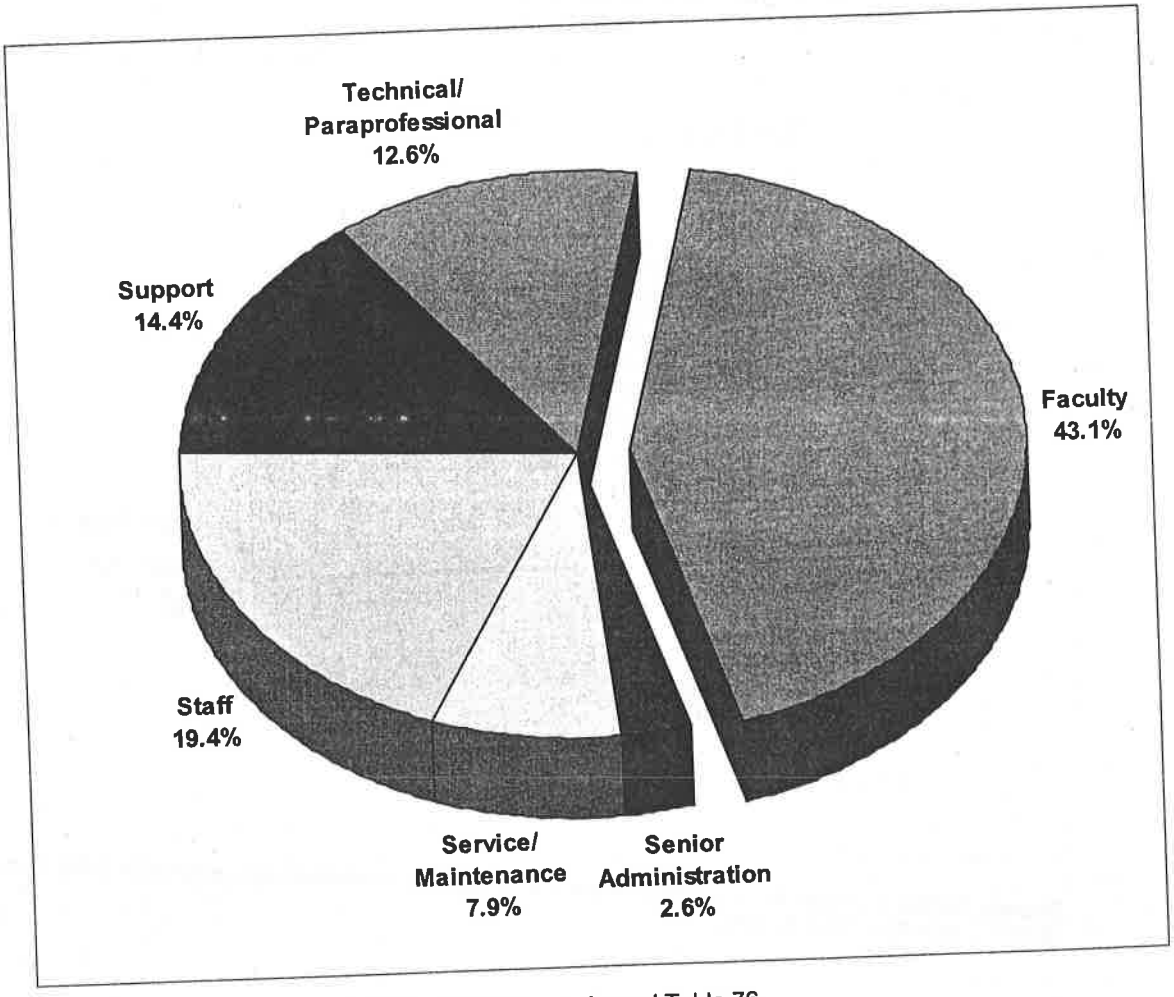
EXHIBIT 4-5 (Continued)
SUMMARY DESCRIPTIONS OF POSITION LEVELS

Service/Maintenance - Includes staff who perform duties which result in or contribute to the comfort, convenience and hygiene of personnel and the student body, or which contribute to the upkeep and care of buildings, facilities or grounds of college property. Some functional areas are cafeteria worker, truck driver, construction laborer, some security personnel, maintenance worker, gardener, etc. Assignments require limited degrees of previously acquired skills and knowledge.

Skilled Crafts - Includes staff whose assignments typically require special skills and a knowledge of the processes involved in the work, acquired through on-the-job training and experience or through apprenticeship or other formal training programs. Staff in this category would have titles such as mechanic, repairer, electrician, skilled maintenance, machinist, carpenter, printer, etc.

The greatest portion of employees at the colleges are classified as instructional faculty (43%). As seen in Exhibit 4-6, the next largest category is "staff" while the smallest grouping is "senior administrator." (It is important to note that the NCCCS does not routinely collect information on part-time employees. If the pie chart below were able to include part-time personnel, faculty would constitute a majority of all staff.)

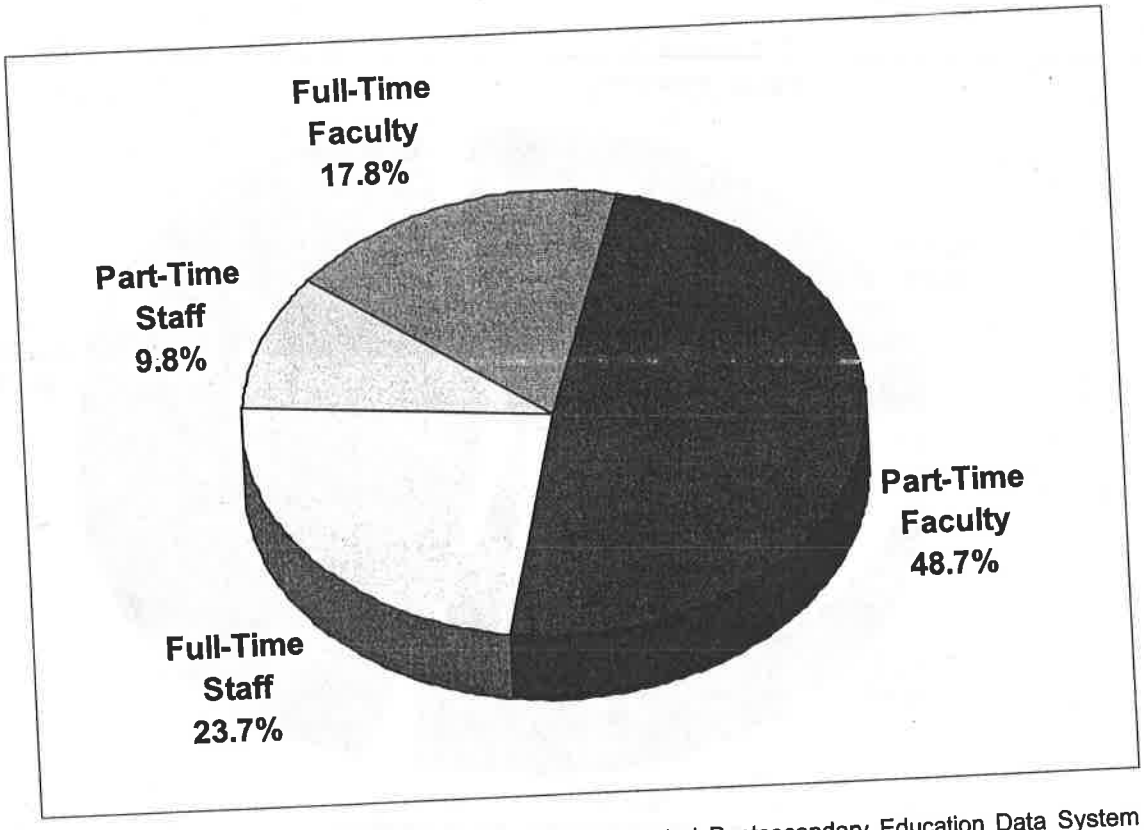
EXHIBIT 4-6
FULL-TIME STAFF BY AREA OF RESPONSIBILITY
2001-02



Source: NCCCS 2001-02 Annual Statistical Report, Annual Table 76.

Staff are further classified by their employment status, with the major categories being full-time and part-time. In Exhibit 4-7, the numbers of college staff by position type and employment status are listed. For this exhibit, we needed to rely on data from the federal IPEDS reports in order to get data on part-time personnel. As seen, part-time faculty constitute a major portion of the colleges' workforce, and about 2/3 of all employees are in instructional positions.

EXHIBIT 4-7
NUMBER OF STAFF BY
POSITION TYPE AND EMPLOYMENT STATUS
FALL 2001



Source: National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Fall 2001 Staff Survey.

4.3 Analysis of Current Staffing Levels Nationally

In Exhibit 4-8, FTE staffing levels by institutional size are analyzed for all community colleges nationally and for NCCCS institutions. Just under half of all personnel nationally are classified as faculty (46%). The percentage of staff classified as "executive / administrative / managerial" and "other administrators and professionals" in the national comparison group decline as colleges increase in enrollment size.

EXHIBIT 4-8
NATIONAL STAFF MIX BY ENROLLMENT CATEGORY

HEADCOUNT ENROLLMENT RANGE	# of Institutions		FULL-TIME EQUIVALENT STAFF*													
			FACULTY		Executive/ Administrative		Other Admin. & Professionals		Technical & Paraprof.		Clerical & Secretarial		Other Staff		TOTAL STAFF	
	NC	US	NC	US	NC	US	NC	US	NC	US	NC	US	NC	US	NC	US
0 - 500	1	36	47.9%	44.3%	9.8%	5.9%	20.3%	16.5%	4.5%	5.6%	11.5%	14.1%	5.9%	13.6%	100.0%	100.0%
501 - 750	2	26	48.0%	47.3%	7.4%	9.1%	14.3%	15.7%	10.8%	5.8%	10.7%	13.5%	8.9%	8.7%	100.0%	100.0%
751 - 1,000	4	37	52.6%	44.0%	6.9%	8.5%	15.3%	17.5%	12.6%	4.9%	6.8%	15.1%	5.9%	10.1%	100.0%	100.0%
1,001 - 1,250	2	32	47.3%	47.0%	10.1%	6.9%	14.0%	14.7%	13.1%	3.7%	10.4%	17.1%	5.2%	10.6%	100.0%	100.0%
1,251 - 1,500	6	35	44.6%	43.1%	4.0%	7.4%	18.5%	15.1%	10.5%	7.4%	14.4%	17.4%	8.1%	9.6%	100.0%	100.0%
1,501 - 1,750	4	28	50.8%	43.7%	9.4%	8.2%	12.9%	15.8%	10.6%	5.6%	7.8%	17.3%	8.5%	9.4%	100.0%	100.0%
1,751 - 2,000	10	43	50.9%	42.1%	4.0%	7.2%	14.3%	16.7%	11.2%	5.8%	12.1%	17.3%	7.5%	11.0%	100.0%	100.0%
2,001 - 2,250	5	27	54.8%	43.3%	3.2%	6.0%	13.7%	16.6%	10.3%	5.8%	9.3%	19.8%	8.8%	8.6%	100.0%	100.0%
2,251 - 2,500	2	31	61.9%	43.3%	2.1%	8.5%	15.2%	14.2%	5.3%	6.9%	10.9%	16.8%	4.6%	10.4%	100.0%	100.0%
2,501 - 2,750	1	40	32.5%	44.7%	2.3%	7.9%	30.2%	15.5%	15.0%	7.6%	11.5%	15.1%	8.5%	9.2%	100.0%	100.0%
2,751 - 3,000	3	27	57.4%	43.8%	2.7%	6.8%	12.4%	18.0%	10.1%	4.9%	9.0%	16.5%	8.5%	10.0%	100.0%	100.0%
3,001 - 4,000	7	108	56.7%	45.4%	3.0%	6.9%	13.6%	14.2%	13.2%	7.5%	7.8%	17.1%	5.8%	9.0%	100.0%	100.0%
4,001 - 5,000	5	72	55.7%	45.4%	4.2%	6.3%	11.5%	14.2%	8.9%	7.3%	11.9%	17.7%	8.0%	9.1%	100.0%	100.0%
Greater than 5,000	6	352	53.9%	46.6%	2.0%	5.7%	12.9%	10.3%	10.8%	10.1%	13.1%	18.1%	7.2%	9.1%	100.0%	100.0%
TOTAL	**58**	**894**	**53.5%**	**46.0%**	**3.7%**	**6.2%**	**13.8%**	**11.8%**	**10.8%**	**9.0%**	**11.0%**	**17.8%**	**7.3%**	**9.3%**	**100.0%**	**100.0%**

Source: National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Fall 2001 Staffing Survey.

