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A comparative analysis of funding formulas applied to the North Carolina Community College System

Cuthbertson, Lloyd William, Jr., Ed.D.

The University of North Carolina at Greensboro, 1994

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A COMPARATIVE ANALYSIS OF FUNDING FORMULAS

APPLIED TO THE NORTH CAROLINA

COMMUNITY COLLEGE SYSTEM

by

Lloyd William Cuthbertson, Jr.

A Dissertation Submitted to the Faculty of the Graduate School at The University of North Carolina at Greensboro in Partial Fulfillment of the Requirements of the Degree Doctorate in Educational Administration

> Greensboro 1994

> > Approved by

<u>Ascelle & Brusen</u> Dissertation Advisor

CUTHBERTSON, LLOYD WILLIAM, JR., Ed.D. A Comparative Analysis of Funding Formulas Applied to the North Carolina Community College System. (1994) Directed by Dr. Joseph Bryson. 102 pp.

The purpose of this study was to contrast the FTE funding formula used to fund the North Carolina Community College System with other funding formulas used in other states to fund their respective community colleges.

The methodology for this study included surveying four senior level administrators--one representing either academic affairs, continuing education, financial affairs or student affairs--at each of the fifty-eight community colleges in North Carolina concerning the concepts of adequacy and equity in funding along with other factors that should be included in a funding formula.

Predicated on an analysis of data, it was concluded that North Carolina's present FTE funding formula does not address the concepts of adequacy and equity in funding; that the formula should be expanded to include new program start-up funding, a more timely cost recovery system for the colleges, allowance for unanticipated program growth in the formula along with funding for equipment and facilities; and that North Carolina should consider revisions to its FTE formula to allow for differentiated funding based on program costs.

APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at The University of North Carolina at Greensboro.

Dissertation Advisor

Brisin)

Committee Members

Acceptance by Committee

Martin 14 1994

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CHAPTER I

INTRODUCTION

Current Situation

Financial constraints have forced community college administrators in North Carolina to seek new ways to overcome inadequate or inconsistent patterns of funding for program areas, administration and support personnel, equipment and supplies.¹ Based on previous funding levels and procedures, as many as forty-nine of the fifty-eight institutions that comprise the North Carolina Community College System may have experienced budgetary shortfalls as North Carolina continued to use its present funding mechanism.²

The North Carolina Community College System needs a funding process that promotes fiscal responsibility while providing equity in the distribution of state funds. The mechanism must, at the same time, assure adequate funding levels for new programs, existing programs, and expanding program areas.

²King, Tom. Letter to the Presidents of the North Carolina Community College System, 17 March 1988.

¹Campbell, Dale F. and Ann F. Kaneklides, <u>Indirect</u> <u>Costs Allocation In Program Cost Determination</u> (Raleigh, N.C.: Department of Adult and Community Education, North Carolina State University) May 1987.

A report published by the Commission on the Future of the North Carolina Community College System entitled "Gaining the Competitive Edge: The Challenge to North Carolina's Community Colleges" recommended that "The State Board should oversee the redesign of the funding process to provide flexible and responsive funding."³ The report further recommended that a state-wide task force be appointed to revise the procedures for the distribution of funds to maintain equity among colleges and to reflect variable program costs.⁴ The findings of the North Carolina Commission on the Future suggested that:

Revised funding procedures should establish two categories for college request for state funding—a base budget and an expansion budget to allow for greater flexibility for colleges to address state priorities and local needs.

Provisions should be made to maintain stable and equitable distributions among colleges by providing base funding through a revised and simplified method of calculating FTE student enrollments at each college by distributing funds for administrative and instructional support positions to reflect the size and service area of particular colleges.

Revisions will need to recognize differences in operating costs by college size and service area and adjust for high-cost and high-priority programs.

Adjustable financial incentives should be used to address urgent state needs. A state-level discretionary fund should be established for high

³"Gaining The Competitive Edge: The Challenge to North Carolina's Community College System", 21.

⁴Ibid.

priority and critical activities, grants for innovative teaching and system-wide research, and start-up costs for high-priority programs.⁵

One possible solution--the adoption of an alternative funding process that will distribute available funds on an adequate (providing state funds according to each institution's needs based on given criteria such as workload, program area costs, etc.) and equitable (providing state funds that will enable each institution to offer quality programs needed by the community) basis--has been discussed in this document.

In a news release dated April 20, 1988, President Bob Scott of the North Carolina Community College System stated that the Department of Community Colleges planned to spend over \$400,000 on a media campaign. The campaign's two-fold purpose was to increase enrollment and to educate the legislature to the need for adequate funding for the state's community colleges. In addition, the campaign focused on educating the state's citizens concerning the mission of the North Carolina Community College System.

Problems With North Carolina's Current FTE Formula

The current funding process used to distribute state funds to the fifty-eight member institutions of the North Carolina Community College System has been enrollment driven.

Traditionally, it has been based on the number of Full Time Equivalent students (FTEs) at each institution. FTE funding has been the major source of state allotted funds used to pay instructor's salaries and benefits, purchase materials and supplies, and for support and administrative staff positions.

A basic economic problem that has existed for North Carolina's Community Colleges has been that they must attempt to satisfy a seemingly unlimited list of needs and wants with a limited source of funds. Administrators must understand that basic economic principles dictate the need for an:

increased awareness that there are limited resources available . . . and that judgments must be made on how to allocate these resources. This suggests the need to measure the cost of programs and to do so on a cost effectiveness basis--that is, what is the cost of accomplishing one program over the cost of another?⁶

The dilemma has been that for a community college in North Carolina to increase its funding base it must grow. Growth in a program area or the addition of another program area required an initial outlay of funds for such items as instructors' salaries, equipment and supplies.

North Carolina's present funding formula has not provided growth funds. North Carolina's current FTE funding formula has traditionally allocated additional funding in the

⁶Gross, M. J., Jr., "Non-Profit Accounting: The Continuing Revolution," <u>The Journal of Accountancy</u>. (June 1977): 186.

fiscal year following the year in which the college experienced a growth in enrollment. Funding for each institution has been based on the total number of student contact hours. For funding purposes, total student contact hours were converted to FTEs (one Yearly FTE equals sixteen student contact hours per quarter for four quarters). In the past, growth has resulted in an increased need for additional support staff as well as for additional instructors. As a result of financial constraints, institutions have often found it difficult to grow and met the educational needs of their service area.

Increased costs have led to problems other than financial ones. For example, recent FTE audits by the North Carolina Department of Community Colleges revealed that several community colleges had falsified class rolls with some classes existing only on paper. The current FTE funding mechanism has encouraged such actions because it has been enrollment driven. To operate a high cost program or to offer new program areas institutions have been forced to cover the added expenses incurred by generating additional FTEs in classes and program areas in which additional students have little effect on either direct or indirect costs.

Colleges have used the additional funds generated by low cost programs with high enrollments to offset expenses incurred by high cost programs with low enrollments. Excess

funds generated by low cost programs with high enrollments have also been used to expand program offerings.

Simply put, there must exist a level of funding that will provide adequate funds to cover program costs associated with an institution's planned and unplanned enrollment growth. A requirement of North Carolina's present funding formula has been that the college must grow before providing funding. A delay in funding has been especially difficult for medium sized and small institutions that have limited budgets and little, if any, discretionary funds available for the expansion of programs.

The North Carolina Community College System and the North Carolina Legislature, by implementing a new funding formula or the restructuring of the present FTE formula, may be better able to insure equity and adequacy of funding for the state's community colleges. North Carolina's FTE formula treated all institutions equally in that each has received the same dollar amount per FTE produced during the previous fiscal year. The FTE Formula has consistently failed, however, to take into account the needs of individual institutions.

North Carolina's current FTE funding formula also has failed to address new program start-up costs, costs associated with unanticipated growth in a program area, and the adequacy of funding for administrative and support staff positions.

Another problem institutions have dealt with has been the delay between the time the institution earns additional funding through enrollment growth and the time that additional funding appeared in the institution's total budget. As a result, institutions have been forced to delay program expansion or implementation of a new program due to the lack of available funding. As stated by Blanchard, Zigarmi and Zigarmi in <u>Leadership and the One Minute Manager</u>, "There is nothing so unequal as the equal treatment of unequals."⁷ North Carolina's FTE funding formula appeared to be an equitable way of allocating state funds to each member institution. In reality, this may not have been the case.

The discrepancy between what the fifty-eight member institutions have needed or desired and the adequacy with which North Carolina's FTE funding formula addressed those needs and desires suggested a need for the consideration of an alternative funding method (formula). Updating North Carolina's FTE based funding formula or the adoption of another funding method may be a solution to this discrepancy.

Purpose of the Study

The purpose of this study was to contrast the FTE funding formula used to fund the North Carolina Community

⁷Blanchard, Kenneth, Patrica Zigarmi and Drea Zigarmi, <u>Leadership and the One Minute Manager</u> (New York: William Morrow and Company, Inc., 1985), 33.

College System with funding formulas used in other states to fund their respective community colleges. As a result, recommendations for policy change or the development of an alternative funding formula(s) have been offered.

Importance of the Study

Given the premise that North Carolina's current FTE funding formula for the state's community colleges has been inadequate in that it does not address adequacy and equity in funding, a new funding process for the North Carolina Community College System may benefit member colleges by:

- restructuring the budgetary process to insure a more adequate distribution of funds directly related to program area costs,
- (2) funding programs at an equitable level increasing a college's accountability to the public, students, state regulatory agencies, and the Legislature,
- (3) re-allocation of current funding to allow for increased flexibility in program area offerings,
- (4) more efficient use of the state's ManagementInformation System will be made in relation to the budgetary process,
- (5) the addition of program offerings that will better meet the needs of the local business community due to a more efficient cost recovery system or funding for program start-up costs.

The North Carolina Community College System will benefit from this study as a result of the evaluation of possible alternatives to FTE funding. Predicated on adequacy and equity in funding, accountability, flexibility, program offerings, and the timely recovery of expenditures an alternative to the present FTE funding mechanism may be a viable solution.

Research Ouestions

To examine the effects of different funding formulas the following research questions have been investigated.

- What are the methods (formulas) used to fund community colleges in states in which colleges are accredited by the Southern Association of Colleges and Schools?
- 2. Predicated on an analysis of data, what are the trends and issues that must be addressed either to revise North Carolina's current FTE formula or to develop an alternative funding mechanism?
- 3. Predicated on an analysis of data, does North Carolina's FTE formula create real differences among small, medium and large institutions in terms of adequacy and equity in addressing the needs of the institutions?
- 4. Predicated on an analysis of data, does one or more elements in funding methods used by other southern states better meet the financial needs of community colleges in North Carolina?

Definitions of Terms

- Adequacy--the distribution of funds based on given criteria according to the individual needs of each institution.
- 2. Administrative Costs--non-instructional and non-capital outlay cost associated with a program area.
- 3. Budget Formula---"a set of statements that detail a procedure for manipulating variable data (base factors) applicable to an institution of higher education by pre-established fixed data (formula factors) to produce estimated future funding requirements of the college."⁸
- Community College--a state supported post-secondary institution that awards certificates, diplomas or degrees in programs two years or less in duration.
- Department of Community Colleges--a state agency responsible for supervising the operations of community colleges.
- 6. Enrollment Driven Formula--a method of funding that is based on the total number of full time equivalent students enrolled in an institution.
- Equity--the distribution of state funds to an institution based on the needs of the citizens served by

⁸Gross, James M. and C. M. Achilles, "A Formula For 'The Elite': Why Risk Your 'Reputation' For Equitable Funding?", 1.

the institution and the needs of the service area for that institution at a funding level that will insure a quality program.

- Equitable--the providing of state funds according to an institution's needs and based on criteria such as workload, program area costs, etc.
- 9. Fiscal Year--a twelve month accounting (budget) year used by an institution to settle financial accounts.
- 10. Full Time Equivalent (FTE) -- a base unit used to fund an institution. One FTE represents the amount of time a "typical" full-time student attends class. Each FTE represents 704 student contact hours during the year.
- 11. Funding Formula (Method) -- a procedure by which selected variables such as student contact hours, student credit hours, etc., and selected fixed factors such as faculty/student ratios, administrative salaries, etc. are used to determine institutional funding.
- 12. PRIME Management Information System--the use of a PRIME Computer to provide summary information of financial data for management purposes.
- 13. Program Start-up Costs--Expenses associated with the implementation of a new program area such as supplies, instructional salaries and benefits, rent, equipment, and certification requirements.
- 14. Quarterly FTE--the total number of student contact hours for a given quarter divided by 176 (sixteen contact

hours in a class, shop or laboratory per week for eleven weeks).

- 15. Southern Association of Colleges and Schools--an association that serves as an accrediting body for educational institutions located in the eleven southern states (Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas and Virginia).
- 16. Yearly (Average Annual) FTE--the total number of student contact hours taken at an institution during an academic year divided by 704 (sixteen student contact hours per week for eleven weeks for four quarters).

CHAPTER II

REVIEW OF THE LITERATURE

North Carolina's Community College System recently celebrated its thirtieth anniversary. The ability of the North Carolina Community College System to grow and meet the ever-changing educational needs of the state's citizens have been, and will continue to be, tied directly to state funding. Research indicated the need for additional funding --whether from state, federal or local sources--to allow the state's community colleges System to continue to grow and flourish in today's high technology economy.

Types of Formula Funding

David I. Carter identified three basic types of formula funding used in higher education. The first type was based on student/faculty ratios with auxiliary costs (support staff, supplies, etc.) based on the number of faculty positions. This formula's main advantage was its simplicity and ease of understanding.⁹ Funding based on student/faculty

⁹Carter, David I. <u>Program Funding By Formula Of The</u> <u>Unrestricted Current Fund Operations Of Kentucky's Public</u> <u>Higher Education Institutions</u>. Staff report to the Council On Public Higher Education, April 1977 (Revised 18 July 1977), 31. ratios with auxiliary costs based on the number of faculty positions was easier to "sell" to the state legislature. The possibility exists that funding decisions based on strict interpretations of non-educational factors has resulted in inadequate funding. Basic funding formulas were not designed to deal with such details.¹⁰

A second type of budgeting formula--program budgeting-has seen limited application except in higher education fields such as law, medicine, etc. The major hindrance to program budgeting has been the lack of quantifiable information on which to base decisions. Although it targets personnel needs, the prediction of personnel needs in today's changing economy has been less than an exact science.¹¹

The third type of funding formula was based on student credit or student contact hours. Most often referred to as FTE funding, it allowed for differentiation of program offerings without the confines of a rate structure.¹²

A funding formula has been described as a procedure by which selected variables (i.e., student contact hours, student credit hours, etc.) and selected fixed factors (i.e., salaries of support staff, administrative salaries, faculty/student ratios, etc.) were used to determine

¹⁰Ibid. ¹¹Ibid., 32. ¹²Ibid. institutional funding. Formula funding allowed for better financial control of the taxpayers' money and protected academic freedom by disallowing discretionary budget cuts. To decide to use one formula over another, one must have weighed the advantages, disadvantages, and limitations of each formula. For a formula to have been selected, its advantages must have outweighed its disadvantages.¹³

Objectives of Formula Funding

Two underlying objectives for all funding formulas used in higher education were <u>equity</u> and <u>adequacy</u>. Carter's detailed study of funding by formula stated that what constitutes equity in the distribution of funds varied.

