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-ABSTRACT

To determine the effects of changes in state funding on patterns of spending among institutions within the Virginia Community College System (VCCS), an analysis was performed of audited operating expenditures, enrollment, and staffing for the decade between 1980 and 1990 for each of the 23 VCCS colleges. The analysis found that from 1981-82 to 1990-91 there was a 55% increase systemwide in the ratio of "education and general" (E&G) expenditures to full time equivalency students (FTES), with appropriations for FY90 amounting to \$1.2 million less than inflation adjusted FY80 levels. One response to the financial pressure was to raise tuition, and tuition revenue over the study period increased from 22% of actual E&G expenditures to 24%. In addition, from 1985-86 to 1990-91 there was a 53% decline in FTES expenditures in instructional equipment, while other methods VCCS presidents used to compensate for reduced resources were staff reductions, increased use of part-time faculty, increased student/faculty ratio, reduced expenditures for academic support, and reduced expenditure for operation and maintenance. However, while the presidents significantly increased the student/faculty ratio, they also applied a relatively constant percentage of E&G funding to instruction. Recommended tactics for coping with financial pressures include restricting enrollment, evaluating programs based on delivery cost, and rethinking the mission of the community college. (MAB)



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Changing Times, Changing Mission?

Submitted by

Bernard H. Levin, James R. Perkins, Darrel A. Clowes

Presented at the 21st Annual Conference of the Southeastern Association for Community College Research,

Orlando Fl,

August 4, 1992

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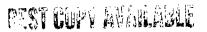
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Changing Times, Changing Mission? Bernard H. Levin², James R. Perkins³, and Darrel A. Clowes⁴

Abstract

Throughout the southeast, community colleges have been facing significant shifts in both enrollment and funding patterns. This paper examines some relationships between these shifts and indices of mission. Data from the Virginia Community College System for the years 1980, 1985, and 1990 were analyzed. The data include numbers of faculty, staff, students, and dollars, both aggregated and disaggregated for the 23 VCCS colleges.

"Public education is in the midst of a financial crisis" (Lombardi, 1973, vii). This quotation from the Preface to Managing Finances in Community Colleges underscores the ongoing dilemma of financing America's newest addition to the public higher education system: the community college. Demands for expanded service and mission have regularly been countered by reluctance to expand or even continue existing commitments of state and local resources while



Levin, Perkins & Clowes, p. 2 federal resource commitments have been increasingly constrained.

This pressure was felt as the rapid expansion of higher education driven by the social imperatives of the 1960's ebbed and was replaced with the cautious policies of the Vietnam- and Watergate-dominated 1970's. The academy's response to these pressures is well documented in, for example, Lombardi (1973), Wattenbarger and Cage, 1974, Garms (1976), and Wattenbarger and Starnes (1976).

The 1980's and 1990's have seen the pendulum swing even further from human development toward economic development as the focal emphasis, the raison d'etre for public higher education in the United States, and especially so for the community colleges (Levin & Clowes, in press). A declining national economy and (not unrelated) increasing calls for (ac)countability have resulted in a reduction in real dollars for instruction in higher education, and especially for community colleges, the most vulnerable sector of higher education.

In the summary of the 14 July 1992 meeting of the State Council of Higher Education for Virginia (<u>Council Notes</u>, 1992) is the following statement:

The Council was told that higher education's portion of the state's total general fund budget has declined from 15.3 percent in 1980-82 to 12 percent for 1992-94.... Tuition and fee costs at Virginia's public colleges and universities have risen an average of 10 percent in each of the last four years.... The community college costs are in the top third nationwide(p. 1).



Levin, Perkins & Clowes, p. 3

Finley's (1992) analysis of state "Education and General Programs" actual dollars appropriated for Virginia public colleges and universities is also instructive. For example, while the 1988-89 appropriation was \$782 million, by 1992-93 the appropriation had dropped about 8% to \$720 million dollars (p. 3).

With regard to Virginia's community colleges, Pierce (1991, p. 3) notes that "The VCCS finds itself today, for a variety of reasons, in a situation of significant overextension relative to the enrollment levels it is serving." His response to this situation focussed on system management contingencies which limited enrollment growth.