*Full-time equivalent staff calculated as total of full-time staff plus (1/4)*part-time staff.

In the same exhibit, similar information is presented for community colleges in North Carolina. When compared to the national data set, the size effects are not as pronounced for the NCCCS institutions. Importantly, the NCCCS on average has a larger portion of its FTE personnel as faculty and fewer as executives.

4.4 Concept of Core Positions

The literature review on economy of scale in Chapter 2.0 discussed the "lumpiness" of resources needed to operate a college, and suggested that a certain number of core positions were needed regardless of enrollment size. The concept of core positions is closely linked to the fixed costs in our analysis of economy of scale in administrative costs.

The funding models used by the NCCCS over the years for Instructional and Administrative Support have reflected an appreciation for core staffing requirements. In the late 1980s, the System office surveyed the presidents on their perceived needs for core staff. The results of that survey, which some later described as a "wish list," identified 60.5 positions that might be needed for each college up to 1500 FTE students. As seen in Exhibit 4-9, 4 of the 60 positions were considered as "senior administrators" in executive management, and 39.5 would be for instructional support. The largest subcomponent of the instructional support category was 11.5 positions for student services.

EXHIBIT 4-9
DISTRIBUTION OF 60 POSITION PROPOSED BASE IN EARLIER STUDY FOR FIRST 1500 FTE STUDENTS

Position Category	Executive Management	Institutional Support	Instructional Support	Total
Senior Administration	4			4
Supervisor of Programs			7	7
Student Support Services			11.5	11.5
General Institution		7	3	10
Technical/Paraprofessional		2	7	9
Faculty			3	3
Clerical	5	3	8	16
Total	9	12	39.5	60.5

Although the 60-position core staffing plan was never adopted by the General Assembly for funding purposes, the survey results did form the basis for a modified core staffing arrangement of 30 positions for the first 750 FTE students (i.e., both the number of positions and the enrollment to be served were halved). In the modified list of 30 core positions, shown in Exhibit 4-10, there continued to be 4 "senior administrator" positions in Executive Management, but reductions were made in the institutional support and instructional support categories, especially in "clerical" and "general institutional" positions. It is important to note that the position for the president is separately funded, and is not considered as part of the 30-position base.

EXHIBIT 4-10
DISTRIBUTION OF 30 POSITION BASE IN CURRENT FUNDING MODEL FOR FIRST 750 FTE STUDENTS

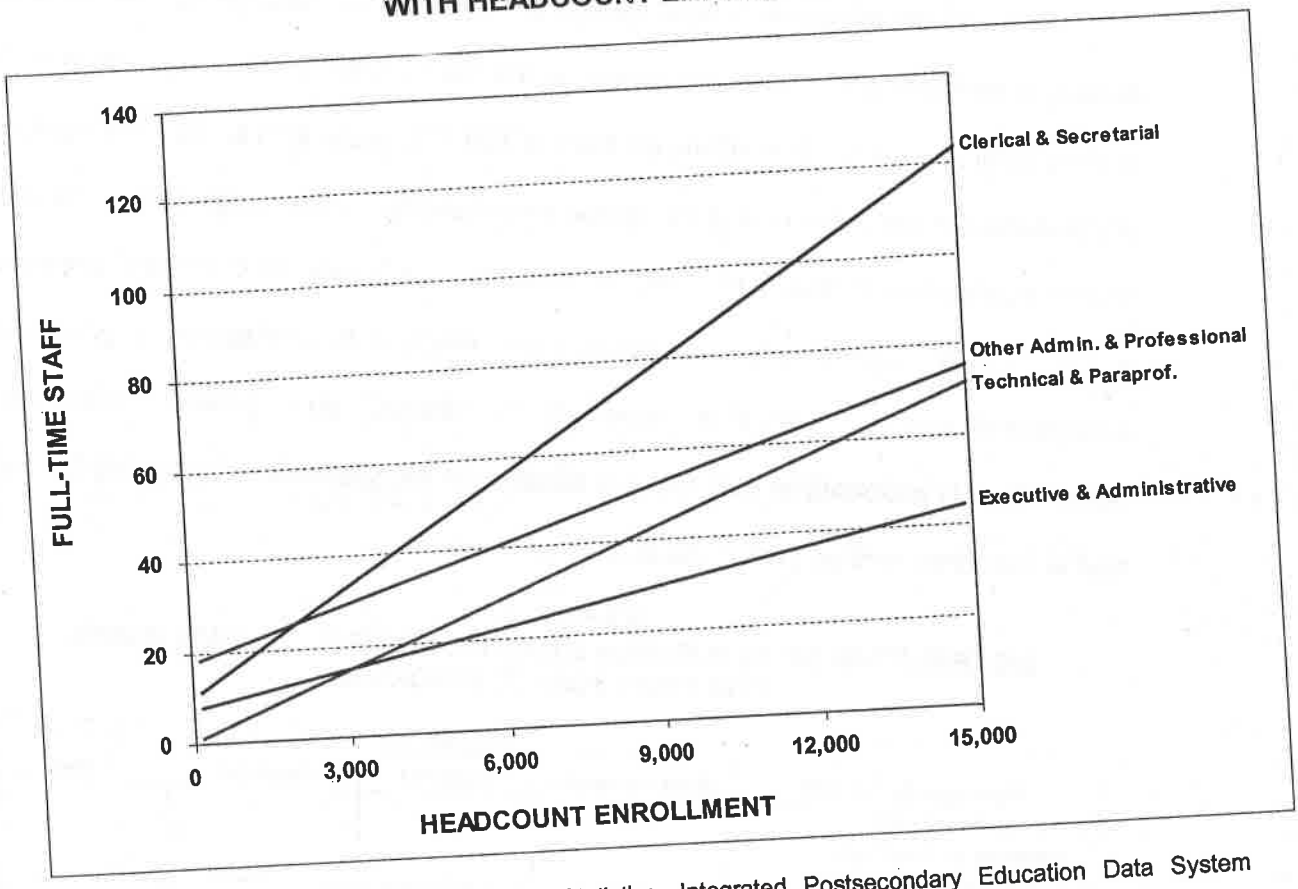
Position Category	Executive Management	Institutional Support	Instructional Support	Total
Senior Administration	4			4
Supervisor of Programs			2	2
Student Support Services			7	7
General Institution		1	3	4
Technical/Paraprofessional		1	5	6
Clerical		3	4	7
Total	4	5	21	30

For more than a decade, the 30-position core staffing level has persisted with modest fluctuation.

4.5 Analysis of Core Staffing Requirements

To determine whether there was any statistical basis to support the notion of core staff, we analyzed staffing levels with respect to FTE enrollment for all community colleges nationally, excluding those in North Carolina. As seen in Exhibit 4-11, the results of linear regression analysis provide further evidence of economy of scale when staffing (rather than expenditure) levels are considered.

EXHIBIT 4-11
REGRESSION OF FULL-TIME SUPPORT STAFF BY TYPE WITH HEADCOUNT ENROLLMENT



Source: National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Fall 2001 Staffing Survey.

5.0 CONSOLIDATION OPPORTUNITIES

5.0 CONSOLIDATION OPPORTUNITIES

One key component of the special provision for the study is to consider whether administrative activity in the NCCCS could be delivered more efficiently through consolidation. More specifically, the Request for Proposal stipulated "The project shall include consideration, analysis, and assessment of . . . whether or not the consolidation of two or more colleges or the administrations of two or more colleges is feasible." In this chapter, we explore the merits and challenges related to merger of colleges as well as the consolidated delivery of administrative services.

5.1 Potential Value of Institutional Consolidation

As discussed in Chapter 2.0, the consolidation of institutions offers economic appeal. Both the research literature and our analyses of more recent expenditure data on the national level suggest that the cost per student, and especially the administrative cost per student, decrease as the size of the institution increases. That is, operating one larger college would be more efficient than serving the same number of students through two or more different colleges.

Potential cost savings, of course, is not the only consideration when determining whether to merge colleges. The key programmatic concern is whether the potential merger would prohibit students from attending. Data and other information reported in Chapter 3.0 show that North Carolina is well above the national average in terms of attendance rates at community colleges and that 25-mile radius service areas for colleges, campuses and centers blanket the state. Presumably, the state would not realize significant loss of enrollments through institutional mergers, particularly if the current sites of any colleges that were merged became multi-campus sites of newly created colleges.

Talk of institutional consolidation has encountered a significant level of resistance from a wide variety of individuals and groups. Both the community college presidents association and the trustees association have passed resolutions in support of retaining the current 58 colleges. During a series of six regional meetings conducted as part of the current project, numerous spokesmen representing local governments and economic development interests came to testify in support of keeping their local community college in tact.

Discussions of merger, however, involve more than just analyses of numbers. In a 1994 legislatively-mandated investigation of a potential merger between Edgecombe Community College and Nash Community College, the conclusion was that the benefits of merger were not worth the savings. However, the consultants did recommend closer cooperation between the two colleges in workforce training.

The fiscal impact of potential institutional consolidation is examined in Exhibit 5-1. In the exhibit, comparisons are made between the funding levels that would result for a small college with 900 FTE students using:

- The current funding formula for Instructional and Administrative Support for a separate college
- The formula proposed by the NCCCS for additional campuses of a multi-campus college
- The funding rates currently appropriated by the General Assembly for multi-campus college locations.

As seen in the exhibit, the potential savings in appropriations for administrative expense is approximately $190 thousand when compared to the NCCCS formula and $648 thousand when compared to the General Assembly's funding rate.

EXHIBIT 5-1
POTENTIAL SAVINGS FROM INSTITUTIONAL CONSOLIDATION

Funding for Instructional and Administrative Support for a Separate College with 900 FTE Enrollment:

Formula Component	Factor	Amount
Base Allotment	Salary for 30 Positions	$ 1,560,000
Enrollment Funding	$1093/FTE for 150 FTE	163,950
Total		**$ 1,723,950**

Funding for Instructional and Administrative Support for an MCC Campus with 900 FTE Enrollment:

SBCC Multicampus Formula

Formula Component	Factor	Amount
Enrollment Funding	$1093/FTE for 900 FTE	$ 983,700
Duplicative Funding	$1093/FTE for 900 FTE up to Maximum of $550K	550,000
Total		**$ 1,533,700**
Savings Compared to Separate College		$ 190,250

General Assembly Multicampus Funding Rates

Formula Component	Factor	Amount
Enrollment Funding	$1093/FTE for 900 FTE	$ 983,700
Supplement	$92,093 per Campus	92,093
Total		**$ 1,075,793**
Savings Compared to Separate College		**$ 648,157**

The total savings that could be expected, of course, is contingent on the number of institutions that might be merged and the budgeted FTE enrollment of each. To provide a general estimate of potential savings, since specific merger recommendations have not been made, we have assumed that the three colleges with an enrollment of less than 1000 FTE students could be merged with a larger college. Under this scenario, approximately $600 thousand in total savings could be realized under the NCCCS formula and $2 million under the current funding rates.

5.2 Potential Value of Administrative Consolidation

An alternative to institutional consolidation is administrative consolidation. Under the administrative consolidation approach, each institution would continue to retain its own separate identity, accreditation, and board of trustees. However, certain administrative functions would be performed on a cooperative basis with other colleges in the same region whenever savings could be realized.

At first glance, it might seem that the most pronounced advantage to administrative consolidation is financial savings. While this may be true, there are an array of secondary benefits as well—ones that relate to quality, efficiency, and effectiveness as well as cost savings. Shafer and Reed (1996) articulated the following benefits to cooperative institutional relationships:

- reduced administrative costs;
- sharing of overhead costs;
- the power of combined purchasing volumes;
- enhanced quality and breadth of service offerings, often without added costs;
- decreased redundancy of expertise;
- opportunities to build skills, keeping staff refreshed and engaged in their work;
- continuity during times of staff turnover on campus;
- a broader range of options for responding to change;
- sustained efforts during peaks and valleys;
- more rapid diffusion of best practices across campuses; and
- an enhanced sense of professional community.

Maydew (1999) adds the ripple effects of successful collaboration to this list. Each successful collaborative effort provides opportunities to extend the joint efforts into

related areas. Each effort builds on the past, and expands the opportunities for cost savings. Collectively, all these benefits provide a strong argument for exploring the many approaches to collaboration among colleges and universities.