To some, the concept of equity is confused with the concept of equality. Why not give the same amount of money to each institution? Since institutions and campuses vary considerably in enrollment size, the concept of equality is translated into providing the same amount of state support per full-time equivalent student. But since program offerings are different, and since program costs vary (it is more expensive to offer a medical education program than to offer a business administration program), then the whole matter of program differentiation among institutions must be resolved. Because state institutions of higher education differ among themselves in terms of programs and of enrollment size, equity in the distribution of the state appropriation requires a differentiation according to enrollment and . . . according to programs.14

¹³Ibid., 2.

¹⁴Ibid., 6.

Equity did not imply the equal distribution of state funds based solely on institutional size or based on the number of students regardless of the program offered. Three factors dealing with equity that were addressed included: program area costs, workload, and available revenue. Therefore, a concept such as equity was often difficult, if not impossible, to define in operational terms.¹⁵

The concept of equity was concerned with the equal distribution of available funds among institutions based on given criteria. The objective of equity was to provide (distribute) state funds to each institution according based on needs. When needs were greater than the legislature's ability to meet those needs, the equity issue remained a dominant factor in funding.¹⁶

The concept of adequacy was even more difficult to define in operational terms than that of equity. For example, economies of scale tend to have favored large institutions located in urban areas. Because of the amount of total funding large institutions received due to having served a larger number of students, large urban institutions were able to offer high cost programs that meet the needs of the students and the local job market. A stated goal of the North Carolina Community College System has been to make

¹⁵Ibid.

classes and training available to all the state's citizens within commuting a reasonable commuting distance of their home or job. As a result, program offerings needed by an institution's service area must be accessible to the citizens regardless of cost factors. For community colleges to provide a sound educational program for the state's citizens, adequacy of funding must be addressed in North Carolina's funding formula.

Adequacy of funding enables an institution to offer program areas needed by the community it serves and at a funding level that will insure a quality program. For the budgetary process to deal with adequacy there must exist an explicit definition of adequacy. To date, one does not exist. The definition of adequacy in program funding has been implied but it has never been explicit. All previous planning, budgeting, programming, etc., has been, in reality, a search for adequacy.¹⁷

Adequacy in funding, whether by formula or by other means, is not likely to occur as long as variables such as student/teacher ratios are manipulated. A formula without variables would have produced the same value year after year. This has not always been the case with the value assigned for each yearly FTE in North Carolina. Based on financial records furnished each institution, the value of a yearly FTE

¹⁷Ibid., 6-7.

has varied in past years (See TABLE 1). There must have existed at least one variable in the current funding formula used to fund North Carolina's Community College System that accounts for variations in the value of an Annual FTE. By manipulating variables, states have been able to control support dollars therefore accommodating the state's limited supply of funds.

TABLE 1

F T E VALUES FOR FISCAL YEARS 1984-85 TO 1993-94

YEAR	CURRICULUM	NON-CURRICULUM
1984-85	\$2,027.07	\$1,107.70
1985-86	\$2,279.13	\$1,196.15
1986-87	\$2,361.33	\$1,279.71
1987-88	\$2,505.49	\$1,372.78
1988-89	\$2,770.13	\$1,843.81
1989-90	\$2,965.74	\$1,976.90
1990-91	\$3,083.03	\$2,055.57
1991-92	\$2,943.50	\$1,977.21
1992-93	\$3,036.56	\$2,025.72
1993-94	\$3,143.43	\$2,059.47

SOURCE: Tom King, Vice President of Finance (FY 1984-85 through FY 1988-89) and Larry Morgan, Director of Audits and Accounting (FY 1989-90 through FY 1993-94), North Carolina Department of Community Colleges

Advantages of Formula Funding

Advantages of most funding formulas included their objectivity in the determination of equitable financial support. Funding formulas have also tended to reduce political pressure that occurred as several institutions compete for the same state dollars. Funding formulas have provided a basis for determining required levels of support that were understandable and administrators were able to measure the adequacy of support based on a particular formula. Finally, most formulas held accountability, needs and autonomy of community colleges in balance.¹⁸

Gross stated in his article entitled "Formula Funding of Higher Education in the United States: An Overview of the State-of-the-Art" (1973) that funding formulas have had several advantages over other budgeting techniques. First, they have been effective in estimating funding requirements for functional budget areas when based on objective (quantitative) data was available. Second, the amount of bickering among institutions competing for state funds was reduced. Third, based on the premise that base factors (e.g., FTE enrollments) do not decrease, there was at least a potential for an institution being assured of an appropriation that would provide a base operating budget. Forth, state governmental officials had a simple and

¹⁸Ibid., 8.

understandable basis for deciding and presenting financial requirements for higher education including community colleges. Fifth, budget formulas had a tendency to compromise two opposing factions (the state's control due to line-item budgeting versus the institution's control over its fiscal affairs).¹⁹

Disadvantages of Formula Funding

Depending upon the degree to which funding formulas were used, several criticisms of funding formulas arose. First, formulas seldom, if ever, addressed the varying quality of instructional program areas both within the institution and across institutions. A basic assumption was that high quality, high costs and greater funding levels went hand-inhand.²⁰ This assumption incorrectly implied that programs with high costs and greater funding levels are quality Second, formulas tend to have had a leveling programs. effect on program quality due to equal levels of funding. An equal level of funding across program areas did not take into account, or explain, the need for a greater level of funding for one institution in relation to another institution unless one of the institutions was able to justify the need for a

¹⁹Gross, James M., "Formula Funding for Higher Eduction in the United States: An Overview of the State-of-the Art", 50.

 20_{Carter} , 7.

difference in expenditures. A third criticism was that a formula may reduce a state's support for an institution as outside sources of income (grants, endowments, gifts, etc.) were factored into the formula. A negative effect on an institution's funding by such sources implied that the formula itself, not the formula process, was flawed.²¹

Other criticisms included that often funding formulas: (a) did not adequately estimate program costs, (b) tended to perpetuate inequalities that existed before implementation of the formula, and (c) as enrollment stabilizes or declines an enrollment driven formula did not equitably and adequately address the changing circumstances.²²

Due to continual changes in an institution's internal and external environment, it has been anticipated that most formulas will, from time-to-time, need to be revised. Funding formulas have been considered a beginning--not an end. In addition, a particular formula may not have been of equally benefit to all institutions.

The use of enrollment driven formulas during periods of declining or stable enrollments have resulted in more than one institution recruiting students for low cost programs for which there was little employment possibilities for program completers in the local job market.

21Ibid., 7-8.
22Ibid., 8.

College administrators must be careful not to recruit students for low cost programs in greater numbers than the local labor market demands. Administrators, however, cannot be expected to overlook the potential for excess revenues associated with high enrollment levels in low cost programs. A purely incremental approach to funding tended to perpetuate inequalities in funding.

Finally, special circumstances--such as accessibility for students--have, in all likelihood, dictated the operation and continuation of non-profitable low enrollment programs in small, rural colleges.²³

Cost Factors Associated With FTE Funding

Administrative costs have often been associated with the number of students served as opposed to the number of student contact hours. In the past several institutions have experienced a need for additional administrative and/or support staff positions as a result of an increase in the total number of students served. These institutions experienced a decrease in total FTE funding because of a drop in the average number of student contact hours taken by students.

The North Carolina Community College System has been experiencing a trend of more part-time or special interest

²³Ibid., 9.

students taking one or two classes as opposed to students enrolling for a full student load. Max Hutchins, Dean of Evening Programs at Asheville-Buncombe Technical Community College, stated at a North Carolina Instructors Conference (October 17, 1988) that the number of part-time students (those carrying less than twelve hours of credit) at his institution had increased to approximately 47% of the total student body and that, if the current trend continues, estimates were that part-time students would constitute over 50% of the student body at his institution.

Another discrepancy that added to this situation was that students who enrolled for twelve or more credit hours were considered full-time students for tuition purposes. These full time students, however, did not produce the equivalent of one FTE.

Funding by Program Area vs. FTE Funding

A major concern expressed by proponents of funding by program area (program driven formula) versus proponents of FTE funding has been the need for an adequate method of accounting for and allocating indirect program costs. Campbell and Kaneklides in their study stated:

In practice, indirect cost allocations are used by community and technical colleges and other organizations. They are considered necessary and may or may not be appropriate for each situation. 24

The ability to allocate indirect costs carries with it the incorrect assumption that the basis for allocation can be objectively verified. The lack of verifiable data may produce misleading results.²⁵

A review of accounting and educational literature provides few descriptive studies that are applicable to North Carolina.²⁶

Methods selected for determining indirect costs are influenced by the structure of the institution and the level of accuracy required by its management.²⁷

No single basis for the allocation of exact program costs can be used by all institutions.²⁸

Average costs are not useful for planning purposes because cost variations resulting from volume changes do not follow the average. Both fixed and variable cost components must be used in conjunction with average costing methods.²⁹

Administrators must decide whether or not to allocate all indirect costs to curriculum programs. Such allocation is defensible only to the extent that the allocation basis reflects the factors that cause the costs to be incurred.³⁰

Indirect costs allocations "per se" should not be included in short-term decision-making unless the

24Campbell, 162. 25Ibid., 163. 26Ibid., 164. 27Ibid. 28Ibid., 165. 29Ibid., 166. 30Ibid., 168. decision or plan is framed in relation to costs objectives.³¹

Indirect cost allocations may only appropriately be used as broad guidelines for setting pricing or funding levels for community and technical colleges.³²

Full costing of curriculum programs may provide a framework for the review of the costs of instructional delivery, it is not appropriate for all management objectives.³³

Formula funding was one of many budgeting techniques that has been used in education and in business. The question remained "Will other funding formulas better meet the needs of the North Carolina Community College System?" To answer this question North Carolina's funding formula and possible alternatives to formula funding must be examined.

North Carolina's FTE Formula

The North Carolina Legislature has traditionally funded Community Colleges based on the total number of Full Time Equivalent (FTE) students served during the previous year. In the North Carolina Community College System one Quarterly FTE equaled 176 student contact hours per quarter (sixteen contact hours per week for eleven weeks). One Annual FTE equaled 704 student contact hours (sixteen contact hours per

³¹Ibid., 170.
³²Ibid., 171.
³³Ibid., 175.
week for eleven weeks for four quarters) for curriculum program areas.

The average of the previous year's fall, winter and spring quarter enrollments determined Total Annual FTE funding. For FTE purposes, summer quarter enrollment in curriculum programs was the average FTE enrollment for the previous fall, winter and spring quarters. Actual FTE production during summer quarter did not affect an institution's Annual (Yearly) FTE production.

The present funding formula penalized institutions with a high summer quarter enrollment in curriculum classes and rewarded institutions with low summer quarter enrollments. Offering fewer classes during the summer quarter reduced variable costs without the loss in income for the institution. As a result, many institutions facing financial constraints have given less academic emphasis to the summer quarter. For non-curriculum programs the actual fall, winter, spring and summer quarter enrollments have been used to determine total funding.

One exception to North Carolina's enrollment driven funding formula has been Pamlico Community College. Because of its location, service area and the community's need for services, Pamlico, the state's smallest community college, received an additional base amount whether or not its Annual FTE production reached five hundred. This may be consider a type of programmatic funding for the system.

North Carolina's funding formula addressed three areas (Curriculum FTE, Non-Curriculum FTE, and Instructional Support and Administrative Allotment).

Budgeted Curriculum FTEs have been divided into five major categories--College Transfer, Technical, Vocational, General Education and Cosmetology Contracts. Instructional units were the basis for funding these five major categories. For Fiscal Year 1993-94, one instructional unit (position) was allowed for every 21.6 FTEs produced.

For Fiscal Year 1993-94, the value of an instructional unit for College Transfer, Technical, Vocational and General Education was \$34,262 (See TABLE 2). The unit value for cosmetology contracts was \$20,604. The number of units times the unit value for each unit determined Total Instructional Salaries.

The employee benefit package differed for cosmetology contracts because these instructors were not considered state employees and, therefore, did not qualify for the state benefit package. Whereas 18.61% (7.65% for Social Security and 10.96% for employer retirement match) was included in the state benefit package for each full time instructor with teaching responsibilities in either College Transfer, Technical, Vocational or General Education programs, the formula provided only the minimum requirement of 7.65% in Social Security match for positions funded through Cosmetology Contracts.

TABLE 2

FORMULA FOR BUDGETED CURRICULUM FTE

		OPERATING FORMULA COMPUTATION X Y Z COMMUNITY COLLEGE PAGE 1	07-12-93 1993-94
BUDG CO TEC VO	ETED CURRICULUM FTE LLEGE TRANSFER CHNICAL CATIONAL	BUDGETED NON-CURRICULUM FTE 200 OCCUPATIONAL 159 492 ADULT BASIC ED 269 346	
GEI	TOTAL CURRICULUM	1117 TOTAL NON-CURR. 420	
I. CU	INSTRUCTIONAL ALLOTME RRICULUM INSTRUCTION:	NT:	
A.	COLLEGE TRANSFER		
	1. INSTRUCTORS SALARIE	ES 9.3 UNITS @ \$34,262 EACH	\$318,637
	2. EMPLOYEE BENEFITS	(A) 18.61% OF TOTAL INSTRUCTIONAL SALARIES \$59,29	B
		(B) HOSPITALIZATION @ \$1,735.2 PER UNIT \$16,13	7 \$75,435
	3. OTHER COSTS: @	\$105.00 PER FTE	\$21,000
	TOTAL COLLEGE TRAN	NSFER ALLOTMENT	\$415,072
В.	TECHNICAL		
	1. INSTRUCTORS SALARIE	ES 22.8 UNITS @ \$34,262 EACH	\$781,174
	2. EMPLOYEE BENEFITS	(A) 18.61% OF TOTAL INSTRUCTIONAL SALARIES \$145,370	
		(B) HOSPITALIZATION @ \$1,735.2 PER UNIT \$39,56	5 \$184,939 ¢51,600
	3. UTHER COSTS: W		401,000
<u> </u>		LOIMENT	φι,017,773
ι.			\$5/8 102
	2 EMDIOVEE RENEETS		φ040,192 α
		(R) HOSPITALIZATION $@$ \$17352 PER LINIT \$27.76	3 \$129 702
	3 OTHER COSTS: @	\$105.00 PER FTF	\$36,330
	TOTAL VOCATIONAL	ALLOTMENT	\$714.304
D.	GENERAL EDUCATION		<i></i>
	1. INSTRUCTORS SALARIE	ES 0.9 UNITS @ \$34,262 EACH	\$30,836
	2. EMPLOYEE BENEFITS	(A) 18.61% OF TOTAL INSTRUCTIONAL SALARIES \$5,73	Э , , ,
		(B) HOSPITALIZATION @ \$1,735.2 PER UNIT \$1,562	2 \$7,301
	3. OTHER COSTS: @	\$105.00 PER FTE	\$2,100
	TOTAL GENERAL EDU	CATION ALLOTMENT \$40,237	
E	COSMETOLOGY CONTRACTS	3	
	1. INSTRUCTORS SALARIE	ES 2.7 UNITS @ \$20,604 EACH	\$55,631
	2. EMPLOYEE BENEFITS	(A) 7.65% OF TOTAL INSTRUCTIONAL SALARIES \$4,25	3
	3. OTHER COSTS: @	\$105.00 PER FTE	\$6,195
	TOTAL CONTRACTED	COSMETOLOGY ALLOTMENT	\$66,082
TOT	AL CURRICULUM ALLOTMENT		\$2,253,468

Source: <u>Annual Statistical Report--1992-93</u>, Volume 28. North Carolina Department of Community Colleges, Raleigh, North Carolina, August, 1993. Only full time employees who fell under one of the first four categories (College Transfer, Technical, Vocational and General Education) were eligible for the medical insurance benefit. The medical insurance benefit added \$1,735.20 per full time employee to the total benefit package.

