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ABSTRACT

Materials from Southwestern College, the Chancellor's Office of the California Community Colleges, and the California Research Bureau (CRB) are presented to help community college practitioners calculate curricular costs. First, a set of charts and forms from Southwestern College include the college's definition of curriculum efficiency, explanations of basic funding formulas, data collection forms for calculating course costs and program costs, and sample calculations. Next, the Chancellor's Office publication, "Manager's Handbook: Understanding Funding, Finance, and Budgeting," is presented. The handbook is a compilation of materials covering the history of community college finances in California, Proposition 98, program-based funding, full-time faculty obligation, and district financial accounting. The handbook also includes a discussion of ways to reconcile a projected $400 million shortfall for 1994-95; sections of the California Code of Regulations on credit instruction, credit student services, institutional support, allocation process, and full- and part-time faculty; a chart of accounts; and a glossary. Finally, the CRB Occasional Paper, "Beyond Business as Usual: A Framework and Options for Improving Quality and Containing Costs in California Higher Education," by Kirk L. Knutsen, is presented. The report covers: (1) the history and missions of California public higher education: (2) the challenges provided by enrollment growth, demographic diversity, and financial deficits; (3) principles of higher education finance; (4) national and statewide trends in instructional costs; (5) a framework to explain the causes of cost escalation; (6) options for improving quality and containing costs; and (7) a framework for institutional change and promising examples in other states. (ECC)

MEASURING THE COSTS OF THE CURRICULUM

Presented at:

Community College League of California, 1993

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Southwestern College

Is This A Revenue or Expenditure Decision?

1 Student	=	Revenue, FTES (Example: Reduce class max is a reduction in revenue)
1 Hour Lec/Lab	=	Expenditure (Example: Increase credit units of a course is an increase in expenditure)

Measuring the Costs of Curriculum

Southwestern College defines curriculum efficiency as how to do more with less.

Realities that are requiring measuring the costs of curriculum:

1. Financial resources - shrinking annual operating budget and capital outlay.
2. Learning resources - accelerating technical innovation requiring an accelerating equipment replacement cycle.
3. Shifting enrollment patterns and decreasing student population under-cap.
4. Meeting tenured faculty workloads and increasing efficiency.
5. Enhancing the quality of the curriculum and maximizing student retention.
6. Maintaining a positive image of the college at a time of increased student fees.

Workbook includes:

1. Basic Formulas
   - FTES Full-time equivalent students.
   - FTFE Full-time equivalent faculty.
2. Estimating Course Costs
3. Estimating Program Costs
4. Manager's Handbook: Understanding Funding, Finance, and Budgeting by Chancellor's Office of the California Community College
5. Beyond Business as Usual: A Framework and Options for Improving and Containing Costs in California Higher Education by Kirk L. Knutsen

Basic Formulas

What is Program Based Funding?

The major components of program-based funding are shown in the figure below. It is important to remember that program-based funding is designed as a revenue-allocation method.

Categories
⇩
Standards
⇩
Target Allocation
⇩
Standard Allocation Minimum Funding Level
↘ ↙
Equalization

Categories of Operation and Workload Measures

The AB 3409 Task Force was directed to develop a financing mechanism "which would differentiate among the major categories of operating community colleges..."It proposed five major program categories that ultimately were prescribed by AB 1725:
⇩

How to compute district's apportionment?

Computing a district's apportionment revenue under program-based funding is a relatively complex procedure. This attempts to give an insight into that procedure in a manner which will be understandable to someone besides a nuclear physicist. It will not be exact but will allow for approximating revenue in a manner which will be adequate for most decision making activities. Under program-based funding, a distict's apportionment revenue is computed from the following: (Manager's Handbook)

1. Prior Year Apportionment Revenue (base revenue) There are four areas where a district's base revenue may be augmented by additional funds.
2. COLA = Cost of Living Adjustment
3. Program Improvement/Equalization=Equalization is first priority among districts.
4. Growth/Decline/Restoration = computed in the five categories.
5. Stability (phases impact of decline)=loss of districts base revenue spread new 3 years (loss of FTES).

Category	Workload Measure
Instruction (Credit)	Full-Time Equivalent Students (FTES)
Instructional Services (Credit)	FTES
Student Services (Credit)	Credit Headcount
Maintenance & Operations	Square Feet (Owned & Leased)
Institutional Support	Percentage of Total Computed Standard Allocation

Basic Formulas

FTES = Full-Time Equivalent Students
FTES = Replaced ADA in Program Based Funding

FTES can be generated under four different formulas:

1. Positive Attendance (ASCH)
2. Census Week (WSCH)
3. Daily Census (DSCH)
4. Independent Study/Work Experience

Census Week - Most common, WSCH = Weekly Student Contact Hours

Classes which meet on a regular basis each week for a full semester or quarter are counted for FTES under the Census Week procedure. Under the Census Week procedure, the students are counted based on enrollment and not based on actual attendance. The count is taken on the Monday which is closest to 20% of the way through the semester or quarter. In a semester operation this usually occurs during the 4th week.

Because census weeks are introduced in this procedure, it is necessary to find how many weeks occur in a semester. Since there are 175 days of instruction in a year and 5 days of instruction in each week, by dividing 175 by 5 we find there are 35 weeks in a school year. Since there are 2 semesters, we divide 35 by 2 and find there are 17.5 weeks in each semester.

Therefore, in a semester operation, to compute FTES under the census week procedure WSCH, do the following:

1. Find the number of hours of enrollment during the census week.
2. Multiply (1) by 17.5. This gives the hours of enrollment for the full semester.
3. To obtain the number of FTES, divide (2) by 525.

Example: Suppose a class meets 3 hours per week during the fall semester and has 40 enrollees during the census week. To find the FTES follow the 3 steps above:

1. 40 enrollees x 3 hours = 120 hours of enrollment in the census week.
2. 120 x 17.5 = 2100 hours of enrollment for the semester.
3. 2100/525 = 4 FTES.

In this example, assuming it is a credit class, the revenue generated would be approximately 4 times $2,700. which is $10,800.

(Note: For 1993-94, the average growth revenue per credit FTES = $2,700.00 calculated for the state.)

Basic Formulas

FTES - Credit Courses Computation
(Full-Time Equivalent Students)

$$*FTES = \frac{WSCH \times 17.5}{525} + \frac{DSCH}{525} + \frac{ASCH}{525}$$

*Based on census data

$WSCH_{CENSUS}$ = Enrollment x Hours = Subtotal A
Subtotal A x 17.5 = Subtotal B
Subtotal B ÷ 525 = FTES

$DSCH_{CENSUS}$ Enrollment x Hours = Subtotal A
Subtotal A x Days = Subtotal B
Subtotal B ÷ 525 = FTES

$ASCH_{CENSUS}$ Total Hours ÷ 525 = FTES

Note: Independent Study/Work Experience
1 Hour = 1 Credit
Compute FTES as either WSCH or DSCH

SCH = Total Student Contact Hours

SCH = WSCH + DSCH + ASCH

FTES - Credit Course Funding

For a district with one college and more than 10,000 credit FTES and for a college in a multi-college district where the college has more than 5,000 credit FTES, the rates for growth in each category are shown below:

Instruction:	$1,868.62 per credit FTES.
Instructional Services:	$ 117.87 per credit FTES.
Student Services:	$ 221.08 per credit headcount.
	$ 113.78 per continuing headcount.

In each case, the amount shown is increased by 16.55% to account for the indirect overhead costs which are included in the Institutional Support category. Single college districts with less than 10,000 credit FTES and colleges in a multi-college district where the college has less than 5,000 credit FTES are assigned a scale factor which increases the rates listed above. As a district or college approaches the 10,000 or 5,000 FTES plateau, the scale factor becomes smaller and at the plateau the scale factor becomes one. Exact scale factors for various sized colleges and districts are shown elsewhere in this booklet. We recommend you check your individual district for exact figures to use in computing funds.

Basic Formula

FTEF = Full-Time Equivalent Faculty
or
FTIE = Full-Time Instructor Equivalent
(local use by some colleges)

In computing the percentage of hours of credit instruction taught by full-time instructors, the following rules shall be applied. (Title V, 53310)

A. Contract Load = 15 LHE
LHE = Lecture Hour Equivalent
Lab x __% LHE = LHE Conversion

B. Released/Reassigned Time = LHE of Contract Load counted as if teaching.

C. Team Teaching = __% LHE of Contract Load

D. Unpaid Leave = Counted as if the instructor was teaching full-time.

E. Replacement faculty = deducted from calculation of FTEF.

F. Teaching by Others = counted in FTEF (counselors, librarians, classified or administrators)

G. Part-time = calculated same as full-time.

H. Overload = calculated with part-time faculty.

I. Sabbatical = counted as if the instructor was teaching full-time.

FTEF = Computation for One Semester.

ADD = Contract Lecture
Overload Lecture
Reassigned Lecture
Banked Lecture
+Part-time Lecture
Subtotal A

ADD = Contract Lab
Overload Lab
Reassigned Lab
Banked Lab
Part-time Lab
Total x __% = Subtotal B

$$FTEF = \frac{\text{Subtotal A + Subtotal B}}{15}$$

FTEF = All Faculty
(Full-time, Part-time and teaching counselors, librarians, classified or administrators).