5.3 Consolidation Experience Elsewhere

Dorger (1999) outlines some basic conceptual approaches to cooperative strategies with the potential to reduce costs for participating higher education institutions:

- Cooperative Purchasing
- Cooperative Contracts
- Sharing Risk
- Sharing Resources
- Sharing Staff
- Designating a Lead Institution
- Establishing a Centralized Service Center
- Establishing Regional Service Centers

With these broad conceptual approaches in mind, the remainder of this section focuses on specific strategies that have been implemented in the various administrative areas of colleges.

Human Resources. Human resources management encompasses all the responsibilities and duties related to attracting, developing, and retaining an effective work force. Human resource responsibilities include:

- development and administration of an employee benefits program;
- administration of a classification and compensation system/plan;
- implementation and management of an employee evaluation and development program;
- administration of the employee grievance and complaint process;
- management of personnel records;
- reporting to satisfy compliance;
- management and development of employee training programs; and

- administration of flexible spending account administration.

Sensitivity and responsiveness to employee concerns are best maintained if personnel relations are conducted under the authority and responsibility delegated to each college's administration. Consequently, "front-line" functions related to hiring, discipline, salary, employee rights, and the like are not suitable candidates for regionalization. Certain "back-office" functions, however, have been accomplished efficiently and effectively in regional centers.

The human resource areas that have the greatest opportunity for successful adoption of regionalization, centralization, or cooperative arrangements are:

- Applicant tracking system and a time-worked accounting system.
- Employee Training Programs
- Benefits Coordination/Flexible Spending Account Administration

Business and Financial Services. Financial management is critical for colleges and involves budgeting and planning; accounting operations such as accounts payable, payroll, grant accounting, and student receivables; and internal and external auditing. Effective financial management enables a college to plan for the future, meet its goals with limited resources, and manage its commitments. Sound financial management also ensures that an institution's monetary resources are properly recorded, controlled, and safeguarded so that its mission can be achieved efficiently.

Accounting operations include payroll, accounts payable, student accounting, and grant accounting. These are critical functions in any organization, including colleges and universities. Payroll represents the largest operating expenditure of colleges or universities. Employees must be paid accurately and promptly. Goods and services must be purchased and paid for if the institution is to continue supporting the educational goals of the community. Vendors, particularly local vendors, expect to be paid on time and the correct amount. The institution must properly account for student tuition and

other payments and must collect these funds on a timely basis. Grants are obtained from federal, state, and local sources to support and promote educational programs and other activities. These funds must be properly accounted for so that accurate, timely financial reports are submitted to funding agencies that will verify whether grant requirements and objectives are being met.

MGT found examples of best cooperative practices in the following responsibilities that are part of business and financial services:

- purchasing cards, or "P-Cards"
- consortial purchases of electricity and other energy
- internal audit
- risk management
- security services
- compliance with Homeland Security requirements
- just-in-time delivery and warehousing
- e-procurement
- bar coding for inventory maintenance
- payroll processing
- student loan processing
- student accounts collections
- banking services
- Form 1098 processing
- business services

Plant Operation, Maintenance, Capital Planning, and Construction. Although not typically funded by the state, facility planning and management of construction and renovation projects are significant activities for most community colleges in North Carolina. Comprehensive campus master planning for facilities is essential to provide for student needs without overcrowding, use of substandard facilities due to deferred maintenance or noncompliance with applicable codes, or use of costly alternatives. Active management of construction projects can provide cost control, ensure quality of workmanship, and help ensure timely and orderly completion. Facilities also must be maintained and cleaned on a routine basis to ensure a safe and healthy environment for students, faculty, staff, and visitors.

Several elements of facilities planning and management call for technical skills, specialized knowledge, or computer systems not available at every NCCCS college, but to which every college needs at least occasional access. These include:

- real estate rental and management
- facilities planning
- maintenance management systems
- custodial and janitorial operations
- carpet laying
- elevator/escalator repair and maintenance
- window glazing and repair
- printing
- equipment repair
- solid waste collection
- street maintenance and repair
- tree trimming
- HVAC maintenance
- architecture services

MGT found examples of best practices in the following responsibilities that likely can be regionalized, centralized, or obtained through consortial or cooperative arrangements.

- Construction Management and Facilities Planning
- Computer-Based Maintenance Management Systems

This section has presented best practices in regionalization, centralization, or consortial/cooperative arrangements in administrative areas in which the North Carolina Community College System could benefit. These areas are summarized in Exhibit 5-2.

EXHIBIT 5-2
POTENTIAL CANDIDATES FOR
CONSOLIDATING ADMINISTRATIVE SERVICES

Human Resources:

Applicant tracking system and a time-worked accounting system
Employee training programs
Benefits Coordination and Flexible spending account administration

Business and Financial Services:

Purchasing cards
E-procurement
Payroll processing
Student loan processing
Banking services
Student account collections and Credit Card Student Payments
Internal audit
Risk Management, environmental safety, and security services
Just-in-Time delivery and warehousing
Bar coding and inventory control
Form 1098 processing
Utilities purchasing cooperatives

Plant Operations, Maintenance, Capital Planning, and Construction:

Construction management and facilities planning
Computer-based maintenance management systems

5.4 Barriers to Consolidation in NCCCS

Perhaps the greatest barriers to any type of consolidation are *historic* in nature. In this case, 59 colleges already exist with their own faculty, staff, boards of trustees, alumni, affiliated community support organizations, and facilities. The SBCC and General Assembly would want to weigh carefully advantages of relatively modest savings of roughly $2 million (as described in section 5.1) versus the adverse consequences that can come from loss of institutional identity. Historic barriers are likely

to be much more significant for institutional consolidation than for administrative consolidation.

A second potential barrier is *fiscal* in nature. As mentioned earlier, county governments now contribute about 14% of the community colleges' general revenues statewide. During our regional meetings, we perceived a potential unwillingness by counties who might "lose their college" to continue funding with the same level of commitment. Without the same level of local funds, either overall funding levels would drop or the state would need to pick up the difference. If the latter option were pursued, the savings would be less than currently estimated. As with the historic barriers, fiscal problems related to consolidation are likely to be much more significant for institutional consolidation than for administrative consolidation.

A third group of potential barriers can be labeled *legal* or *structural*. For instance, each college now has its own employment contracts, pay and classification plans, vendor relationships, etc. In many ways, legal or structural barriers might be more of an impediment for administrative consolidation than for institutional merger. With a merger, existing contractual commitments would presumably cease.

The final barrier is *organized opposition*. As reported earlier, the statewide associations of community college trustees and presidents have both formally opposed mergers. Once more specific proposals for institutional consolidation are developed, even greater opposition from elected officials and economic development groups in the affected local communities can be anticipated. While the opposition to date has focused on institutional merger, at least some opposition can be expected for administrative consolidation as well.

5.5 Recommendations for Consolidation

Our several analyses of economy of scale each demonstrated that the greatest potential for savings occurs in colleges with enrollments below 1000 FTE students. After the recent increases in enrollment being experienced by community colleges in North Carolina, there are now only three colleges with budgeted FTE enrollments of less than 1000. Any attempt to achieve administrative savings through institutional consolidation should focus on these three colleges that are not large enough to enjoy economy of scale.

- Pamlico Community College
- Montgomery Community College
- Roanoke-Chowan

Exhibit 5-3 provides more specific information about these three colleges and their neighbor colleges.

Pamlico Community College, with 493 FTE students, is the smallest of the three colleges to be considered for institutional consolidation. It is located about 20 miles from Craven Community College in New Bern, which has an FTE enrollment of 2175. Roanoke-Chowan Community College, on the other hand, enrolls nearly 900 FTE, and is considerably farther away from its nearest neighbor community colleges.

Our call for consideration of institutional consolidation is intended to address only potential savings in administrative costs and not to limit access to instructional programs. Based on the results of a future community college service area study, as periodically conducted by the NCCCS, any sites that are consolidated for administrative savings should still be permanent instructional sites (either an MCC or OCC) of a neighbor community college.

EXHIBIT 5-3
BASIC INFORMATION ON COLLEGES
FOR CONSIDERATION FOR CONSOLIDATION

Colleges to Consider for Institutional Consolidation	City and County of Main Campus		FTE Enrollment	Nearby Colleges	City and County of Main Campus		FTE Enrollment	Distance in Miles
Pamlico Community College	Grantsboro	Pamlico	493	Craven Community College	New Bern	Craven	2175	20
Montgomery Community College	Troy	Montgomery	689	Randolph Community College Stanly Community College	Asheboro Albemarle	Randolph Stanly	2017 1727	29 25
Roanoke-Chowan Community College	Ahoskie	Hertford	883	Halifax Community College Martin Community College	Weldon Williamston	Halifax Martin	1714 1006	40 48

Overall, however, we doubt that the savings from institutional consolidation are worth the effort. As reported in Exhibit 5-1 and its accompanying interpretation, the potential savings that might result are approximately $2 million. To put this number in context, a greater amount could be saved by reducing the base allotment for each college by only one position, or by reducing the enrollment allotment by just over $10 per student.[1] Either of these approaches could be implemented with considerably less effort and without any concern for loss of critical community college services for students or economic development.

The concept of service coordination merits further consideration by the SBCC and the General Assembly. This chapter has provided a list of administrative functions that are strong candidates to be evaluated for potential cooperation among the institutions in service delivery. A similar strategy for identifying potential support service to consolidate is to consider functions that the current MCCs perform only at main campus. In the latter case, NCCCS leaders can have greater confidence that certain administrative services can be delivered effectively from a central location. Under either approach, the SBCC should encourage the presidents and business officers within each region to explore opportunities for administrative consolidation.

[1] The preliminary appropriation for FY2004 will require the NCCCS to modify the formula by more than this amount.

6.0 FORMULA FOR INSTRUCTIONAL AND ADMINISTRATIVE SUPPORT

6.0 FORMULA FOR INSTRUCTIONAL AND ADMINISTRATIVE SUPPORT

One of the specific requirements of the special provision called for the assessment of funding for Instructional and Administrative Support. This chapter includes an examination of expenditure data from national sources as the baseline in determining the validity of relationships between funding and enrollment size in the NCCCS formula. In particular, it considers both FTE and headcount enrollment as possible drivers of administrative funding.

6.1 Description of Current Formula for Instructional and Administrative Support

The basic structure of the current formula for instructional and administrative support, which was introduced in chapter 1.0, has been in existence for nearly 15 years. It was specifically developed to recognize the difficulties that the smaller colleges faced in achieving economy of scale in their administrative operations. The formula itself is a combination of a base allotment (the salary requirements for an identified set of core positions) and a dollars per student rate for enrollment beyond the base level of 750 full-time-equivalent students (the base allotment is presumed to be the amount needed to provide administrative support the first 750 FTE students).

Although the base allotment in FY2003 was $1.56 million for 30 positions and the enrollment allotment was $1093 per student, the number of core positions and the per-student funding rate have changed over time. Not only do the dollar amounts change to reflect annual price-level adjustments, but the number of core positions have changed to reflect modifications in policies of the General Assembly and the SBCC and the amount appropriated by the General Assembly for this purpose. For instance, the preliminary appropriations bill for FY2004 calls for reduced funding for Instructional and

Administrative Support and the SBCC is expected to implement the reduction through a combination of cuts in core positions and the per-student funding rate.

One aspect of the current administrative formula requires clarification. First, it is important to note that many of the thirty core positions and the majority of all the positions funded through this formula component are for student and instructional support personnel rather than being for senior administrators. In fact, the principal senior administrator for each college is not even funded through the Instructional and Administrative Support formula.

Overall, the current formula measures up well against typical formula assessment criteria. The formula has enjoyed broad-based support as both the basis for the appropriation request and the allocation to institutions. Our analysis builds on the successful basic structure of the formula, and focuses on funding rates and their relationships to enrollment levels.

6.2 *Alternative Treatment of Workload in Formula*

Since it was first adopted, the formula for Instructional and Administrative Support has used some variation of full-time-equivalent enrollment (FTE) as its workload driver. FTE is a common feature of most higher education formulas, including the NCCCS formula for Curriculum Instruction. Basically, FTE enrollment is a means of equating the workload of part-time students to that of full-time students using a mathematical standard of student credit hours taken by a typical full-time student. The current NCCCS formula uses "budgeted FTE," which is intended to provide greater stability and is calculated by using the greater of the current or three-year rolling average of FTE enrollment.