The instructional allotment for curriculum instruction provided an additional \$105 per FTE to cover other supply costs for each of the five instructional categories.

TABLE 3

FORMULA FOR BUDGETED NON-CURRICULUM FTE

		OPERATING FORMULA COMPUTATION X Y Z COMMUNITY COLLEGE	07-12-93 PAGE 1 1993-94	
١١.	No	N-CURRICULUM INSTRUCTION:		
	Α.	OCCUPATIONAL EXTENSION: 1. INSTRUCTORS SALARIES6.9 UNITS @ \$20,604 EACH 2. EMPLOYEE BENEFITS: (A) 7.65% OF TOTAL INSTRUCTIONAL SALARIES 3. OTHER COSTS: @ \$56.00 PER FTE	\$142,168 \$10,876 \$8,094	
		TOTAL OCCUPATIONAL EXTENSION ALLOTMENT	\$161,948	
	B.	LITERACY EDUCATION: LITERACY INSTRUCTION GRANT	\$484,878	
	C	COMMUNITY SERVICE BLOCK GRANT	\$31,781	
	то	TAL NON-CURRICULUM ALLOTMENT	\$678,607	
то	TAL IN	ISTRUCTIONAL ALLOTMENT	\$2,932,075	

Source: Annual Statistical Report--1992-93, Volume 28. N C Department of Community Colleges, Raleigh, NC, August, 1993.

There were three budget categories based on FTE production that have been classified as non-curriculum.

Included were Occupational Extension, Literacy Education and Community Service (See TABLE 3). Funding for Occupational Extension followed the same procedure and unit values as funding for Cosmetology Contracts. One exception was that the allotment for Other Cost was only \$56.00 per FTE for Occupational Extension.

Each of the fifty-eight community colleges received funding for Literacy Education in the form of a "Literacy Instruction Grant" that was also formula driven. (See TABLE 3). Literacy Education funding was based on enrollment in all courses related to Adult Basic Education, Adult High School diploma programs, General Education Development (GED) and the Compensatory Education Curriculum.³⁴

In 1993-94, each college received a base allocation of \$20,000. To the base allocation was added twenty-five cents per target population sixteen to fifty-four years of age who had less than a high school education; \$1,906 per FTE produced by literacy classes; \$50 for each GED awarded; \$150 for each Adult High School diploma awarded; and \$10,000 for each percent in excess of the statewide level of effort (8.94%) of the eligible population. Actual student contact hours served as the basis for calculating Literacy FTEs.³⁵

³⁴King, Tom. Letter to the Presidents and Business Managers of the North Carolina Community College System, Attachment 9-F, 19 July 1994.

³⁵Ibid.

Funding for Community Service was through a Community Service Block Grant. Block Grant funding was tied to FTE production in community service classes and other activities. The current trend was, and continues to be, for community service activities to become self-supporting. As a result, state funding of Community Service Block Grants has continued to decrease.

In North Carolina, funding for instructional support and administrative positions (See TABLE 4) was formula driven. One exception found in the formula has been that of the president's salary that was set by a state salary plan for presidents.

Each institution received a base allotment for administrative and support personnel. Included in the allotment were salaries and fringe benefits (Social Security, state retirement and insurance) for a president, four senior administrators, 5.5 instructional support personnel, and 3 clerical staff.

The base allotment included Social Security, state retirement and medical insurance match for each allotted position. In addition, the base allotment included funding for other administrative costs. The only variation among base allotment amounts for all fifty-eight community colleges was due to the variation in the president's salary and fringe benefits package.

Part B of the Instructional Support and Administrative Allotment (See TABLE 4) provided funding in addition to the base allotment. The additional funding was based on the number of FTEs produced that exceed the five hundred required for the base allotment. Section B--Additional Instructional Support, provides funding in addition to the base allotment. Administrators of Programs and Instructional Support allotments were divided into parts A (Curriculum Salaries and benefits) and B (Continuing Education salaries and benefits). The only benefit provided by the formula for Continuing Education positions was Social Security.

Several fallacies existed with North Carolina's FTE funding mechanism. First, as previously stated, FTE funding in North Carolina was enrollment driven. For a member institution of the North Carolina Community College System to qualify for additional funding, the institution must have experienced an increase (growth) in the total number of student contact hours during fall, winter and spring quarters. Possible sources for growth included:

- an increase in the total number of students enrolled,
- an increase in the average number of contact hours taken by current students, or
- an increase in enrollment coupled with an increase in the average number of contact hours attempted by students.

TABLE 4

FTE FORMULA FOR INSTRUCTIONAL SUPPORT AND ADMINISTRATION

INST	RUCTIONAL SUPPORT AND ADMINISTRATIVE ALLOTMENT				
POSITIONS	A. BASE ALLOTMENT				
1.0	1. SALARIES - PRESIDENT (SALARY AUTHORIZED: \$67,224)	\$69.096			
	(A) SOCIAL SECURITY 7.65% (MAXIMUM \$57,600) (B) RETIREMENT 10.96%	\$4,406 \$7,573			
4.0	SENIOR ADMINISTRATORS (4.0) @ \$49,451 EACH	\$197,660			
5.5	INSTRUCTIONAL SUPPORT (5.5) @ \$31,792 EACH \$ CLERICAL PERSONNEL (3.0) @ \$18,215	\$174,856 \$54,645			
13.5					
	2. EMPLOYEE BENEFITS (A)18.61% OF TOTAL BASE ALLOTMENT SALARIES\$79,495(B)HOSPITALIZATION @ \$1,735.2 PER POSITION\$23,425	\$102,920			
	3. OTHER COSTS: @ \$54,611	\$54,611			
	TOTAL BASE ALLOTMENT	665,767			
	B. ADDITIONAL INSTRUCTIONAL SUPPORT				
0.6 1.5 0.2	1. SALARIES -SENIOR ADMINISTRATORS (.0453) POSITIONS PER 125 FTE @ \$49,415 EACH ADMINISTRATORS OF PROGRAMS: A (0.173) POSITIONS PER 125 FTE @ \$42,511 EACH B (0.044) POSITIONS PER 125 FTE @ \$42,511 EACH	\$29,649 \$63,765 \$8,502			
7.9	INSTRUCTIONAL SUPPORT A (0.775) POSITIONS PER 110 FTE @ \$31,792 EACH \$ B (0.820) POSITIONS PER 110 FTE @ \$31,792 EACH \$	\$251,157 \$101.734			
7.9 <u>11.1</u> 32.4	TECH/PARAPROFESSIONALS(0.563) POSITIONS PER 110 FTE @ \$22,564 EACHCLERICAL PERSONNEL(0.790) POSITIONS PER 110 FTE @ \$18,215 EACH	\$178,256 \$202,187			
	2. EMPLOYEE BENEFITS: (A) 18.61% OF ADDITIONAL ALLOTMENT SALARIES \$155,440 (B) HOSPITALIZATION @ \$1735.20 PER POSITION \$56,220 \$	211,660			
	3. OTHER COST: @ \$123.00 PER TOTAL FTE\$TOTAL ADDITIONAL INSTRUCTIONAL SUPPORT\$1	190,035 .236,947			
TOTAL ADMINISTRATIVE SUPPORT AND ADMINISTRATIVE ALLOTMENT \$1,902,714					
	TOTAL POSITIONS.104.5TOTAL FORMULA BUDGET.\$4,834,789AMOUNT NOT FUNDED.\$0VOCATIONAL FORMULA LOTMENT.\$4,834,789				

Source: Annual Statistical Report--1992-93, Volume 28. N C Department of Community Colleges, Raleigh, NC, August, 1993.

During periods of full employment many students choose either full time or part-time employment. As a result, students often enrolled for less than a full academic load or even delayed continuing their education. With funding based on FTE production, fewer full time students or an increase in the number of students enrolled in less than full time (as minimum of 16 contact hours per week) adversely affected an institution's total funding. An increase in the number of full time students enrolled fall, winter and spring quarters was one key to increased funding.

A second fallacy that existed in North Carolina's FTE funding mechanism was its inconsistency in the amount of funds each FTE generates from year to year. Part of the problem with inconsistency in funding levels was that, according to personal communications with Department of Community Colleges staff, the North Carolina General Assembly had a tendency to manipulate the value of a FTE from year to year by controlling total funding for the Community College System (See TABLE 1). As a result, it has been difficult for administrators to effectively plan from one year to the next when there was little, if any, guarantee as to the value of the next year's funding level for each FTE.

Third, North Carolina's FTE funding formula did not take into account direct and indirect variable costs often associated with different program areas. Inadequate or reduced levels of funding detrimentally affected the ability of colleges to offer needed curriculum programs. A much needed program area or classes that had high cost with a low

student/teacher ratio were often curtailed or discontinued as administrators "tighten their belts" in an effort to control expenses. New high tech program areas demanded in today's high tech environment have often been associated with high direct and variable costs. Often the high costs associated with a particular program area was the result of colleges competing with the private sector's salary schedule in attempting to attract competent instructors in addition to the ever increasing costs of state of the art equipment needed to train students for today's high tech job market has helped justify the need for another funding mechanism.

Fourth, a topic often discussed at regional and state meetings has been that the current FTE funding mechanism did not provide for timely recovery of new program start-up costs and costs associated with unanticipated growth in a program area. As a result, North Carolina's funding formula has often hindered expansion of program offerings because of the lack of seed or start-up money.

Because North Carolina's FTE funding formula has been enrollment driven, a paradox has existed for the local community college. In order for a community college in North Carolina to have offered a new program--one that meet the needs of its service area--funds for all costs must have been covered in the college's current operating budget.

The previous year's FTE production determined the college's budget for the current year. The result was that

program costs were not recovered until the next fiscal year. Colleges experienced up to a twelve month delay before they received funds to cover the additional program the costs. For example, a college's operating budget for Fiscal Year 1993-94 financed all new or expanding program with funds earned in Fiscal Year 1992-93.

Fifth, FTE funding did not allow for the flexibility needed to fund administrative and support staff positions. There have been times when an institution could not afford to wait for the next year's budget to fund additional support staff or administrative positions to meet the demands placed on the institution as a result of unanticipated growth, the need to expand an existing program area, or the immediate need for an additional program.

Funding Formulas Used by Other States

Holderfield and Mellon found that FTE funding formulas are more prevalent in Southern Region Education Board (SREB) states than in non SREB states. Based on research findings, only four states outside the jurisdiction of the Southern Region Education Board used a FTE formula to fund their community colleges.³⁶ On the basis of their research, the following funding methodologies were in place in SREB states.

³⁶Holderfield, McClean, Associate Director for Instruction, South Carolina State Board of Technical and Comprehensive Education, Columbia, South Carolina. Telephone interview on 31 October, 1994.

Alabama's Funding Methodology: Alabama's funding model was based on cost per FTE. In addition, health related programs received additional funding because of their high cost. The instructional component of the budget formula included the computation for FTEs produced by faculty--eleven disciplines per credit hour were divided by a discipline productivity ratio. For budget computation, the faculty FTE was multiplied by average faculty salaries to determine the amount to be budgeted.³⁷

Arkansas' Funding Methodology: Arkansas' community colleges were funded based on faculty/student ratios. Faculty/student ratios were multiplied by a salary rate. The formula also allowed for an additional cost factor based on student/faculty ratio with technical program areas enjoying a lower ratio.³⁸

Florida's Funding Methodology: Florida used a "base plus" system to fund community colleges that is separate from the way the lower division of senior institutions was funded. The base budget was computed based on direct instructional costs per FTE with an adjustment for inflation. A "full

³⁷Holderfield, McClean, and Robert Mellon, "An Analysis of Formula Funding Differentiation Between Comprehensive Community Colleges and The Lower Division of Senior Institutions", A Report by the South Carolina State Board of Technical and Comprehensive Education. 1 September, 1994, 43.

³⁸Ibid.

cost" funding model--based on the previous year's cost per FTE with adjustments for academic support costs--was used to fund new enrollment requests.³⁹

Georgia's Funding Methodology: Georgia had a total of fifteen two-year colleges that operate separately from the University of Georgia System. These colleges were funded in the same manner as the lower division (first two years) of the state's universities. The primary goal for these fifteen colleges was for transfer of students to senior institutions. They were funded based on the average salary rate times the faculty/student ratio. In addition to its two-year community colleges, Georgia funded its two-year post secondary technical colleges in a different manner (block appropriations) than it funded community colleges. The "system is revising its funding methodology and expects to go from block appropriation to cost by discipline."⁴⁰

Kentucky's Funding Methodology: Kentucky's formula was based on faculty/student ratios in which general education (non-technical) programs were funded separately from technical programs. General education programs were funded in the same manner as programs in the lower division (first two years) of the state's university system. Technical

³⁹Ibid., 44.

⁴⁰Ibid.

programs were funded based on faculty/student ratios and salary rates. Kentucky's faculty/student ratios were based on historical data. The future of Kentucky's present funding mechanism was uncertain.⁴¹

Louisiana's Funding Methodology: Louisiana's state appropriation formula, for the past ten years, has been used only in selective areas.⁴² Louisiana's funding formula was originally designed "to be revised annually to reflect the regional average for state funding per FTE student and cost per credit hour."⁴³

Maryland's Funding Methodology: Approximately 70% of funding for Maryland's community colleges was based on FTE produced in both credit and non-credit activities. In addition, the FTE value was the same for all disciplines. Maryland's formula does, however, take into account other factors such as size and wealth of the institution in addition to challenge grants in which the institution participates.⁴⁴

<u>Mississippi's Funding Methodology</u>: Mississippi's fifteen community colleges each received an equal base allotment. Total state funds available for the base

41_{Ibid.}, 45. 42_{Ibid}. 43_{Ibid}. 44_{Ibid.}, 46. allotment equaled 5% of the previous year's total state appropriation. Community colleges also received funding based on cost per full-time student (FTE). FTE allocations were based on costs associated with five weighted discipline areas (academic, technical vocational, part-time academic and associate degree nursing programs).⁴⁵ "Technical programs being weighted more heavily than academic programs."⁴⁶

Oklahoma's Funding Methodology: Oklahoma's funding formula for community and technical colleges was based, to a large degree, on the prior year's actual costs per student credit hour in twenty-tow different disciplines. Each institution received a separate rate based on actual costs, the institution's mission and a survey of funding of two hundred peer institutions. Generally, technical and occupational programs were funded at a higher rate.⁴⁷

South Carolina's Funding Methodology: Holderfield and Mellon found that South Carolina's funding formula was considered by most experts as the second most complex formula (second only to the Texas formula) used to fund community colleges in the United States.⁴⁸ Holderfield and Mellon folund that:

45Ibid. 46Ibid. 47Ibid., 47. 48Holderfield.

In simplified terms, this formula process summarizes student credits and FTE generated at the discipline level, calculates appropriate FTE faculty positions based on predetermined ratios, and recommends funding based on faculty slots generated through application of the ratios.⁴⁹

In summary, community colleges in South Carolina were funded on discipline specific student/faculty ratios.⁵⁰

Tennessee's Funding Methodology: Holderfield and Mellon found that Tennessee's funding formula, although under intense study, differentiated between the funding of technical and academic courses. In addition, Tennessee's formula also recognized cost variations between academic and technical courses and costs associated with remedial course offerings along with differences in cost factors (faculty/student ratios and salary costs) between academic and technical program areas.⁵¹

Texas' Funding Methodology: Texas has been considered by many as the "dean of formula funding" for community and technical colleges. Community colleges in Texas were funded through a very complex cost per FTE student formula. Holderfield and Mellon in their study found that:

⁴⁹Holderfield and Melton, 38.
⁵⁰Ibid., 48.
⁵¹Ibid.

