

Community College FTE Funding Formula Study
Session Law 2007-323, Section 9.2

Presented to the
Joint Legislative Education Oversight Committee
and
Chairs of the Senate Committee on Appropriations/Base Budget
and House Appropriations Committee

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Executive Summary

Section 8.8 of S.L. 2007-323 directed the Fiscal Research Division (FRD), in consultation with the NC Community College System (NCCCS), to "consider modifications to community college funding formulas to ensure that colleges have sufficient funds to adequately serve students when enrollment increases." This study focuses on four issues outlined in the legislation: the Basic Skills Block Grant formula, the funding mechanism for equipment and instructional resources, the formula "other costs" funding factors, and the Institutional Support formula. Based on this research, the General Assembly should consider the following recommendations.

Basic Skills Block Grant

The General Assembly should direct the NC Community College System to develop a new formula for the Basic Skills Block Grant for consideration during the 2009 Session. The current formula is overly complicated, outdated, and inconsistent with federal law. A revised formula should incorporate the following changes:

- Federal funds must be distributed to both community-based organizations and community colleges using the same process and should only be awarded to programs that meet minimum standards.
- A larger amount of funding should be distributed based on performance using revised criteria.
- To simplify the formula, target population funding should be eliminated.

Equipment and Instructional Resources

The General Assembly should reevaluate how it funds equipment and instructional resources. The current method of providing funds through categorical appropriations allows the General Assembly to retain a high level of control over funding levels. However, it has not always ensured that funding has kept pace with changing needs. Legislation directs this study to consider whether equipment and instructional resources (library) funding should be incorporated into the FTE funding formula. Increasing equipment and instructional resources funding for enrollment growth would provide a simple and stable funding mechanism. However, enrollment growth is an imperfect proxy for increased equipment and library needs. To the extent that enrollment growth exceeds colleges' equipment and instructional resources capacity, additional funding is appropriate. However, enrollment growth within colleges' current capacity would also generate additional funds.

"Other Costs" Funding Factors

The General Assembly should adjust the "other costs" funding factors in the Institutional Support formula to better align with expenditures. The "other costs" factors in the Instructional and Institutional Support formulas generate resources for community colleges' non-personnel operating expenses, such as supplies, travel, advertising, and computer software. These factors have not been modified recently, and "other costs" expenditures are outpacing the funding provided through the current formulas. The disparity between funding and expenditures is most acute for Institutional Support "other

costs". In FY 2005-06, these expenditures were 170% of funding levels. Colleges are managing the disparity by transferring funds from Institutional Support personnel.

Institutional Support Formula

The General Assembly should direct staff to continue to study whether funding is appropriately allocated between the base and enrollment allotments of the Institutional Support formula. A 1997 study conducted by an outside consultant found that the formula provides funding similar to the expenditures incurred by small- and mid-sized institutions in other states, but fewer resources for larger institutions. This analysis should be replicated with updated data. Additional study is also needed to identify alternative measures of institutional support workloads to better evaluate whether full-time equivalent students or student headcount drives these expenditures.

Introduction

S.L. 2007-323, Section 8.8 directs the Fiscal Research Division (FRD), in consultation with the NC Community College System (NCCCS), to "consider modifications to community college funding formulas to ensure that colleges have sufficient funds to adequately serve students when enrollment increases." Specifically, the General Assembly directed FRD staff to study four issues:

1. "Make findings and recommendations for a new formula budget computation for the Basic Skills Block Grant, which has not been reviewed for at least two decades and may be impacted by potential changes in the allocation of federal funds for literacy education through the Workforce Investment Act, Title II;
2. Consider whether funding for equipment and instructional resources should be incorporated into the FTE funding formula;
3. Make findings and recommendations regarding the appropriateness of adjusting the "Other Costs" factors in the Instructional and Institutional Support formulas; and
4. Review the Institutional Support formula to determine whether funding is appropriately allocated between the Base Allotment and Enrollment Allotment."

This document provides analysis, identifies key findings, and recommends options the General Assembly may want consider for each issue. The analysis is based on staff's review of the current funding formulas, funding and expenditure trends, and relevant statutes. Where applicable, staff also reviewed practices in other states as well as other educational systems within North Carolina.

To satisfy the requirement to consult with NCCCS, a study working group was established, consisting of System Office staff, five current community college presidents, one retired community college president, and a community college chief financial officer. The working group met four times throughout the interim to discuss the study's findings and provide feedback on the impact of potential changes. FRD staff also conducted site visits to multiple community colleges.

Basic Skills Block Grant Formula

As a result of concerns expressed by the Education Appropriations Subcommittees during the 2007 Session, S.L. 2007-323, Section 8.8 instructs FRD to "make findings and recommendations for a new formula budget computation for the Basic Skills Block Grant." The formula has not been modified to respond to changing program needs or to conform to the reauthorization of the federal Adult Education and Family Literacy Act passed in 1998.

Basic skills programs "assist adults to become literate and obtain the knowledge and skills necessary for employment and self-sufficiency, assist adults who are parents to

obtain the educational skills necessary to become full partners in the educational development of their children, and assist adults in the completion of a secondary school education."¹ Basic skills instruction is provided through five program components:

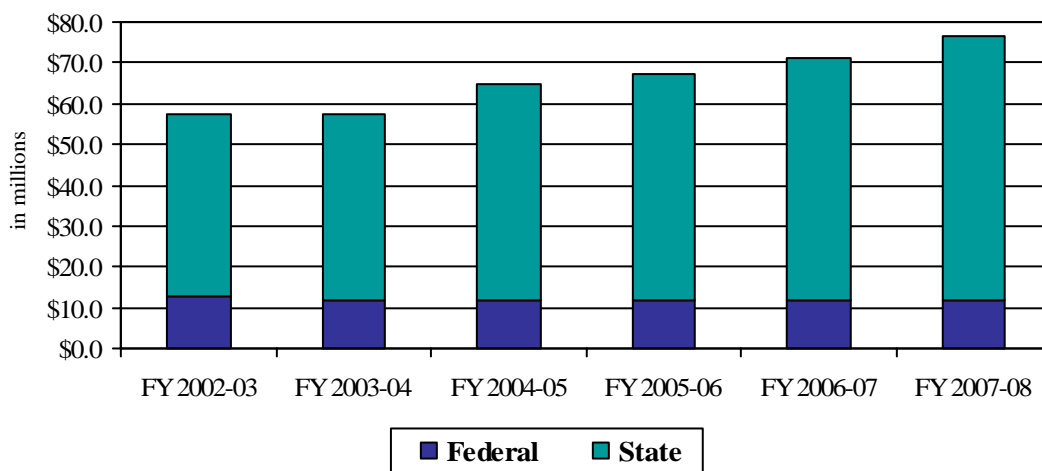
1. **Adult Basic Education (ABE)**, which is designed for adults who lack literacy skills to function in society, on a job, or in the family;
2. **General Educational Development (GED)**, which prepares adult students to pass the GED tests that lead to a high school diploma equivalency;
3. **Adult High School (AHS)**, which is offered cooperatively with local public school systems to help adults earn an Adult High School Diploma;
4. **English as a Second Language**, which helps adults who have limited English proficiency achieve competence in the English language; and
5. **Compensatory Education**, which serves adults with developmental disabilities who have not received an adequate education.