FTE enrollment is an especially effective workload measure for instruction formulas, since the productive function is based on classroom enrollment where a full-time and a part-time student in the same class place similar workload demands on the instructor. However, many support services (such as those funded through the Instructional and Administrative Support formula) are more sensitive to the number of people to be served (i.e., the headcount enrollment) than the number of student credit hours in which they are enrolled (i.e., the FTE enrollment). Examples include the admissions office, the registrar and similar units which maintain records for each individual served.

The choice whether to use FTE or headcount enrollment is important for at least two reasons. First, the ratio of headcount to FTE enrollment can vary considerably across colleges, so the choice of enrollment measure has distributional effects. Institutions that serve a disproportionately high number of full-time students, often in rural areas, receive a greater share of the available funding under an FTE-based formula, while colleges with a high proportion of part-time students are favored by a headcount-based funding model. Exhibit 6-1 shows the proportion of unduplicated headcount to budgeted FTE enrollment for each college in the NCCCS for FY2002.

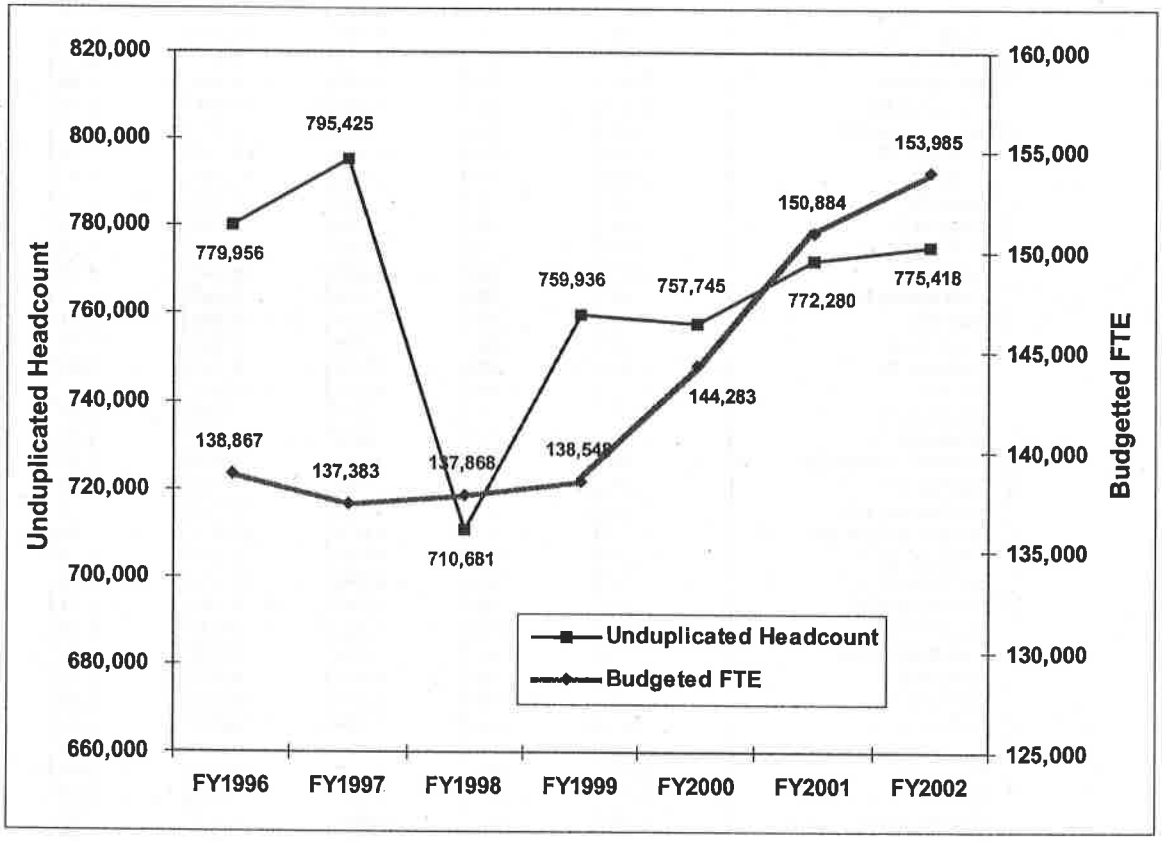
EXHIBIT 6-1
RATIO OF HEADCOUNT TO FTE ENROLLMENT BY COLLEGE

Colleges	Full-Time Equivalent Enrollment			Unduplicated Headcount Enrollment	RATIO: Headcount/ FTE
	Total Curriculum	Budgeted Contin. Ed.	TOTAL		
Alamance CC	2,564	465	3,029	13,865	4.58
Asheville-Buncombe TCC	3,845	918	4,763	24,299	5.10
Beaufort County CC	1,290	444	1,734	7,296	4.21
Bladen CC	931	286	1,217	4,854	3.99
Blue Ridge CC	1,389	578	1,967	15,491	7.88
Brunswick CC	754	358	1,112	7,093	6.38
Caldwell CC & TI	2,793	555	3,348	13,510	4.04
Cape Fear CC	4,717	822	5,539	23,724	4.28
Carteret CC	1,324	337	1,661	6,670	4.02
Catawba Valley CC	2,871	587	3,458	18,924	5.47
Central Carolina CC	3,367	1,299	4,666	17,109	3.67
Central Piedmont CC	9,417	1,799	11,216	57,409	5.12
Cleveland CC	1,984	349	2,333	8,460	3.63
Coastal Carolina CC	2,914	915	3,829	24,255	6.33
College of The Albemarle	1,588	491	2,079	10,789	5.19
Craven CC	1,762	413	2,175	10,548	4.85
Davidson County CC	2,077	736	2,813	14,626	5.20
Durham TCC	3,129	838	3,967	20,304	5.12
Edgecombe CC	1,545	528	2,073	8,409	4.06
Fayetteville TCC	6,425	2,191	8,616	35,309	4.10
Forsyth TCC	4,262	1,209	5,471	28,921	5.29
Gaston College	3,401	572	3,973	19,400	4.88
Guilford TCC	6,030	1,248	7,278	34,970	4.80
Halifax CC	1,367	347	1,714	6,878	4.01
Haywood CC	1,401	212	1,613	6,350	3.94
Isothermal CC	1,451	256	1,707	10,057	5.89
James Sprunt CC	1,078	214	1,292	6,778	5.25
Johnston CC	2,514	481	2,995	12,730	4.25
Lenoir CC	1,899	791	2,690	13,274	4.93
Martin CC	640	366	1,006	4,487	4.46
Mayland CC	995	466	1,461	5,950	4.07
McDowell TCC	962	295	1,257	10,020	7.97
Mitchell CC	1,507	415	1,922	10,896	5.67
Montgomery CC	569	120	689	3,288	4.77
Nash CC	1,715	555	2,270	11,370	5.01
Pamlico CC	287	206	493	1,634	3.31
Piedmont CC	1,566	273	1,839	7,775	4.23
Pitt CC	4,183	494	4,677	16,684	3.57
Randolph CC	1,403	614	2,017	11,097	5.50
Richmond CC	1,192	724	1,916	6,838	3.57
Roanoke-Chowan CC	739	144	883	4,021	4.55
Robeson CC	1,791	1,349	3,140	11,786	3.75
Rockingham CC	1,552	363	1,915	10,714	5.59
Rowan-Cabarrus CC	3,139	790	3,929	17,614	4.48
Sampson CC	1,027	484	1,511	8,295	5.49
Sandhills CC	2,734	654	3,388	13,198	3.90
Southeastern CC	1,759	457	2,216	8,361	3.77
South Piedmont CC	1,290	532	1,822	9,819	5.39
Southwestern CC	1,429	547	1,976	7,628	3.86
Stanly CC	1,379	348	1,727	6,394	3.70
Surry CC	2,675	602	3,277	10,606	3.24
Tri-County CC	967	172	1,139	4,928	4.33
Vance-Granville CC	2,908	849	3,757	15,773	4.20
Wake TCC	6,961	1,828	8,789	33,792	3.84
Wayne CC	2,372	879	3,251	13,706	4.22
Western Piedmont CC	1,799	775	2,574	14,122	5.49
Wilkes CC	1,956	650	2,606	12,670	4.86
Wilson TCC	1,323	433	1,756	9,714	5.53
Total 2001-2002	**132,913**	**36,625**	**169,538**	**785,482**	**4.39**

Source: NCCCS, 2001-02 Annual Statistical Reports.
Note: Totals show n are the calculated sums of college-level detail figures and vary slightly from reported System totals.

The second potential reason that the choice of whether to use headcount or FTE as the enrollment driver is that the growth rates of the two measures can differ. If headcount is a more valid measure than FTE and headcount is growing more rapidly, then eventually the amount of funding provided by an FTE-based formula will become inadequate since headcount-based workload is growing faster than funding. As seen in Exhibit 6-2, headcount enrollment grew faster in the NCCCS between 1998 and 2000, while FTE has rebounded during the past couple of years as the job market tightened and more students enrolled on a full-time basis.

EXHIBIT 6-2
ENROLLMENT TRENDS OVER PAST SEVEN YEARS
HEADCOUNT AND FTE ENROLLMENT



Source: NCCCS
Note: Shift in headcount enrollment in FY1998 partially affected by change in reporting practice.

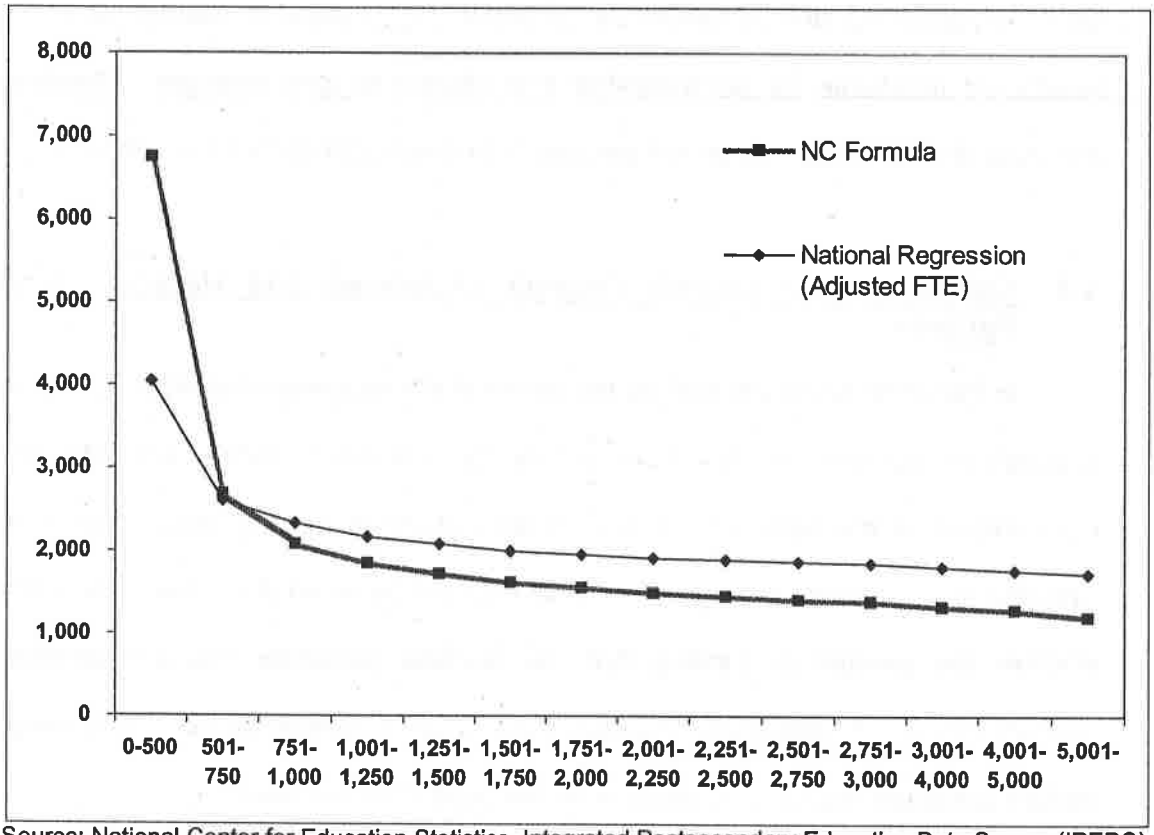
Other states often use different enrollment measures for different formula components. In surveys of states on their usage of formulas over the years, many states reported the use of headcount enrollment, or a blended average of FTE and headcount measures for administrative and student support formulas. Subsequent analyses of data in this chapter will consider both headcount and FTE enrollment.