Increased financial pressure affects individual institutions. Indeed, some writers (e.g., Hyatt, Shulman & Santiago, 1984; Richardson & Leslie, 1980; Breneman & Nelson (1981)) have noted that financial constraints are likely to have effects on institutional practices, priorities, budgeting patterns, and even the teaching-learning transaction.

The present study examines the behavior of individual colleges within the Virginia Community College System (VCCS), a highly centralized state-funded community college system. The key question is the extent to which changes in finances led community college leaders to change the patterns of spending within the institutions.



Levin, Perkins & Clowes, p. 4

The data we present below are 1980 through 1990 audited operating expenditures, enrollment, and staffing for each of the twenty-three colleges in the Virginia Community College System (VCCS). The VCCS data were selected because they were accessible, they reflect a common budgeting and reporting system thus increasing the comparability of data across colleges), they operate within a common set of external and internal constraints, and they represent a broad range of institutional configurations from single to multicampus and from less than 300 to more than 17,000 FTES.

Hyatt, Shulman, and Santiago (1984) discussed a variety of specific tactics by which presidents might reallocate funds within their budgets in order to compensate for limited appropriations. They included reduction in support units, reductions in library services, and deferral of plant maintenance, among others. We present data below which address these tactics and others as they have been applied by VCCS presidents.

Richardson and Leslie (1980) made eight recommendations for aligning institutional aspirations and available resources. Two involved refining mission from the "all things to all people" model. This the VCCS chose not to do; in 1988 it reaffirmed a comprehensive mission for the VCCS colleges (Virginia Community College System, 1988). Two of Richardson and Leslie's recommendations called for study of and revisions in the credithour based funding strategy. The VCCS and the State Council for



Levin, Perkins & Clowes, p. 5 Higher Education in Virginia (SCHEV) have discussed doing a study but have neither conducted a study nor modified the credit-hour based funding strategy. Virginia also has not acted on a fifth recommendation of Richardson and Leslie, the development of regional programs supported by residence halls. The sixth (cost analysis of programs) and seventh (outcomes assessment) have both been implemented. Richardson and Leslie's final recommendation, to limit programs and services to those for whom adequate funding is provided, has been adopted by default rather than by explicit policy.

It is unclear how cost analysis and outcomes assessment have influenced the decisions of VCCs presidents as they considered limiting programs and services. Nonetheless, programs and services indeed have been limited as revealed by the expenditure patterns of the institutions.

Thus the VCCS has chosen to continue to operate with a declared comprehensive mission, a credit-hour funding formula, and the existing teaching-learning structure. The primary response to reduced state resources has been the limiting of services and programs, increasing student/faculty ratios, and increased student tuition.

There is a variety of ways to measure the financial pressure on institutions. We think that one of the better global measures is



Levin, Perkins & Clowes, p. 6 change in "Education and General" expenditures per FTES.

In the VCCS, from 1981-82 to 1990-91 there was a 55% increase in the ratio of "Education and General" (E&G) expenditures to FTES (Table 1). It is instructive to put that increase into a perspective which takes inflation into account. According to data assembled and analyzed by the VCCS Budget Office, "Overall, total funds appropriated for FY80 operations amounted to \$113.7 million. These dollars inflated to current values equals approximately \$251.5 million. Actual appropriations for FY90 amounted to \$250.3 million, or \$1.2 million less than the FY80 levels." (Virginia Community College System Budget Office, 1991, p. 1).

During the decade under examination, one tactic employed by the VCCS is clear -- raise tuition. VCCS tuition is set by the System, and individual colleges cannot deviate from whatever the System tuition is for a given year. While FTES increased 17%, tuition revenue in actual dollars increased 104%, and tuition revenue as a percentage of actual E&G expenditure increased from 22% to 24%.

Community colleges in the VCCS are institutions attempting to maintain traditional operations during a period of reduced financing. Since each of the colleges must function within the constraints of the centralized VCCS, many of the options proposed in the literature for coping with retrenchment are not available to the college presidents. The institutions are left with a limited



Levin, Perkins & Clowes, p. 7 array of coping mechanisms. The presidents may effect internal economies of maintenance, administration, and support services, or they may modify the character of the learning-teaching transaction by changing the mix of full- and part-time instructors, increasing average class size, and reducing offerings with low enrollments. The choices made by college presidents are reflected in the changes in expenditure patterns over time. The remainder of the paper describes quantitative changes in the VCCS colleges from 1980-81 through 1990-91 and the coping strategies which our data indicate the presidents selected.