All 58 community colleges provide basic skills instruction, enrolling over 130,000 students in 2006-07.² Many community-based organizations (CBOs) – non-profits such as literacy councils, library-based initiatives, etc. – also provide literacy instruction. Basic skills services are provided to students free of charge.³

Current Funding for Basic Skills Programs

Both State and federal funds support basic skills programs. Total funding has grown by approximately 33% over the last five years, or an average of 6% per year (see Figure 1).⁴ In FY 2007-08, a total of \$75.6 million – \$64.6 million in State dollars and \$11.9 million federal – supported basic skills instruction.⁵ State funding has increased each year for enrollment growth and legislative salary increases for community college faculty. Federal

Figure 1: Funding for Basic Skills Programs



funding was cut by \$1.2 million in FY 2003-04 and has increased by only 2% since then. Consequently, federal funding as a percentage of total and per student funding has declined from 22% to 16%.

Basic skills programs operated by community colleges receive both State and federal funding. In FY 2007-08, community colleges received a total of \$75.6 million from both sources. Since 2002-03, total funding has increased by an average of 5.9% per year. This growth has been funded entirely with State funds, as federal funds allocated to community colleges have declined by an average of 2.1% per year.

The formula for allocating basic skills funding to community colleges includes five components:

- **Base Funding:** Each college receives a base of \$20,000 from State funds.
- **Target Population Funding:** From State funds, each college also receives 25 cents (\$0.25) per person in its service area that falls into the target population of persons 16 to 54 years of age with less than a high school education.
- **Performance Funding:** Colleges can earn additional State funds by meeting certain performance criteria. To incentivize the completion of secondary diplomas or the equivalent, colleges receive \$50 in State funding for each GED certificate and \$150 for each Adult High School diploma awarded. To reward colleges that successfully reach out to the community, colleges can earn additional funding based on their relative level of effort. The percentage of the eligible population served by each college is calculated and statewide average. For each percentage point in excess of the statewide level of effort, a college receives an additional \$10,000.
- **State FTE Funding:** Once base, target population, and performance funding are provided from State funds, the remaining State resources are allocated among colleges based on the number of budgeted full-time equivalent (FTE) students.
- **Federal FTE Funding:** The amount of federal funding available to community colleges is also distributed among colleges on an FTE basis.

Figure 2 summarizes the various Basic Skills funding formula factors for FY 2007-08 and calculates the funding for a hypothetical college with 115 Basic Skills FTE students.

Figure 2: Hypothetical Basic Skills Funding Calculation

College A: 115 Basic Skills FTE

Step 1 Base Allotment: **\$20,000**

Step 2 Population Funding: $10,150 \times \$0.25 = \mathbf{\$2,538}$

Step 3 Performance Funding:

- 225 GED certificates awarded $\times \$50 = \mathbf{\$11,250}$
- 30 Adult High School Diplomas $\times \$150 = \mathbf{\$4,500}$
- College level of effort above System = 0.30%
- Level of effort: $\$10,000 \times 0.30 = \mathbf{\$3,000}$

Step 4 State FTE Funding: $115 \times \$3,188.26 = \mathbf{\$366,650}$

Step 5 Federal FTE Funding: $115 \times \$567.67 = \mathbf{\$65,252}$

Step 6 Sum steps 1 through 5: **\$473,190**

FY 2007-08 Funding Factors

Base Allotment:

\$20,000

Population Funding:

\$0.25 per Target Population

Performance Funding:

- \$50 / GED Certificate
- \$150 / AHS Diploma
- \$10,000 per 1% above system average for level of effort

State Funding:

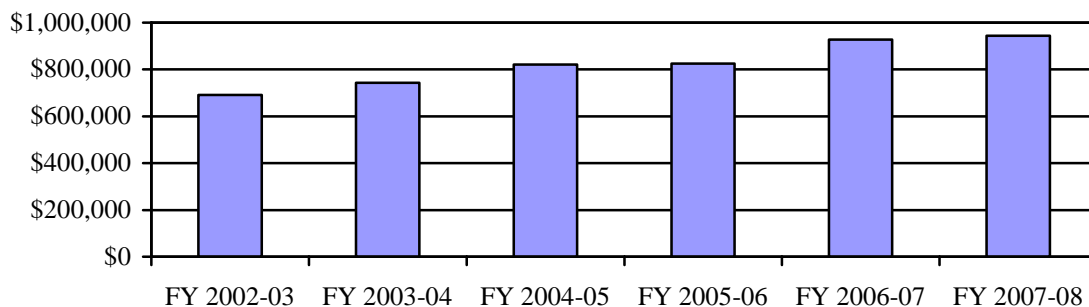
\$3,188.26 per FTE

Federal Funding:

\$567.67 per FTE

Basic skills programs operated by CBOs do not receive State funding. Under Title II of the Workforce Investment Act of 1998, CBOs are considered an "eligible provider" and may apply for federal literacy funding.⁶ Grants are awarded through an open application process. A panel of representatives from CBOs in North Carolina reviews the applications and makes recommendations for allocations based on requests, number of students served, number of students projected to be served, total scores, cost per student, and project achievements. There is not set amount of federal funds reserved for CBOs, rather the amount awarded is based on the grant panel's recommendation, taking into consideration the previous year's awards. In FY 2007-08, \$944,300 was awarded to 29 CBOs. Over the last five years, CBO funding has increased by 37%, or an average 6.4% per year (see Figure 3).⁷

Figure 3: Community-Based Organizations Basic Skills Funding



Key Findings and Recommendations

The General Assembly should consider directing the NC Community College System to develop a new formula for consideration during the 2009 Session. The revised formula should incorporate the following changes:

Federal funds must be distributed to both CBOs and community colleges using the same process and should only be awarded to programs that meet minimum standards. The current system which grants federal funds to CBOs and community colleges through different mechanisms conflicts with federal law. P.L. 105-220, Title II, Section 231(c) requires that all eligible providers have "direct and equitable access" to apply for grants and that "the same grant or contract announcement process and application process (be) used for all eligible providers." To comply with this provision, the process for granting federal funds must be revised to require CBOs and community colleges to compete on an equal playing field.

As explained above, federal funds are currently distributed to community colleges based on the number of FTE students served. Simply extending this funding method to CBOs would result in significant funding reductions to CBOs, as most CBO programs are extremely small. In FY 2006-07, 50% of the 28 CBO programs funded served less than 5 FTEs.⁸ Figure 4 compares the number of FTE students and the funding per FTE for CBO and community college basic skills programs.⁹

Figure 4: FY 2006-07 Basic Skills FTE and Funding Comparison

	Community Colleges	CBOs
Total # of programs funded	58	28
Total # of FTE served	18,619	182.2
# of FTE of smallest program	39	0.4
# of FTE of largest program	1130	23.1
Median # of FTE per program	271	4.6
Total Funding	\$70,492,696	\$927,800
Average funding per FTE	\$3,786.06	\$5,092.21

A revised formula should take into account the needs of smaller programs, particularly those programs that provide access to rural and isolated communities. However, programs should be required to meet certain minimum standards to ensure funds are appropriately targeted. After an initial start-up phase, continued funding should be contingent on serving a certain minimum number of students and meeting minimum student achievement levels.