6.3 Comparison of Current Formula Outcomes and National Funding Patterns

In this section, we will analyze the nature of the economy of scale phenomenon in expenditure patterns of American community colleges. While the data permit comparisons of the adequacy of funding by comparing funding rates used in North Carolina to the national averages, the focus here will be on equity. That is, we examine whether the amount of funding that the General Assembly has appropriated for Instructional and Administrative Support is distributed equitably across the 58 colleges, using the national expenditure patterns as the basis of comparison.

Dollars per FTE. The first set of analyses considers funding for administrative and support purposes on a FTE student basis – the same basis used in the current formula. In Exhibit 6-3, line graphs are used to illustrate the average amounts of expenditures per FTE student for colleges in varying size ranges for the three support functions. As would be expected under the assumption of economy of scale, the expenditures per FTE are highest for the colleges with the fewest FTE students, and the least for colleges with the largest enrollments.

EXHIBIT 6-3
VARIOUS ANALYSES OF
ADMINISTRATIVE EXPENDITURES PER FTE STUDENT



Source: National Center for Education Statistics, Integrated Postsecondary Education Data Survey (IPEDS), 2000-01 Fall Enrollment and Finance Surveys.

A regression line representing the sum of all three support functions is shown at the top of the chart. As seen, the line (representing expenditures per FTE student) shows a relatively steep downward slope through the smaller enrollment categories, and begins to flatten out once enrollment exceeds about 1000 FTE students. That is, recognition of economy of scale is most critical for those colleges with 1000 FTE enrollment or less.

Also shown on the same exhibit is a line representing the formula equation used as the current funding model for Instructional and Administrative Support in the NCCCS. When comparing the regression and formula lines, the shapes of the two lines are

generally similar but the NCCS funding rates are less than the national average for each size category above 750 students.

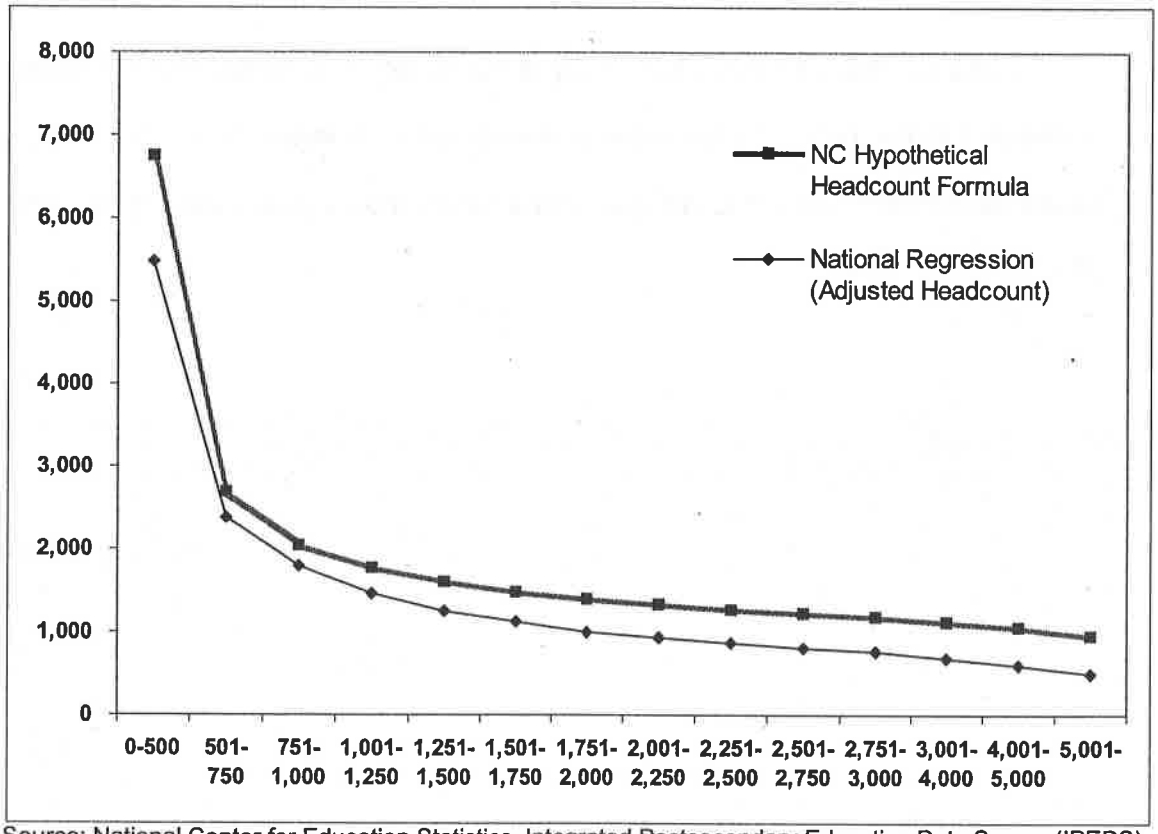
To assess the equity of the current formula distribution, we compare how the same available pool of dollars would have been distributed across the 58 colleges using the regression formula as the basis for the actual allocations. In Exhibit 6-4, we first show the formula-generated amount for Instructional and Administrative Support by college, and then the amounts that would have been generated using the regression equation as the formula. (Since the regression results would generate a different total requirement, the amount for each college is pro-rated to enable comparison of the distribution patterns.) Generally speaking, the distribution based on national regression results would shift a portion of the available funding from the smaller to the larger colleges.

EXHIBIT 6-4
COMPARISON OF CURRENT FORMULA RESULTS TO A DISTRIBUTION BASED ON NATIONAL PATTERNS FTE ENROLLMENT BASIS

College	Full-Time Equivalent Enrollment	Formula Generated Amount	*Pro-Rated* Regression-Predicted Budget	Funding Difference
Alamance CC	3,029	$4,175,947	$4,197,139	$21,192
Asheville-Buncombe TCC	4,763	$6,071,209	$6,340,919	$269,710
Beaufort County CC	1,734	$2,760,512	$2,596,104	($164,408)
Bladen CC	1,217	$2,195,431	$1,956,926	($238,505)
Blue Ridge CC	1,967	$3,015,181	$2,884,167	($131,014)
Brunsw ick CC	1,112	$2,080,666	$1,827,113	($253,553)
Caldw ell CC & TI	3,348	$4,524,614	$4,591,525	$66,911
Cape Fear CC	5,539	$6,919,377	$7,300,303	$380,926
Carteret CC	1,661	$2,680,723	$2,505,853	($174,870)
Cataw ba Valley CC	3,458	$4,644,844	$4,727,520	$82,676
Central Carolina CC	4,666	$5,965,188	$6,220,996	$255,808
Central Piedmont CC	11,216	$13,124,338	$14,318,894	$1,194,556
Cleveland CC	2,333	$3,415,219	$3,336,660	($78,559)
Coastal Carolina CC	3,829	$5,050,347	$5,186,195	$135,848
College of The Albemarle	2,079	$3,137,597	$3,022,635	($114,962)
Craven CC	2,175	$3,242,525	$3,141,321	($101,204)
Davidson County CC	2,813	$3,939,859	$3,930,094	($9,765)
Durham TCC	3,967	$5,201,181	$5,356,808	$155,627
Edgecombe CC	2,073	$3,131,039	$3,015,217	($115,822)
Fayetteville TCC	8,616	$10,282,538	$11,104,461	$821,923
Forsyth TCC	5,471	$6,845,053	$7,216,233	$371,180
Gaston College	3,973	$5,207,739	$5,364,225	$156,486
Gullford TCC	7,278	$8,820,104	$9,450,264	$630,160
Halifax CC	1,714	$2,738,652	$2,571,378	($167,274)
Hayw ood CC	1,613	$2,628,259	$2,446,509	($181,750)
Isothermal CC	1,707	$2,731,001	$2,562,723	($168,278)
James Sprunt CC	1,292	$2,277,406	$2,049,651	($227,755)
Johnston CC	2,995	$4,138,785	$4,155,104	$16,319
Lenoir CC	2,690	$3,805,420	$3,778,026	($27,394)
Martin CC	1,006	$1,964,808	$1,696,063	($268,745)
Mayland CC	1,461	$2,462,123	$2,258,589	($203,534)
McDow ell TCC	1,257	$2,239,151	$2,006,379	($232,772)
Mitchell CC	1,922	$2,965,996	$2,828,532	($137,464)
Montgomery CC	689	$1,685,000	$1,304,149	($380,851)
Nash CC	2,270	$3,346,360	$3,258,772	($87,588)
Pamlico CC	493	$1,685,000	$1,061,831	($623,169)
Piedmont CC	1,839	$2,875,277	$2,725,918	($149,359)
Pitt CC	4,677	$5,977,211	$6,234,595	$257,384
Randolph CC	2,017	$3,069,831	$2,945,983	($123,848)
Richmond CC	1,916	$2,959,438	$2,821,114	($138,324)
Roanoke-Chow an CC	883	$1,830,369	$1,543,995	($286,374)
Robeson CC	3,140	$4,297,270	$4,334,371	$37,101
Rockingham CC	1,915	$2,958,345	$2,819,878	($138,467)
Row an-Cabarrus CC	3,929	$5,159,647	$5,309,827	$150,180
Sampson CC	1,511	$2,516,773	$2,320,405	($196,368)
Sandhills CC	3,388	$4,568,334	$4,640,978	$72,644
Southeastern CC	2,216	$3,287,338	$3,192,011	($95,327)
South Piedmont CC	1,822	$2,856,696	$2,704,900	($151,796)
Southw estern CC	1,976	$3,025,018	$2,895,294	($129,724)
Stanly CC	1,727	$2,752,861	$2,587,450	($165,411)
Surry CC	3,277	$4,447,011	$4,503,746	$56,735
Tri-County CC	1,139	$2,110,177	$1,860,493	($249,684)
Vance-Granville CC	3,757	$4,971,651	$5,097,180	$125,529
Wake TCC	8,789	$10,471,627	$11,318,344	$846,717
Wayne CC	3,251	$4,418,593	$4,471,602	$53,009
Western Piedmont CC	2,574	$3,678,632	$3,634,613	($44,019)
Wilkes CC	2,606	$3,713,608	$3,674,176	($39,432)
Wilson TCC	1,756	$2,784,558	$2,623,303	($161,255)
TOTAL, NCCCS	169,531	$235,829,457	$235,829,457	$0

Dollars per Headcount Student. In the second set of analyses, we develop similar exhibits using headcount rather than FTE students as the workload measure. In Exhibit 6-5, we again see line graphs representing different categories of administrative expenditures per headcount student for colleges in different size categories. Again, the pattern of having the greatest expenditures per student for colleges with the least enrollment is seen.

EXHIBIT 6-5
VARIOUS ANALYSES OF
ADMINISTRATIVE EXPENDITURES PER HEADCOUNT STUDENT



Source: National Center for Education Statistics, Integrated Postsecondary Education Data Survey (IPEDS), 2000-01 Fall Enrollment and Finance Surveys.

As in the earlier line graph for FTE students, two lines are seen in Exhibit 6-5. The top line represents the results of linear regression analysis of total support expenditures from the other 49 states. When using headcount enrollment as the basis, the efficiency

gains in administrative spending due to economy of scale are mostly realized by the time a college reaches 1500-2000 headcount students.

The second line in Exhibit 6-5 depicts a hypothetical NCCCS formula based on headcount enrollment. The current base allotment of approximately $1.56 million is assumed to continue to be used, but the pool of funds now available for the enrollment allotment would be distributed on unduplicated headcount rather than FTE. When comparing the national regression and hypothetical formula lines, we see that NCCCS funding trails the national average across all size categories above 500 headcount enrollment.

In Exhibit 6-6, we assess the equity of the current FTE-based NCCCS formula as contrasted to the national regression of headcount enrollment data. The headcount-based model shifts funding to colleges with a higher than average ratio of headcount to FTE.