Estimating Course Costs

Direct Costs

Accompanist/Models _____

Certificated Travel _____

Classified Staff _____
- * technician
- * tutors
- * aids

Consortium Costs _____

Consultants/Contract Services _____

Dues/Membership/Entry Fees _____

Duplicating _____

Equipment Rental _____

Field Trips/Tournaments _____

Film Rental _____

Faculty _____
- * full-time
- * part-time
- * extra pay-stipends
- * Load
- * Re-assigned time
- * FTES

Faculty Substitutes _____

Hospitality _____

Instructional Equipment _____
- * capital purchases
- * equipment replacement
- * facilities
- * remodeling special

Instructional Supplies _____

Laundry/Dry Cleaning _____

Learning Resources (LRC/Library) _____
- * print/non-print

Maintenance Contracts/Software License Agreements/Vendor Repair Contracts _____

Mileage _____

Off-campus Facility Use Costs _____

Specialized Department/ Divisional Practices _____

Student Insurance (special rider) _____

Student Worker-District _____

Telephone, special _____

Subtotal A _____

* actual expenditures **not** budgeted

Estimating Course Costs

Indirect Costs			
Administration	_____	Security	_____
Administrative Affairs (Personnel)	_____	Student Services	_____
Capital Equipment	_____	Utilities	_____
Classified Staff	_____	Others	_____
Computer Systems & Services	_____		_____
Facilities	_____		_____
Fiscal Affairs	_____		_____
Grounds	_____		_____
Insurance	_____		_____
Legal Services	_____		_____
Library/LRC	_____	Subtotal B	_____
Maintenance	_____	* Campus-wide Indirect Costs = Percent of Total Operating Costs Campus-Wide. Overhead Costs should be agreed upon by administration prior to calculation of course or program of study costs.	
Negotiations	_____		
Printing/Duplicating/Mailing	_____		

Estimating Course Costs

Hidden Costs			
Building-Remodeling	_____	Non-competitive Bidding Processes (such as staff doctors)	_____
Cancellation of Classes	_____	Number of Credit Units Awarded for a Course	_____
Class Maximums, size	_____	Obsolete Programs/Curricula	_____
Clerical Support of Faculty	_____	Prerequisites, Incorrect or Unnecessary	_____
Computer Services-Systems Programming Changes ($1,000)	_____	Recruitment/Hiring Process, Faculty (Bad Decisions - 20 yr. cost)	_____
Course Scheduling	_____	Schedule Changes after Printing	_____
Duplication of Programs/Curricula	_____	Staff Retention of Ineffective Personnel	_____
Equipment Usage/Duplication	_____	Student Attrition/Retention	_____
Facilities Usage/Duplication	_____	Unnecessary Administrative Functions (dept./division practices)	_____
Fiefdomes-Territorialism	_____	Others	_____
Faculty Travel, other	_____		_____
In-Service & Lack of In-Service	_____	Subtotal C	_____
Jury Duty	_____	* Hidden Costs may not equal an actual dollar amount but need to be evaluated.	
Losses of Equipment & Supplies (theft, mishandling inventory)	_____		

Estimating Course Costs - Change in Credit Units

Art 100 = Lecture Course
General Education 3 Credit Units
Art History 3 hrs. Lec
Course Max = 45

3 Hrs. Lect. **Increased to** 4 Hrs. Lect.

Revenue

FTES Under Census week procedure

45	Max	45
3	x hrs./wk.	x 4
135	hrs. of enrollment in census week	180
17.5	x wks/sem.	x 17.5
2,362.5	hrs. of enrollment/semester	3,150

2,362.5 ÷ 525 = 4.5 FTES
$2,700 x 4.5 = $12,150

3,150 ÷ 525 = 6.0 FTES
$2,700 x 6.0 = $16,200

Expenditure (Faculty)

3 Lect. Hrs. ÷ 15 Lec. Hrs = 20%

4 Lect. Hrs. ÷ 15 = 26.7%

$20,000	(Aver. Fac. Salary ÷ 2)	$20,000
.20	x % of Load	.267
$4,000	Expenditure	$5,340

True Income

$12,150	Revenue	$16,200
- 4,000	- Expenditure	- 5,340
$8,150	True Income	$10,860

Art 101 = Lec/Lab Course
Ceramics 3 Credit Units
2 Hr. Lect./4 Hr. Lab
Course Max = 30

2 Hrs. Lect./4Hrs Lab **Increased to** 3 Hrs. Lect./3 Hrs. Lab

4	Lab Hrs.	3
x .80	x Lab Hrs. % of Lect. Hrs.	x .80
3.2	LHE	2.4
+ 2.0	+ Lect. Hrs.	+ 3.0
5.2	Total LHE/wk.	5.4

Revenue

FTES Under Census week procedure

30	Max	30
x 5.2	x LHE/wk.	x 5.4
156	LHE of enrollment in census week	162
x 17.5	x wks./sem.	x 17.5
2,835	LHE of enrollment/semester	2,835

2,730 ÷ 525 = 5.2 FTES
$2,700 x 5.2 = $14,040

2,835 ÷ 525 = 5.4 FTES
$2,700 x 5.4 = $14,580

Expenditure (Faculty)

5.2 LHE ÷ 15 Lect Hrs. = 34.7%

5.4 LHE ÷ 15 Lect Hrs. = 36%

$20,000	(Aver. Fac. Salary ÷ 2)	$20,000
.347	x % of Load	.36
$6,940	Expenditure	$7,200

True Income

$14,040	Revenue	$14,580
- 6,940	- Expenditure	- 7,200
$7,380	True Income	$7,380

Estimating Course Costs - Change in Class Max, Lecture

Art 100 = Lecture Course
General Education 3 Credit Units
Art History 3 hrs. Lec

45 Max decrease to **35 Max**

Revenue

45		35
	FTES Under Census week procedure	
45	Max	35
3	x hrs./wk.	x 3
135	hrs. of enrollment in census week	105
17.5	x wks/sem.	x 17.5
2,362.5	hrs. of enrollment/semester	1,837.5

2,362.5 ÷ 525 = 4.5 FTES
$2,700 x 4.5 = $12,150

1,837.5 ÷ 525 = 3.5 FTES
$2,700 x 3.5 = $9,450

Expenditure

$20,000	3 Lec. Hrs. ÷ 15 Lec. Hrs = 20% (Aver. Fac. Salary ÷ 2)	$20,000
.20	x % of Load	.20
$4,000	Expenditure	$4,000

True Income

$12,150	Revenue	$9,450
- 4,000	- Expenditure	-4,000
$8,150	True Income	$5,450

Art 100 = Lecture Course
General Education 4 Credit Units
Art History 3 hrs. Lec

45 Max decrease to **35 Max**

Revenue

45		35
	FTES Under Census week procedure	
45	Max	35
4	x hrs./wk.	x 4
180	hrs. of enrollment in census week	140
17.5	x wks/sem.	x 17.5
3,150	hrs. of enrollment/semester	2,450

3,150. ÷ 525 = 6.0 FTES
$2,700 x 6.0 = $16,200

2,450 ÷ 525 = 4.7 FTES
$2,700 x 4.7 = $12,690

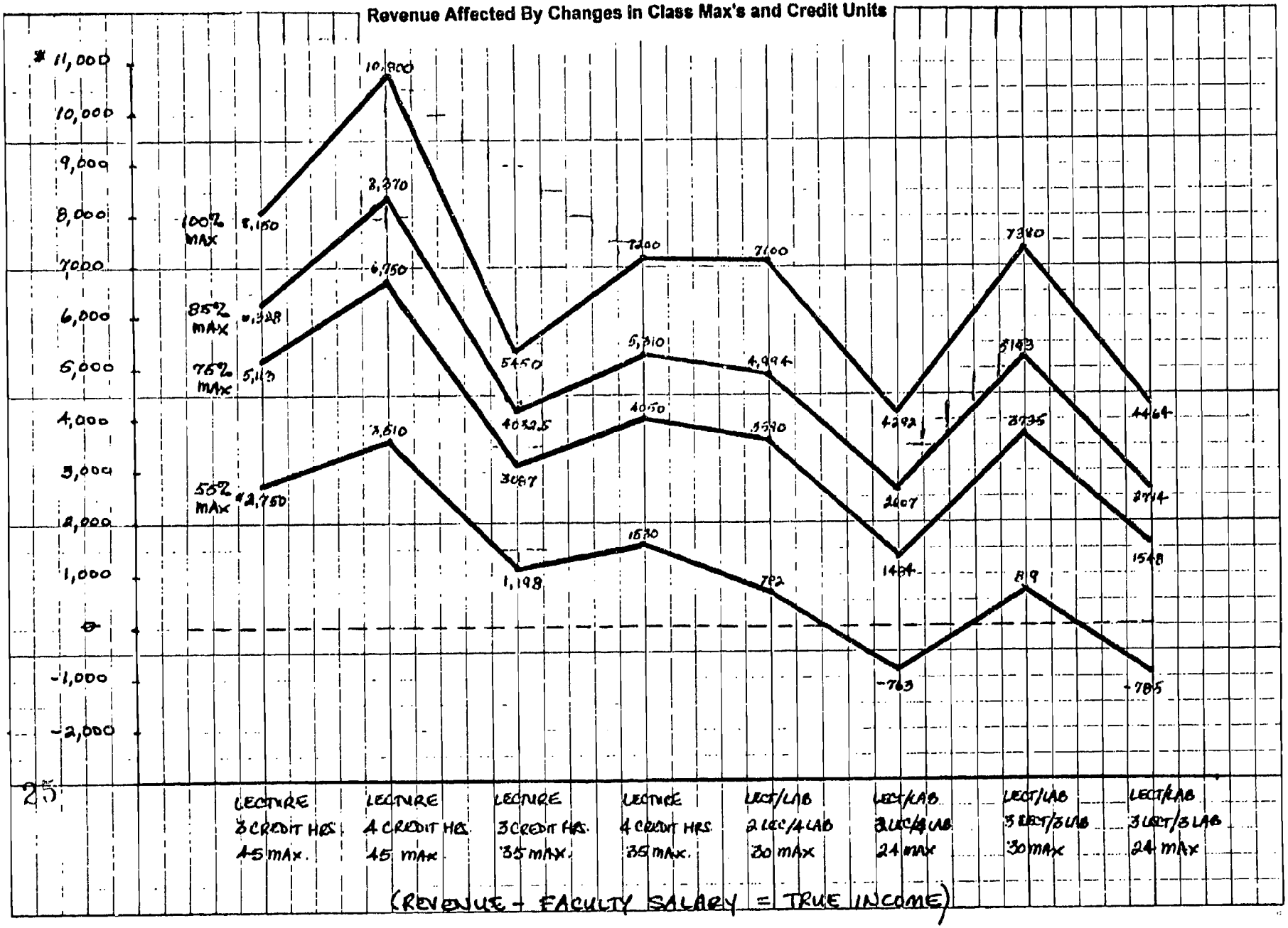
Expenditure

$20,000	4 Lec. Hrs. ÷ 15 Lec. Hrs = 26.7% (Aver. Fac. Salary ÷ 2)	$20,000
.267	x % of Load	.267
$5,340	Expenditure	$5,340