Funding rates are revised every two years through a process of evaluation contact hours to determine system median costs. Median costs by programs are used to develop a budget. There are other complexities considered, such as local money, president salary supplements, etc. Technical programs generate more funds per FTE due to cost calculations.⁵²

Virginia's Funding Methodology: As a result of financial constraints, community colleges in Virginia have received a base amount of funds without an increase for the past three years. The base funding amount was based on student/faculty ratios. The formula did, however, allow for adjustments for different sizes of colleges. Virginia's fiscal management was different from most other states in that once a base allotment was allocated for a community college, the college had total flexibility in how those dollars were distributed within the institution.⁵³

West Virginia's Funding Methodology: West Virginia funded its community colleges and two-year components of the state's eight senior institutions based on a cost per full time equivalent FTE student. West Virginia's FTE values are based on peer averages for the Southern Region Education Board.⁵⁴

⁵²Ibid., 49 ⁵³Ibid. ⁵⁴Ibid., 50

Other Budgetary Processes

Along with funding based on student/faculty ratios and formula budgeting such as FTE formulas, Carter discussed, in detail, five additional budgetary processes. The alternatives included Program Budgeting, Management By Objectives, Zero Based Budgeting, Open-ended Budgeting and Incremental Budgeting.

Program Budgeting: Program budgeting as a budgetary process focused on the organization's activities and programs to determine the institution's needs, adequacy of funding and the budget's overall effectiveness. Needs were based on the institution's objectives along with its mission statement. As a result, needs were largely self justified and funding was expected to be adequate to meet those needs.

Program budgeting in North Carolina may not be feasible at this time because of a lack of a mechanism to adequately determine indirect costs--both variable and fixed--and their allocation to different program areas. This shortcoming may be overcome in the future due to a decision by the North Carolina Department of Community Colleges to update and standardize its management information system. It has been anticipated that, for the first time, the North Carolina Community College System will be able to monitor costs, both direct and indirect, using a standardized record-keeping system containing obtainable quantifiable data.

While program budgeting did address the concepts of adequacy and justification, it failed to address an equable way of distributing the limited resources available in the total state budget. Program budgeting may be an alternative funding formula to use in a state that consistently has a surplus of funds available for education.⁵⁵ Given the present economic situation of insufficient tax revenues to fund all requested projects and programs by the North Carolina Legislature, this situation is not likely to occur in the foreseeable future.

Management By Objectives: A second type of budgetary technique was Management By Objectives (MBO). MBO was based on the stated objectives of the organization and was rooted in superior/subordinate relationships that have developed in the organization. This behavioral approach, in theory, states that when employees were allowed to take an active part in basic decision-making and in the formulation of goals and objectives they "bought in" to the process. As a result, the employees feel that they had a greater stake in the outcomes and eventual success of the organization. Because employees "buy in" it was assumed that they will work harder to insure success for the organization and its goals.

Management By Objectives, however, did not address equity, adequacy, or justification and, therefore, should not

55_{Carter}, 40.

be considered a budgetary technique. It was, at best, a management tool.⁵⁶

Zero Based Budgeting: A third alternative to formula funding was Zero Based Budgeting (ZBB). Zero Based Budgeting was based on the premise that all costs and allocations be justified for all program areas from the very beginning. Therefore, all budgets were begun with a "zero" base. The budget was formulated by adding justifiable costs and expenditures to the "zero" base.

Zero Based Budgeting has been impractical for post secondary institutions because of the time required for budget development and required resources. Most Zero Based Budgeting funding formulas, however, did address the justification of costs and the allocation of resources to some degree.⁵⁷

<u>Open-ended Budgeting</u>: Open-ended Budgeting was another alternative to formula funding. Open-ended Budgeting allowed departments and/or institutions the opportunity to submit requests without restrictions. The submitted requests were sent to a central authority who, in turn, justified each request based on the fiscal reality of the request.

One fallacy in Open-ended Budgeting was that departments or institutions had a tendency to over-state their needs or

⁵⁶Ibid. 57_{Ibid}. inflate the amount of funds needed.⁵⁸ During negotiations with the decision makers, there was a tendency to defend the inflated amounts. This may have allowed for inequities in funding in that the better "defender" received funding regardless of the concepts of adequacy and equity. In addition, Open-ended budgeting also left the door open for political considerations. Because Open-ended Budgets were the result of requests based on departmental or organizational guide lines, not program guide lines, it was often difficult to relate a specific request to the mission or goals of the organization.⁵⁹

When administrators made political decisions it was more often the case that "might makes right"--not institutional needs--was the major consideration in developing an Openended Budget. Like Management By Objectives, Open-ended Budgeting failed to deal with or address the concepts of equity, adequacy or justification. There was little justification, therefore, for including Open-ended Budgeting as a viable alternative to North Carolina's FTE formula budget process because it failed to meet all selection criteria.⁶⁰

⁵⁸Ibid., 32. ⁵⁹Ibid., 40-1. ⁶⁰Ibid.

Incremental Budgeting: Incremental budgeting was closely related to Open-ended Budgeting. One major advantage of incremental budgeting was that it was easy to understand and, therefore, decision makers tend to accept it at face value. One fallacy was that incremental budgeting assumed that existing programs would continue and an increase in the level of funding for those programs was necessary. Incremental budgeting, however, did not address program review or justification along with suffering from the same fallacies found in Open-ended Budgeting.⁶¹

FTE funding was found to be the most prevalent in the Southern Region of the United States. It was determined that only four states outside the Southern Region used FTEs as the basis for funding community colleges. The rest of the states used some form of a cost base structure or a student/faculty ratio. 62

As the North Carolina Community College System's Management Information System (MIS) becomes more attuned to cost accounting procedures, one possible solution to North Carolina's allocation formula may lie in program budgeting.

In conclusion, it may be advisable for the North Carolina Community College System and the North Carolina Legislature to consider an alternative funding mechanism for

⁶¹Ibid., 41.

⁶²Holderfield

the North Carolina Community College System. Just what that mechanism might be is not clear. One can rule out alternatives with a high degree of certainty such as Program Budgeting, Management By Objectives, Zero Based Budgeting, Open-ended Budgeting, and Incremental Budgeting for their failure to meet the criteria of adequacy, equity, and justification.

Regardless of the funding formula chosen--as long as there is a limited amount of funds available for post secondary education in North Carolina--the key elements of equity and adequacy deserve major consideration.

CHAPTER III

METHODOLOGY

<u>Subjects</u>

The population for this study was the 58 institutions of the North Carolina Community College System. The method of funding (FTE Funding) employed by the North Carolina Legislature to allocate financial resources to the member institutions of the North Carolina Community College System has been, and still is, enrollment driven. All fifty-eight member institutions, the entire population of the North Carolina Community College System, were surveyed to determine the adequacy and appropriateness of North Carolina's formula and to draw conclusions for comparing North Carolina's funding formula to funding formulas used by other states.

Instruments

An instrument was developed to survey the perceptions of senior-level administrators (deans or vice-presidents at each institution) in regard to their perception of the adequacy and equity of North Carolina's FTE funding method in relation to funding needs for their respective institution. The survey included an evaluation (using a Likert Scale) of the line-item expenditures found in North Carolina's current

funding formula. Senior administrators were ask to respond as to how well each line items meets the financial needs of their institution. Also included in the survey instrument were other factors such as new program start-up funding, funding for unanticipated growth in a given program area, and adequate funding to provide needed administrative and support staff not presently included in the current line item budget.

Field Test

The survey instrument (See Appendix A) was field tested by the presidents of the fifty-eight institutions of the North Carolina Community College System. Each president was mailed a survey and asked to evaluate statements that dealt with the adequacy and equity of FTE funding for North Carolina's community colleges. Presidents were requested to rank the listed budget line-items according to importance for their institution and to allocate a given amount of dollars among line items to determine not only relative position but the relative strength of each item. The presidents were also asked to evaluate and make constructive comments concerning the addition or deletion of items for the survey. Presidents who failed to return the survey within three weeks were either mailed a follow-up letter or contacted by telephone.

As a result of feed-back from the presidents on the original questionnaire, the following ten revisions were made to the final survey instrument.

Revision 1: The first revision was cosmetic in that the font was changed from Courier to Helvitica to make the survey more readable.

Revision 2: The title of the survey was changed to more accurately reflect the survey's intent and to clarify the type of information requested. Because a portion of the survey dealt with the establishment of selection criteria, the title was changed from "SURVEY OF ADEQUACY AND EQUITY IN RELATION TO NORTH CAROLINA'S FUNDING FORMULA" to "SURVEY TO DETERMINE FUNDING CRITERIA, ADEQUACY AND EQUITY IN NORTH CAROLINA'S FTE FUNDING FORMULA".

Revision 3: Based on an analysis of written responses by presidents on the field test survey, a purpose statement was included to clarify the intent of the survey.

Revision 4: The original PART I and PART II of the original survey were switched to more accurately reflect the sequencing found in the revised survey title (See Revision 2).

Revision 5: SECTION A of PART II of the original survey was omitted. The rationale for this change was two-fold. First, results of the field test survey reflected an inconsistency between the way items were ranked and the amount of monetary value assigned those items. It was not uncommon to have a high ranked item in SECTION A be funded at a lower level in SECTION B. Second, several presidents indicated on the field test survey that they felt that SECTION B was only another way of stating SECTION A. The monetary value assigned each item (found in SECTION B in the original survey) was used to rank the items according to the importance placed on each item.

Revision 6: The dollar amount was increased from \$1,000 to \$10,000 to allow more flexibility in completing PART I of the new survey. This also allows for greater discretion in the allocation of available funds.

Revision 7: Three Budget Items (Travel, Professional Development, and Supplies) were added to PART I as a result of feedback from the field test survey:

Revision 8: An "Instructional Positions" line-item was added to PART II, items 1 and 2. As a result, each Budget Item in PART I had at least one closely related item in PART II.

Revision 9: As a result of responses on the field test survey, Items 10, 11, and 12 were added to PART II of the revised survey.

Revision 10: PART III of the field test survey was revised by removing the last part of the instructions along with any comments on how this survey can be improved. This information was only desirable on the field test survey to refine the final survey.

The revised survey (See Appendix B) was mailed to four senior level administrators at each of the fifty-eight institutions comprising the North Carolina Community College System. Each administrator represented one of the four major administrative areas (academic affairs, finance, continuing education and student services) at each college. Each administrator was asked to return the questionnaire within two weeks. Those who fail to do so were contacted either with a follow-up letter or by telephone.

The results of the revised questionnaire were used to develop the specific criteria used for the selection and comparison of different funding formulas. Funding formulas used by other states whose community colleges have been accredited by the Southern Association of Colleges and Schools were collected, evaluated and compared to North Carolina's FTE formula.

Confidentiality of the responses by those surveyed has been insured. It was, however, necessary to code each survey with each respondent's position and institution to allow for comparisons by job titles and to allow for a follow-up contact for those who did not respond to the initial survey.

Procedures

This study examined the funding of the North Carolina Community College System as a whole and reviewed the results that different funding formulas may have on the total funding for each member institution of the North Carolina Community College System. Institutions were grouped according to the total number of FTEs produced for fiscal year 1993-94 and

compared as to the overall effect FTE funding had on each institution's total funding.

The data used in conducting this study was already in existence. Data collection was available through reports published by the North Carolina Department of Community Colleges, by conducting personal interviews, by surveying senior level administrators, from reports of study commissions and related research.

Funding formulas in use by other states whose community colleges were accredited by the Southern Association of Colleges and Schools were evaluated based on selection criteria as determined by the survey of senior level administrators in the North Carolina Community College System. The minimum criterion variables selected for the comparison of funding formulas included the following variables: instructional salaries, administrative salaries, salaries for instructional support personnel, start-up funding for new programs, funding for unanticipated growth in or expansion of a program area, capital outlay funds for equipment, and capital outlay for facilities.

Limitations

This study was limited to the fifty-eight community and technical colleges that belong to the North Carolina Community College System. This study was also limited to community colleges in the states that were accredited by the Southern Association of Colleges and Schools. The states whose funding mechanisms were included in this report were Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia. Even though community college systems were found to be diverse within the Southern Region of the United States, they shared the following homogeneous attributes:

- The lack of public mass public transit which would enable students greater access to educational opportunities.
- The absence of teacher unions that could have affected the budgetary process.
- 3. The economic growth of the region due to migration of industry to the South which has resulted in the need for training and retraining of employees.

Comparisons and summaries were made based on criteria that was determined by the survey of senior level administrators at each of the fifty-eight institutions.

<u>Analysis of Data</u>

The data collected from a review of the literature, surveys and personal interviews were used in the analysis of North Carolina's funding formula and in the analysis of funding formulas employed by other states. Based on budget information for Fiscal Year 1993-94 and on predetermined selection criteria, each formula was analyzed to determine the extent to which it was, either in whole or in part, applicable to North Carolina's Community College System.

Emphasis was placed on the analysis of data as it addressed inadequacies in funding among small, medium and large institutions in North Carolina. In addition, each of the fifty-eight institutions was compared to other institutions located in same geographic region (west, piedmont, and coastal).

CHAPTER IV

RESULTS

Introduction

An analysis of data from surveys completed by 127 senior administrators representing fifty-six of the fifty-eight institutions that comprise the North Carolina Community College System has been included in this chapter along with a summary of funding mechanisms employed by other Southern States whose community colleges have been accredited by the Southern Association of Colleges and Schools along with other states who make up the Southern Region Education Board.

The first section in this chapter includes the procedures used to qualify survey response to PART I of the final survey and procedures for the handling of all nonresponse items in PART II of the survey.

In the second section of this chapter survey response rates have been presented.

The third section of this chapter summarized the survey results from PART I and Part II of the survey of senior level administrators in a narrative format.

Included in the fourth section of this chapter are responses to each of the four research questions. Each response was based on research and survey data. A summary of the research findings has been included in the final section of this chapter.

Procedures Used to Qualifying Survey Data

PART I of the survey instrument provided an opportunity for respondents to allocate \$10,000 among established budget categories along with allowing for write-in categories. First, of the 127 completed surveys, the data from seventeen were not included in the survey results because respondents failed to allocate exactly \$10,000. The relative value of each budget category was based on the dollar value entered for each budget category. The allocation of more than or less than \$10,000 cast doubts on the relative value each item had to the other items in the survey. Survey responses that did not total \$10,000, therefore, were not included in the data analysis for PART I.

The second selection criteria for PART I was that respondents must have allocated at least some monetary value to selected budget categories. The categories selected for inclusion--Instructional Salaries (Curriculum), Instructional Salaries (Continuing Education), Administrative Salaries, Institutional Support Salaries, Supplies and Equipment-represented categories that must be funded for an institution to exist. A total of 75 surveys representing 32.3% (75 of 232) of the total population have been included in the analysis of data for PART I of the survey. Non responses for individual survey items in PART II of the survey were noted as such. Failure to respond to one or more items in PART II of the survey did not invalidate an individual survey because of the ability to account for a non-response item on an opinion survey.

Survey Response Rate

The total response rate for the survey of senior level administrators was 54.7% (127 of 232). As previously stated, the final response rate for PART I of the survey (based on the selection criteria) was 32.3% (75 of 232). The response rate for PART II of the survey was 54.7% (127 of 232). A minimum of one senior administrator from fifty-six of the fifty-eight community colleges responded to the survey.