A larger amount of funding should be distributed based on performance using revised criteria. In FY 2007-08, 2.3% of funding for community college basic skills programs was distributed based on performance measures. The amount of funding allocated on a performance basis should be increased to a more compelling level. This can be accomplished by either increasing the amount awarded for attaining certain

objectives or earmarking a certain percentage of funds. Practices vary widely in other states that use performance funding, though many distribute 5-10% of total funding on a performance basis.¹⁰

The current performance measures should be revised. The current emphasis on rewarding the attainment of secondary credentials is too narrow. In FY 2007-08, 57% of performance funding was distributed based on the number of AHS diplomas and GED credentials conferred. No incentives are provided for progress made by students in the ABE, ESL, or Compensatory Education program components. The remaining 43% of performance funding in FY 2007-08 was distributed based on a college's relative level of effort. This measure does not effectively incentivize improvement. While the rationale behind this measure is sound, the calculation is complicated and not well understood by local college staff. Furthermore, since the system-wide average changes each year, colleges do not have a set goal to strive toward.

Revised criteria should be designed to increase program accountability and more effectively promote program improvement. Measures should be simple to understand, align with policy priorities, and use data already being collected to minimize any additional burden on colleges.¹¹ To promote college buy-in, only standards that can reliably be measured should be included. When developing new performance funding criteria, the NC Community College System should consider the key performance indicators for Basic Skills programs outlined in the federal Adult Education and Family Literacy Act. Section 212 of P.L. 105-220 states that Basic Skills programs should be held accountable based on the following indicators:

- Demonstrated improvements in literacy skill levels;
- Placement in, retention in, or completion of postsecondary education, training, unsubsidized employment, or career advancement;
- Receipt of a secondary school diploma or its recognized equivalent.

The amount of funding provided for meeting performance goals should also be revised. The current practice of rewarding AHS diploma and GED attainment at different levels is no longer defensible. Based on interviews with both college presidents and basic skills program directors, there is not a significant difference in how these credentials are valued. In fact, they report that many employers prefer a GED, since it is a nationally normed test. Differential weighting of performance criteria should only be used when there is evidence that certain goals are more expensive to achieve or where improvement is especially needed.

To simplify the formula, target population funding should be eliminated. Although the funding formula for community college basic skills programs consists of five components, over 95% of funding is allotted based on the number of FTE students. Such a high percentage indicates that the formula's complexity is not adding much value. In FY 2007-08, target population funding constituted only 0.3% of total funding, an amount too small to be meaningful.

Rather than increase the per person amount to a more significant level, this formula component should be eliminated. The rationale behind target population funding is that more funding is needed in a service area that has more residents in need of basic skills services. Colleges, however, receive this funding regardless of whether they are actually serving the target population. Colleges will naturally receive more funding through the FTE formula component if they have large populations needing basic skills services *and* they are serving those needs.

How the target population is defined and measured is problematic as well. The current definition – persons 16 to 54 years of age with less than a high school education – is not consistent with the System's mission to serve North Carolina adults regardless of age, nor does it match the federal definition of "qualifying adult," which spans from 16 to 61 years of age. The number of people in the target population is based on the most recent census, and therefore, remains static for 10 years. In areas experiencing significant demographic changes, this data quickly becomes obsolete.

Equipment and Instructional Resources

S.L. 2007-323, Section 8.8(2) requests that staff "consider whether funding for equipment and instructional resources should be incorporated into the FTE funding formula." By law, the State is responsible for providing "furniture and equipment for administrative and instructional purposes, (and) library books."¹² These two items are not funded through the regular FTE funding formula, but rather through separate categorical allotments. Consequently, these allotments do not currently increase for enrollment growth.

Current Funding for Equipment

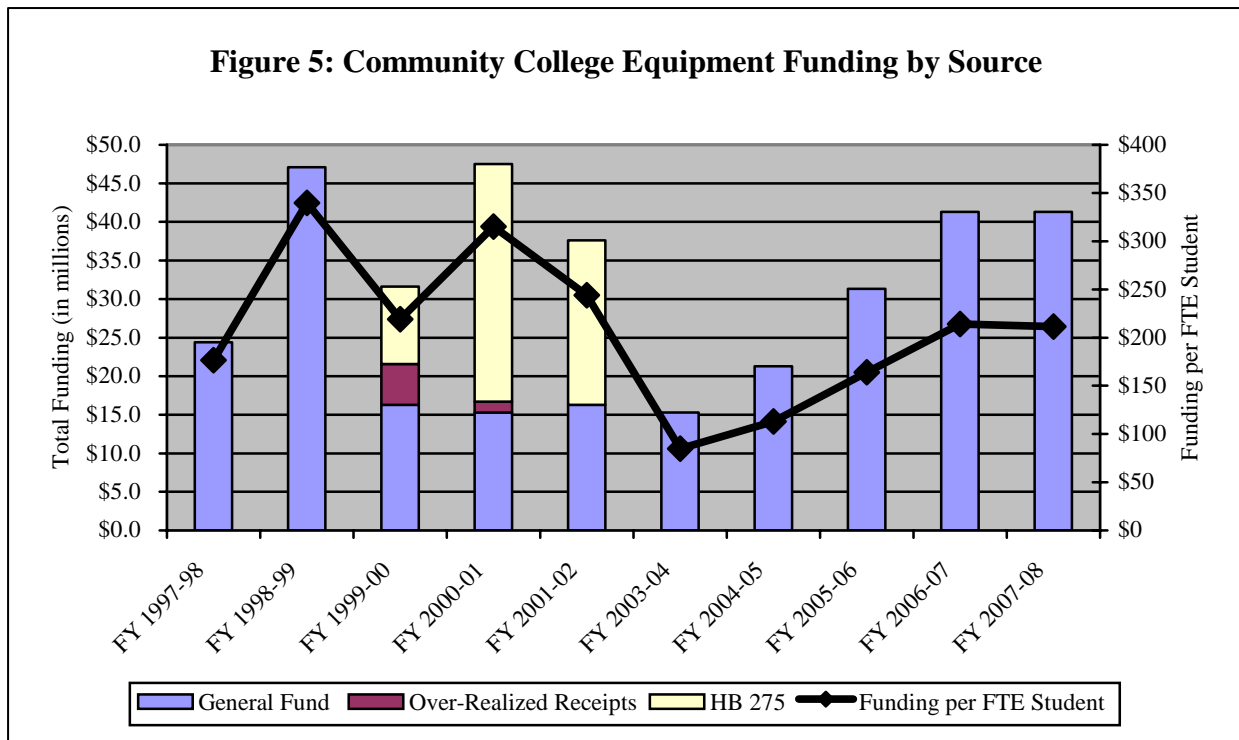
Funding for equipment is provided primarily through General Fund appropriations. In FY 2007-08, the General Assembly appropriated \$41.3 million, \$10 million of which is non-recurring. There are two other potential funding sources:

- **Overrealized receipts:** G.S. 115D-31(e) allows overrealized tuition and fee receipts to be transferred to the Equipment Reserve Fund for future equipment purchases.¹³ In the past 10 years, transfers have occurred twice: FY 1999-00 and FY 2000-01.
- **Employment and Training Account funds:** S.L. 1999-321 (HB 275) created the Training and Employment Account, which is funded by a mandatory training and reemployment contribution levied on employers. A portion of the funds in this account are appropriated to the community colleges for equipment. Funding was available through this account in FY 2000-01, FY 2001-02, and FY 2002-03. Funding has not been available since then because, the training and reemployment contribution "does not apply in a calendar year if, as of August 1 of the preceding year, the amount in the Unemployment Insurance Fund equals or is less than eight

hundred million dollars (\$800,000,000)."¹⁴ The Training and Employment Account is only authorized through 2011.