True Income

$16,200	Revenue	$12,690
- 5,340	- Expenditure	- 5,340
$10,860	True Income	$7,350

Revenue Affected By Changes in Class Max's and Credit Units



(REVENUE - FACULTY SALARY = TRUE INCOME)

Estimating Course Costs - Change in Class Max, Lec/Lab

Art 101 Ceramics = Lec/Lab Course, 3 Credit Units, 2 Hr. Lec/4 Hrs. Lab

30 Max	decrease to	24 Max
4	Lab Hrs.	4
x .80	x Lab Hrs. % of Lect. Hrs.	x .80
3.2	LHE	3.2
+ 2.0	+ Lect. Hrs.	+ 2.0
5.2	Total LHE/wk.	5.2

Revenue

	FTES Under Census week procedure	
30	Max	24
x 5.2	x LHE/wk.	x 5.2
156	LHE of enrollment in census week	124.8
x 17.5	x wks./sem.	x 17.5
2,730	LHE of enrollment/semester	2,184

2,730 ÷ 525 = 5.2 FTES
$2,700 x 5.2 = $14,040

2,184 ÷ 525 = 4.16 FTES
$2,700 x 4.16 = $11,232

Expenditure

5.2 LHE ÷ 15 Lect Hrs. = 34.7%

$20,000	(Aver. Fac. Salary ÷ 2)	$20,000
.347	x % of Load	.347
$6,940	Expenditure	$6,940

True Income

$14,040	Revenue	$11,232
- 6,940	- Expenditure	- 6,940
$7,100	True Income	$4,292

Note: The loss of 6 students represented a loss of $2,808 of true income.

Art 101 Ceramics = Lec/Lab Course, 3 Credit Units, 3 Hr. Lec/3 Hrs. Lab

30 Max	decrease to	24 Max
3	Lab Hrs	3
x .80	x Lab Hrs. % of Lect. Hrs.	x .80
2.4	LHE	2.4
+ 3.0	+ Lect. Hrs.	+ 3.0
5.4	Total LHE/wk.	5.4

Revenue

	FTES Under Census week procedure	
30	Max	24
x 5.4	x LHE/wk.	x 5.4
162	LHE of enrollment in census week	129.6
x 17.5	x wks./sem.	x 17.5
2,835	LHE of enrollment/semester	2,268

2,835 ÷ 525 = 5.4 FTES
$2,700 x 5.4 = $14,580

2,268 ÷ 525 = 4.32 FTES
$2,700 x 4.32 = $11,664

Expenditure

5.4 LHE ÷ 15 Lect Hrs. = 36%

$20,000	(Aver. Fac. Salary ÷ 2)	$20,000
.36	x % of Load	.36
$7,200	Expenditure	$7,200

True Income

$14,580	Revenue	$11,664
- 7,200	- Expenditure	- 7,200
$7,380	True Income	$4,464

Note: The loss of 6 students represented a loss of $2,916 of true income.

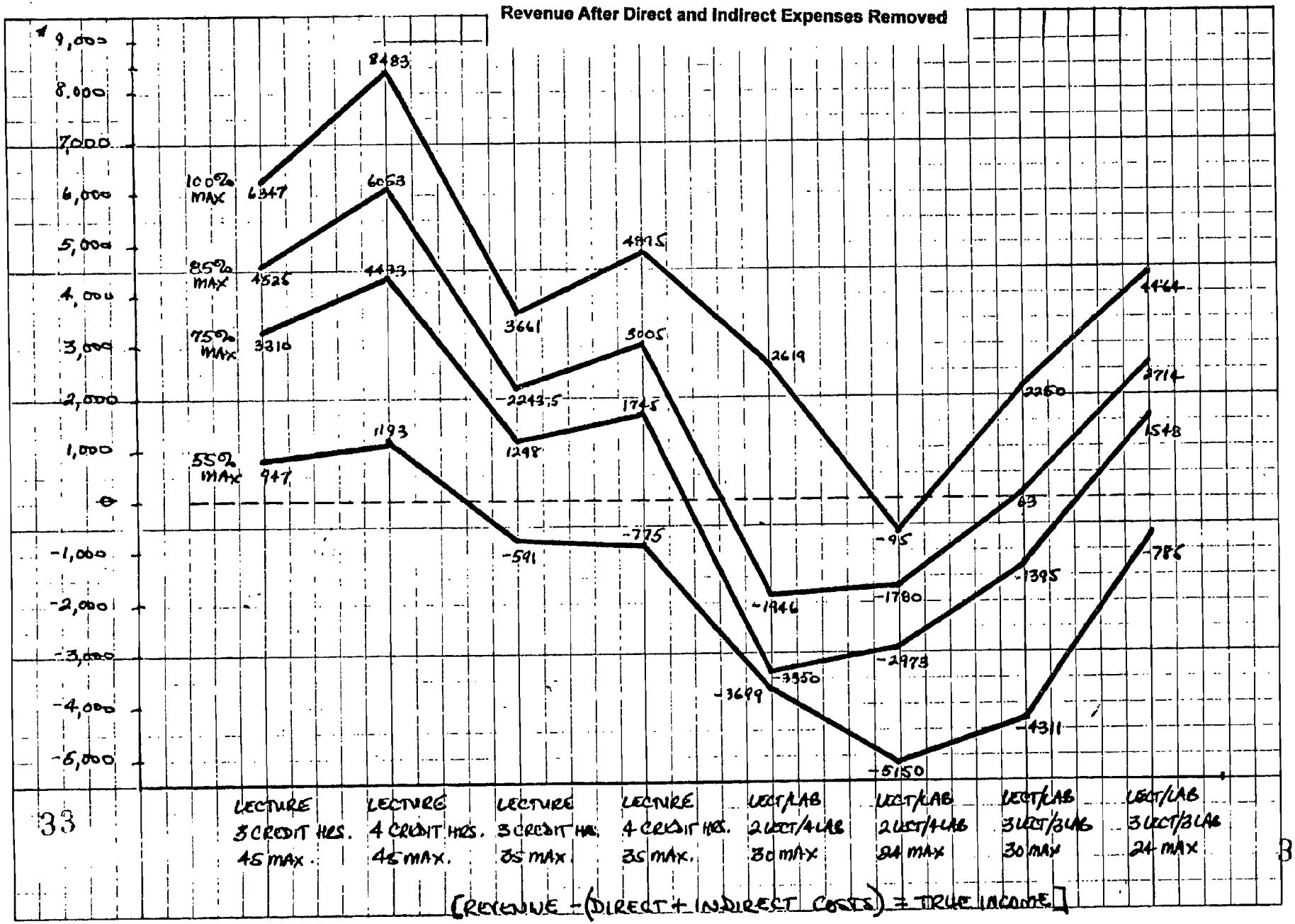
Estimating Course Costs - Full-Time Faculty vs. Part-Time Faculty Teaching

Art 100 =	**Lecture Course**	**Art 101 =**	**Lect/Lab Courses**
General Education	**3 Credit hours**	**Ceramics**	**3 Credit Units**
Art History	**3 Lect. hours**		**2 hr. Lect./4 Hrs. Lab**

Full-Time Faculty	**Part-Time Faculty**		**Full-Time Faculty**	**Part-Time Faculty**
Revenue			**Revenue**	
45	45	Maximum	30	30
x 3	x 3	x LHE/wk	x 5.2	x 5.2
135	135	hrs.of enrollment	156	156
x 17.5	x 17.5	in census wk.	x 17.5	x 17.5
2,362.5	2,363.5	x wks./sem.	2,730	2,730
		hrs.of enrollment/ semester		
2,362.5 ÷ 525 = 4.5 FTES			2,730 ÷ 525 = 5.2 FTES	
$2,700 x 4.5 = $12,150			$2,700 x 5.2 = $14,040	
Expenditure (Faculty Salary)			**Expenditure** (Faculty Salary)	
3 LHE ÷ 15 Lect. Hrs. = 20%	3 Credit U's x 17.5 wks. x $39=		5.2 LHE ÷ 15 Lect. Hrs. = 34.7%	3 Credit U's x 17.5 wks. x $31 =
$20,000	$2,047.50		$20,000	$1,627.5
x .20			x .347	
$ 4,000			$ 6.940	
True Income			**True Income**	
$12,150	$12,150.00		$14,040.00	$14,040.00
- 4,000	- 2,047.50		- 6,940.00	- 1,627.50
$ 8,150	$ 10,102.50		$ 7,100.00	$ 12,412.50