Survey Results

In PART I of the survey, four senior administrators at each institution (representing either academic affairs, student services, financial affairs or continuing education) allotted \$10,000 among budget categories.

The average allotment for each budget category by administrative area (See APPENDIX C) has been included in TABLE 5.

The data in TABLE 5 (average for each response and the overall average for all responses) indicated variations among the four administrators. A summary of survey data (See TABLE 5) indicated that senior administrators in academic affairs allotted the most funding to curriculum salaries while senior administrators in continuing education allotted the most salary to continuing education salaries. The allotment by continuing education for support staff salaries was significantly lower than that of the other three administrators. One possible reason could be that continuing education traditionally had fewer full time staff to supervise.

TABLE 5

SURVEY RESPONSE (AVERAGE ALLOTMENT) BY ADMINISTRATIVE AREA--PART I

Budget Item	Academic Affairs	Continuing Education	Financial Affairs	Student Services	Average For All Responses
Curriculum Salaries	\$4,024	\$3,671	\$3,876	\$3,408	\$3,705
Extension Salaries (Con. Ed.)	\$1,483	\$2,193	\$1,850	\$1,333	\$1,644
Support Staff Salaries	\$957	\$746	\$943	\$985	\$917
Administrative Salaries	\$964	\$1,114	\$1,088	\$959	\$994
Program Start-Up Costs	\$497	\$363	\$350	\$658	\$483
Program Expansion Costs	\$333	\$412	\$309	\$447	\$393
Capital OutlayEquipment	\$566	\$557	\$629	\$628	\$611
Capital OutlayFacilities	\$455	\$396	\$505	\$678	\$547
Professional Development	\$318	\$189	\$261	\$276	\$270
Travel	\$189	\$204	\$163	\$254	\$214
Supplies	\$401	\$312	\$479	\$356	\$396

Administrators from student services allotted a significant amount in relation to the other administrators for new program start-up costs. It could be argued that new programs bring new students and that student service administrators may have seen this as one way to increase enrollment thus increasing FTE production.

Continuing education allotted the least amount of funding for facilities. This could be due to the fact that a majority of continuing education classes are offered in the community--not on the main campus of the college. On the other hand, administrators in financial affairs allotted a much more substantial amount for facilities. Traditionally, the financial affairs staff has been responsible for preparing the local budget for presentation to the county commissioners. The local budget provides for upkeep and maintenance of facilities. The addition of state funding for facilities would take some of the burden off the local budget process.

One final discrepancy was in the staff (personal) development line-item. Continuing education administrators provided the least amount of funding of the four administrators for staff development. One possible reason for continuing education administrators to have placed less emphasis on staff development was that part-time staff teach
and administer a majority of continuing education classes and activities. As a result, less emphasis may have been placed on this line-item because of the expense involved in staff development for a part-time instructor who may or may not ever teach for the college again.

In PART II of the survey, senior administrators were requested to respond to statements concerning adequacy and equity in funding along with the potential for a more timely period for cost recovery for new and expanding programs. Acceptable responses for each question were SA (Strongly Agree), A (Agree), D (Disagree) or SD (Strongly Disagree). All non response answers to an individual question were tallied and can be found In APPENDIX D. Each item in PART II of the survey has been treated and discussed individually.

Question 1 dealt with the <u>adequacy</u> of North Carolina's funding formula as it related to administrative positions, instructional positions and support staff positions.

For administrative positions 46.5% either agreed or strongly agreed that the present FTE formula adequately funded administrative positions while 52.8% either disagreed or strongly disagreed with the statement. Non responses represented .8% of the responses.

Regarding funding for instructional positions survey results indicated that 40.9% of the administrators either agreed or strongly agreed while the remaining 59.1% either disagreed or strongly disagreed.

Of those senior administrators who responded to the survey, 28.3% either agreed or strongly agreed that the current FTE formula provided adequate funding for support staff positions while the remaining 71.7% either disagreed or strongly disagreed with the statement.

Question 2 in the survey dealt with the <u>equity</u> of North Carolina's funding formula as it related to administrative positions, instructional positions and support staff positions.

For administrative positions 15.0% either agreed or strongly agreed that the present FTE formula funded administrative positions in an equitable manner while 84.2% either disagreed or strongly disagreed with the statement. Non responses represented .8% of the responses.

In regard to funding for instructional positions survey results indicated that 44.1% of the administrators either agreed or strongly agreed while the remaining 55.9% either disagreed or strongly disagreed.

Survey data indicated that 4.7% either agreed or strongly agreed that the current FTE formula provided equitable funding for support staff positions while the remaining 95.3% either disagreed or strongly disagreed with the statement.

Question 3 dealt with the adequacy and equity of North Carolina's funding formula as it related to curriculum instruction.

Survey results indicated that 42.5% either agreed or strongly agreed that funding for instruction was adequate while 55.1% either disagreed or strongly disagreed with the statement.

Concerning equity in funding for curriculum instruction, 28.3% of the respondents either agreed or strongly agreed while 66.9% either disagreed or strongly disagreed that curriculum instructional areas were funded on an equitable basis. Non responses represented 4.7% of the responses.

Question 4 of the survey dealt with adequacy and equity of funding for non-curriculum (continuing education) instructional areas.

Survey responses indicated that 37.0% either agreed or strongly agreed that funding for instruction was adequate while 60.6% either disagreed or strongly disagreed with the statement. Non responses accounted for a total of 2.4%.

In regard to equity in funding for non-curriculum (continuing education) instructional areas, 42.5% of the respondents either agreed or strongly agreed that funding was adequate while 55.1% either disagreed or strongly disagreed. Non responses accounted for a total of 2.4%.

Question 5 dealt with the need for expanding North Carolina's current FTE formula to include funding for program expansion and new program start-up costs.

Survey data indicated that 91.3% either agreed or strongly agreed that North Carolina's FTE funding formula

should specifically address funding for program expansion while 6.3% either disagreed or strongly disagreed with the statement. Non responses accounted for a total of 2.4%.

In regard to new program start-up costs, 96.9% either agreed or strongly agreed that North Carolina's funding formula should be expanded to include funding for program start-up costs while 2.4% either disagreed or strongly disagreed with the statement. Non responses accounted for a total .7%.

Question 6 of PART II of the dealt with adequacy and equity of North Carolina's funding formula in regard to capital outlay funding for equipment.

Survey data indicated that 31.5% either agreed or strongly agreed that capital outlay funding for equipment was adequate while 67.7% either disagreed or strongly disagreed with the statement. Non responses totaled .8%.

In regard to equity in funding for equipment, 44.1% either agreed or strongly agreed that funding for equipment was adequate while 55.1% either disagreed or strongly disagreed with the statement. Non responses accounted for a total of .8%.

Question 7 dealt with whether or not the current funding formula should be expanded to include a line item for capital outlay expenses for buildings.

Survey results indicated that 70.9% of the respondents either agreed or strongly agreed that capital outlay funding for buildings should be a part of North Carolina's funding formula while 27.6% either disagreed or strongly disagreed with the statement. Non responses accounted for a total of 1.6%.

Question 8 dealt with the timely recovery of program and instructional costs.

Survey results indicated that 24.4% either agreed or strongly agreed that North Carolina's funding formula provides for the timely recovery of instructional costs while 71.7% either disagreed or strongly disagreed with the statement. Non responses accounted for a total of 3.9%.

Question 9 of the survey dealt with whether or not funding provided by the North Carolina's FTE formula provided for fiscal flexibility in meeting institutional needs.

Of those responding to the survey, 40.9% either agreed or strongly agreed that the formula provided sufficient flexibility in meeting institutional needs while 58.3% either disagreed or strongly disagreed with the statement. Non responses accounted for a total of .8%.

Question 10 address the question as to whether or not non-curriculum (continuing education) programs should be funded at the same level per FTE as curriculum programs.

Survey data indicated that 50.4% of the respondents either agreed or strongly agreed that both curriculum and non-curriculum programs should be funded at the same level per FTE while 49.6 either disagreed or strongly disagreed.

Question 11 dealt with whether or not the FTE funding formula should incorporate some type of weighted factor to allow for additional funding for high cost program areas.

Survey responses indicated that 85.8% of the respondents either agreed or strongly agreed that the formula should include a weighted factor that would address high cost program areas while 13.4% either disagreed or strongly disagreed. Non responses on the survey for this item accounted for a total of .8%.

Question 12 dealt with whether or not variables other than FTEs (i.e., student headcount) should be included in North Carolina's FTE funding formula.

The survey data indicated that 74.0% of those who responded either agreed or strongly agreed that other factors such as headcount should be considered in the development of a FTE funding formula while 23.6% either disagreed or strongly disagreed with the statement. Non responses accounted for a total of 2.4%.

Response To Research Questions

To examine the effects of different funding formulas the following research questions were investigated.

Research Question 1

What were the methods (formulas) used to fund community colleges in states in which colleges are accredited by the Southern Association of Colleges and Schools?

Response: There was very little consistency among the funding formulas used by states included in this study. A majority of the states, however, used either a funding formula based on Full Time Equivalent (FTE) students or one based on student/faculty ratios to fund community colleges. One state, Alabama, funded nursing programs at a higher rate because the state's current funding formula does not adequately cover program costs.

Several states--Georgia, South Carolina, and North Carolina--were in the process of potentially revising their funding methods to include either programmatic or cost basis funding.

Maryland's formula was based on FTEs and included other factors such as the size and wealth of each institution.

Community colleges in Mississippi received a base allotment equal to 5% of the previous year's budget in addition to an additional allotment based on the weighted cost for each FTE produced.

Three states--Tennessee, Kentucky and Arkansas-differentiated between funding per FTE for technical versus academic programs with technical FTE being funded at a higher rate due to higher program costs.

Research Ouestion 2

Predicated on an analysis of data, what are the trends and issues that must be addressed either to revise North

Carolina's current FTE formula or to develop an alternative funding mechanism?

Results of the survey of 127 senior administrators in the North Carolina Community College System who were representative of academic affairs, continuing education, financial affairs and student services documented the following issues as they relate to formula funding.

First, North Carolina's FTE formula failed to adequately fund instructional positions and support staff. Adequacy in funding for all positions has been, and always will be, debated as long as needs exceed resources. The key issue, however, was the overall strength (See TABLE 6) of the responses to questions.

A second issue addressed was equity in funding. Survey data documented that 84.2% of the senior administrators either agreed or strongly agreed that administrative positions have not been funded in an equitable manner; 95.3% believe that funding for support staff positions in general was not equitable; and 66.9% either agreed or strongly agreed that curriculum instructional does not received equitable funding.

Third, survey data indicated that North Carolina's funding formula should be expanded to include funding for new program start-up costs (96.9% either agreeing or strongly agreeing) and program expansion expenses (91.3% either agreeing or strongly agreeing).

TABLE 6

SUMMARY OF RESPONSES TO QUESTIONS WITH HIGH DISCRIMINATION VALUES--PART I

AREA	Agree or Strongly Agree	Disagree or Strongly Disagree	No Response	
Adequacy—Support Staff Funding	28.3%	71.7%	0.0%	
Adequacy—Funding of Equipment	31.5%	67.7%	0.8%	
Equity—Funding of Administration	15.0%	84.2%	0.8%	
Equity—Funding of Support Staff	4.7%	95.3%	0.0%	
Equity—Curriculum Instruction	28.3%	66.9%	4.7%	
Timely Recovery of Funds	24.4%	71.7%	3.9%	
Add—Program Expansion Funding	91.3%	6.3%	2.4%	
Add—Start-Up Funding	96.9%	2.4%	0.7%	
Add—Capital Outlay for Buildings	70.9%	27.6%	1.6%	
AddWeighted Factor for High Cost Programs	85.8%	13.4%	0.8%	
 Add—Weighted Factor Based on Other Variables	74.0%	23.6%	2.4%	

Fourth, community colleges needed a more timely recovery system (24.4% either agreed or strongly agreed, 71.7% either disagreed or strongly disagreed and 3.9% did not respond) for the recovery of programmatic funds.

A fifth issue was the need for a weighted factor in the funding formula for high cost programs. Almost all respondents (85.8%) either agreed or strongly agreed that North Carolina's FTE formula needed a weighted factor that would adequately fund high cost programs.

A sixth, issue not addressed by North Carolina's funding formula was that other factors such as student headcount, student/teacher ratios, etc. needed to be addressed in the funding formula. Of those who responded to the survey, 74.0% either agreed or strongly agreed that other factors should be included in North Carolina's FTE Formula.

Finally, 71.7% of the respondents either disagreed or strongly disagreed that North Carolina's current formula provided for timely recovery of costs. Non responses accounted for 3.9% while 14.4% either agreed or disagreed.

TABLE 7

AREA	Agree or Strongly Agree	Disagree or Strongly Disagree	No Response
Adequacy—Funding for Administration	46.5%	52.8%	0.8%
Adequacy—Funding of Instructional Staff	40.9%	59.1%	0.0%
Adequate—Funding of Curriculum Instruction	42.5%	55.1%	0.0%
Adequate—Funding of Non-Curriculum Instruction	37.0%	60.6%	2.4%
Equity—Funding of Instructional Staff	44.1%	59.9%	0.0%
Equity—Funding of Non-Curriculum Instruction	42.5%	55.1%	2.4%
Equity—Funding of Equipment	44.1%	55.1%	0.8%
Flexibility Built Into Budget	40.9%	58.3%	0.8%
Equal Funding for Curriculum and Non-Curriculum Programs	50.4%	49.6%	0.0%

SUMMARY OF RESPONSES TO QUESTIONS WITH LOW DISCRIMINATION VALUES--PART I

Survey responses that indicated a very low level of discrimination (a variance of less than 30 percentage points between the categories of agree and strongly agree and disagree and strongly disagree) are summarized in TABLE 7.

Research Ouestion 3

Predicated on an analysis of data, does North Carolina's FTE formula create real differences among small, medium and large institutions in terms of adequacy and equity in addressing the needs of institutions?

North Carolina's current funding formula does not take into account economies of scale that benefit large institutions and penalize small and many medium size institutions.

For example, instructional allotments (units) for small institutions based on North Carolina's current formula do not provide enough instructional positions to meet program staffing requirements (one full time instructor per program area) set by Southern Association of Colleges and Schools. One result has been that small colleges have been forced to transfer administrative salaries and funds intended to cover other costs to instructional support for salaries. At the same time, due to the funding mechanism for determining the number of instructional units in North Carolina's formula, large institutions are funded for more instructional staff positions than required to meet the instructional needs of the institution.

Research Ouestion 4

Predicated on an analysis of data, does one or more elements in funding methods used by other southern states better meet the financial needs of institutions belonging to the North Carolina Community College System?

Predicted on the research, community colleges in North Carolina would benefit from the following elements that were included in funding formulas used by other Southern States. Funding elements employed by other states that have the potential of better meeting the needs of community colleges in North Carolina include: program based funding based on operational costs for each program, differentiated funding for technical versus academic program area, and additional funding for program expansion and new program start-up costs.

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS

Summary

The purpose of this study was to contrast the FTE funding formula used to fund the North Carolina Community College System with funding formulas used in other states to fund their respective community colleges. As a result, recommendations for policy change or the development of an alternative funding formula(s) have been offered.

Along with a review of published literature and personal interviews, four senior level administrators each representing either academic affairs, continuing education, financial affairs or student services at fifty-six of North Carolina's fifty-eight community colleges were surveyed. Predicated on the data, the following four research questions were addressed.

The First Research Question

The first research question dealt with funding formulas used by other southern states to fund their respective community colleges.