Figure 5 provides a history of equipment funding by source over the last ten years.¹⁵ Available funds are distributed among community colleges using an allocation formula. This formula provides each college with a base amount of \$100,000. The remaining funds are distributed on a weighted FTE basis using the following weights:

- Low equipment intensity programs: 0.50,
- Moderate equipment intensity programs: 0.75,
- High equipment intensity programs: 1.00.

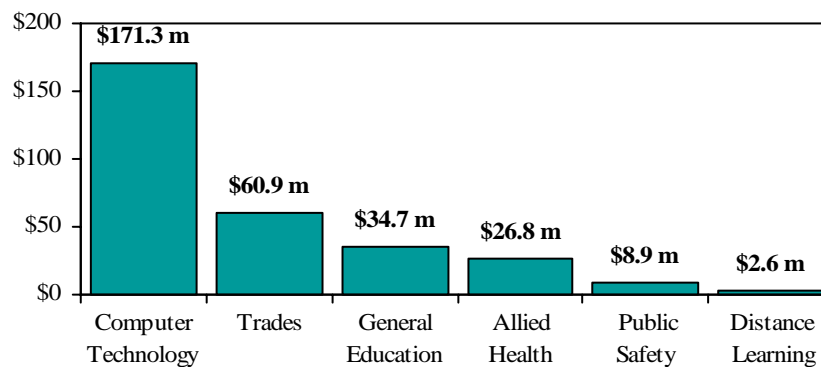


Equipment funding varies widely from year to year, both in terms of total funding and funding per FTE student (see Figure 5). Sixty-five percent of the total equipment funding provided during the past decade came from recurring General Fund appropriations, while 45% came from either non-recurring appropriations or other variable funding sources. Interviews with community college presidents indicate that the uncertainty surrounding equipment funding undermines their ability to plan and systematically invest in equipment.

Replacement and new equipment needs outstrip funds provided. According to the most recent system-wide equipment inventory survey, the amount of State-funded equipment in use at the 58 colleges totaled of \$305.3 million as of June 30, 2006 (see Figure 6).¹⁶ Applying the "useful life" guidelines set out in the NCCCS "Asset Policy with Useful Lives and Capitalization Limits," the amount of funding needed to replace

existing equipment is \$47.4 annually. The most recent survey of new and replacement equipment needs was conducted in 2005. At that time, colleges reported equipment needs totaling \$223.5 million: 50% for computer technology, 41% for equipping classrooms, shops, and laboratories, and 9% for non-classroom furnishings.¹⁷

Figure 6: State Equipment Currently In Use by Program
Total = \$305.3 million as of June 30, 2006



Current Funding for Instructional Resources

Formerly called "library books," instructional resources are the non-personnel resources necessary to equip a modern library. Expenditures include books, periodical subscriptions, electronic format and license expenses, telephone line and service access charges, software and other related costs of an increasingly electronic library. Funding is provided through General Fund appropriations.

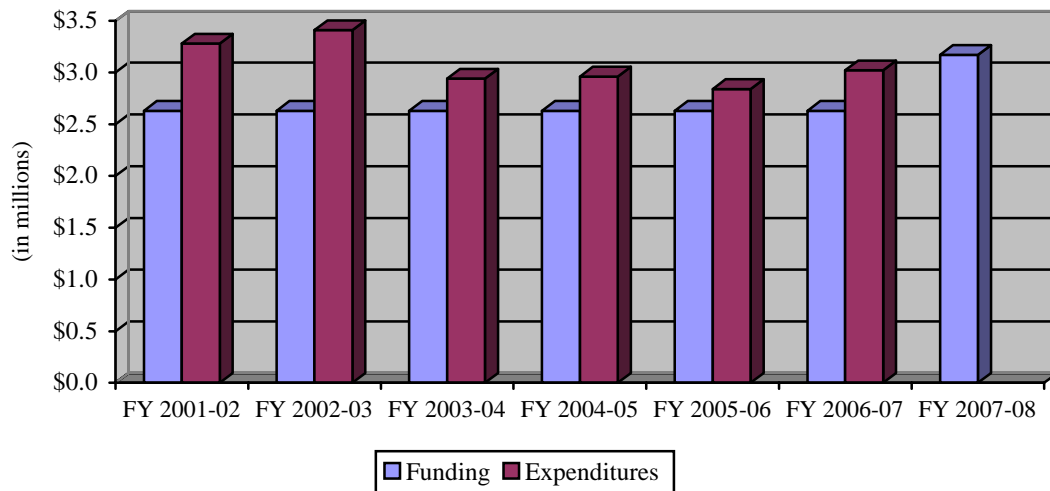
In FY 2007-08, the General Assembly appropriated \$3.7 million for instructional resources, a \$537,975 increase over the prior fiscal year. An adjustment to the continuation budget, this increase was based on FY 2005-06 actual expenditures adjusted for inflation. This inflationary increase was the first continuation budget adjustment for instructional resources approved by the Office of State Budget and Management in recent history. Prior to this increase, instructional resources funding had remained flat at \$3.1 million since 1999.

Each year the Community College System Office retains \$500,000 of this allotment to pay for the System's NCLIVE subscription.¹⁸ All 58 colleges can access electronic resources provided through this service. The remaining funds are distributed among colleges using an allocation formula. Each college receives a base of \$25,000. Per a recent analysis completed by an outside consultant, this amount reflects the approximate base expenditures incurred by colleges, regardless of the size of the institution. The remaining funds are distributed on a weighted FTE basis using the following weights:

- College Transfer and General Education: 2.0,
- Technical and Vocational Education: 1.0,
- Basic Skills and Occupational Continuing Education: 0.25.