In the following discussion of college finances, it is important to note that all calculations are based on actual dollars, uncorrected for inflation. Further, you will notice that in some cases we will refer to 1981-82 data and in others the earliest data are 1980-81. This difference is solely based on present data availability. The error introduced by this temporal instability is probably low -- we are aware of no significant shifts in policy, funding, or enrollment in the VCCS between 1980-81 and 1981-82.

Several phenomena were obvious as we examined the data across college groups. For example, for each of the years we examined, the percentage of expenditures allocated to instruction (primarily faculty salaries, instructional equipment, supplies) was positively correlated with FTES (Table 2). Also, for each of the years, FTES was negatively correlated with the percentage of expenditures



Levin, Perkins & Clowes, p. 8 allocated to institutional support. We believe that these patterns ref¹ect an economy of scale -- smaller institutions must spend a disproportionate amount of their budgets on costs which have fixed or relatively inflexible minima. Among many other examples of these costs are executive management and financial and administrative service positions, including institutional research and compliance reporting to external agencies.

During the period 1981-82 through 1985-86, FTES dropped significantly (Table 1). The dip in enrollment (1985-86) was accompanied by relatively stable percentage distribution of budget (Table 3). The largest percentage increase in 1985-86 was a slight change in percentage of E&G expenditure devoted to academic support. That increase was accompanied by a nearly identical decrease in percentage of E&G expenditure assigned to operations and maintenance of plant.

During the period 1985-86 through 1990-91, FTES increased significantly beyond proportional increases in total E&G expenditures (Table 1). Presidents continued to raid the operations and maintenance of plant category, and also reduced academic support. Increased percentages of E&G expenditures went to institutional support, and to instruction. Thus presidents protected their own, as well as (though to a lesser extent) faculty.



Levin, Perkins & Clowes, p. 9

One example of the reduction in academic support is that during the past decade there was an 21% decrease in the number of professional librarians employed in the VCCS (Table 4). Similarly, expenditures for books and periodicals per FTES rose only 25% from 1981-82 to 1990-92. (Table 5). In fact, there has been a 10% decline in actual dollars per FTES spent for books and periodicals between 1985-86 and 1990-92. Obviously, library expenditures have fallen well below what is necessary for maintenance of 1981-82 effort.

Another indication that presidents are economizing on academic support is expenditures per FTES on instructional equipment. (Table 6). The increase in this item from 1981-82 to 1985-86 was 142%. However, from 1985-86 to 1990-91 there was a 53% decline in per FTES expenditures in instructional equipment. We see this as evidence that in 1985-86 the presidents perceived a serious unmet need for instructional equipment, and tried to meet that need. However, by 1990-91, rather than trying to maintain educational quality, they were reduced to trying to keep the doors open.

An equally foreboding means of economizing is manifest in our data. While in 1981-82 the colleges averaged 10% of expenditures allocated to operations and maintenance of plant, 1985-86 saw a drop to 9%, and by 1990-91 to 8%. Of the 23 vccs colleges, 19 showed a decline in percentage allocated to operations and maintenance from 1981-82 to 1990-91. This "economizing" is likely to lead to very high long term costs, as in our judgment the change



Levin, Perkins & Clowes, p.10 reflects reduced maintenance more than increased operating efficiency.

One area of expenditures stood out as unrelated to year and to institutional size. The money spent on student services averaged about 8%; the range across all 23 institutions and three time periods was only from 7% to 10%, with little indication of systematic variation. Although student services expenditures as a percentage of E&G remained consistent across time and colleges, the number of professional counselors employed by VCCS has declined markedly (Table 7). We suspect that one reason for this is increased dependence on paraprofessional and clerical staff for functions previously performed by professional counselors.

Another way to look at how presidents have addressed the financial crunch is to examine staff employed per 1000 FTES (Table 8). For every category of staff (classified, administrative, professional counselors, professional librarians) there has been a marked decline in the employee/FTES ratio from 1980-81 to 1990-91.