Very little consistency was found among funding formulas used by the other states included in this study. A majority

of the Southern States used funding formula based on Full Time Equivalent students or student/faculty ratios to fund community colleges. Data also documented that one state funded nursing programs at a higher rate because the state's current funding formula did not adequately cover program costs; three states were in the process of potentially revising their funding methods to include either programmatic or cost basis funding; Maryland's funding formula was based on FTEs but also took into account the size and wealth of each institution while community colleges in Mississippi received a base allotment equal to 5% of the previous year's budget in addition to an additional allotment based on the weighted cost for each FTE produced. In addition, three states had differentiated funding per FTE based on technical versus academic programs with technical FTE being funded at a higher rate due to higher program costs.

The Second Research Ouestion

The second research question addressed trends and issues that must be addressed in the development of an alternative funding mechanism. Results of the survey of senior administrators in North Carolina documented the following issues as they relate to formula funding.

First, predicated on survey results, North Carolina's FTE formula failed to adequately fund instructional positions and support staff.

Second, survey data documented that 84.2% of the senior administrators either agreed or strongly agreed that administrative positions have not been funded in an equitable manner; that 95.3% of respondents either agree or strongly agree that funding for support staff positions was not equitable; and 66.9% either agreed or strongly agreed that curriculum instructional areas have not received equitable funding.

Third, new program start-up costs (96.9% either agreeing or strongly agreeing) and program expansion expenses (96.9% either agreeing or strongly agreeing) should be addressed by the funding formula.

Fourth, community colleges need a more timely recovery system for instructional costs.

Fifth, 58.3% of the senior administrators either agreed or strongly agreed that local community colleges need greater flexibility in the use of state funds.

Sixth, 85.8% of the senior administrators agreed that a funding formula should include a weight factor for programs that have high cost.

Finally, a funding formula should take into account the total number of students, both full time and part-time.

The Third Research Question

The third research question dealt with difference created by the funding formula among small, medium and large

colleges in North Carolina. It was determined that the major factor affecting funding differences among the colleges was economies of scale. Economies of scale penalize small colleges while, at the same time, reward larger colleges for simply being large.

The Fourth Research Question

The fourth research question dealt with elements in funding methods used by other southern states will better meet the financial needs of institutions belonging to the North Carolina Community College System. It was determined that the following elements found in funding formulas used by other states would benefit the funding of North Carolina's Community Colleges. The identified elements included: program based funding, differentiated funding for technical versus academic program area, increased flexibility in the use of state funds and additional funding for program expansion and new program start-up costs.

<u>Conclusions</u>

Predicated on the analysis of data, the following conclusions can be drawn.

 There was little consistency among funding formulas used by North Carolina and other Southern States to fund their respective community colleges. It was determined, however, that a majority of Southern States used either a funding formula based on Full Time Equivalent (FTE) students or one based on student/faculty ratios to fund community colleges.

- Three Southern States fund program areas at different levels because of high program cost for the programs in addition to the regular funding produced through FTEs.
- 3. Three states were in the process of moving from FTE funding to programmatic or cost basis funding.
- 4. Maryland's funding formula was based on FTEs but also took into account the size and wealth of each institution.
- 5. Community colleges in Mississippi received a base allotment equal to 5% of the previous year's budget in addition to an additional allotment based on the weighted cost for each FTE produced.
- Three states had differentiated funding in that technical programs received additional funding in the formula because of program costs.
- 7. North Carolina's FTE formula failed to adequately fund instructional positions and support staff.
- Administrative positions have not been funded in an equitable manner by North Carolina's funding formula.
- Curriculum instructional areas did not receive equitable funding by North Carolina's funding formula.

- 10. New program start-up costs and program expansion expenses should be addressed by North Carolina's current funding formula.
- North Carolina's Community Colleges need a more timely recovery system for instructional costs, especially for program expansion and start-up costs.
- 12. The state's community colleges need greater flexibility in the use of state funds.
- 13. The funding formula should include a weight factor for programs that have high cost.
- 14. The funding formula should take into account the total number of students, both part-time and full time.
- 15. The major factor affecting funding differences among the colleges was economies of scale. Economies of scale penalize small colleges while, at the same time, reward larger colleges for simply being large.
- 16. The following elements found in funding formulas used by other states would benefit the funding of North Carolina's Community Colleges.
 - 1. program based funding
 - differentiated funding for technical versus academic program area
 - 3. increased flexibility in the use of funds
 - additional funding for program expansion and new program start-up costs.

Recommendations

Predicated on the analysis of data, the following are recommendations for dealing with North Carolina's current FTE funding formula.

- North Carolina's current FTE funding formula needs to be revised to include line item funding for:
 - ∞ New program start-up costs,
 - A timely cost recovery system based on unanticipated program growth,
 - Programmatic funding for high cost program areas,
 - Additional funding based on student
 headcount (the total number of full time and part-time students).
 - ∞ Funding for equipment and facilities.
- North Carolina's funding formula should be reviewed in light of other funding mechanisms such as program based and cost based funding.
- North Carolina's funding formula should be revised so that economies of scale do not penalize small and medium size institutions.
- North Carolina's funding formula should be altered to allow for adequate and equitable funding for support staff and administrative positions.

Recommendations for Further Study

It is recommended that further study be conducted on the development of alternative funding formulas for the North Carolina Community College System. As part of the study, it is recommended that the implementation of each alternative funding mechanism be closely monitored to determine the impact that each mechanism has on small, medium and large colleges. In addition, each funding mechanism must be monitored according to the total amount of state funds required once the mechanism is implemented.

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APPENDIX A

FIELD TEST SURVEY

SURVEY OF ADEQUACY AND EQUITY IN RELATION TO NORTH CAROLINA'S FUNDING FORMULA

DEFINITIONS:

- 1. Adequacy—The concept of adequacy is based on the assumption that state funds are distributed based on the educational needs of the citizens to be served by each institution, the training needs of each institution's service area, and that each institution's level of funding is sufficient to ensure a quality instructional program.
- 2. Equity—The concept of equity implies that the distribution of state funds is based on each institution's needs in relation to stated criteria such as faculty workloads, program area costs, etc.

PART I

DIRECTIONS:

Keeping in mind the definitions of adequacy and equity, please respond to each of the following statements as they relate to the funding mechanism used to allocate financial resources to institutions that make up the North Carolina Community College System.

Please circle the response you believe is most accurate in relation to each statement using the following code:

SA	(Strongly Agree)	A (Agree)	D	(Disagree)	SD	(S	trongly I	Disagree)
1.	NorthCarolina's funding for	ormila provides a dequate funding Administrative Positions	for:		SA	Α	D	SD
		SupportStaffPositions.			SA	Α	D	SD
2.	NorthCarolina's funding for	ormula provides equitable funding Administrative Positions	for:		SA	Á	D	SD
		SupportStaffPositions.			SA	Α	D	SD
. 3.	NorthCarolina's funding for Curriculum Instructional as	ormila allotnentin relation to reasis: Advante			SA	А	П	SD
		Equitable			SA	A	D	SD
4.	NorthCarolina's funding to Non-Curriculum Instructio	rmila allotmentinrelationto ralareas (ContinuingEduration): Adequate	is:		SA	Α	D	SD
		Equitable			SA	Α	D	SD
5.	NorthCarolina's funding fo	rmula shouldbeexpanded to inclu funding for program expansion	ide		SA	Α	D	SD
		new programstart-upcosts			SA	Α	D	SD
6.	NorthCarolina'sfundingfo	ormula in regard to capital outlay f	unds					
	Mappines	Adequate			SA	Α	D	SD
		Equitable			SA	Α	D	SD
7.	NorthCarolina's fundingn for capital outlay funds	echanismshouldbeexpandedtoir	ndude		SA	A	D	SD
8.	NorthCarolina's funding for programment instructional	rmila provides for timely recover costs.	yof		SA	A	D	SD
9.	NorthCarolina's funding for to meet institutional needs	ormula provides sufficient flexibilit	у		SA	Α	D	SD

PART II

DIRECTIONS—Section A

The following list contains possible criteria that could be used to select and/or evaluate a funding formula (mechanism) for a community/technical college. Please consider the effect of each of the following budget items on your institution. Using SECTION A (left column) rank them in order of importance from highest to lowest with the highest being assigned #1.

NOTE: You may add any item to the list that you feel should be included in North Carolina's budget formula

DIRECTIONS—Section B

You have at your disposal \$1,000 with which to purchase the items that you just ranked for your institution. In SECTION B (right column) please assign a dollar value to each item (the highest ranked item should command the highest price, etc.) as if you were required to purchase each item for your institution.

NOTE: You must spend the entire \$1,000 and your total purchases may not exceed \$1,000.

SECTION A SECTION B **Budget Item Rank of Item** Value of Item Instructional Salaries (Curriculum) \$____ Instructional Salaries (Continuing Education) Administrative Salaries Instructional Support Salaries New Program Start-Up Costs Program Area Expansion Costs Capital Outlay Funds for Equipment **Capital Outlay Funds for Facilities** Other_ Other_ Other_ Other_ \$_

PART III

Please provide any additional information that you believe would be useful for understanding the advantages and disadvantages North Carolina's current funding formula along with any comments on how this survey can be improved. (Use Back if necessary.)

PART IV

The results of this survey will be shared with each institution that chooses to responds to this survey. Individual responses will be held in strict confidentiality. As a result, the following information is needed.

Name of College: _

Title (President, Dean, etc.): ___

Area (Academic Affairs, Fiscal Affairs, etc.):

APPENDIX B

FINAL SURVEY DOCUMENT

SURVEY TO DETERMINE FUNDING CRITERIA, ADEQUACY AND EQUITY IN NORTH CAROLINA'S FTE FUNDING FORMULA

The purpose of this survey is to provide specific criteria to be used in evaluating the overall adequacy and equity of North Carolina's FTE Funding Formula as it relates to funding formulas used by other southern states.

NOTE: Please respond to the following demographic data.

Which of the following classifications most accurately describes your major work activity? (Please check only one area.)

_____Financial Affairs _____Academic Affairs; _____Student Affairs; _____Continuing Education

The service area of my institution can best be described as: _____Urban ______Rural

Please check the Total Average Annual FTEs produced at your institution in 1989-90 (See Table on Page 2):

1,001 to 1,200	1,201 to 1,400	1,401 to 1,600	1,601 to 1,800
2,001 to 2,200	2,201 to 2,400	2,401 to 2,600	2,601 to 2,800
3,001 to 3,200	3,201 to 3,400	3,401 to 3,600	Greater than 3,600
	1,001 to 1,200 2,001 to 2,200 3,001 to 3,200	1,001 to 1,2001,201 to 1,400 2,001 to 2,2002,201 to 2,400 3,001 to 3,2003,201 to 3,400	1,001 to 1,2001,201 to 1,4001,401 to 1,600 2,001 to 2,2002,201 to 2,4002,401 to 2,600 3,001 to 3,2003,201 to 3,4003,401 to 3,600

DIRECTIONS:

PART I

You have \$10,000 at your disposal to purchase budget items that are necessary for the operation of your institution. Please assign a dollar value to each budget item contained in the following list (the highest ranked item should command the highest price, etc.) as if you were required to purchase each item. You may omit budget items that you do not consider necessary and you may add budget items that you feel are necessary for the operation of your college.

NOTE: You must spend the entire \$10,000 and your total purchases may not exceed \$10,000.

Budget Item	Purchase Price of Each Item
Instructional Salaries (Curriculum)	\$
Instructional Salaries (Continuing Education)	\$
Administrative Salaries	\$
Instructional Support Salaries	\$
New Program Start-Up Costs	\$
Program Area Expansion Costs	\$
Capital Outlay Funds for Equipment	\$
Capital Outlay Funds for Facilities	\$
Professional Development	\$
Travel	\$
Supplies	\$
Other	\$
Other	\$

TOTAL AVERAGE ANNUAL FTE (1989-90)

Alamance Community College		3178
Anson Community College		649
Asheville-Buncombe Technical Community College	•	2794
Beauford County Community College		1405
Bladen Community College		648
Blue Ridge Community College		1525
Brunswick Community College		1021
Caldwell Community College and Technical Institute		1991
Cape Fear Community College		2546
Carteret Community College		1279
Catawba Valley Community College		2733
Central Carolina Community College		3150
Central Piedmont Community College		9313
Cleveland Community College		1408
Coastal Carolina Community College		2228
College of the Albemarte		1474
Craven Community College		1015
Davidson County Community College		2162
Durbarn Technical Community College		2172
Edgecombe Community College		1764
Equationible Community College		0101
Forsith Technical Community College		4075
Coston College		4070
Gaston College		2000
Halifax Community College		1450
Hainax Community College		1100
Haywood Community College		1000
Isothermal Community College		2029
James Sprunt Community College		0060
Longir Community College		2300
Lenoir Community College		2000
Martin Community College		1140
MaDawall Tashnicol Community College		007
Michoell Community College		1405
Mantaemany Community College		1400
Noch Community College		1217
Remline Community College		400
Biodmont Community College		1120
Pitt Community College		2765
Pandolph Community College		1657
Dishmond Community College		1007
Poppeka Chewan Community College		1200
Roboson Community College		1000
Rockingham Community College		1674
Rowon Cohamun Community College		10/4
Roman-Capalitus Collinuinity College		1000
Sandhille Community College		1200
Sanuninis Community College		1471
Southwastern Community College		1226
Stanley Community College		1/90
Surry Community College		2252
Tri-County Community College		2002
Vance-Granville Community College		1017
Wake Technical Community College		5542
Wayne Community College		2200
Western Diedmont Community College		2000
Wilkon Community College		2004
Wilson County Technical College		1260
wison county recharda college		1300

(Source: "1989-1990 Annual Statistical Report." North Carolina Department of Community Colleges. Volume 25, Page 83.)

PART II

DEFINITIONS:

Adequacy—The concept of adequacy is based on the assumption that state funds are distributed based on the educational needs of the citizens to be served by each institution, the training needs of each institution's service area, and that each institution's level of funding is sufficient to ensure a quality instructional program.

Equity—The concept of equity implies that the distribution of state funds is based on each institution's needs in relation to stated criteria such as faculty workloads, program area costs, etc.

DIRECTIONS:

Keeping in mind the definitions of adequacy and equity, please respond to each of the following statements as they relate to the funding mechanism used to allocate financial resources to institutions that make up the North Carolina Community College System.