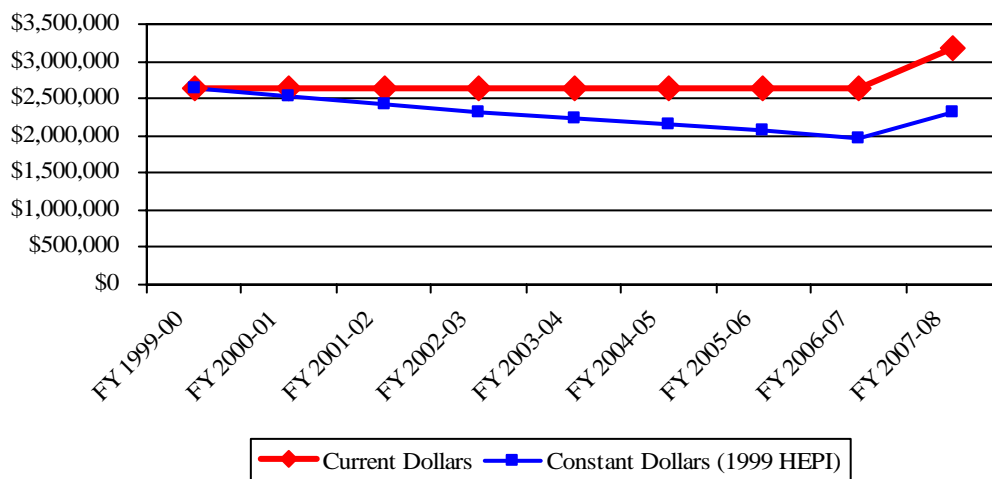
Prior to this year's inflationary adjustment, expenditures had consistently outpaced the funding provided (see Figure 7).¹⁹ Even though technology has helped reduce costs, demand for instructional resources has continued to rise as additional multi-campus are established and student enrollments rise at existing campuses. Concurrently inflation has eroded the purchasing power of the funds provided. Even with the FY 2007-08

Figure 7: College Instructional Resources Funding vs. Expenditures



inflationary increase, the current level of instructional resources funding is \$330,000 less than that provided in FY 1999-00 in constant dollars as measured by the Higher Education Price Index, an inflationary measure specific to post-secondary institutions (see Figure 8).²⁰ During that time period, enrollment increased by 51,000 students, or 35%. On a per FTE basis, the amount of funding provided in constant dollars in FY 2007-08 is 65% of the FY 1999-00 level.

Figure 8: Instructional Resources Funds Allotted to Colleges



Key Findings and Recommendations

The General Assembly should reevaluate the way it funds community college equipment and instructional resources. The current method of providing funds through categorical appropriations has not always ensured that funds have kept pace with changing needs. When deciding whether to continue with the current method of categorical funding or to incorporate equipment and instructional resources into the FTE funding formula, the General Assembly should consider the following pros and cons of each option:

Continue with Categorical Appropriations

Under this method, the General Assembly retains greater control over funding levels. Except for potential inflationary adjustments built into the continuation budget for instructional resources, funding only increases when the General Assembly includes expansion funding in the budget. Consequently, this option only requires additional funds when the General Assembly takes direct action.

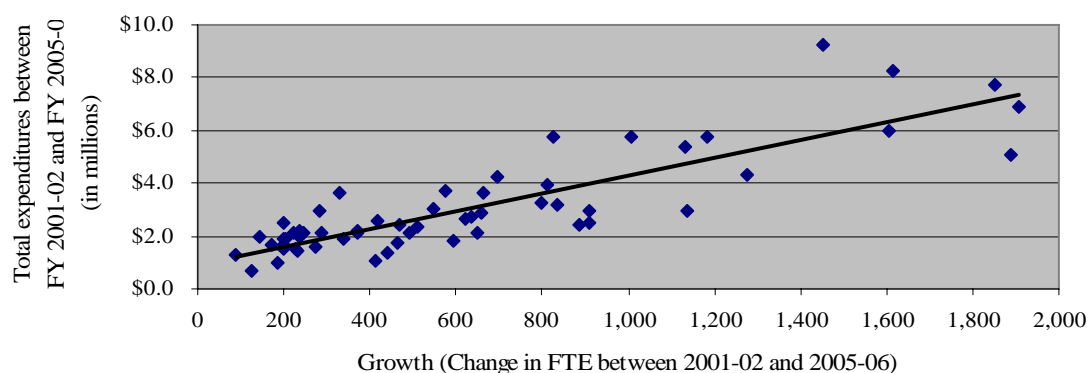
To ensure funding changes as needed, this option requires the General Assembly to routinely revisit funding levels. If it does not, the long-term effects of inflation and enrollment growth can erode the adequacy of the funding. Prior to this year, the purchasing power of the instructional resources allotment had slowly declined over time. As long as instructional resources funding is adjusted for inflation based on the previous actual expenditures, the categorical method of funding works well.

In contrast to instructional resources, categorical funding for equipment has been revisited often. While this has maximized the General Assembly's ability to adjust funding based on each year's unique circumstances, it has resulted in appropriations that have fluctuated significantly from year to year. While data inform appropriations decisions, funding is driven by the political process. It is not directly tied to needs as determined by replacement schedules, the establishment of new programs, or the opening of new buildings. This undermines colleges' ability to implement a systematic plan for investing in equipment.

Incorporate Equipment and Instructional Resources into the FTE Funding Formula

Variable costs – costs that increase directly with the number of students served – are the most appropriate costs for which to provide additional funding through the enrollment growth model. Equipment and instructional resources are not variable costs. Annual expenditures vary based on multiple factors and do not increase smoothly with enrollment growth. These costs, however, do appear to be semi-variable: they are fixed up to a certain level, but increase once enrollment exceeds that level. Consequently, larger and rapidly growing institutions must spend more on equipment and instructional resources over time (see Figures 9).²¹

Figure 9: Equipment and Instructional Resources Expenditures by Growth of Institution



Under this option, enrollment growth would serve as a simple, yet imperfect proxy for additional equipment and instructional resources needs. In addition to replacing outdated equipment, colleges purchase equipment for new or expanded facilities, for new programs, and when program enrollment exceeds current equipment capacity. To the extent that enrollment growth is related to these circumstances, additional equipment funding is appropriate.

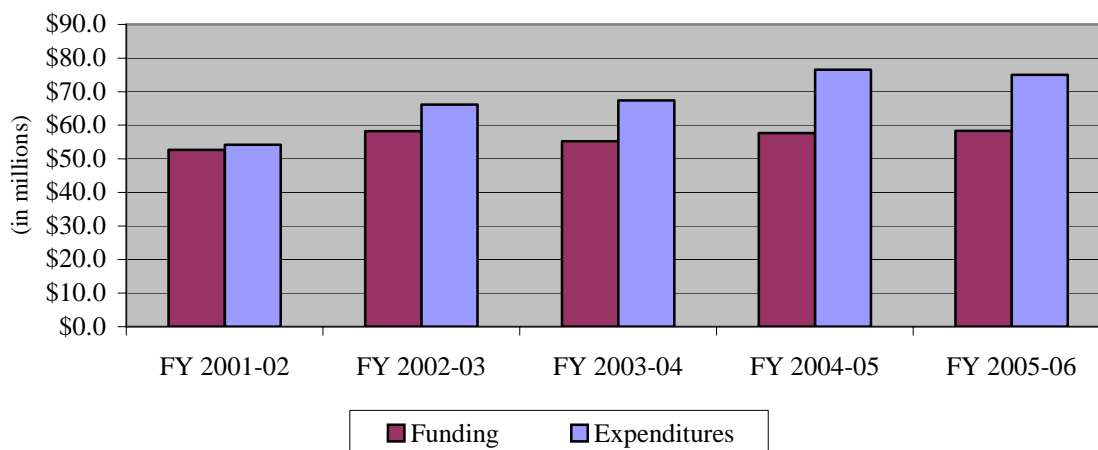
Enrollment growth can also impact instructional resources needs. Consequently, the University of North Carolina enrollment growth model includes a library component. Community colleges need additional funding for instructional resources particularly when new multi-campus are established, as accreditation standards require these sites to provide library services. Also libraries are increasingly substituting electronic resources for traditional print documents. These resources are frequently provided through electronic subscriptions services, which typically use enrollment-based pricing schemes. For instance, many electronic subscription services – such as InfoTrac, Gale's Nursing Resource Center, and the Science Resource Center – use a tiered pricing schedule based on total college enrollment. Other vendors provide services by the number of simultaneous user licenses purchased by a college. In such instances, as colleges grow, additional licenses are needed to provide adequate access. Demand for electronic resources is expected to continue to grow, especially given the expansion of distance learning courses.