Estimating Direct & Indirect Costs In Relationship to Revenue

Art 100 = Lecture Course Max 45			Art 101 = Studio/Ceramics Max 30	
3 Credit Units	**4 Credit Units**		**2 Lect/4Lab**	**3 Lect/3 lab**
$4,000	$5,300	Faculty Salary	$6,940	$7,200
300	398	Matching Retirement (7½%)	521	540
340	554	Classified Staff/Tech.	1,190	1,445
10	14	Dues/Memberships	10	13
57	57	Duplicating	23	23
100	100	Field Trips	100	100
75	75	Film Rental	45	45
54	18	Instructional Equipment	490	613
12	16	Instructional Supplies	300	375
31	38	District Student Worker	180	225
$4,979	$6,570	Subtotal	$9,799	$10,579
824	1,087	+ Indirect Costs (16.55%)	1,622	1,751
$5,803	$7,657	Total Expenses	$11,421	$12,330
$12,150	$16,200	Revenue	$14,040	$14,580
- 5,803	- 7,657	- Total Expenses	$11,421	$12,330
$ 6,347	$ 8,543	True Income	$ 2,629	$ 2,250



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[REVENUE - (DIRECT + INDIRECT COSTS) = TRUE INCOME]

Estimating Program Costs

Description-Art	Budget 1993-94
Contract Instructors	248,172
Contract Non Teaching	0
Fall Part-time Overload	57,604
Spring Part-time Overload	57,604
Summer Instr	13,263
Instr Aide Contract	29,440
Dist Student Worker	1,198
D.O.E. Student Workers	684
STRS Instructional	20,475
STRS Non-Instructional	0
Pers Instruction	2,503
OASDHI Instruction	2,232
Medicare Instruction	6,326
Medicare Non-Instruction	0
H & W Instructional	30,153
H & W Non-Instructional	0
SUI Instructional	1,222
WCI Instructional	4,245
WCI Non-Instructional	19
Academic A.P.P.L.E.	4,818
Instructional Supplies	9,316
Accompanists/Models	2,024
Certificated Travel	1,085
Field Trips	1,021
Dues & Memberships	478
maintenance Contract	320
Film Rental	999
CB Equip Repl Instructor	0
Total	495,201

Budget for all art programs includes art, photography, graphic design majors.

	Revenue	Expenditure
ART Major		
First Semester		
Art 104 Intro to Art		
Art 100 Drawing I		
Art 101 Design I		
Second Semester		
Art 150 History/Appr. of Art I		
Art 102 Drawing II		
Art 103 Design II		
Third Semester		
Art 151 History/Appr. of Art II		
Select 3 units from electives		
Fourth Semester		
Select 6 units from electives		
Plus Graduation & General Education Requirements		
Electives:		
Art 105 Life Drawing I		
Art 107 Painting I		
Art 110 Sculpture I		
Art 116 Printmaking I		
Art 121 Beginning Photography		
Art 131 Video & Film Making		
Art 157 19th & 20th Century Art		
Art 165 Comp. Art & Graphics I		
Art 170 Ceramics I		
Art 185 Jewelry & Metalwork I		
* **Subtotal**		
* **Each major program of study must be accounted for prior to making budgetary decisions.**		

Estimating Program Costs

Art

		Credit Units
First Semester		
Art 104	Intro to Art	3
Art 100	Drawing I	3
Art 101	Design I	3
Second Semester		
Art 150	History/Appr. of Art I	3
Art 102	Drawing II	3
Art 103	Design II	3
Third Semester		
Art 151	History/Appr. of Art II	3
Select 3 units from electives		3
Fourth Semester		
Select 6 units from electives		6
		30

Plus Graduation & General Education Requirements

Electives:

Art 105	Life Drawing I	3
Art 107	Painting I	3
Art 110	Sculpture I	3
Art 116	Printmaking I	3
Art 121	Beginning Photography	3
Art 131	Video & Film Making	3
Art 157	19th & 20th Century Art	3
Art 165	Comp. Art & Graphics I	3
Art 170	Ceramics I	3
Art 185	Jewelry & Metalwork I	3

ART Major — **Expenditures**

First Semester
Art 104 Intro to Art _____
Art 100 Drawing I _____
Art 101 Design I _____

Second Semester
Art 150 History/Appr. of Art I
Art 102 Drawing II _____
Art 103 Design II _____
_____

Third Semester
Art 151 History/Appr. of Art II _____
Select 3 units from electives _____

Fourth Semester
Select 6 units from electives

Plus Graduation & General Education Requirements

Electives:
Art 105 Life Drawing I _____
Art 107 Painting I _____
Art 110 Sculpture I _____
Art 116 Printmaking I _____
Art 121 Beginning Photography _____
Art 131 Video & Film Making _____
Art 157 19th & 20th Century Art _____
Art 165 Comp. Art & Graphics I _____
Art 170 Ceramics I _____
Art 185 Jewelry & Metalwork I _____

Total _____

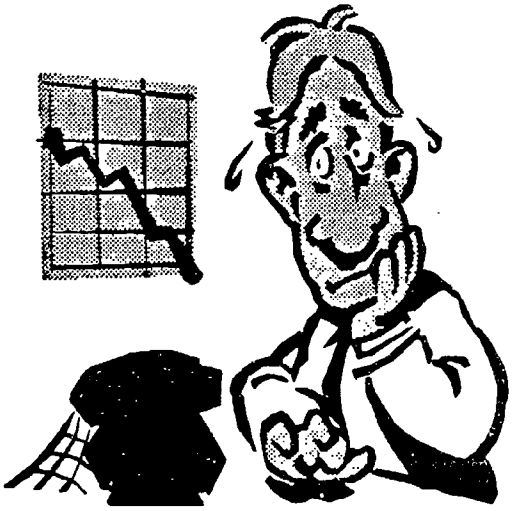
Estimating Program Costs

ART Major	Revenue = FTES
First Semester	
Art 104 Intro to Art	
Art 100 Drawing I	
Art 101 Design I	
Second Semester	
Art 150 History/Appr. of Art I	
Art 102 Drawing II	
Art 103 Design II	
Third Semester	
Art 151 History/Appr. of Art II	
Select 3 units from electives	
Plus Graduation & General Education Requirements	
Electives:	
Art 105 Life Drawing I	
Art 107 Painting I	
Art 110 Sculpture I	
Art 116 Printmaking I	
Art 121 Beginning Photography	
Art 131 Video & Film Making	
Art 157 19th & 20th Century Art	
Art 165 Comp. Art & Graphics I	
Art 170 Ceramics I	
Art 185 Jewelry & Metalwork I	
Total	

ART Major	Expenditures
First Semester	
Art 104 Intro to Art	
Art 100 Drawing I	
Art 101 Design I	
Second Semester	
Art 150 History/Appr. of Art I	
Art 102 Drawing II	
Art 103 Design II	
Third Semester	
Art 151 History/Appr. of Art II	
Select 3 units from electives	
Fourth Semester	
Select 6 units from electives	
Plus Graduation & General Education Requirements	
Electives:	
Art 105 Life Drawing I	
Art 107 Painting I	
Art 110 Sculpture I	
Art 116 Printmaking I	
Art 121 Beginning Photography	
Art 131 Video & Film Making	
Art 157 19th & 20th Century Art	
Art 165 Comp. Art & Graphics I	
Art 170 Ceramics I	
Art 185 Jewelry & Metalwork I	
Total	

Manager's Handbook

Understanding Funding, Finance and Budgeting



September 1993

Chancellor's Office of the California Community Colleges

Understanding Funding, Finance and Budgeting

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Acknowledgements

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Several other individuals helped but special thanks must go to Gary Cook and Roger Merle for their contributions. Their input and editing have immensely improved the quality of this document.

But none of this would have happened without the oversight and secretarial skills of Cynthia McFarland. Her work in bringing this all together and especially in formatting has been invaluable.

Joe Newmyer

HISTORY OF FUNDING
IN THE
CALIFORNIA COMMUNITY COLLEGES

Financial support for the California Community Colleges has evolved over the years, as have the colleges and the purposes they serve. The following brief summary traces the evolution of financial support and support systems for the colleges.

1907 - Postgraduate courses in high school were authorized.

1917 - High school districts of $3 million or more in assessed valuation were permitted to establish junior colleges. Fifteen dollars per unit of ADA (average daily attendance) was apportioned to junior colleges. ADA was computed as for high schools.

1921 - A district tax for junior colleges was authorized. A state fund for junior colleges was established from federal funds. Funds were apportioned on the basis of $2,000 per junior college plus $100 per ADA on an equal matching basis.

1931 - Provisions were made for inter-district contracts. The State Board of Education was required to approve junior college programs before the college was eligible for state support. Payment of tuition for students not residing in a district maintaining a junior college was made mandatory.

1935 - A method was established for measuring junior college ADA as a minimum of 175 days based upon 15 hours per week with no more than one ADA per student.

1937 - A maximum local tax rate of 35 cents was established.

1945 - Provisions were made for counting summer session attendance for apportionment.

1947 - The concept of state support based upon a foundation program was established. There was $2,000 apportionment for each junior college with $90 per ADA as basic state aid. Each district contributed the amount derived from a 20-cent tax against the assessed valuation. If necessary, state equalization aid was added to provide the $200 per ADA level set in the foundation program.

1949 - The unit of junior college ADA was defined as the total number of hours of student attendance divided by 525.

1953 - Separate accounting of the attendance of adults (students 21 years of age or older enrolled in 10 or fewer class hours) was required. Basic state aid and the foundation program were increased.

1957 - Basic state aid and the foundation program were increased again. The foundation program was set at $410 per ADA. Basic state aid was set at $125. The district's contribution was computed on the basis of a 33-cent tax rate on the district's assessed valuation.

1959 - The foundation program was increased to $424 per ADA. Basic state aid remained at $125. This legislation authorized that, in 1961, the foundation program would be at $495 per ADA with a district contribution equal to 24 cents multiplied by assessed valuation. It provided further that in 1961, equalization aid could only be computed on the basis of students residing in the district.