Please circle the response you believe is most accurate in relation to each statement using the following code:

SA	(Strongly Agree)	Α	(Agree)	D	(Disagree)		SD (Si	rongly Dis	sagree)
1.	North Carolina's fund	ng formu Adminis Instructi Support	la provides adeo trative Positions onal Positions Staff Positions	quate fun s	ding for:	SA SA SA	A A A	D D D	SD SD SD
2.	North Carolina's fund	ng formu Adminis Instructi Support	la provides equi trative Positions onal Positions Staff Positions	table fund S	ding for:	SA SA SA	A A A	D D D	SD SD SD
3.	North Carolina's fundi Curriculum Instructior	ng formul nal areas Adequat Equitabl	a allotment in re is: e	lation to		SA SA	AA	D D	SD SD
4.	North Carolina's fundi Non-Curriculum Instru	ng formul Ictional a Adequat Equitabl	a allotment in re reas (Continuino te e	lation to g Educati	on) is:	SA SA	AA	D D	SD SD
5.	North Carolina's fundi	ng formul Funding Funding	a should be exp for program exp for new prograr	anded to bansion n start-up	include:	SA SA	A A	D D	SD SD
6.	North Carolina's fundi for equipment is:	ng formul Adequat Equitabl	a in regard to ca e e	apital outl	ay funds	SA SA	A A	D D	SD SD
7.	North Carolina's fundi capital outlay funds fo	ng mecha or building	anism should be js.	expande	d to include	SA	Α	D	SD
8.	North Carolina's fundi program area instruct	ng formul ional cos	a provides for ti ts.	mely reco	overy of	SA	Α	D	SD
9.	North Carolina's fundi to meet institutional n	ng formu eeds.	la provides suffi	cient flex	ibility	SA	Α	D	SD
10.	Curriculum and Non-C should be funded at th	urriculum le same le	n (Continuing Ed evels per FTE.	ucation) (orograms	SA	Α	D	SD
11.	The funding formula s provide additional fund	hould hav ding for h	ve a weighted fa igh cost program	ctor—i.e. n areas.	to	SA	Α	D	SD
12.	Funding should be ba costs, etc. instead of	sed on va being bas	ariables such as sed on FTEs.	headcou	nt, basic	SA	Α	D	SD

PART III

Please provide any additional information that you believe would be useful in understanding the advantages and disadvantages of North Carolina's FTE funding formula. (Attach additional pages if necessary.)

PART IV

If you desire the results of this survey, please provide the following information. All individual responses will be held in strict confidentiality.

Name:		<u> </u>
Title:	en e	
College:	· · · · · · · · · · · · · · · · · · ·	
Address:		
City, State, Zip:		

APPENDIX C

RAW SURVEY RESULTS--PART I

RAW SURVEY RESULTS--PART I

	Average							
	Allotme	ent	\$3,705	\$1,644	\$994	\$917	\$483	\$393
Ref.	Area of	Annual	Salary	Salary	Admin.	Instruct.	Start-up	Expand
No.	Respon.	FTEs	Curr.	Con. Ed.	Support	Support	Program	Program
257	Α	1000	\$5,200	\$850	\$1,000	\$350	\$650	
156	Α	1001	\$3,000	\$1,000	\$2,000	\$1,000	\$250	\$250
187	Α	1001	\$5,000	\$2,000	\$200	\$700		
46	A	1201	\$5,100	\$1,200	\$1,000	\$1,400	\$400	\$100
172	Α	1201	\$5,000	\$2,000	\$1,000	\$1,000	\$100	\$50
199	A A 1	1201	\$3,000	\$2,000	\$1,200	\$800	\$300	\$200
291	Α	1201	\$3,000	\$1,500	\$500	\$2,000	\$500	\$500
66	Α	1401	\$2,500	\$1,400	\$1,000	\$1,600	\$400	\$800
96	A.	1601	\$5,000	\$2,000	\$500	\$200	\$200	\$200
213	Α	1801	\$3,000	\$500	\$1,000	\$500	\$1,000	\$1,000
252	A	2201	\$4,000	\$1,000	\$1,000	\$1,000	\$400	\$400
41	A	2401	\$4,000	\$2,000	\$1,200	\$1,200	\$200	\$100
53	Α	2601	\$4,000	\$1,300	\$1,000	\$400	\$700	\$500
192	Α	2601	\$5,000	\$1,000	\$500	\$750	\$250	\$250
1	A	3001	\$5,100	\$2,265	\$990	\$1,410	\$10	\$100
71	A	3201	\$2,000	\$2,000	\$1,000	\$1,000	\$500	\$500
25	S	1000	\$3,000	\$1,000	\$1,000	\$750	\$750	\$500
151	S	1000	\$2,400	\$2,000	\$2,000	\$1,400	\$45	\$20
164	S	1000	\$3,000	\$2,000	\$1,500	\$600	\$300	\$350
171	S	1000	\$3,500	\$1,500	\$1,000	\$2,000	\$500	
262	S	1000	\$3,500	\$1,500	\$1,000	\$2,000	\$500	
125	S	1001	\$5,000	\$2,000	\$500	\$500	\$500	\$500
161	S	1001	\$3,000	\$1,000	\$1,250	\$1,500	\$250	\$250
50	S	1201	\$3,000	\$1,000	\$500	\$2,000	\$500	\$500
176	S	1201	\$3,000	\$2,000	\$1,200	\$500	\$1,000	\$500
201	S	1201	\$3,500	\$1,000	\$1,000	\$750	\$500	\$500
231	S	1201	\$4,500	\$2,000	\$500	\$1,000	\$500	\$100
232	S	1201	\$3,000	\$2,000	\$1,200	\$500	\$1,000	\$500
233	S	1201	\$3,500	\$1,000	\$1,000	\$750	\$500	\$500
234	S	1201	\$4,500	\$2,000	\$500	\$1,000	\$500	\$100
30	S	1401	\$3,000	\$2,000	\$1,000	\$2,000	\$500	
70	S	1401	\$2,000	\$500	\$1,000	\$500	\$500	\$500
80	S	1401	\$2,000	\$250	\$2,000	\$1,250	\$1,250	\$250
100	S	1601	\$1,500	\$250	\$500	\$1,000	\$2,000	\$1,000
146	S	2401	\$3,500	\$1,500	\$500	\$500	\$500	\$200
236	S	2601	\$4,000	\$200	\$400	\$400	\$1,500	\$1,000
238	S	2601	\$4,000	\$200	\$400	\$400	\$1,500	\$1,000
55	S	2801	\$3,000	\$2,000	\$1,500	\$1,000	\$500	\$500
115	S	2801	\$5,000	\$1,000	\$750	\$2,000		\$250
132	S	2801	\$3,000	\$1,250	\$1,250	\$1,000	\$500	\$500
5	S	3001	\$3,500	\$2,000	\$1,200	\$800	\$500	\$500
60	S	3001	\$2,000	\$2,000	\$1,000	\$1,000	\$500	\$500
105	S	3600	\$8,700	\$500	\$40	\$500	\$20	\$20
139	F	1000	\$5.000	\$1.600	\$1.000	\$1.550	\$50	

RAW SURVEY RESULTS--PART I (CONTINUED)

Ref. No.	Area of Respon.	Annual FTEs	Salary Curr.	Salary Con. Ed.	Admin. Support	Instruct. Support	Start-up Program	Expand Program
209	F	1000	\$3,600	\$1,400	\$1,000	\$500	\$500	\$200
179	F	1201	\$5,000	\$2,000	\$1,500	\$400	\$100	\$125
229	F	1201	\$1,750	\$1,000	\$1,500	\$1,500	\$750	
243	F	1201	\$3,000	\$2,000	\$1,500	\$1,500	\$200	\$100
245	F	1201	\$5,000	\$1,300	\$1,200	\$1,000	\$200	\$200
28	F	1401	\$1,500	\$1,000	\$2,000	\$500	\$1,000	\$1,000
68	F	1401	\$2,000	\$500	\$700	\$800	\$1,000	\$1,000
128	F	1401	\$5,500	\$1,500	\$500	\$100	\$600	\$350
216	F	1801	\$3,700	\$3,000	\$600	\$500	\$150	\$35
264	F	1801	\$4,000	\$1,500	\$500	\$1,250		
149	F	2201	\$2,709	\$4,971	\$500	\$633	\$50	\$50
13	F	2601	\$5,000	\$1,000	\$700	\$700	\$500	\$500
226	F	2601	\$4,000	\$2,232	\$890	\$1,543	\$50	\$100
234	F	2601	\$4,000	\$2,000	\$500	\$500	\$250	\$250
3	F	3001	\$5,000	\$2,300	\$1,100	\$500	\$100	\$400
103	F	3600	\$4,500	\$2,000	\$1,500	\$1,000		
9	С	1000	\$2,000	\$2,000	\$1,500	\$500	\$500	\$1,000
165	C	1000	\$4,000	\$2,000	\$1,000	\$1,000	\$250	\$250
170	С	1000	\$3,900	\$2,100	\$500	\$500	\$850	\$600
210	С	1000	\$3,500	\$3,500	\$1,000	\$750	\$150	
260	С	1000	\$6,000	\$1,500	\$1,000	\$500	\$100	\$100
190	С	1001	\$4,000	\$2,100	\$700	\$1,100	\$300	\$300
180	С	1201	\$3,500	\$2,500	\$2,000	\$1,000	\$200	\$200
230	С	1201	\$1,500	\$1,000	\$1,000	\$500	\$1,000	\$1,000
129	C	1401	\$5,000	\$3,000	\$1,000	\$300		\$200
135	C	2001	\$3,000	\$2,500	\$1,000	\$1,500	\$500	\$300
253	С	2201	\$4,500	\$2,000	\$1,400	\$800	\$100	\$100
44	С	2401	\$3,000	\$2,000	\$1,500	\$1,000	\$300	\$200
235	C	2601	\$2,500	\$2,500	\$500	\$500		\$1,000
4	С	3001	\$5,000	\$2,000	\$1,500	\$500	\$100	\$100
257	Α	1000	\$850		\$160	\$90	\$850	
156	Α	1001	\$500	\$500	\$500	\$500	\$500	
187	Α	1001	\$800		\$300	\$100	\$900	
46	Α	1201	\$100	\$50	\$200	\$300	\$150	
172	A	1201	\$300	\$250	\$200	\$25	\$75	
199	Α	1201	\$500	\$1,000	\$300	\$200	\$500	
291	Α	1201	\$500	\$500	\$500	\$100	\$400	
66	Α	1401	\$800		\$200	\$140	\$760	\$400
96	Α	1601	\$1,000	\$500	\$100	\$150	\$150	
213	Α	1801	\$1,000	\$500	\$1,000	\$200	\$300	
252	Α	2201	\$500	\$800	\$200	\$200	\$500	
41	Α	2401	\$400	\$400	\$200	\$100	\$200	
53	Α	2601	\$800	\$500	\$200	\$300	\$300	
192	Α	2601	\$500	\$500	\$500	\$250	\$500	
1	Α	3001	\$30	\$15	\$30	\$15	\$35	
71	Α	3201	\$1,000	\$500	\$500	\$500	\$500	
25	S	1000	\$1,000	\$1,000	\$100	\$150	\$200	\$550
151	S	1000	\$25	\$1,000	\$700	\$60	\$150	\$200
164	S	1000	\$400	\$700	\$200	\$150	\$400	\$400

RAW SURVEY RESULTS--PART I (CONTINUED)

Ref. No.	Area of Respon.	Annual FTEs	Salary Curr.	Salary Con. Ed.	Admin. Support	Instruct. Support	Start-up Program	Expand Program
171	S	1000	\$500	\$500		\$250	\$250	
262	S	1000	\$500	\$500		\$250	\$250	
125	S	1001	\$200	\$200	\$200	\$200	\$200	
161	S	1001	\$400	\$1,000	\$500	\$350	\$500	
50	S	1201	\$500	\$500	\$500	\$500	\$500	
176	S	1201	\$500	\$200	\$300	\$300	\$500	
201	S	1201	\$500	\$500	\$250	\$500	\$250	\$750
231	S	1201	\$500	\$500	\$200	\$100	\$100	
232	S	1201	\$500	\$200	\$300	\$300	\$500	
233	S	1201	\$500	\$500	\$250	\$500	\$250	\$750
234	S	1201	\$500	\$500	\$200	\$100	\$100	
30	S	1401	\$250	\$500	\$250	\$100	\$400	
70	S	1401	\$2,000	\$500	\$500	\$500	\$1,500	
80	S	1401	\$500	\$1,750	\$250	\$250	\$250	
100	S	1601	\$1,000	\$2,000	\$200	\$50	\$500	
146	S	2401	\$1,500	\$1,500	\$100	\$100	\$100	
236	S	2601	\$500	\$500	\$500	\$500	\$500	
238	S	2601	\$500	\$500	\$500	\$500	\$500	
55	S	2801	\$500	\$700	\$100	\$100	\$100	
115	S	2801	\$500		\$250	\$250		
132	S	2801	\$500	\$500	\$500	\$500	\$500	
5	S	3001	\$500	\$200	\$100	\$100	\$400	\$200
60	S	3001	\$2,000	\$500	\$100	\$100	\$300	
105	S	3600	\$50		\$5	\$100	\$65	
139	F	1000	\$200		\$200	\$100	\$200	\$100
209	F	1000	\$1,480	\$745	\$200	\$100	\$275	
179	F	1201	\$600		\$75	\$75	\$125	
229	F	1201	\$500	\$500	\$750	\$250	\$1,500	
243	F	1201	\$500		\$200	\$500	\$500	
245	F	1201	\$300		\$200	\$300	\$300	
28	F	1401	\$1,000	\$1,000	\$500	\$250	\$250	
68	F	1401	\$2,000		\$500	\$200	\$1,300	
128	F	1401	\$500	\$500	\$200	\$50	\$200	
216	F	1801	\$250	\$500	\$50	\$15	\$500	\$700
264	F	1801	\$1,250		\$500	\$300	\$700	
149	F	2201	\$300	\$300	\$300	\$20	\$167	
13	F	2601	\$900	\$300	\$100	\$100	\$200	
226	F	2601	\$300	\$200	\$100	\$50	\$535	
234	F	2601	\$500	\$500	\$250	\$250	\$1,000	
3	F	3001	\$200			\$100	\$300	
103	F	3600	\$250		· · · ·	\$250	\$500	
9	С	1000	\$1,200	\$1,000	\$100	\$100	\$100	*
165	С	1000	\$250	\$250	\$250	\$250	\$250	\$250
170	C	1000	\$750	\$400	\$100	\$100	\$200	
210	C	1000	\$400		\$200	\$200	\$300	
260	C	1000	\$300	\$100	\$100	\$200	\$100	
190	C	1001	\$300	\$300	\$100	\$200	\$600	
180	С	1201	\$100	\$100	\$400			

Ref. No.	Area of Respon.	Annual FTEs	Salary Curr.	Salary Con. Ed.	Admin. Support	Instruct. Support	Start-up Program	Expand Program
230	С	1201	\$2,000	\$500	\$500	\$500	\$500	
129	С	1401	\$100	·	\$100	\$100	\$200	
135	C	2001	\$300	\$200	\$300	\$100	\$300	
253	Ċ	2201	\$300	\$300	\$100	\$200	\$200	
44	С	2401	\$500	\$500	\$100	\$300	\$600	
235	С	2601	\$1.000	\$1.000	\$200	\$300	\$500	
4	Ċ	3001	\$300	\$100	\$100	\$100	\$200	

RAW SURVEY RESULTS--PART I (CONTINUED)

APPENDIX D

RAW SURVEY RESULTS--PART II
RAW SURVEY RESULTS--PART II

SA	(Strongly Agree) A (Agree)	D.	(Disagree)		SD (Str	ongly Dis	sagree)
1.	North Carolina's funding formula provides adequ	ate fundi	ing for:				
	Administrative Positions	N=	SA	А	D	SD	N/R
	ACADEMIC AFFAIRS	27	0	12	7	7	1
	CONTINUING EDUCATION	29	0	13	_13	3	0
	FINANCIAL AFFAIRS	29	1	_12	9	7	0
	STUDENT SERVICES	42	3		16	5	0
	TOTAL RESPONSES	127	4	55	45	22	1
	Instructional Positions	N=	SA	Α	D	SD	N/R
	ACADEMIC AFFAIRS	_27	0	7	6	14	0
	CONTINUING EDUCATION	29	0	14	11	4	0
	FINANCIAL AFFAIRS	<u>_29</u>	1	12	<u>12</u>	4	0
	STUDENT SERVICES	<u>42</u>	2	16	15	9	0
	TOTAL RESPONSES	<u> 127</u>	3	<u>_49</u>	44	31	0
	Support Staff Positions.	N≒	SA	Α	D	SD	N/R
	ACADEMIC AFFAIRS	27	0	<u>11</u>	8	8	0
	CONTINUING EDUCATION	29	0	8	<u> 16</u>	5	0
	FINANCIAL AFFAIRS	29	0	8	<u>13</u>	8	0
	STUDENT SERVICES	<u>42</u>	2	7	<u> 17</u>	<u> 16</u>	0
	TOTAL RESPONSES	127	2	34	<u> 54</u>	37	0
2.No	orth Carolina's funding formula provides equitable	funding	for:				
	Administrative Positions	N=	SA	Α	D	SD	N/R
	ACADEMIC AFFAIRS	27	1	11	11	4	0
	CONTINUING EDUCATION	29	0	10	<u> 15</u>	4	0
	FINANCIAL AFFAIRS	29	2	<u>13</u>	7	6	1
	STUDENT SERVICES	<u>42</u>	<u> </u>	<u>18</u>	<u> 15</u>	8	0
	TOTAL RESPONSES	127	4	52		_22	1