Incorporating instructional resources into the FTE funding formula would provide a simple and stable funding mechanism by tying resources to enrollment growth. However, it is an imperfect proxy for equipment needs. To the extent that enrollment growth exceeds colleges' equipment and instructional resources capacity, additional funding is appropriate. However, enrollment growth within a colleges' current capacity would also generate additional funds. If additional funds were provided at the current per capita rate, each additional FTE student would cost \$16.23 and \$211.49 for instructional resources and equipment, respectively.

"Other Costs" Funding

S.L. 2007-323, Section 8.8(3) directs this study to "make findings and recommendations regarding the appropriateness of adjusting the "Other Costs" factors in the Instructional and Institutional Support formulas." These funding factors generate resources for community colleges' non-personnel operating expenses, such as supplies, travel, advertising, and computer software. The factors have not been modified recently, and "other costs" expenditures are outpacing the funding provided through the formulas (see Figure 10).²²

Figure 10: "Other Costs" Funding vs. Expenditures



"Other Costs" Funding Factors

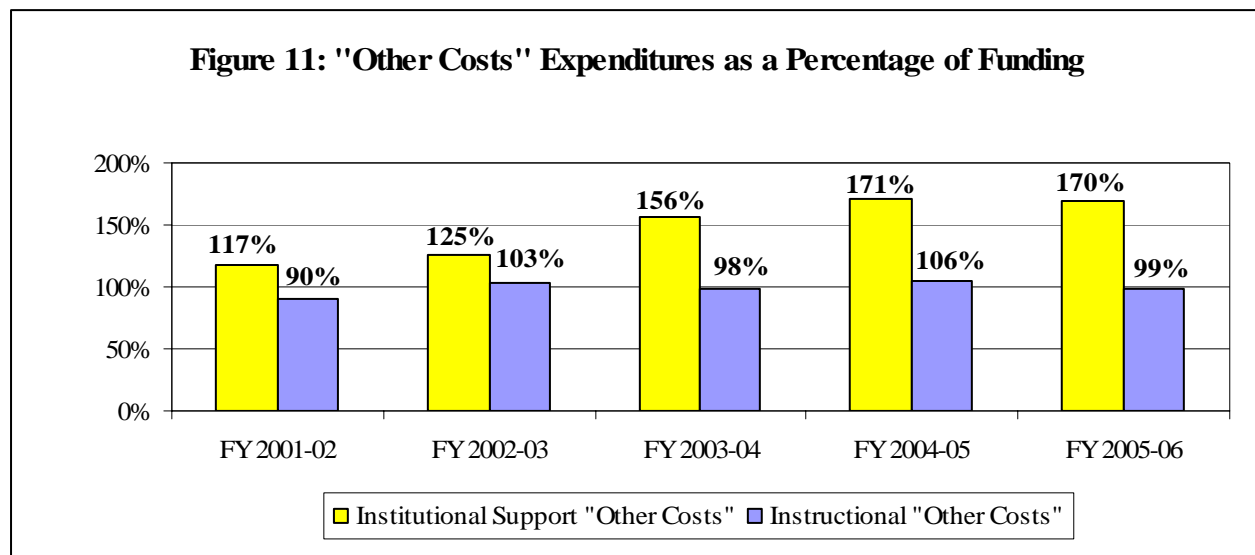
In FY 2007-08, community colleges received \$34.9 million for instructional "other costs," the majority of which are instructional supplies. These funds are distributed among colleges through the Instruction formula, which provides a flat amount per FTE student. Total funding increases each year for enrollment growth. Since 1985, the General Assembly has modified this funding level twice. In 1999, the General Assembly funded two changes to instructional "other costs": 1) the rate was increased to \$175 per FTE student and 2) for this first time, the same "other costs" funding rate applied to curriculum, continuing education and basic skills FTE students. In 2001, the General Assembly increased the rate by \$3.50 per FTE to the current level of \$178.50.

Institutional support "other costs" are non-personnel costs that support college operations other than instruction, including such varied expenses as supplies, advertising, travel, and maintenance agreements. For such expenditures, colleges received \$24.9 million this fiscal year. The Institutional Support formula provides each college a base amount in acknowledgement that colleges incur certain "other costs" regardless of size. The formula also provides a flat amount for each FTE student above 750 FTE at an institution. Since 1985, the General Assembly has increased the base and per FTE funding rate once. In 1999, the base and per FTE funding levels were increased to \$107,069 and \$173.02,

respectively. In 2003, budget constraints caused the General Assembly to cut the funding factors to the current levels of \$91,562 per college and \$128.85 per FTE above 750.

Funding vs. Actual Expenditures

As noted above, total "other costs" expenditures have outpaced the funding provided (see Figure 10). Further analysis reveals that funding for institutional support "other costs" has significantly lagged actual expenditures, while instructional "other costs" expenditures have more closely mirrored the funding provided. Between FY 2001-02 and FY 2005-06, the five fiscal years for which expenditure data was available, institutional support "other costs" expenditures ranged from 117% to 171% of funding provided; instructional "other costs" expenditures ranged from 90% to 106% of funding (see Figure 11).²³ In FY 2005-06, institutional "other costs" expenditures exceeded funding by \$17 million.



To manage this disparity, colleges must transfer funds from other line items. Note that the Instruction and Institutional Support formulas merely serve as mechanisms for allocating funds to community colleges. With the exception of faculty salary funds and certain other limitations, colleges have flexibility regarding how funds are actually spent. Based on system-wide year-end transfer summaries, colleges are transferring funds primarily from institutional support personnel line items. These line items support administrative staff – such as, executive management, accounting, human resources – and student services staff – such as, counselors, financial aid officers, librarians, registrars.²⁴

Widening Gap Between Funding and Actual Expenditures

"Other Costs" expenditures are increasing at a faster rate than "other costs" funding, causing the gap to widen. Between FY 2001-02 and FY 2005-06, the average annual growth rate was 8.5% and 2.6% for "other costs" expenditures and funding, respectively. To control for enrollment growth, it is necessary to look at "other costs" on a per FTE student basis. While funding per FTE has declined by 2.8%, expenditures per FTE have

increased on average by 2.8% per year during the five-year time period examined (see Figure 12).