1967 - The foundation program was set at $628 per resident, non-adult ADA. Basic state aid remained at $125. This change required a computational local effort equal to 25 cents per $100 of assessed valuation. Assessed valuation was modified by the "Collier" factor (to compensate for varying assessment rates). A special formula was adopted for small districts of 1,000 ADA and under.

1973 - Average revenue per student (revenue limit) was specified with state and local tax revenues varying as needed to provide the specified support. Each district was guaranteed full funding for ADA growth.

1975 - A five percent cap or limit was set on ADA growth. Local districts retained the authority to increase local property taxes to provide additional revenue.

1976 - A form of tax rate control was re-established. State apportionment was provided at an average rate rather than according to a foundation program. Assessed valuation of local real property increased rapidly.

1978 - Proposition 13 was approved by the electorate limiting the local property tax. "Bail out" legislation provided for block grants from the state surplus. Funding was at about seven percent below the prior year and was based on revenue received in 1977-78 rather than on expenditures per ADA. Prior to the passage of Proposition 13, community colleges received about 55 percent of their revenues from local property taxes with the tax rate under local control, within limits. Since 1978, community colleges have been "state-funded" with a portion of that support from the local property tax. The local share of support has been between 20 and 32 percent on a statewide basis. The local share is no longer set or controlled by local district boards of trustees.

1979 - A fixed appropriation of state general fund revenues was set in combination with legislatively prescribed local revenues. A base year concept was used, again, with an attempt to "equalize" funding rates per ADA by changing the rate of inflationary

allowance for each college. Marginal funding was introduced with growth or decline in ADA from one year to the next funded at a fraction (about two-thirds) of the average revenue per ADA.

1981 - Each district was assigned an ADA growth cap which, if exceeded, would not produce additional state revenues. Growth or decline in noncredit ADA is funded at approximately 50% of the full credit rate.

1982 - No additional funding was provided for growth or for inflation. A $30 million reduction was mandated in "recreational/avocational classes.

1983 - Base year funding concept was continued with revenues added for increased ADA or subtracted for decline in ADA (at incremental rate). Equalization funding was added, if applicable. Inflation funding was added. Projected property tax receipts were subtracted from the state apportionment share. Small district factor was included to adjust small district average revenues. For the first time, non-credit classes were funded at a different rate than credit classes using a rate of $1,100 per ADA.

1984 - General student fees were imposed for the first time. The general student fee was set at $50 per semester for students enrolled in classes totaling 6 or more credit semester units and $5 per unit per semester for students enrolled in classes totaling less than 6 credit semester hours. Student fees were treated as is the local property tax share of state apportionment. Fees were not used to increase general apportionment. Total general revenues were determined for each district and the amount generated by fees and by local property taxes in each district was used to "offset" that amount for each district in the state general apportionment.

1987 - Apportionment formulas for COLA, equalization and growth were extended through the 1988-89 year. General student fees were modified by levying $5 per semester unit for the first 10 units. Student health fees which were abolished in 1984, were reinstated on a local option basis. (Maximum $7.50 per semester, $5 summer.) Matriculation was funded for the first time.

1988 - AB 1725, a comprehensive community college reform proposal, was enacted. A "trigger mechanism" was included which held in abeyance certain reforms until prescribed increased funding levels were provided by the state. One of the provisions of the new law was program-based funding.

Proposition 98 was approved by the electorate providing a minimum funding level for K-12 and community colleges.

1989 - An allocation of $70 million of program improvement funds was provided which triggered Phase I reforms, including a requirement that 33-1/3 to 40% of the money be used to transition part-time faculty to full-time status. An additional amount of $45 million was provided on a one-time basis.

A statutory split of Proposition 98 funds between community colleges and K-12 was established.

1990 - An additional allocation of $70 million of program improvement funds was provided, triggering Phase II reforms, including the implementation of program-based funding.

1991 - Enrollment fee increased to $6 per unit for 1991-92 only. Program-based funding was implemented. ADA is no longer used. Full-Time Equivalent Students (FTES), headcount, and square footage now used as workload measures.

1992 - Effective January 1, 1993, enrollment fee increased to $10 per unit with no 10 unit limitation and a $50 per unit differential fee is instituted for holders of BA degree.

The statutory split of Proposition 98 funds between community colleges and K-12 was suspended with community colleges receiving a smaller share than required by law. A loan of $241 million to be repaid from future Proposition 98 funds was provided to community colleges.

1993 - The enrollment fee was increased to $13 per unit with no cap on the number of units and the differential fee for holders of a BA degree was continued at $50 per unit. The statutory split of Proposition 98 funds was again suspended. An additional loan of $178 million was provided to community colleges.

PROPOSITION 98
EDUCATION'S MINIMUM FUNDING GUARANTEE

In 1988, California voters approved Proposition 98, an initiative that amended Article XVI of the State Constitution and provided specific procedures to determine a minimum guarantee for annual K-14 funding. The constitutional provision links the K-14 funding formulas to growth factors that are also used to compute the state appropriations limit (GANN Limit).

Guaranteed Revenue for K-12 and Community Colleges

Proposition 111 (Senate Constitutional Amendment 1), adopted in June 1990, among other things, changed some earlier school funding provisions of Proposition 98 relating to the treatment of revenues in excess of the state spending limit and added a third funding "test" to calculate the annual funding guarantee. This third calculation is operative in years in which general fund tax revenue growth is weak. The amendment also specified that under Test 2 (see below), the annual cost of living adjustment (COLA) for the minimum guarantee would be the change in California per-capita personal income, which is the same COLA used to make annual adjustments to the state appropriations limit (Article XIII B).

THREE METHODS FOR CALCULATING MINIMUM FUNDING GUARANTEE

There are currently three tests which determine the minimum level of K-14 funding. Test 1 guarantees that K-14 education will receive at least the same funding share of the state general fund budget it received in 1986-87. Initially, that share was just over 40 percent. Because of the major shifts of property tax from local government to community colleges and K-12 which began in 1992-93 and increased in 1993-94, the percentage has now dropped to 33.0%.

Test 1:

40.33% of State General Fund (33.0%, Effective 7/1/93).

Test 2 provides that K-14 education will receive as a minimum, its prior-year total funding (including state general fund and local revenues) adjusted for enrollment growth (ADA) and COLA (per-capita personal income).

Test 2:

Prior Year General Fund Revenue and Property Tax Plus Increases for:

a. Change in Per Capita Personal Income.
b. Change in K-12 Enrollment.

A third formula, established pursuant to Proposition 111 as "Test 3," provides an alternative calculation of the funding base in years in which State per-capita General Fund revenues grow more slowly than per-capita personal income. When this condition exists, K-14 minimum funding is determined based on the prior-year funding level, adjusted for changes in enrollment and COLA where the COLA is measured by the annual increase in per-capita general fund revenues, instead of the higher per-capita personal income factor. The total allocation, however, is increased by an amount equal to one-half of one percent of the prior-year funding level as a funding supplement.

Test 3:

Prior Year General Fund Revenue and Property Tax Plus Increases for:

a. Change in Per Capita State Revenue + .5%.
b. Change in K-12 Enrollment.

In order to make up for the lower funding level under Test 3, in subsequent years K-14 education receives a maintenance allowance equal to the difference between what should have been provided if the revenue conditions had not been weak and what was actually received under the Test 3 formula. This maintenance allowance is paid in subsequent years when the growth in per-capita state tax revenue outpaces the growth in per-capita personal income.

The enabling legislation to Proposition 111, Chapter 60, Statutes of 1990 (SB 88, Garamendi), further provides that K-14 education shall receive a supplemental appropriation in a Test 3 year if the annual growth rate in non-Proposition 98 per-capita appropriations exceeds the annual growth rate in per-pupil total spending.

PROPOSITION 98 SPLIT AMONG SEGMENTS

Under implementing legislation (AB 198 and SB 98 of 1989), each segment of public education (K-12 districts, community college districts, and direct elementary and secondary level instructional services provided by the State of California) has separately calculated amounts under the Proposition 98 tests. The base year for the separate calculations is 1989-90. Each year, each segment is entitled to the greater of the amounts separately computed for each under Test 1 or 2. Should the calculated Proposition 98 guarantee (K-14 aggregated) be less than the sum of the separate calculations, then the Proposition 98 guarantee amount shall be prorated to the three segments in proportion to the amount calculated for each. This statutory split was suspended in 1992-93 and 1993-94. In both years, community colleges received less than was required from the statutory split.

Table 1 below, shows that during 1993-94, excluding the loans, community colleges received $300 million less than was required under the statutory split. If the loans are included, then the shortfall from the statutory split is approximately $200 million. The difference in the shortfall occurs because the 1993-94 loan to community colleges was disproportionately large when compared to its share of the statutory split.

TABLE 1

I. Excluding Loan

		1993-94		
	1989-90	Budget	Statutory Amount	Adjustment
K-12	$18,787,928 *(89.09%)*	$21,400,000 *(90.30%)*	$21,100,000	$-300,000
CC	2,301,220 *(10.91%)*	2,300,000 *(9.70%)*	2,600,000	+300,000
Total:	$21,089,148	$23,700,000	$23,700,000	$ 0

II. Including Loan

		1993-94		
	1989-90	Budget	Statutory Amount	Adjustment
K-12	$18,787,928 *(89.09%)*	$22,000,000 *(89.80%)*	$21,800,000	$-200,000
CC	2,301,220 *(10.91%)*	2,500,000 *(10.20%)*	2,700,000	+200,000
Total:	$21,089,148	$24,500,000	$24,500,000	$ 0

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1994-95 PERSPECTIVE

The budgets for community colleges and K-12 for 1994-95 will undoubtedly be driven by Proposition 98. Because of the far-reaching, monumental impact of the voucher initiative on Proposition 98 and because it is very uncertain how it will be implemented if passed; this perspective does not include any potential impact from its passage.