EXHIBIT 6-6
COMPARISON OF HYPOTHETICAL FORMULA RESULTS TO A DISTRIBUTION BASED ON NATIONAL PATTERNS HEADCOUNT ENROLLMENT BASIS

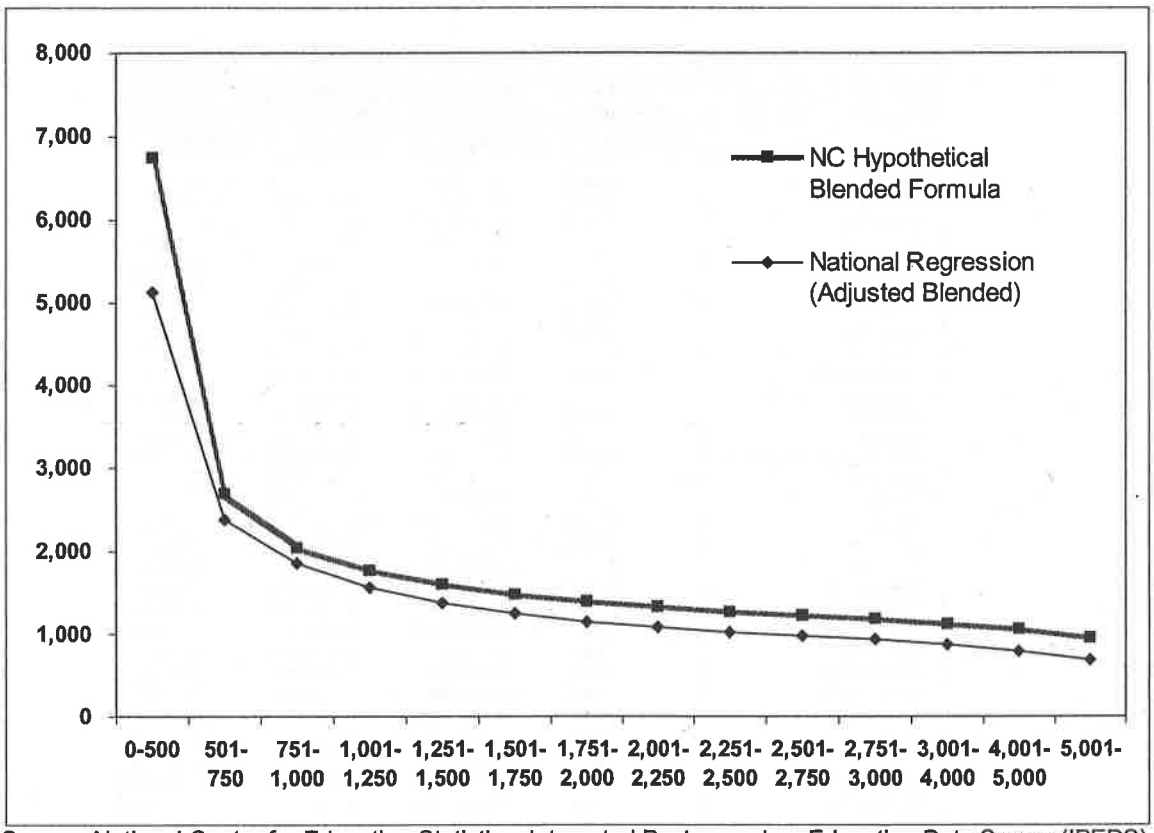
College	Headcount Enrollment	Formula Generated Amount	*Pro-Rated* Regression-Predicted Budget	Funding Difference
Alamance CC	13,865	$4,175,947	$4,140,762	($35,185)
Asheville-Buncombe TCC	24,299	$6,071,209	$6,560,974	$489,765
Beaufort County CC	7,296	$2,760,512	$2,617,054	($143,458)
Bladen CC	4,854	$2,195,431	$2,050,622	($144,809)
Blue Ridge CC	15,491	$3,015,181	$4,517,920	$1,502,739
Brunsw ick CC	7,093	$2,080,666	$2,569,967	$489,301
Caldw ell CC & TI	13,510	$4,524,614	$4,058,419	($466,195)
Cape Fear CC	23,724	$6,919,377	$6,427,601	($491,776)
Carteret CC	6,670	$2,680,723	$2,471,851	($208,872)
Cataw ba Valley CC	18,924	$4,644,844	$5,314,220	$669,376
Central Carolina CC	17,109	$5,965,188	$4,893,222	($1,071,966)
Central Piedmont CC	57,409	$13,124 338	$14,240,984	$1,116,646
Cleveland CC	8,460	$3,415,219	$2,887,049	($528,170)
Coastal Carolina CC	24,255	$5,050,347	$6,550,768	$1,500,421
College of The Albemarle	10,789	$3,137,597	$3,427,271	$289,674
Craven CC	10,548	$3,242,525	$3,371,370	$128,845
Davidson County CC	14,626	$3,939,859	$4,317,280	$377,421
Durham TCC	20,304	$5,201,181	$5,634,317	$433,136
Edgecombe CC	8,409	$3,131,039	$2,875,219	($255,820)
Fayetteville TCC	35,309	$10,282,538	$9,114,792	($1,167,746)
Forsyth TCC	28,921	$6,845,053	$7,633,067	$788,014
Gaston College	19,400	$5,207,739	$5,424,630	$216,891
Guilford TCC	34,970	$8,820,104	$9,036,159	$216,055
Halifax CC	6,878	$2,738,652	$2,520,097	($218,555)
Hayw ood CC	6,350	$2,628,259	$2,397,625	($230,634)
Isothermal CC	10,057	$2,731,001	$3,257,480	$526,479
James Sprunt CC	6,778	$2,277,406	$2,496,902	$219,496
Johnston CC	12,730	$4,138,785	$3,877,494	($261,291)
Lenoir CC	13,274	$3,805,420	$4,003,677	$198,257
Martin CC	4,487	$1,964,808	$1,965,494	$686
Mayland CC	5,950	$2,462,123	$2,304,844	($157,279)
McDow ell TCC	10,020	$2,239,151	$3,248,898	$1,009,747
Mitchell CC	10,896	$2,965,996	$3,452,090	$486,094
Montgomery CC	3,288	$1,685,000	$1,687,381	$2,381
Nash CC	11,370	$3,346,360	$3,562,036	$215,676
Pamlico CC	1,634	$1,685,000	$1,303,728	($381,272)
Piedmont CC	7,775	$2,875,277	$2,728,160	($147,117)
Pitt CC	16,684	$5,977,211	$4,794,642	($1,182,569)
Randolph CC	11,097	$3,069,831	$3,498,713	$428,882
Richmond CC	6,838	$2,959,438	$2,510,819	($448,619)
Roanoke-Chow an CC	4,021	$1,830,369	$1,857,404	$27,035
Robeson CC	11,786	$4,297,270	$3,658,529	($638,741)
Rockingham CC	10,714	$2,958,345	$3,409,874	$451,529
Row an-Cabarrus CC	17,614	$5,159,647	$5,010,359	($149,288)
Sampson CC	8,295	$2,516,773	$2,848,777	$332,004
Sandhills CC	13,198	$4,568,334	$3,986,049	($582,285)
Southeastern CC	8,361	$3,287,338	$2,864,086	($423,252)
South Piedmont CC	9,819	$2,856,696	$3,202,275	$345,579
Southw estern CC	7,628	$3,025,018	$2,694,063	($330,955)
Stanly CC	6,394	$2,752,861	$2,407,831	($345,030)
Surry CC	10,606	$4,447,011	$3,384,823	($1,062,188)
Tri-County CC	4,928	$2,110,177	$2,067,786	($42,391)
Vance-Granville CC	15,773	$4,971,651	$4,583,331	($388,320)
Wake TCC	33,792	$10,471,627	$8,762,917	($1,708,710)
Wayne CC	13,706	$4,418,593	$4,103,882	($314,711)
Western Piedmont CC	14,122	$3,678,632	$4,200,375	$521,743
Wilkes CC	12,670	$3,713,608	$3,863,577	$149,969
Wilson TCC	9,714	$2,784,558	$3,177,920	$393,362
TOTAL, NCCCS*	785,482	$235,829,457	$235,829,457	($0)

*Represents sum of institutions, and therefore does not rule out duplicative enrollments betw een institutions.

Dollars per Blended FTE-Headcount Enrollment Measure. While some of the work in the Instructional and Administrative Support function appears to be driven by headcount enrollment, other functions may be more directly related to FTE enrollment. For instance, the workload in the personnel office is heavily influenced by the number of faculty, whose numbers in turn are a function of FTE enrollment. For our third set of analyses, we recognize the impact of both FTE and headcount enrollment by using the simple average of the two numbers as the workload variable.

Following the same pattern as used in the analyses of both FTE and headcount enrollment, Exhibit 6-7 again includes two line graphs showing national regression results and hypothetical NCCCS formula lines. In this case, the benefits of economy of scale begin to be realized by the point that the blended enrollment level reaches 1500-2000 blended students.

EXHIBIT 6-7
VARIOUS ANALYSES OF
ADMINISTRATIVE EXPENDITURES PER BLENDED STUDENT



Source: National Center for Education Statistics, Integrated Postsecondary Education Data Survey (IPEDS), 2000-01 Fall Enrollment and Finance Surveys.

In Exhibit 6-8, we assess the equity of the current FTE-based NCCCS formula as contrasted to the national regression of blended enrollment data. The current NCCCS formula based on FTE enrollment provides relatively more funding to the smaller colleges with a relatively low ratio of headcount – to – FTE enrollment.

EXHIBIT 6-8
COMPARISON OF HYPOTHETICAL FORMULA RESULTS TO A DISTRIBUTION BASED ON NATIONAL PATTERNS BLENDED ENROLLMENT BASIS

College	50/50 Blended Enrollment*	Formula Generated Amount	*Pro-Rated* Regression-Predicted Budget	Funding Difference
Alamance CC	8,447	$4,175,947	$4,150,190	($25,757)
Asheville-Buncombe TCC	14,531	$6,071,209	$6,541,534	$470,325
Beaufort County CC	4,515	$2,760,512	$2,604,699	($155,813)
Bladen CC	3,036	$2,195,431	$2,023,175	($172,256)
Blue Ridge CC	8,729	$3,015,181	$4,261,031	$1,245,850
Brunsw ick CC	4,103	$2,080,666	$2,442,564	$361,898
Caldw ell CC & TI	8,429	$4,524,614	$4,143,115	($381,499)
Cape Fear CC	14,632	$6,919,377	$6,581,036	($338,341)
Carteret CC	4,166	$2,680,723	$2,467,326	($213,397)
Cataw ba Valley CC	11,191	$4,644,844	$5,228,731	$583,887
Central Carolina CC	10,888	$5,965,188	$5,109,439	($855,749)
Central Piedmont CC	34,313	$13,124,338	$14,316,743	$1,192,405
Cleveland CC	5,397	$3,415,219	$2,951,177	($464,042)
Coastal Carolina CC	14,042	$5,050,347	$6,349,330	$1,298,983
College of The Albemarle	6,434	$3,137,597	$3,358,971	$221,374
Craven CC	6,362	$3,242,525	$3,330,474	$87,949
Davidson County CC	8,720	$3,939,859	$4,257,297	$317,438
Durham TCC	12,136	$5,201,181	$5,599,972	$398,791
Edgecombe CC	5,241	$3,131,039	$2,890,057	($240,982)
Fayetteville TCC	21,963	$10,282,538	$9,462,519	($820,019)
Forsyth TCC	17,196	$6,845,053	$7,589,024	$743,971
Gaston College	11,687	$5,207,739	$5,423,490	$215,751
Guilford TCC	21,124	$8,820,104	$9,132,943	$312,839
Halifax CC	4,296	$2,738,652	$2,518,620	($220,032)
Hayw ood CC	3,982	$2,628,259	$2,395,004	($233,255)
Isothermal CC	5,882	$2,731,001	$3,142,005	$411,004
James Sprunt CC	4,035	$2,277,406	$2,416,033	$138,627
Johnston CC	7,863	$4,138,785	$3,920,449	($218,336)
Lenoir CC	7,982	$3,805,420	$3,967,419	$161,999
Martin CC	2,747	$1,964,808	$1,909,582	($55,226)
Mayland CC	3,706	$2,462,123	$2,286,521	($175,602)
McDow ell TCC	5,639	$2,239,151	$3,046,296	$807,145
Mitchell CC	6,409	$2,965,996	$3,349,144	$383,148
Montgomery CC	1,989	$1,685,000	$1,611,646	($73,354)
Nash CC	6,820	$3,346,360	$3,510,690	$164,330
Pamlico CC	1,064	$1,685,000	$1,248,071	($436,929)
Piedmont CC	4,807	$2,875,277	$2,719,471	($155,806)
Pitt CC	10,681	$5,977,211	$5,028,077	($949,134)
Randolph CC	6,557	$3,069,831	$3,407,316	$337,485
Richmond CC	4,377	$2,959,438	$2,550,457	($408,981)
Roanoke-Chow an CC	2,452	$1,830,369	$1,793,827	($36,542)
Robeson CC	7,463	$4,297,270	$3,763,424	($533,846)
Rockingham CC	6,315	$2,958,345	$3,312,001	$353,656
Row an-Cabarrus CC	10,772	$5,159,647	$5,063,845	($95,802)
Sampson CC	4,903	$2,516,773	$2,757,204	$240,431
Sandhills CC	8,293	$4,568,334	$4,089,659	($478,675)
Southeastern CC	5,289	$3,287,338	$2,908,727	($378,611)
South Piedmont CC	5,821	$2,856,696	$3,117,832	$261,136
Southw estern CC	4,802	$3,025,018	$2,717,506	($307,512)
Stanly CC	4,061	$2,752,861	$2,426,056	($326,805)
Surry CC	6,942	$4,447,011	$3,558,446	($888,565)
Tri-County CC	3,034	$2,110,177	$2,022,389	($87,788)
Vance-Granville CC	9,765	$4,971,651	$4,668,236	($303,415)
Wake TCC	21,291	$10,471,627	$9,198,386	($1,273,241)
Wayne CC	8,479	$4,418,593	$4,162,571	($256,022)
Western Piedmont CC	8,348	$3,678,632	$4,111,277	$432,645
Wilkes CC	7,638	$3,713,608	$3,832,208	$118,600
Wilson TCC	5,735	$2,784,558	$3,084,226	$299,668
TOTAL, NCCCS	477,507	$235,829,457	$235,829,457	$0

*Represents the simple average of FTE and headcount enrollment levels at each institution.