The pattern of faculty utilization is also of interest, since faculty salaries account for a large portion of any college's budget. One means by which presidents might reduce dollars spent for instruction is to depend more on part-time faculty, whose salaries are much lower than full-time faculty. The former chancellor of the VCCS addressed this issue (Pierce, 1991). "The



Levin, Perkins & Clowes, p.11

VCCS has introduced a standard ratio of full-time to part-time faculty because the SCHEV guidelines do not speak to this important issue. The standard ratio is 75% full-time to 25% part-time" (p. 1). That laudable "standard" has not been met in many years (if ever), and reality has diverged even further from the standard over the last decade (Table 9).

Perhaps even more serious in terms of student-faculty relationships. there has been a dramatic increase student/faculty ratio since 1985-86 (Table 10). As the studentfaculty ratio increases, the likelihood of meeting the specialized needs of disadvantaged, minority, and returning students declines. In addition, clearly differentiating the community college culture and the public's perception of the community college versus the senior institutions becomes more problematic as the student-faculty ratio increases.

Summary and Discussion

To compensate for reduced resources, VCCS presidents have used a fairly broad range of tactics, including

- 1. staff reductions at all levels, both absolute and as a ratio with FTES.
- 2. Increased utilization of part-time faculty.
- 3. Increased student/faculty ratio.
- 4. Reduced expenditures for academic support, e.g., for



Levin, Perkins & Clowes, p.12

instructional equipment and for books and periodicals.

5. Reduced expenditure for operation and maintenance.

Although presidents economized, at least in the short run, on the above, they did try to protect funding for direct services to students. For example, support for student services remained relatively constant as a percentage of overall E&G expenditures during the decade under study. Further, institutional support has also remained relatively constant within institutions across time. Economies of scale are evident in this expenditure category, with larger colleges consistently spending much less on institutional support, as a percentage of E&G.

Probably most important as an indicator of presidential intent is expenditure on instruction. Although presidents did increase the student/faculty ratio significantly, over the course of the decade they have applied a relatively constant percentage of E&G to instruction. Here, too, economies of scale are evident; throughout the period under study, large institutions spent a larger percentage of their E&G money on instruction.

The consistent picture we see in the VCCS is that of colleges under economic siege. In every support area, and even in the mission-critical areas of instruction and student services, the financial patterns and prospects are downbeat. It is clear to us that the colleges do not have, for much of the past decade have not had, and



Levin, Perkins & Clowes, p.13 are unlikely in the near future to receive, enough money to maintain even the 1980 interpretations of mission.

We read into the available data that presidents, while still seeking new means of getting more bucks and more bang for their bucks, perceive that they are on a downhill slide. We agree. The question is what should be done to halt the slide, or at least assuage its sequelae, i.e., damage control.

We agree that Pierce, in ordering that the VCCS colleges reduce access through enrollment restriction, was correct. However, he did not go far enough. We believe at least two other tactics must be addressed in a formal, systematic manner.

The first tactic we recommend is the evaluation of programs based on cost of delivery, rather than primarily on perceived need. We believe that until there is either a dramatic improvement or a dramatic decline in the economy, the enrollment pressure for an increasing number of programs will be nearly insatiable, e.g., in health care, developmental, and transfer. Health care programs are notoriously expensive to deliver. Although presidents have increasingly sought (and to some extent, received) external funding for health care programs, they remain a significant drain in the budgets of many colleges. Developmental studies is also notoriously expensive. In addition, the data supporting effectiveness of developmental studies programs are weak at best. On the other hand,



Levin, Perkins & Clowes, p.14 transfer programs can usually be made profitable. Thus, on the basis of cost, colleges must lean even more toward emphasizing transfer programs.

A second, and probably more important tactic which we believe must be applied, is to re-think the mission of the community college. We suspect that the substance of the written mission statement of most community colleges has not changed since they were founded. Although there have been occasional minor revisions, e.g., to mention diversity and multiculturalism, the typical community college mission remains sufficiently broad to authorize every conceivable kind and scope of training, education, and service. This "business as usual" approach to mission can no longer be tolerated in a time of declining finances. In the current economic setting, "business as usual" is likely to destroy college quality, college culture, and college physical plant.

We believe that most community colleges, like those in the VCCS, have already chosen (overtly or covertly) to reduce access and reduce quality in order to maintain mission. Colleges must now, most for the first time, seriously address mission. Whether they choose to focus on a junior college model, a vocational training model, or some other model, they must focus on doing less, doing it for fewer students, but doing it better than they have been doing. The alternatives are even less palatable.