The most difficult aspect of 1994-95 will be to absorb the impact of the allocation of one-time funds to both K-12 and community colleges during 1993-94. This is quantified in *Table 1*.

TABLE 1

1993-94 Allocations
(In billions)

	CCs	K-12	Total
1993-94 Proposition 98 Funds	$2.3	$21.4	$23.7
One-time Funds *(loan & prior year funds)*	.2	.6	.8
Fees	.2		.2
Total:	$2.7	$22.0	$24.7

While Proposition 98 provided $23.7 billion for 1993-94, the two systems were allocated a total of $24.7 billion with $800 million coming from one-time funds. These one-time funds were included in on-going apportionments to the districts in both systems and thus, must be made up before any increases can be provided in 1994-95. One "trailer bill" (SB 399) to the 1993 Budget Act required that loan repayments to the aggregate K-14 be made from Proposition 98 funds after providing normal growth to both K-12 and community colleges.

For 1994-95, the inflation and growth rates for Proposition 98 are projected to be 1.77% and 2.34% respectively. Combining these and applying them to the 1993-94 Proposition 98 guarantee of $23.7 billion gives a 1994-95 Proposition 98 guarantee of $24.7 billion. Assuming a community college statutory growth rate of 1.7% and a K-12 growth rate of 2.34% for 1994-95, then the community colleges would need $46 million for growth and K-12 would need $510 million for growth for a total growth need of $556 million. Combining this with the total 1993-94 on-going funds of $24.7 billion gives a 1994-95 need of approximately $25.3 billion.

Assuming community college fees remain the same, then the combined amount of funds available from Proposition 98 and students fees during 1994-95 would be $24.9 billion. Not only would no loan repayment be required, but the funding would be $400 million short of meeting the

minimal growth needs of K-14. And these assumptions provide no cost of living adjustment to community colleges or K-12 for the third straight year.

One potential saviour for 1994-95 stems from the fact that Proposition 98 has required a Test 3 computation for the prior two years. When Test 3 is used, the Proposition 98 base is less than under Test 2 and this shortfall in the base must be restored in years when the state's revenue exceeds a specified level. This restoration is called the maintenance allowance. If in 1994-95, the state's per capita general fund revenue increases by just over 3%, then the required restoration of the maintenance allowance would be large enough so that the growth amounts mentioned above would be met and a modest amount would be available for loan repayment. If the state revenue increase does not materialize, then some other alternative must be found.

Although most of them are less than desirable and some are not likely to occur, there are several other avenues available to accommodate the potential shortfall of $400 million. These would include:

1. Provide funds above the Proposition 98 minimum guarantee.
2. Provide an additional loan.
3. Provide no growth funds to community colleges.
4. Reduce community college funding below 1993-94 level.
5. Reduce K-12 funding per ADA below 1993-94 level.
6. Increase student fees at community colleges.

If the overall state budget is tight and cuts are occurring in other programs, then Item 1 is not likely to happen. Furthermore, because of the dramatic underfunding that now exists in K-12 and because of the political sensitivity, Item 5 is also not very likely.

The aggregate loan for K-14 now stands at almost $1.8 billion. This will only be increased if the economy clearly shows that significant repayments will occur beginning in 1995-96. Thus, Item 2. provides only minimal hope. This only leaves the prospect of additional cuts to community colleges and/or further increases in student fees. However, it is not likely that implementation of Items 3, 4, and 6, would accommodate a shortfall of $400 million. The first attempt to address this major problem will be seen on January 10, 1994, when the Governor introduces his proposed budget for 1994-95.

PROGRAM-BASED FUNDING

Overview

Background

Assembly Bill 1725 (Chapter 973, Statutes of 1988) required the Board of Governors to develop "criteria and standards" for a program-based funding mechanism, which was to be implemented systemwide on July 1, 1991, or after adequate funding for Phase II of AB 1725 had been provided. In March 1990, the Board submitted a report on the basic structure of program-based funding to the Legislature and the Governor.

Seventy million dollars was provided for Phase II reforms in the 1990-91 State Budget. At its November 1990 meeting, the Board formally certified that adequate funding has been provided for Phase II, thereby triggering implementation of the final reforms, including program-based funding.

While the Title 5 regulations included in this booklet include the latest amendments, they are based on the Board of Governors March 1990, *Report to the Governor and the Legislature on Program-Based Funding*, which were submitted pursuant to Section 84750 of the *Education Code* (Appendix B), as approved in Assembly Bill 1725. Section 84750 states in part:

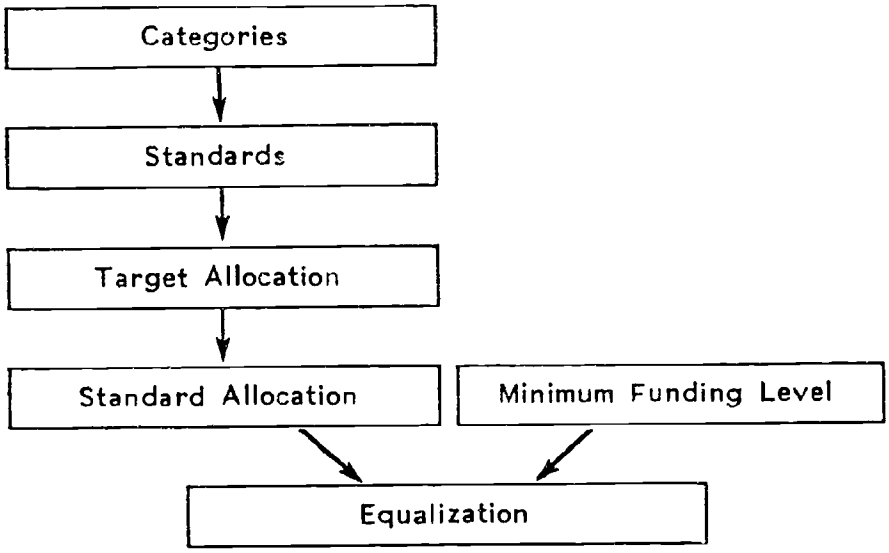
> The board of governors, in accordance with the statewide requirements contained in subdivisions (a) to (j), inclusive, and in consultation with institutional representatives of the California Community Colleges and statewide faculty and staff organizations, so as to ensure their participation in the development and review of policy proposals, shall develop criteria and standards for the purposes of making the annual budget request for the California Community Colleges to the Governor and the Legislature, and for the purpose of allocating the state general apportionment revenues, beginning with the budget request for the 1991-92 fiscal year.
>
> In developing the criteria and standards, the board of governors shall utilize and strongly consider the guidelines and work products of the Task Force on Community College Financing as established pursuant to Chapter 1465 of the Statutes of 1986, and shall complete the development of these criteria and standards, accompanied by the necessary procedures, processes, and formulas for utilizing its criteria and standards, by March 1, 1990, and shall submit on or before that date a report on these items to the Legislature and the Governor.

The report relied heavily on the "work product" of the Task Force on Community College Financing, established pursuant to Chapter 1465 of the Statutes of 1986 (AB 3409), and the Ad Hoc Committee for Community College Financing Reform. The committee was convened by the Chancellor's Office to review and build upon the work of the task force, and consisted of several task force members, Chancellor's Office staff, and representatives from MPR Associates (staff consultants to the task force).

Overview

The major components of program-based funding are shown in Figure 1. It is important to remember that program-based funding is designed as a revenue-allocation method. It is not intended to be an expenditure model. While the allocation of revenues will be related to individual program categories, community college districts will not be required to expend those funds in those categories.

FIGURE 1



Categories of Operation

The AB 3409 Task Force was directed to develop a financing mechanism "which would differentiate among the major categories of operating community colleges...." It proposed five major program categories that ultimately were prescribed by AB 1725:

1. Instruction *(Credit)*
2. Instructional Services *(Credit)*
3. Student Services *(Credit)*
4. Maintenance and Operations
5. Institutional Support

Workload Measures

It is necessary to define a "workload measure" for each of the five categories. A "workload measure" is an index used to determine the amount of funding a district will receive. In the prior system, for all practical purposes, the only workload measure used to determine district funding was the unit of average daily attendance (ADA). For program-based funding, Section 84750 specifies the following workload measure for each category:

Category	Workload Measure
Instruction (Credit)	Full-Time Equivalent Students (FTES)
Instructional Services (Credit)	FTES
Student Services (Credit)	Credit Headcount
Maintenance and Operations	Square Feet (Owned and Leased)
Institutional Support	Percentage of Total Computed Standard Allocation

Program-based funding is designed to allocate the general State apportionment, exclusive of capital outlay and categorical expenditures. It is intended that the allocations for special areas such as EOPS and DSPS be kept separate and remain categorical. It was agreed that Matriculation funding should remain categorical until it was well established and then those funds should be folded into the appropriation for program-based funding.

Standards

Probably the most innovative and influential recommendation of the AB 3409 Task Force was that standards be developed, refined, and periodically updated for each of the five categories of operation. The standards determine the level of service and the corresponding level of funding deemed appropriate for each category. Along with the categories established for program-based funding, the standards provide the justification and rational for the appropriate level of funding for community colleges. In addition, the standards furnish a framework within which the needs of students receive primary consideration. A detailed description of the standards for each of the five categories is contained in Title 5 regulations, which are included in this booklet.

Target Allocation

The target allocation is obtained by calculating the exact cost of funding the specific standards in each category on a district-by-district basis. The target allocation reflects the level of funding required to achieve the level of service defined by the standards in each category. However, computing target allocations is not a satisfactory procedure for determining the actual allocations to each district. The computation is far too complex and contradicts the Board of Governors guideline, which calls for simplicity. For that reason, simplified standard rates were derived from the target allocation. When applied to the applicable workload measures and scale factor, the rates produce approximately the same results. This is called the standard allocation.