Figure 12: "Other Costs" per FTE						
	FY 2001-02	FY 2002-03	FY 2003-04	FY 2004-05	FY 2005-06	Average Growth Rate
Institutional Support						
Funding	\$ 163.72	\$ 164.19	\$ 127.31	\$ 127.29	\$ 127.21	-6.1%
Expenditures	\$ 192.12	\$ 205.48	\$ 198.66	\$ 217.63	\$ 215.83	3.0%
Instructional						
Funding	\$ 178.50	\$ 178.50	\$ 178.50	\$ 178.50	\$ 178.50	0.0%
Expenditures	\$ 159.82	\$ 183.49	\$ 174.29	\$ 188.32	\$ 177.03	2.6%
Total						
Funding	\$ 342.22	\$ 342.69	\$ 305.81	\$ 305.79	\$ 305.71	-2.8%
Expenditures	\$ 351.94	\$ 388.97	\$ 372.95	\$ 405.96	\$ 392.86	2.8%
Consumer Price Index	181.6	185.5	189.6	195.3	202.7	2.8%
Higher Education Price Index	215.0	221.2	231.5	239.8	251.8	4.0%
HEPI (Materials & Supplies)	130.6	129.0	133.8	140.2	151.9	3.8%

The increase in expenditures is partly due to inflation. Between FY 2001-02 and FY 2005-06, expenditures per FTE grew on average by 2.8% per year, the same rate as inflation as measured by the Consumer Price Index (CPI). CPI measures price increases of a general basket of market goods and services.²⁵ This annual growth rate, however, is lower than inflation as measured by the Higher Education Price Index (HEPI) for public two-year institutions and the HEPI component specific to materials and supplies (see Figure 12).²⁶ HEPI measures the average relative price level of a fixed market basket of goods and services purchased by post-secondary institutions. While none of these three measures of inflation capture a basket of goods and services identical to "other costs," these comparisons do suggest the community colleges have controlled costs, especially when compared to peer institutions.

Without adjusting funding factors for inflation, the purchasing power of "other costs" funding erodes over time. A comparison of "other costs" funding per FTE in constant dollars reveals that FY 2007-08 funding levels for instruction are 82% of FY 1999-00 levels, as measured by CPI and 74% as measured by HEPI. Current funding per FTE for institutional support are 63% and 57% of FY 1999-00 levels in constant dollars as measured by CPI and HEPI, respectively.

In addition to inflation, increases in "other costs" expenditures also appear to be driven by changes in the type of expenditures incurred by colleges. Figure 13 shows what types of "other costs" expenditures were incurred in FY 2001-02 and FY 2005-06 and how those expenditures have changed over the last five years.²⁷ While supplies still constitute the largest expenditure type, travel and technology-related expenditures – such as software, and maintenance agreements – are growing at the fastest rates.

Figure 13: "Other Costs" Expenditures by Type

By Type of Expenditure	2001-02 Expenses		2005-2006 Expenses		Change	
	Amount	%	Amount	%	Amount	% change
Supplies	\$ 24,429,244	45%	\$ 31,677,450	42%	\$ 7,248,205	30%
Travel	\$ 5,141,195	9%	\$ 8,855,444	12%	\$ 3,714,249	72%
Advertising	\$ 5,600,305	10%	\$ 7,627,098	10%	\$ 2,026,792	36%
Software	\$ 2,238,705	4%	\$ 4,486,330	6%	\$ 2,247,624	100%
Maintenance Agreements	\$ 3,018,837	6%	\$ 4,341,874	6%	\$ 1,323,037	44%
Other	\$ 13,764,571	25%	\$ 18,005,611	24%	\$ 4,241,040	31%
Total	\$ 54,192,858	100%	\$ 74,993,806	100%	\$ 20,800,948	38%

Recommendations and Options

The General Assembly should consider adjusting the Institutional Support "other costs" factors to better align funding with actual expenditures. Such an adjustment would reduce the amount of funds currently being transferred from other line items. While granting colleges budget flexibility is necessary to ensure they can be responsive to changing community needs, perpetuating the need for such sustained transfers is not good budgeting practice. Adjustment options that the General Assembly could consider include:

- **Adjust funding factors within the current budget:** A simple realignment would not cost any additional money, but would require a cut to institutional support personnel. NCCCS has requested expansion funding for counselors and other institutional support personnel each year since 2003 when funding was reduced by the General Assembly.
- **Increase the funding factors to a specific level:** This option allows the General Assembly to increase the funding factors to a level of its choosing, but would require additional funding. Note that periodic adjustments in the future may be necessary to account for inflationary increases.
- **Allow inflationary increases to be built into the continuation budget:** Though not always approved, the Department of Public Instruction may request inflationary increases for instructional supplies in the continuation budget. This option would follow that model. While this option would account for future inflationary cost increases, it requires additional funding each year.

Institutional Support Formula

S.L. 2007-323, Section 8.8(4) requests a "review (of) the Institutional Support formula to determine whether funding is appropriately allocated between the Base Allotment and Enrollment Allotment." This formula seeks to balance the needs of providing adequate

funding to small institutions that do not benefit from economies of scale, while also recognizing the additional demands faced by large institutions.

Current Institutional Support Formula

In FY 2007-08, community colleges received \$317.6 million through the Institutional Support formula. This formula was cut by \$9.7 million in FY 2003-04. Since then total Institutional Support funding has increased by approximately 32%.²⁸ This increase has been driven by enrollment growth and legislative salary increases. Since FY 2003-04, the formula has been expanded once. In 2006 the General Assembly provided funds for an additional financial aid position at each college.

The Institutional Support formula has two components:

1. **Base allotment:** In FY 2007-08, each college received a base of \$1,977,724. This amount provides each college with funding for 31 positions and \$91,562 for other costs (see Figure 14 for breakdown by position).²⁹
2. **Enrollment allotment:** Colleges that have more than 750 FTE students receive an additional \$1,335 per FTE above 750 this fiscal year.

Figure 14: Institutional Support Based and Enrollment Allotment Breakdown

	Unit Salary	Base Allotment		Enrollment Allotment Amount per FTE >750
		Positions	Amount	
Administration				
Sr. Administrator	\$82,076	4	\$395,857	\$0
General Institution	\$53,075	1	\$65,474	\$158
Technical/Paraprofessional	\$35,800	1	\$45,525	\$0
Clerical	\$29,425	3	\$114,489	\$46
Other Costs			\$3,471	\$15
Subtotal		9	\$624,816	\$219
Instructional Support				
Supervisor of Programs	\$70,715	2	\$171,689	\$259
Student Services	\$53,075	7	\$458,318	\$277
General Institution	\$53,075	4	\$261,896	\$217
Technical/Paraprofessional	\$35,800	4	\$182,099	\$110
Clerical	\$29,425	5	\$190,815	\$138
Other Costs			\$88,091	\$114
Subtotal		22	\$1,352,908	\$1,116
Total		31	\$1,977,724	\$1,335

Additional Study is Needed

A 1997 formula study conducted by MGT of America compared funding provided by the Institutional Support formula to actual expenditures in the other 49 states. Its analysis found that North Carolina's formula was "reasonably similar to the national pattern for colleges in the 500-900 FTE enrollment range, but provided significantly lower support

than the other states for larger institutions."³⁰ Staff was unable to obtain the necessary data to replicate this analysis within this study's timeframe. During the next interim, updated data should be analyzed to see this conclusion still holds.