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Tables

- 1. FTES, Tuition Revenue, and E&G Expenditures
- 2. Correlations between E&G Category Percentages and FTES
- 3. E&G Category Percentages
- 4. Professional Librarians Employed
- 5. Expenditures for Books and Periodicals per FTES6. Expenditures for Instructional Equipment per FTES
- 7. Professional Counselors Employed
- 8. VCCS Staff per 1000 FTES
- 9. Percentage Part-time Faculty
- 10. Student-Faculty Ratios
- 1 We are grateful to Mike Beadles and Earl McHewitt of the VCCS Systems Office for locating and copying the data we needed.
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- 3 President, Blue Ridge Community College
- Associate Professor, Virginia Tech

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FTES, TUITION REVENUE, AND E&G EXPENDITURES TABLE

1990-1991	71,933.00	3,453.69	60,716,140.00	24%
	↔	↔	↔	
1985-1986	51,384.00	3,536.28	41,042,970.00	23%
	↔	↔	↔	
1981-1982	61,428.00	2,221.55	29,715,795.00	22%
	⇔	₩	⇔	
	VCCS FTES	VCCS Expend/FTES	Tuition Revenue	Tuition Revenue as a % of E&G Expenditures

20

CORRELATIONS BETWEEN E&G CATEGOPY PERCENTAGES AND FTES TABLE II

Operation and Maintenance of Plant	r =.00	r =-,19	r =18
Institutional Support	r =.27	r =.22	r =.22
Student Services	r =16	r=1	r =21
Academic Support	r =55	r =48	r =54
Instruction	r =.38	r =.42	r =.51
Year	1981-82	1985-86	1990-91

54

TABLE III

ERIC Full Text Provided by ERIC

E & G CATEGORY PERCENTAGES

Year	Instruction	Academic Support	Student Services	Institutional Support	Operation and Maintenance of Plant
1981-82	52.1%	13.1%	8.0%	16.6%	10.1%
1985-86	52.4%	14.4%	7.8%	16.5%	8.7%
1990-91	54.6%	11.8%	8.1%	17.2%	8.1%
				;	

TABLE IV

PROFESSIONAL LIBRARIANS EMPLOYED YEAR TOTAL VCCS

1980-81

99

1985-86

54

1990-91

52

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EXPENDITURES FOR BOOKS AND PERIODICALS PER FTES **TABLE V**

YEAR

AMOUNT*

1981-82

\$16.17

1985-86

\$22.29

1990-91

\$20.15

* not adjusted for inflation

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30

TABLE VI

ERIC Full Text Provided by ERIC

EXPENDITURES FOR INSTRUCTIONAL EQUIPMENT PER FTES

YEAR

AMOUNT*

1981-82

\$133.43

\$55.14

1985-86

1990-91

\$62.95

* not adjusted for inflation

TABLE VII

ERIC Full Task Provided by ERIC

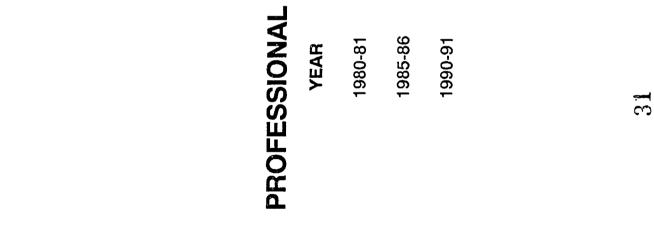
PROFESSIONAL COUNSELORS EMPLOYED

NUMBER

155

148

138



ERIC *Full Taxt Provided by ERIC

TABLE VIII VCCS STAFF PER 1000 FTES

	1980-81	1985-86	1990-91
FTE Classified Employees	33	37	27
Administrative Staff	9	9	Ŋ
Professional Counselors	က	က	7
Professional Librarians	Γ	-	0.7

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34

TABLE IX

PERCENTAGE PART-TIME FACULTY

PERCENTAGE YEAR

1980-81

37.9%

1985-86

1990-91

43.9%

46.9%

TABLE X STUDENT-FACULTY RATIOS

YEAR

RATIOS

1980-81

17.8:1

1985-86

1990-91

20.2:1

16.0:1

C:3