Standard Allocation

The standard allocation is an attempt to find a simple formula that produces a close approximation of the amount computed in the target allocation. The goal is to have the standard allocation for each category, on a district-by-district basis,

relatively close to the target allocation. In a large majority of the cases, the standard allocation is within 3 percent of th target allocation.

Consideration of Size

In certain program areas, small colleges and districts find that their costs are disproportionately higher than those of their larger counterparts. The AB 3409 Task Force agreed that special consideration should be given to offsetting these extra costs for small colleges and districts. Consequently, an extra-cost factor reflecting economy of scale has been built into the target allocation based on the staff and materials required to open an institution.

Table 1 shows economy of scale factors for instruction and for student services for different size colleges and districts. In addition to the economy of scale factors some of the standard allocation formulas include an initial block grant which also provides consideration for size.

TABLE 1

Program-Based Funding
Economy of Scale Factors

Instruction			Student Services		
Credit FTES	District Factor	College Factor	Credit Headcount	District Factor	College Factor
500	1.38899110	1.35134268	500	1.41540320	1.37703888
1,000	1.31403831	1.27842145	1,285	1.33865171	1.30236761
1,500	1.23984163	1.20623582	2,070	1.26268762	1.22846230
2,000	1.16640105	1.13478579	2,855	1.18751095	1.15532296
2,500	1.09371659	1.06407136	3,640	1.11312169	1.08294959
3,000	1.03900351	1.01084147	4,425	1.03969304	1.01151230
3,500	1.03621754	1.00813101	5,210	1.03684996	1.00874629
4,000	1.03343158	1.00542056	5,995	1.03400688	1.00598027
4,500	1.03064561	1.00271011	6,780	1.03116380	1.00321426
5,000	1.02785965	1.00000000	7,565	1.02832073	1.00044824
5,500	1.02507368	1.00000000	8,350	1.02547765	1.00000000
6,000	1.02228772	1.00000000	9,135	1.02263457	1.00000000
6,500	1.01950175	1.00000000	9,920	1.01979150	1.00000000
7,000	1.01671579	1.00000000	10,705	1.01694842	1.00000000
7,500	1.01392982	1.00000000	11,490	1.01410534	1.00000000
8,000	1.01114386	1.00000000	12,275	1.01126226	1.00000000
8,500	1.00835789	1.00000000	13,060	1.00841919	1.00000000
9,000	1.00557193	1.00000000	13,845	1.00557611	1.00000000
9,500	1.00278597	1.00000000	14,630	1.00273303	1.00000000
10,000	1.00000000	1.00000000	15,385	1.00000000	1.00000000

Discretionary Factor(s)

As mentioned above, the proposed regulations for program-based funding include a specific proposal for a factor that reflects the concept that it is more expensive to provide a comprehensive program in a small institution. In addition,

one of the principles enumerated in Section 58704(f) of the proposed regulations recognizes the possible need to add new or refine existing factors for special financial consideration to provide incentives for particular programs, services, or circumstances, based on the Board's discretion.

Noncredit Funding

The discussion on noncredit funding is complicated by the fact that most noncredit programs are concentrated in a very few districts. In addition, the constant comparison with K-12 adult education makes it difficult to accommodate in an isolated manner. A major change in funding noncredit programs was accomplished in Senate Bill 851 (Chapter 565, Statutes of 1983, which directed that all noncredit ADA be funded at the same rate, $1,100). Allowing for inflation, this rate has remained constant, and during 1990-91, reached a level of approximately $1,648. For most districts, this amount was more than adequate to provide for all direct and indirect needs of the noncredit program.

Section 84750(b)(3) of AB 1725 outlines the method to be used for noncredit Full-Time-Equivalent Students (FTES) in the program-based funding model. It stipulates that the general district allocations for Maintenance and Operations and for Instructional Support are to be computed in a way that includes provisions for the noncredit program. It further states that an amount corresponding to the allocation for these two categories is to be deducted from the rate for noncredit funding. The remainder is deemed to be the noncredit allocation for the combined categories of Instruction, Instructional Services, and Student Services. For 1993-94, the remainder for the three categories is estimated at $1,254.

A task force has been working on the definition of standards for noncredit programs and it is hoped that its report will be entered into consultation within the next year.

Minimum Funding Level

The Minimum Funding Level for each district will be determined by a method very similar to that used in the past. A district's prior-year revenue, as adjusted for decline and within the constraints defined in the State Budget Act, will become the base revenue for each year. This amount is then divided by the funding level needed to reach the full standards based on the same workload. The resulting percentage is called the *district percent of standard*. A *statewide percent of standard* is calculated on the accumulated statewide totals.

This base revenue will be increased for inflation and any applicable growth. The inflation index to be used is identical to that used since 1983. However, each high-revenue district will receive inflation on their own average revenue, and each low-revenue district will receive inflation on the statewide average revenue.

As prescribed in AB 1725, adjustments for decline will be phased in over three years following the year of decline. Districts with funding above the statewide average (*statewide percent of standard*) will have their revenues adjusted for decline over a three-year period at the statewide average rate. Districts with funding below the statewide average (*statewide percent of standard*) will have their revenues adjusted for decline over a three-year period at one-half of the district average rate. Under certain circumstances, the beginning of the three-year period for the reduction of funds will be delayed by one year.

For all districts, the adjustment for growth will be at the statewide average rate *(statewide percent of standard)*. In all applicable cases, this will also be modified by the scale factor.

Program Improvement or Equalization

The program-based funding regulations state that to the extent funds are provided, an amount equal to at least 10 percent of the full credit COLA be set aside each year for equalization. These funds would be allocated in such a manner that the district at the lowest level of funding (compared with the standard allocation) would receive equalization dollars until it reaches the district at the second-lowest level. These two districts would then receive funds until they reach the district at the third-lowest level. This process continues until all equalization funds have been exhausted. Should there be more appropriated than 10 percent of the credit COLA, the excess will be distributed on the basis of 30 percent for equalization and 70 percent across the board per FTES.

PROGRAM-BASED FUNDING
COMPUTING REVENUE AND FTES

Computing a district's apportionment revenue under program-based funding is a relatively complex procedure. This article attempts to give an insight into that procedure in a manner which will be understandable to someone besides a nuclear physicist. It provides some shortcuts for computing revenue. It will not be exact but will allow for approximating revenue in a manner which will be adequate for most decision making activities. In other words, it will be close enough for government work. Under program-based funding, a district's apportionment revenue is computed from the following:

1. Prior Year Apportionment Revenue (base revenue)
2. COLA
3. Program Improvement/Equalization
4. Growth/Decline/Restoration
5. Stability (phases impact of decline)

If a district did not decline in the prior year, then the district's base revenue for the current year will equal the prior year revenue. If a district did decline in the prior year, the funds corresponding to that decline will be deducted from the base revenue in the current year. However, stability funds are provided so the final result is to spread any loss from decline in equal installments over a three year period.

There are four areas where a district's base revenue may be augmented by additional funds. The four areas are: Cost of Living Adjustment (COLA), Program Improvement, Growth and restoration. The COLA is computed from an index which measures the increase due to inflation in governmental goods and services. While not allocated, the COLA for 1992-93 was 2.62% and for 1993-94, it was 2.05%. For each district, when allocated, the COLA is applied to the district's own base revenue or to the statewide average revenue, whichever is greater. By using this procedure, a low revenue district will not "lose ground" in the application of the COLA.

Program Improvement, as the term implies, is an allocation that allows a district to improve the quality of its programs. The first priority for any program improvement funds which are available would be toward equalization. Equalization funds are allocated to the districts which are defined as low revenue districts. To determine low revenue under program-based funding, a standard allocation is computed for each district. This is the allocation that a district would need to fund the standards defined in program-based funding. Each district's actual allocation is then compared with its standard allocation. The district whose actual allocation is the lowest percentage of its standard allocation would be the first district to qualify for equalization funds.

Regulations in Title 5 indicate that an amount equal to 10% of the credit COLA will be allocated toward equalization. If program improvement funds in excess of this are available, the remainder would be distributed with 30% for equalization and 70% across the board to all districts. For 1993-94, no program improvement funds were made available.

Funds for growth are now computed in five categories. For the Maintenance and Operations category, the growth funds are driven by square footage and by full-time equivalent students (FTES) in leased space. Except when a new state-approved building is completed, the growth in Maintenance and Operations is limited to the greater of the Adult Population Change or 1%. When a new state-approved building is completed, the total square footage is funded in the growth formula. Any growth funds provided for Maintenance and Operations are increased by 16.55% to provide for indirect overhead costs which are included in the Institutional Support category.

Growth in the Instruction category and the Instructional Services category are driven by FTES. A full discussion of the FTES and how an FTES is generated occurs later in this paper. Growth funds for the Student Services category are driven by new headcount and continuing headcount.

For a district with one college and more than 10,000 credit FTES and for a college in a multi-college district where the college has more than 5,000 credit FTES, the rates for growth in each category are shown below:

Instruction:	$1,916 per credit FTES.
Instructional Services:	$ 121 per credit FTES.
Student Services:	$ 227 per new credit headcount. $ 117 per continuing credit headcount.

In each case, the amount shown is increased by 16.55% to account for the indirect overhead costs which are included in the Institutional Support category. Single college districts with less than 10,000 credit FTES and colleges in a multi-college district where the college has less than 5,000 credit FTES are assigned a scale factor which increases the rates listed above. As a district or college approaches the 10,000 or 5,000 FTES plateau, the scale factor becomes smaller and at the plateau the scale factor becomes one. Exact scale factors for various sized colleges and districts are shown elsewhere in this booklet.

For non-credit FTES, a growth rate of $1254 is used in an aggregate fashion for the three categories of Instruction, Instructional Services, and Student Services. When 16.55% is added to this rate, the non-credit rate per FTES becomes $1462. If the FTES is generated in leased space and the district shows growth in that workload measure, then another $221 is allocated which brings the maximum rate for a non-credit FTES to $1683.