6.4 Recommendations

The results of the analyses using three different definitions of enrollment as the workload driver are summarized in Exhibit 6-9. The results of the current FTE-based model are compared to results of nationally normed models using FTE, headcount and blended enrollment, respectively, as the workload variable.

EXHIBIT 6-9
SUMMARY COMPARISON OF CURRENT BASE FUNDING AND THREE ALTERNATIVE MODELS

Model	Funding per Student	Base Funding	R-Square
Actual Funding Level			
Current Model[1]	$1,093	$1,685,000	
Predicted Funding Levels[3]			
FTE Enrollment	$1,236	$452,325	0.831
Headcount Enrollment	$232	$924,715	0.824
Blended[2] Enrollment	$393	$830,057	0.828
Funding Differences			
FTE Enrollment	n/a	$1,232,675	
Headcount Enrollment	n/a	$760,285	
Blended[2] Enrollment	n/a	$854,943	

1-NC base funding includes an estimated median of $125,000 for president's salary and benefits, and $1,560,000 for the first 750 FTE.
2-Formula based on 50-50 blend of headcount and FTE enrollment levels.
3-Comparisons between funding rates per student are not valid due to differing measures of enrollment (FTE/Headcount/Blended)

While each of the colleges will likely find merit in the option that provides them with the largest piece of the pie, a number of other factors can inform which model is best for the overall system.

For the three models based on regression analyses of national expenditure and enrollment data, one consideration is how well each regression equation explained the variance in expenditures per student across the national universe of community

colleges. The common statistical measure used for this purpose is the R-square, and is also displayed in Exhibit 6-9. The scores for each of the three analyses shows a high degree of explanatory power, but a slightly better fit is found for the regression analysis that uses FTE enrollment as the workload measure.

Beyond statistical criteria, other factors to consider include face validity (i.e., does the workload variable make sense to the lay person?) and responsiveness to changes in workload. As discussed earlier, many college administrators contend that headcount enrollment is a stronger predictor of administrative workload than FTE enrollment – perhaps suggesting strong face validity for a model using headcount as a basis. The analyses of enrollment trends (see Exhibit 6-2) revealed that headcount grew more rapidly than FTE over part of the past decade while FTE grew faster in the past couple of years. Since one measure does not consistently change at a faster rate than the other, the blended enrollment basis might be more responsive to varying patterns of change over time.

Based on all of the above analyses, we recommend that the formula used to request and allocate funding for Instructional and Administrative Support in the NCCCS continue to include a base allotment but that the enrollment allotment be based on blended enrollment.[1] The specific details of the recommended formula are listed in Exhibit 6-10.

[1] Since the measure of unduplicated headcount has not previously affected budget allocations, we recommend that NCCCS staff review the headcount data for consistency across colleges before final implementation of this recommendation.

EXHIBIT 6-10
RECOMMENDED FORMULA FOR
INSTRUCTIONAL AND ADMINISTRATIVE SUPPORT

Illustration for College with 4000 Blended Enrollment			
Base Allotment		$	830,057
Enrollment Allotment			
Blended Enrollment	4000		
Funding Rate Per Student	393		
Amount		$	1,572,000
Total Allocation		$	2,402,057

Under this recommendation, formula calculations would be performed s follows:

Step 1: A base allotment of approximately $830 thousand would be made to each college. The actual amount should be reviewed annually to take into account inflation and other relevant factors,

Step 2: Determine the per-student funding rate by dividing the remaining appropriation (after the base allotment) by the sum of the blended enrollment for the 58 colleges.

Step 3: Multiply each college's blended enrollment by the funding rate derived in Step 2 to yield the enrollment allotment.

Step 4: Sum the base allotment and enrollment allotment to determine the total allocation for Instructional and Administrative Support.

7.0 FUNDING POLICY FOR MULTI-CAMPUS COLLEGES AND OFF-CAMPUS CENTERS

7.0 FUNDING POLICY FOR MULTI-CAMPUS COLLEGES AND OFF-CAMPUS CENTERS

The final stipulation of the special provision called for an analysis of funding requirements of multi-campus colleges (MCCs) and off-campus centers (OCCs). In this chapter, we analyze the current funding approaches in detail and describe our analyses of fixed costs by type of extended instructional site.

7.1 Background of Funding Issues for Extended Sites

When the community colleges in North Carolina were first founded, they were envisioned as single campus institutions. Over time, however, the colleges began offering courses off campus at temporary sites, usually in adjacent counties or in distant locations within the same county as the original campus. Some of these temporary extended sites later evolved into permanent sites, and were regarded as off-campus centers (OCCs) or branch campuses.

In the late 1980s, the notion of operating a second full service campus emerged. These campuses eventually became known as multi-campus colleges (MCCs) to defuse any perception that the "branch" was something less than the "main" campus. As this movement took hold, the SBCC developed policies that defined different types of instructional sites. The SBCC also adopted a process for granting state recognition of new MCCs and OCCs, with a grand-fathering provision for certain pre-existing locations. Exhibit 7-1 contains the definitions of various types of instructional sites, as adopted by the SBCC in February 2000.

EXHIBIT 7-1
DEFINITIONS OF TYPES OF INSTRUCTIONAL SITES

Designation of Off-Campus Centers & Multi-Campus Colleges Policies and Funding Methods

I. Off-Campus Centers/Multi-Campus College Policy

The purpose of the State Board of Community Colleges' policy on off-campus centers and multi-campus colleges is to help ensure that appropriate geographic access is provided to community college programs and services while minimizing the unnecessary duplication and proliferation of facilities and the impact on existing college campuses and centers. The following criteria apply to the establishment and maintenance of an off-campus center or multi-campus college designation for state funding formula duplication and capital outlay purposes.

Criteria for Approval:

1. An adequate population base exists to support the off-campus center or multi-campus operation.
2. Programs and services provided are based on appropriate student demand and needs.
3. Programs and services provided through off-campus centers or multi-campuses comply with the *Criteria for Accreditation* of the Commission on Colleges of the Southern Association of Colleges and Schools. The State Board of Community Colleges may withhold supplemental funding if an approved Off-Campus Center or Multi-Campus College fails to continue to adequately meet the *Criteria for Accreditation.*
4. Adequate county government maintenance and operation of physical plant support is available.
5. An instructional program and services plan has been developed which includes appropriate details concerning program mix, staffing, and instructional support functions.
6. The center or campus does not have a negative impact on institutions in contiguous areas.
7. Students enrolled at a multi-campus college must be able to complete at least one associate degree at the campus that requests the multi-campus designation.
8. The duplication of instructional support and other cost expenses are justifiable from cost effectiveness and quality perspectives.
9. Off-Campus Centers must enroll a minimum of 50 Budget FTE and multi-campus operations must enroll a minimum of 300 Budget FTE. The method to be used in deriving the FTE shall be the same as the method used for calculating Budgeted FTE (the higher of the current year or a 3-year rolling average). Colleges approved as Multi-Campus Colleges with less than 300 BFTE at the time this policy is adopted, have been grand fathered for inclusion by the State Board of Community Colleges.
10. The physical facility for the center or campus must either be owned or leased on a long-term basis by the college. As defined in the North Carolina Community College System Construction Manual, a forty-year lease is preferred, but shorter leases with options to renew may be acceptable.

As these sites became more numerous and as the colleges gained a better understanding of the costs of operating extended sites, an argument arose that extended sites faced the same economy of scale phenomenon as small colleges. That is, the colleges operating these sites felt that the administrative costs of opening a new site could not be recovered solely from the enrollment allotment portion of the formula for Instructional and Administrative Support.

In the case of MCCs where the second campus was not in the same county as the original campus, the point was made that the campus would have been better funded had the instructional site been created as a new college (rather than as a new campus of an existing college) and, thus, would have been eligible for the base allotment funding provisions of the administrative formula.

To address these concerns, the SBCC undertook a staff study of funding for extended sites in the late 1990s. As a result of that study, the SBCC adopted a basis for recommending supplemental funding for extended sites for their Instructional and Administrative Support functions. The staff study relied heavily on the rationale of "duplicated functions," believing that certain positions at the extended sites would not have been necessary to serve the same number of students had they enrolled on the original campus. As seen in Exhibit 7-2, the formula adopted by the SBCC established separate funding allotments for MCCs and OCCs depending on the enrollment size of each.

EXHIBIT 7-2
SBCC RECOMMENDED FORMULAS FOR MCCs AND OCCs

Type of Site	Budgeted FTE	Formula Duplication Adjustment	Calculation Example
Off-Campus Center			
Level 0	Less than 50	0	
Level 1	50–199	Each BFTE in excess of 50 is funded at the base budget enrollment allotment value per FTE (for 1999-00, $1,056/per FTE) not to exceed a total allocation of $200,000[1]	150 total BFTE - 50 100 x $1,056 = $105,600
Level 2	200 +	Each BFTE in excess of 50 will be funded at the base budget enrollment allotment value per FTE (for 1999-00, $1,056/per FTE) not to exceed a total allocation of $300,000[1]	350 total BFTE - 50 300 x $1,056 = $316,800 Since above the cap, the college qualifies for the $300,000 cap allocation.
Multi-Campus College			
Level 1	Less than 500	Each BFTE is funded at the enrollment allotment value per FTE (for 1999-00, $1,056/FTE) not to exceed a total allocation of $450,000[1]	332 FTE X $1,056 = $350,592
Level 2	500 to 799	Each BFTE is funded at the enrollment allotment value per FTE (for 1999-00, $1,056/FTE) not to exceed a total allocation of $500,000[1]	681 FTE X $1,056 = $500,000
Level 3	Equal to or greater than 800	Each BFTE is funded at the enrollment allotment value per FTE (for 1999-00, $1,056/FTE) not to exceed a total allocation of $550,000[1]	1081 FTE X $1,056 = $550,000

[1]This value shall be adjusted annually to reflect the current Enrollment Allotment value.

The General Assembly considered the SBCC's formula recommendations for MCCs and OCCs, but did not endorse the proposals. Instead, the General Assembly recognized the need for additional administrative funding for MCCs by appropriating a sum to be divided equally among the existing campuses. The share for each campus amounted to approximately $100 thousand. No special funding provision was made for OCCs.

Two points needed to be noted about the funding approach for MCCs implemented by the General Assembly. First, the amount provided was considerably less than the amount requested by the SBCC. Second, the statewide amount was fixed over several years, causing the per-campus supplement to decrease in value as new campuses opened and were eligible to share in the fixed pool of funds. The dwindling value of the MCC supplement is illustrated in Exhibit 7-3. The General Assembly's preliminary appropriation for FY2004 addresses this situation and increases the total supplement by $300 thousand, which restores the per-campus funding rate to approximately $100,000.