Instructional Positions	N=	SA	Α	D	SD	N/R
ACADEMIC AFFAIRS	27	1	5	13	8	0
CONTINUING EDUCATION	_29	0	_12	15	2	0
FINANCIAL AFFAIRS	29	3	14	8	4	0
STUDENT SERVICES	42	0	21	9	<u> 12</u>	0
TOTAL RESPONSES	127	4	_52	45	26	0
Support Staff Positions.	N=	SA	Α	D	SD	N/R
Support Staff Positions. ACADEMIC AFFAIRS	N= 27	SA 2	A 7	D <u>12</u>	SD 6	N/R 0
Support Staff Positions. ACADEMIC AFFAIRS CONTINUING EDUCATION	N = 27 29	SA 2 0	A 7 4	D 12 22	SD 6 3	N/R 0 0
Support Staff Positions. ACADEMIC AFFAIRS CONTINUING EDUCATION FINANCIAL AFFAIRS	N = _27 _29 _29	SA 2 0 1	A 7 4 13	D 12 22 7	SD 6 3 8	N/R 0 0
Support Staff Positions. ACADEMIC AFFAIRS CONTINUING EDUCATION FINANCIAL AFFAIRS STUDENT SERVICES	N= _27 _29 _29 _42	SA 2 0 1 0	A 7 4 13 6	D 12 22 7 22	SD 6 3 8 14	N/R 0 0 0

3. North Carolina's funding formula allotment in relation to Curriculum Instructional areas is:

Adequate	N=	SA	Α	D	SD	N/R
ACADEMIC AFFAIRS	27	0	8	12	6	1
CONTINUING EDUCATION	29	0	14	9	4	2
FINANCIAL AFFAIRS	29	0	<u> 16</u>	<u> 12</u>	1	0
STUDENT SERVICES	<u> 42 </u>	0	16	_21	5	<u> </u>
TOTAL RESPONSES	127	0	<u>_54</u>	54	<u> 16</u>	3
Equitable	N=	SA	Α	D	SD	N/R
ACADEMIC AFFAIRS		0	5	<u>13</u>	8	1
CONTINUING EDUCATION	29	0	<u> 12</u>	_10	4	3
FINANCIAL AFFAIRS	_29	0	8	<u>18</u>	3	0
STUDENT SERVICES	<u>42</u>	0	11	_25	4	2
TOTAL RESPONSES	127	0	36	<u> 66</u>		6

4. North Carolina's funding formula allotment in relation to Non-Curriculum Instructional areas (Continuing Education) is:

Adequate	N=	SA	Α	D	SD	N/R
ACADEMIC AFFAIRS	_27	0	6	16	4	1
CONTINUING EDUCATION	29	0	2	12	15	0
FINANCIAL AFFAIRS	29	0	14	12	3	0

	STUDENT SERVIC	CES <u>42</u>	2	23	10	5	2
	TOTAL RESPON	SES <u>127</u>	2	<u> 45</u>	50	_27	3
	Equitable	N=	SA	А	D	SD	N/R
	ACADEMIC AFFA	NRS <u>27</u>	1	8	13	5	0
	CONTINUING EDUCAT	'ION <u>29</u>	0	3	8	_17	1
	FINANCIAL AFFA	IRS <u>29</u>	0	<u> 15</u>	<u>12</u>	2	0
	STUDENT SERVIC	CES <u>42</u>	3	_24	7	6	2
	TOTAL RESPON	SES <u>127</u>	4	50	40	30	3
5.	North Carolina's funding formula should be	expanded to in	clude:				
	Funding for program expansio	n N⊨	SA	A	D	SD	N/R
	ACADEMIC AFFAIR	S <u>27</u>	<u> 16</u>	8	0	0	03
	CONTINUING EDUCATIO	N <u>29</u>	<u>13</u>	<u>13</u>	2	1	00
	FINANCIAL AFFAIR	S <u>29</u>	11	<u> 16</u>	2	0	00
	STUDENT SERVICE	S <u>42</u>	<u> 16</u>	_23	3	0	30
	TOTAL RESPONSE	S <u>127</u>	56	<u> 60</u>	7	1	3
	Funding for new program start costs	-up N⊨	SA	Α	D	SD	N/R
	Funding for new program start costs ACADEMIC AFFAIR	-up N⊨ IS <u>27</u>	SA <u>18</u>	A 8	D 0	SD	N/R 1
	Funding for new program start costs ACADEMIC AFFAIR CONTINUING EDUCATIO	-up N⊨ IS <u>27</u> N <u>29</u>	SA <u>18</u> <u>14</u>	A 8 13	D 0 1	SD 0 1	N/R 1 0
	Funding for new program start costs ACADEMIC AFFAIR CONTINUING EDUCATIO FINANCIAL AFFAIR	-up N= IS <u>27</u> N <u>29</u> S <u>29</u>	SA <u>18</u> <u>14</u> <u>12</u>	A 8 13 17	D 0 1 0	SD 0 1 0	N/R 1 0 0
	Funding for new program start costs ACADEMIC AFFAIR CONTINUING EDUCATIO FINANCIAL AFFAIR STUDENT SERVICE	-up N= IS <u>27</u> N <u>29</u> S <u>29</u> IS <u>42</u>	SA 18 14 12 19	A 8 13 17 22	D 0 1 0 1	SD 0 1 0 0	N/R 1 0 0
	Funding for new program start costs ACADEMIC AFFAIR CONTINUING EDUCATIO FINANCIAL AFFAIR STUDENT SERVICE TOTAL RESPONSE	-up N= IS _27 N _29 IS _29 IS _42 IS _127	SA 18 14 12 19 63	A 8 13 17 22 60	D 0 1 0 1 2	SD 0 1 0 0 1	N/R 1 0 0 0 1
6.	Funding for new program start costs ACADEMIC AFFAIR CONTINUING EDUCATIO FINANCIAL AFFAIR STUDENT SERVICE TOTAL RESPONSE North Carolina's funding formula in regard to for equipment is:	-up N= IS _27 N _29 IS _29 IS _42 IS _127 D capital outlay	SA 18 14 12 19 63 funds	A 8 13 17 22 60	D 0 1 1 2	SD 0 1 0 0 1	N/R 1 0 0 1
6.	Funding for new program start costs ACADEMIC AFFAIR CONTINUING EDUCATIO FINANCIAL AFFAIR STUDENT SERVICE TOTAL RESPONSE North Carolina's funding formula in regard to for equipment is: Adequate	-up N= S _27 N _29 S _29 S _42 S _127 o capital outlay N=	SA 18 14 12 19 63 funds SA	A 8 13 17 22 60 A	D 0 1 1 2 D	SD 0 1 0 0 1 SD	N/R 1 0 0 1
6.	Funding for new program start costs ACADEMIC AFFAIR CONTINUING EDUCATIO FINANCIAL AFFAIR STUDENT SERVICE TOTAL RESPONSE North Carolina's funding formula in regard to for equipment is: Adequate ACADEMIC AFFAIR	-up N= S _27 N _29 S _29 S _42 S _127 capital outlay N= S _27	SA 18 14 12 19 63 funds SA 1	A 8 13 17 22 60 A 5	D 0 1 1 2 D 13	SD 0 1 0 0 1 SD 7	N/R 0 0 1 N/R 1
6.	Funding for new program start costs ACADEMIC AFFAIR CONTINUING EDUCATIO FINANCIAL AFFAIR STUDENT SERVICE TOTAL RESPONSE North Carolina's funding formula in regard to for equipment is: Adequate ACADEMIC AFFAIR CONTINUING EDUCATIO	-up N= IS _27 N _29 S _29 IS _42 IS _127 D capital outlay N= IS _27 N _29	SA 18 14 12 19 63 funds SA 1 1	A 8 13 17 22 60 A 5 6	D 0 1 1 2 D 13 15	SD 0 1 0 0 1 SD 7 7	N/R 1 0 0 1 N/R 1 0
6.	Funding for new program start costs ACADEMIC AFFAIR CONTINUING EDUCATIO FINANCIAL AFFAIR STUDENT SERVICE TOTAL RESPONSE North Carolina's funding formula in regard to for equipment is: Adequate ACADEMIC AFFAIR CONTINUING EDUCATIO FINANCIAL AFFAIR	-up N= S _27 N _29 S _29 S _42 S _127 capital outlay N= S _27 N _29 S _29 S _29 S _29	SA 18 14 12 19 63 funds SA 1 1 0	A 8 13 17 22 60 6 6 12	D 0 1 1 2 D 13 15 11	SD 0 1 0 0 1 SD 7 7 7 6	N/R 0 0 1 N/R 1 0 0
6.	Funding for new program start costs ACADEMIC AFFAIR CONTINUING EDUCATIO FINANCIAL AFFAIR STUDENT SERVICE TOTAL RESPONSE North Carolina's funding formula in regard to for equipment is: Adequate ACADEMIC AFFAIR CONTINUING EDUCATIO FINANCIAL AFFAIR STUDENT SERVICE	-up $N=$ $S _27$ $N _29$ $S _29$ $S _42$ $S _127$ $D capital outlay N= S _27 N _29 S _29 S _29 S _29 S _29$	SA 18 14 12 19 63 funds SA 1 1 0 2	A 8 13 17 22 60 60 12 13	D 0 1 1 2 D 13 15 11 14	SD 0 0 0 1 SD 7 7 6 13	N/R 0 0 1 N/R 1 0 0 0
6.	Funding for new program start costs ACADEMIC AFFAIR CONTINUING EDUCATIO FINANCIAL AFFAIR STUDENT SERVICE TOTAL RESPONSE North Carolina's funding formula in regard to for equipment is: Adequate ACADEMIC AFFAIR CONTINUING EDUCATIO FINANCIAL AFFAIR STUDENT SERVICE TOTAL RESPONSE	-up $N=$ IS _27 N _29 S _29 S _42 S _127 o capital outlay N= S _27 N _29 S _29 S _42 S _42 S _127	SA 18 14 12 19 63 funds SA 1 1 0 2 4	A 8 13 17 22 60 6 12 13 36	D 0 1 2 D 13 15 11 14 53	SD 0 1 0 0 1 SD 7 7 6 13 33	N/R 0 0 1 N/R 1 0 0 0 0 1
6.	Funding for new program start costs ACADEMIC AFFAIR CONTINUING EDUCATIO FINANCIAL AFFAIR STUDENT SERVICE TOTAL RESPONSE North Carolina's funding formula in regard to for equipment is: Adequate ACADEMIC AFFAIR CONTINUING EDUCATIO FINANCIAL AFFAIR STUDENT SERVICE TOTAL RESPONSE	-up $N=$ IS _27 N _29 S _29 S _42 S _127 o capital outlay N= S _27 N _29 S _29 S _42 S _42 S _127 N= S _127 N=	SA 18 14 12 19 63 funds SA 1 1 0 2 4 SA	A 8 13 17 22 60 6 12 13 36 36 4	D 0 1 1 2 D 13 15 11 14 53 D	SD 0 0 0 1 SD 7 7 6 13 33 SD	N/R 1 0 0 1 N/R 1 0 0 0 1 N/R

CONTINUING EDUCATION	29	1	<u> 10</u>	11	7	0
FINANCIAL AFFAIRS		0	<u> 14</u>	12	3	0
STUDENT SERVICES	<u>42</u>	2	<u> 16</u>	<u> 14</u>	10	0
TOTAL RESPONSES	127	3	53	46	24	1

7. North Carolina's funding mechanism should be expanded to include capital outlay funds for buildings.

	N=	SA	Α	D	SD	N/R
ACADEMIC AFFAIRS	27	7	12	7	1	0
CONTINUING EDUCATION	29	5	14	7	<u>1</u>	2
FINANCIAL AFFAIRS	29	<u>6</u>	<u>13</u>	9	1	0
STUDENT SERVICES	42	6	27	8	1	0
TOTAL RESPONSES	127	24	<u> 66 </u>	31	4	2

8. North Carolina's funding formula provides for timely recovery of program area instructional costs.

	N≕	SA	Α	D	SD	N/R
ACADEMIC AFFAIRS	27	0	5	<u>11</u>	<u>9</u>	2
CONTINUING EDUCATION	29	0	5	<u> 18 </u>	<u>5</u>	1
FINANCIAL AFFAIRS	29	0	9	<u> 15</u>	5	0
STUDENT SERVICES	42	2	10	23	5	2
TOTAL RESPONSES	127	2	29	67	_24	5

9. North Carolina's funding formula provides sufficient flexibility to meet institutional needs.

	N=	SA	Α.	D	SD	N/R
ACADEMIC AFFAIRS	27	0	8	10	9	0
CONTINUING EDUCATION	29	0	8	<u> 15</u>	5	1
FINANCIAL AFFAIRS	29	0	<u> 18</u>	8	3	0
STUDENT SERVICES	42	0	<u>18</u>	<u> 16</u>	8	0
TOTAL RESPONSES	<u> 127</u>	0	52	49	25	1

10. Curriculum and Non-Curriculum (Continuing Education) programs should be funded at the same levels per FTE.

	N=	SA	Α	D	SD	N/R
ACADEMIC AFFAIRS	27	5	8	_10	4	0

CONTINUING EDUCATION	29	<u>18</u>	9	2	0	0
FINANCIAL AFFAIRS	29	5	9	14	1	0
STUDENT SERVICES	42	2	8	29	4	0
TOTAL RESPONSES	127	30	<u>_34</u>	54	9	0

11. The funding formula should have a weighted factor—i.e., to provide additional funding for high cost program areas.

	N⊨	SA	A	D	SD	N/R
ACADEMIC AFFAIRS	_27	<u> 16</u>	8	2	1	0
CONTINUING EDUCATION	29	<u>13</u>	10	4	2	0
FINANCIAL AFFAIRS	29	13	<u> 10</u>	6	0	0
STUDENT SERVICES	42	_12	27	2	0	<u>1</u>
TOTAL RESPONSES	<u>127</u>	54	55	14	3	1

12. Funding should be based on variables such as headcount, basic costs, etc. instead of being based on FTEs.

	N⊨	SA	Α	D	SD	N/R
ACADEMIC AFFAIRS	_27	2	15	5	<u>4</u>	1
CONTINUING EDUCATION	29	9	<u>9</u>	8	2	1
FINANCIAL AFFAIRS	29	<u>6</u>	<u>13</u>	9	0	1
STUDENT SERVICES	<u>42</u>	25	<u> 15</u>	2	<u> </u>	0
TOTAL RESPONSES	127	42	52	24	6	3