Some college presidents also expressed concern that institutional support workloads tend to be driven by headcount enrollment (the actual number of students who enroll in at least one course), rather than FTE students. For instance, a previous formula study noted that a part-time student can place nearly the same requirements on a registrar as a full-time student.³¹ One way to test this hypothesis is to determine how strongly institutional support expenditures are correlated with various student enrollment measures. Statistical analysis of three years of expenditure data suggests that FTE is a better predictor of institutional support expenditures than headcount (see Figure 15).³² This pattern generally held even when looking at the correlation between student enrollment and the three subcategories within institutional support: general institutional support, academic support, and student support.

Figure 15: Correlation between Institutional Support Expenditures and Student Enrollment

	Expenditures		
	FY 2003-04	FY 2004-05	FY 2006-7
Budget FTE	$R^2 = 0.9619$	$R^2 = 0.9524$	$R^2 = 0.9658$
Actual FTE	$R^2 = 0.9619$	$R^2 = 0.9514$	$R^2 = 0.9554$
Actual Headcount	$R^2 = 0.9275$	$R^2 = 0.9184$	$R^2 = 0.9310$

It remains unclear whether Budget FTE is the best predictor simply because it best represents workload or simply because it is the mechanism through which funds are distributed. Additional study is needed to identify alternative workload measures.

¹ NC Community College System, *A Matter of Facts: The NC Community College System Fact Book 2007*, page 27.

² http://www.ncccs.cc.nc.us/Statistical_Reports/collegeYear2006-2007/docs/ANNTBL01_2006-2007.pdf

³ The one exception is that community colleges may charge a GED testing fee.

⁴ Figure 1 includes Basic Skills funds allotted to colleges per NCCCS Allotment Sheets and CBO Grants as approved by the State Board of Community Colleges. Totals do not include federal funds used to support System Office staff or State leadership activities, as those funds are not part of the Basic Skills Block Grant.

⁵ Note that these figures only include funding for basic skills instruction provided to colleges through the Basic Skills Block Grant and to CBOs.

⁶ P.L. 105-220, Title II, Section 203(5) defines eligible providers as "(A) a local education agency, (B) a community-based organization of demonstrated effectiveness, (C) a volunteer literacy organization of demonstrated effectiveness; (D) an institution of higher education; (E) a public or private nonprofit agency; (F) a library; (G) a public housing authority; (H) a nonprofit institution that is not described in any of the subparagraphs (A) through (G) and has the ability to provide literacy services to adults and families; and (I) a consortium of the agencies, organizations, institutions, libraries, or authorities described in any of the subparagraphs (A) through (H)."

⁷ Figure 3 includes CBO grant awards as approved by the State Board of Community Colleges.

⁸ A Basic Skills FTE student is defined as 688 contact hours per year. Data summarized from "2006-07 Total Attendance Hours for Community-Based Organizations" memo from Karen Brown, NCCCS ABE/ESL Coordinator to Dr. Randy Whitfield, Associate Vice Presidents of Academic and Student Services/Basic Skills, January 4, 2008.

⁹ Ibid. Community college data in Figure 4 is based on FY 2006-07 Basic Skills Allotment Sheet.

¹⁰ A report prepared for the US Department of Education in 2005 reviewed the funding formulas of 10 states with performance funding systems. Among those 10 states, the report documented a range of 1% of total adult education resources allocated based on performance measures in Ohio to 88% in Kansas in FY 2004. Klein, Steven, MPR Associates, *Performance-Based Funding in Adult Education: Literature Review and Theoretical Framework*, a report prepared for the US Department of Education, September 2005, Table 3.

¹¹ U.S. Department of Education, Office of Vocational and Adult Education, Division of Adult Education and Literacy, *Performance-based Funding in Adult Education*, August 2007, page 41.

¹² G.S. 115D-31(a)(1)

¹³ G.S. 115D-31(e): "If receipts for community college tuition and fees exceed the amount certified in General Fund Codes at the end of a fiscal year, the State Board of Community Colleges shall transfer the amount of receipts and fees above those budgeted to the Equipment Reserve Fund."

¹⁴ G.S. 96-6.1(a)

¹⁵ NCCCS Division of Business and Finance and year-end BD-701 budget reports.

¹⁶ NCCCS Division of Business and Finance survey of equipment in use by colleges as of June 30, 2006.

¹⁷ NCCCS Division of Business and Finance survey of college equipment needs as of 2005.

¹⁸ NCLIVE offers the citizens of North Carolina online access to a diverse collection of electronic resources including complete articles from over 16,000 newspapers, journals, magazines, and encyclopedias, indexing for over 25,000 periodical titles, and access to over 25,000 online print and audio books.

¹⁹ Funding as reported in the NCCCS Book Allotment Sheets and expenditures as reported for Purpose 930 in the NCCCS State Aid Annual Reports for each fiscal year.

²⁰ Funding as reported in the NCCCS Book Allotment Sheets; Commonfund Institute, *2007 Higher Education Price Index Update*, Table A.

²¹ The account for variations in annual expenditures due to local college circumstances, the sum of expenditures for FY 2001-02 through FY 2005-06 is used. Expenditures as reported in NCCCS State Aid Annual Financial Reports for total program payments for Equipment and Books processed through DCC2-112.

²² Expenditures as reported in the NCCCS State Aid Annual Reports for FY 2001-02 through FY 2005-06. Funding calculation is the sum of 1) the product of the Instructional "other costs" funding factor per FTE and budgeted FTE, 2) the product of the Institutional Support "other costs" base funding rate per college

multiplied by 58 colleges, and 3) the product of the Institutional Support "other costs" funding rate per FTE greater than 750 and the enrollment allotment FTE.

²³ Ibid. Instructional "other costs" expenditures are defined as those in account codes 2000 and greater in object codes 210, 220, 230, 240, 310, 321, 322, and 331. Institutional support "other costs" expenditures are defined as those in account codes 2000 and greater in object codes 110, 120, 130, 140, 311, 410, 421, 422, 430, and 510.

²⁴ NC Community College System, "Detail Budget Transfers: Formula Allotments"

²⁵ Commonfund Institute, *2007 Higher Education Price Index Update*, Table A.

²⁶ Commonfund Institute, *2007 Higher Education Price Index Update*, Table B and Table C.

²⁷ Expenditure data compiled from NCCCS State Aid Annual Financial Reports.

²⁸ In FY 2007-08, the Academic Support Supplement was incorporated into the Institutional Support formula. To make funding comparable across years, the Academic Support and Institutional Support allotments were added together for FY 2003-04 through FY 2006-07.

²⁹ NCCCS Division of Business and Finance

³⁰ MGT of America, *Economy of Scale Supplemental Report*, submitted to the State Board of Community Colleges, April 18, 1997, page 3-6.

³¹ MGT of America, *Economy of Scale Supplemental Report*, submitted to the State Board of Community Colleges, April 18, 1997, page 3-8.

³² Institutional support expenditures include expenditures for Institutional Support, Academic Support, and Student Support programs as reported in the NCCCS State Aid Annual Financial Reports. R-Squared is used to determine the strength of the correlation. R-squared is a statistical term saying how good one term is at predicting another. If R-Squared is 1.0 then given the value of one term, you can perfectly predict the value of another term. If R-Squared is 0.0, then knowing one term does not help you predict the other term at all. More generally, a higher value of R-Squared means that you can better predict one term from another.