EXHIBIT 7-3
DWINDLING VALUE OF SUPPLEMENTAL FUNDING
FOR MULTI-CAMPUS COLLEGES

Fiscal Year	MCC Appropriation	Number of Campuses	$ per Campus	Notes
1999	650,000	12.5	52,000	12 = full year; 1 = 6 mos
2000	1,650,000	14	117,857	14 = full year
2001	1,650,000	15.583	105,885	15 = full year; 1 = 7 mos
2002	1,650,000	16.083	102,593	16 = full year; 1= 1 mo
2003	1,650,000	17.917	92,091	17 = full year; 1 = 11 mos

7.2 *Current Staffing and Funding Profile at MCCs and OCCs*

One means of assessing the adequacy of the appropriation for MCCs is to compare the appropriated funding rate with actual resource consumption rates at the campuses. This section provides a basic profile of current staffing and expenditure levels for both the MCCs and the OCCs. Since the NCCCS does not routinely collect such information at the intra-college level of detail, the data reported here are based on our survey of the 58 colleges to compile staffing and expenditure information.

As a non-recurring data collection effort with a short turnaround time, the survey information reported here is subject to several potential problems in consistency of data across colleges, campuses and centers. First, many of the colleges assign some of their support staff to serve students at two or more different locations. For instance, a financial aid counselor may have office hours three days a week on one campus and two days a week on a different campus. Other college staff, however, may be assigned full-time at a single extended site. While the data reported in this section should be valid in reporting the number of staff (and their related expenditures) who are assigned full-time to a campus or center, the colleges may vary in their ability to allocate the salary costs across campuses of personnel who are assigned to multiple locations.

A second issue surrounds the unique organizational arrangements that Central Piedmont Community College has adopted for its student and administrative support personnel. In general, the director of administrative services at each of the extended campuses has a dual responsibility. Part of the assignment is to oversee the provision of the full range of administrative support services at a particular campus; the other part of the assignment is to serve as the college-wide director of a specific administrative function. For instance, the director of administrative services of CPCC's Southwest Campus also serves as the college's director of procurement and the college's

procurement staff is also housed at the Southwest Campus. While the college can report the number of support personnel according to their campus locations, CPCC has not been able to determine the relative amounts of time these personnel spend on campus-specific duties versus college-wide functions.

Exhibit 7-4 shows the number of staff in administrative and support positions as reported by the colleges for each of their State Board-approved extended campuses along with the budgeted FTE enrollment for each location. As seen, the typical extended campus has approximately 25 staff. (Data for Craven and CPCC are excluded from consideration due to potential reporting inconsistencies.)

EXHIBIT 7-4
STAFFING LEVELS FOR
INSTRUCTIONAL AND ADMINISTRATIVE SUPPORT
EXTENDED CAMPUSES OF MULTI-CAMPUS COLLEGES

College	MCC Name	FTE Students	Support Staff	Support Expenditures
Caldwell CC & TI	Watauga Cty. Campus	669	28	$610,140
Central Carolina CC	Chatham Cty. Campus	289	17	$553,433
	Harnett Cty. Campus	683	55	$1,841,047
Central Piedmont CC	North Campus	503	24	$959,378
	Northeast Campus	n/a	21	$779,256
	South Campus	1,410	44	$1,599,781
	Southwest Campus	533	24	$845,743
	West Campus	221	27	$1,093,132
College of The Albemarle	Dare Cty. Campus	305	13	$341,007
Craven CC [1]	Havelock/Cherry Point Campus	304	7	$99,553
Edgecombe CC	Rocky Mount Campus	649	24	$749,043
Gaston College	Lincoln Cty. Campus	437	12	$393,718
Guilford TCC	Greensboro Campus	677	24	$432,840
Rowan-Cabarrus CC	Cabarrus Cty. Campus	1,383	41	$1,117,898
South Piedmont CC	West Campus	408	13	$568,955
Vance-Granville CC	Franklin Cty. Campus	386	16	$614,931
	Granville Cty. Campus	315	11	$463,492
Wake TCC	Health Sciences Campus	780	19	$550,655

Source: Enrollment data provided from NCCCS budget office. Staffing and financial data from MGT of America Survey, May 2003.
[1]Note: Craven's Havelock Campus has just been granted MCC status and was operating as a center for the time period represented by these data.

Corresponding data from our survey of administrative expenditures at campuses is also shown in Exhibit 7-4. Expenditures range from $400 thousand to $1.8 million.

(Data for Craven and CPCC again are excluded from consideration due to potential reporting inconsistencies.) As compared to the funding supplement from the General Assembly for multi-campus colleges of approximately $100,000, the actual expenditure rates are considerably higher.

EXHIBIT 7-5
EXPENDITURE LEVELS FOR
INSTRUCTIONAL AND ADMINISTRATIVE SUPPORT
OFF-CAMPUS CENTERS

College	Site Name	FTE Students	Support Staff	Support Expenditures
Asheville-Buncombe TCC	Enka Center	n/a	2	$113,224
	Madison Cty. Ctr.	80	2	$24,758
Bladen CC	Kelly/East Arcadia Ctr.	101	2	$59,843
Blue Ridge CC	Transylvania Cty. Ctr.	283	5	$258,841
Brunswick CC	Leland Ctr.	22	4	$56,243
Cape Fear CC	Hampstead Ctr.	102	n/a	$130,772
	Burgaw Ctr.	66	n/a	$98,397
Catawba Valley CC	Alexander Center	6	3	$58,942
Central Carolina CC	Siler City Ctr. (Chatham Cty.)	93	7	$175,506
Central Piedmont CC	West Center	68	13	$560,304
College of The Albemarle	Chowan Cty. Ctr.	94	9	$171,457
Davidson County CC	Davie Cty. Ctr.	132	6	$232,890
Durham TCC	Northern Durham Ctr.	229	6	$131,094
Fayetteville TCC	Spring Lake Ctr.	788	22	$219,366
Forsyth TCC	Carver Road Ctr.	186	10	$385,194
	Kernersville Ctr.	188	13	$403,603
	West Ctr.	455	30	$954,314
Guilford TCC	Aviation Ctr.	197	6	$46,183
	High Point Ctr.	308	16	$400,641
Haywood CC	High Tech Ctr.	63	7	$302,906
Isothermal CC	Polk Cty.Ctr.	40	2	$48,819
Lenoir CC	Greene Cty. Ctr.	127	6	$341,219
	Jones Cty. Ctr.	49	3	$118,996
Mitchell CC	Mooresville Ctr.	174	5	$133,023
Piedmont CC	Caswell Cty. Ctr.	257	15	$937,688
Richmond CC	Continuing Education Ctr.	119	5	$70,858
	Scotland Cty. Ctr.	62	7	$67,414
South Piedmont CC	Wadesboro Ctr.	44	9	$172,937
	Continuing Education Ctr.	n/a	31	$328,396
Southwestern CC	Macon Cty. Ctr.	29	4	$147,327
	Swain Cty. Ctr.	34	2	$33,337
Tri-County CC	Graham Cty. Ctr.	131	7	$203,908
Vance-Granville CC	Warren Cty. Ctr.	124	5	$212,124
Wake TCC	Adult Education Ctr.	245	44	$717,975
Wilkes CC	Alleghany Cty. Ctr.	76	7	$16,295
	Ashe Cty. Ctr.	216	8	$102,745
Wilson TCC	Police Academy Ctr.	52	3	$111,881

Source: Enrollment data provided from NCCCS Statistical reports. Staffing and financial data from MGT of America Survey, Ma

Source: Enrollment data provided from NCCCS Statistical reports. Staffing and financial data from MGT of America Survey, May 2003.

Staffing and expenditure levels for off-campus centers are shown in Exhibit 7-5. As would be expected, the resource commitments are typically much lower at centers than at campuses. The typical staffing complement is approximately five employees and the administrative expenditure rate is usually in the $100-200 thousand range.

7.3 *Validity of Economy of Scale Concept for Extended Sites*

We have examined the validity of the claim that extended sites need special funding from several different perspectives. We looked at practices in other states to determine how common supplemental funding is. We also assessed the functions performed by those positions that are in the college's base allotment to determine whether these functions need to be duplicated at an extended site. Finally, we analyzed the current relationships between staffing, expenditures and enrollments at the current extended sites in North Carolina to determine if there is any statistical support for a base allotment for each type of extended site.

The notion that extended sites require some special funding recognition can be found in the practices of other states. In some cases, states will provide special start-up funds over the first several years of operations while the site attracts sufficient enrollments to become self-supporting under the formula. In other cases, a small complement of positions is funded for each extended site in addition to enrollment-based funding.

As discussed in Chapter 4.0, a key part of the current formula for Instructional and Administrative Support is a base allotment for each college. Funding is provided to support 30 positions that perform duties in academic support, student services and institutional support. These positions range from clerical support personnel to senior administrators. The distribution of the core positions is listed in Exhibit 7-6.

EXHIBIT 7-6
ANALYIS OF CORE STAFF FOR A COLLEGE AND CONSIDERATION OF APPLICABILITY FOR EXTENDED SITES

Position Category	Executive Management	Institutional Support	Instructional Support	Total
Senior Administration				
750 FTE College	4			4
750 FTE Campus	1			1
200 FTE Center	0			0
Supervisor of Programs				
750 FTE College			2	2
750 FTE Campus			0	0
200 FTE Center			0	0
Student Support Services				
750 FTE College			7	7
750 FTE Campus			2	2
200 FTE Center			1	1
General Institution				
750 FTE College		1	3	4
750 FTE Campus		0	1	1
200 FTE Center		0	0	0
Technical/Paraprofessional				
750 FTE College		1	5	6
750 FTE Campus		0	1	1
200 FTE Center		0	1	1
Clerical				
750 FTE College		3	4	7
750 FTE Campus		1	1	2
200 FTE Center		1	0	1
Total Positions				
750 FTE College	4	5	21	30
750 FTE Campus	1	1	5	7
200 FTE Center	0	1	2	3
Funding Implications (at $52,000 per position)				
750 FTE College				$1,560,000
750 FTE Campus				$ 364,000
200 FTE Center				$ 156,000

The positions in the "Executive Management" and "Institutional Support" columns appear to have only limited applicability to the staffing needs of an extended site. By their nature, most of these positions have college-wide duties that do not require site-level duplication. Within the "Instructional Support" functional category, the position categories listed as "Supervisor of Programs" and "General Institution" also do not

suggest responsibilities that typically would be site-specific. Of the remaining categories, those for "Student Support Services" and "Clerical" seem to be strong candidates for site-level staffing, but not in the quantities needed for core staffing for the overall college.

We conducted linear regression analysis of expenditure data for the 18 MCC campuses and 37 centers for which we received survey responses. Due to the combination of small sample size and potential reporting inconsistencies, no statistically significant relationship was found between current enrollment and expenditure levels.

7.4 Recommendations

Based on these analyses, and especially our analysis of core staffing requirements at extended sites, we conclude that the current appropriated funding levels for MCCs and OCCs are not sufficient to fund the core support functions that are needed for these types of instructional sites. We believe that a base allotment of approximately $400 thousand is needed for MCCs. This amount is greater than the current appropriation of approximately $100 per campus, but somewhat less than the previous SBCC proposal for up to $450-550 thousand per campus. We also conclude that approximately $150 thousand is needed for OCCs. This amount compares to the $200-300 thousand proposal by the SBCC and current non-recognition by the General Assembly.

APPENDICES

APPENDIX A:

SCHEDULE OF REGIONAL WORKSHOPS

APPENDIX A
SCHEDULE OF REGIONAL WORKSHOPS

Regional Workshops

February 6, 2003
Edgecombe Community College
Rocky Mount, NC

February 6, 2003
Durham Technical Community College
Durham, NC

February 10, 2003
Sampson Community College
Clinton, NC

March 3, 2003
Central Piedmont Community College
Charlotte, NC

March 3, 2003
Caldwell Community College and Technical Institute
Hudson, NC

March 7, 2003
Southwestern Community College
Sylva, NC

APPENDIX B:

CORRESPONDENCE FROM GOVERNMENT OFFICIALS AND ASSOCIATIONS

APPENDIX B
CORRESPONDENCE FROM GOVERNMENT OFFICIALS AND ASSOCIATIONS

Sources of Correspondence

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Representative Michael A. Gorman
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House of Representatives

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Larry B. Norris
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Stephen C. Scott
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Rowan-Cabarrus Community College

Jan C. Riley
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Essic M. Williams
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Bladen Community College Board of Trustees

Elbert L. Whitley, Jr.
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Stanley Community College