As decisions are made involving the opening of additional class sections, the issue of the corresponding revenue becomes critical. Unless the class is offered in a leased facility, the additional section will not generate new revenue in the Maintenance and Operations category. To determine the exact amount of new revenue individually for the Instruction, Instructional Services, and Student Services category is practically impossible. The amount of new revenue will depend on whether the students enrolled in a new section are new headcount or continuing headcount. Furthermore, if the students are enrolled in other classes, then the revenue corresponding

to the headcount has already been generated. Nonetheless, it must be possible to project an amount of revenue that will be generated when a new class section is added. To do this, we have computed the growth revenue on a statewide basis for the three categories other than Maintenance and Operations but including Institutional Support and have translated that amount into a single number that gives the average revenue per credit FTES. For 1993-94, the average growth revenue per credit FTES that will be generated is $2,700. If a class generates two FTES, then the additional revenue generated will be $5,400. If the cost of operating the class including additional expenses in Instruction, Instructional Services, Student Services, and Institutional Support does not exceed the additional revenue, then from a cost effectiveness standpoint it is worth running the class. Of course, not all classes are going to be cost effective. Our allocation system assumes a tremendous averaging process. Some classes generate more revenue than is needed to operate the class and some generate less. In addition, if a district is overcap and has unfunded FTES, then some classes are generating no revenue.

To compute the revenue generated by a class using the amount of $2,700 per credit FTES, you must be able to compute how many FTES are generated.

FTES can be generated under four different formulas:

1. Positive Attendance
2. Census Week
3. Daily Census
4. Independent Study/Work Experience

Positive Attendance

Classes which do not meet on a regular basis or which operate on an open entry/open exit basis are counted for FTES under the positive attendance format. Also, by law all non-credit courses are counted as positive attendance. In addition, as an option, any classes can be counted for FTES under positive attendance. Under positive attendance, the actual attendance of each student for each hour is counted. Every 525 hours of actual attendance counts as one FTES. The number, 525, is derived from the fact that 175 days of instruction are required each year and a student attending classes 3 hours per day for 175 days will be in attendance for 525 hours. That is, 3 times 175 equals 525.

If you are operating classes under positive attendance and wish to compute the FTES, you should do the following: Count the total hours of attendance for all students and divide this total by 525. The result will be the number of FTES.

Census Week

Classes which meet on a regular basis each week for a full semester or quarter are counted for FTES under the Census Week procedure. Under the Census Week procedure, the students are counted based on enrollment and not based on actual attendance. The count is taken on the Monday which is closest to 20% of the way through the semester or quarter. In a semester operation this usually occurs during the 4th week.

Because census weeks are introduced in this procedure, it is necessary to find how many weeks occur in a semester. Since there are 175 days of instruction in a year and 5 days of instruction in each week, by dividing 175 by 5 we find there are 35 weeks in a school year. Since there are 2 semesters, we divide 35 by 2 and find there are 17.5 weeks in each semester.

Therefore, in a semester operation, to compute FTES under the census week procedure, do the following:

(1) Find the number of hours of enrollment during the census week.

(2) Multiply (1) by 17.5. This gives the hours of enrollment for the full semester.

(3) To obtain the number of FTES, divide (2) by 525.

Example: *Suppose a class meets 3 hours per week during the fall semester and has 40 enrollees during the census week. To find the FTES follow the 3 steps above:*

(1) 40 enrollees x 3 hours = 120 hours of enrollment in the census week.

(2) 120 x 17.5 = 2100 hours of enrollment for the semester.

(3) 2100/525 = 4 FTES.

In this example, assuming it is a credit class, the revenue generated would be approximately 4 times $2,700, which is $10,800.

Daily Census

Classes which meet on a regular basis for at least five days but do not meet for a full semester or quarter are counted for FTES under the Daily Census procedure. This includes classes held during the summer intersession. Summer session classes which meet at least 20% of the time prior to July 1, and end after June 30, may be reported in either of the two fiscal years that they overlap. For daily census classes the enrollment is counted on the day closest to 20% of the way through the course. The

number of hours of enrollment is computed for one day only and not for a full week. This number is multiplied by the number of days the class will be in session. The product is then divided by 525 to obtain FTES.

Example: *Consider a summer class which meets 2 hours per day for 24 days. The 5th day will be the census day. Assume 45 students are enrolled the 5th day. The following 3 steps will compute the FTES.*

(1) 45 x 2 = 90 enrollment hours on the census day.

(2) 90 x 24 days = 2160 enrollment hours for total course.

(3) 2160/525 = 4.11 FTES

Independent Study/Work Experience

For computing FTES in Independent Study and Work Experience courses, one weekly student contact hour is counted for each unit of credit in which the student enrolls. The computation of FTES is identical to the Census Week or Daily Census, whichever is applicable.

In any case, once the credit FTES is computed then the amount of growth funds per FTES will be approximately $2,700. Remember if the college or district involved is relatively small, then a scale factor will be applied and a larger dollar amount will be generated. Remember also that these funds must accommodate costs in four categories: Instruction, Instructional Services, Student Services, and Institutional Support.

PROGRAM-BASED FUNDING
QUESTIONS AND ANSWERS
REVISED SEPTEMBER, 1993

1. **What is Program-Based Funding?**

   For California community colleges, program-based funding determines how all general apportionment funds, including base revenue, COLA, growth, stability, and program improvement, will be distributed to the 71 districts.

   Program-based funding is also a system that determines the revenue necessary to operate a district at an appropriate level in the following five program categories:

   a. Instruction
   b. Instructional Services
   c. Student Services
   d. Maintenance and Operations
   e. Institutional Support

2. **How is the necessary level to operate a district determined?**

   In each category, standards have been developed and the cost of these standards determines the necessary funding. For example, in the instruction category, one standard is that a 25 to 1 student/faculty ratio should be maintained. This standard translates into a number of faculty which translates into a number of dollars.

3. **How close does the current revenue come to funding the standards in all five categories?**

   On a statewide basis, the current general revenue is approximately 55% of the cost of all the standards. On a district by district basis, the range is from 51% to 66%. Other revenue such as lottery and matriculation may also help fund the standards, however, they are not included in the program-based funding calculations. If included, these would raise the statewide percentage to almost 60%.

4. **Does program-based funding require that a certain portion of the revenue be spent in each category?**

   FTES are computed by a census and/or positive attendance accounting formula. One FTES is equivalent to 525 class (contact) hours of student instruction/activity in credit and noncredit courses.

5. **Is the 50% Law still in effect?**

Yes. The law that requires a district to spend at least 50% of its current expense of education on the salaries and benefits of classroom instructors, was not affected by program-based funding.

6. **Is it possible that the program-based funding standards, if fully funded and implemented in a given district, would be inconsistent with the implementation of the 50% law?**

No. Under normal conditions, the cost of the standards, if fully implemented, would always result in more than 50% of the funds being spent on the salaries and benefits of classroom instructors.

7. **What about the requirement to employ full-time faculty?**

The Board of Governors has adopted a minimum standard involving the employment of full-time faculty. Because program-based funding and the statute on full-time faculty were both included in AB 1725, and because they both involve the budget, the implementing regulations were processed through consultation simultaneously.

8. **Will districts be required to employ additional full-time faculty in subsequent years?**

The minimum standard *(Title 5, Section 51025)* adopted by the Board of Governors requires that beginning in 1992-93, districts must increase the number of full-time faculty corresponding to the prior year increase in funded credit FTES, provided that the Board of Governors certifies that adequate COLA and growth funds were allocated in the prior year. The Board of Governors has determined that adequate COLA and growth funds were not allocated in 1991-92, and 1992-93, and therefore, no obligation for increasing the number of full-time faculty will be imposed in 1993-94.

9. **What workload measures are used to determine eligibility for funds under program-based funding?**

The workload measures used are credit full-time equivalent students (FTES), non-credit FTES, new headcount, continuing headcount, square feet of facilities owned or leased 100%, and FTES in space leased less than 100%.

10. **How are FTES computed?**

FTES are computed in the same manner as ADA, except the absence factor (.911) and the second census count are no longer applied.

11. **When are headcount counted?**

Initially, headcount were counted during the census week for the fall semester. However, pursuant to regulations adopted in 1992, it was determined that an unduplicated headcount during two semesters or three quarters be used. Base data became available during 1992-93, and the new process is expected to be implemented in the 1993-94 year.

12. **Why were the specific workload measures selected?**

These specific workload measures provide the most appropriate and simplest measures that identify costs in each category.

13. **Why was no workload measure identified for the institutional support category?**

The workload in institutional support is driven by activity in all other categories. Therefore, it was decided to drive the funding in this category by applying a set percentage to the funding for all other categories.

14. **What is a low revenue district?**

A low revenue district is a district whose credit revenue as a percent of standard, is below the statewide aggregate credit revenue as a percent of standard.

15. **What is a high revenue district?**

A high revenue district is a district which is not a low revenue district.

16. **How is the cost-of-living adjustment (COLA) determined?**

The COLA is a reflection of the percentage change of the Implicit Price Deflator for state and local government purchases of goods and services for the United States, as published by the United States Department of Commerce, from the fourth calendar quarter of the prior year to the fourth calendar quarter of the latest available year rounded up to the next hundredth.

17. **How is the COLA for each district determined?**

For each low revenue district, a COLA is computed based on the statewide average. For each high revenue district, a COLA is computed based on its revenue.

18. **Will equalization funds be available under program-based funding?**

Yes. AB 1725 defined any additional funds other than COLA and growth as program improvement funds. The implementing regulations state that at a minimum, an amount equal to 10% of the credit COLA, should be allocated for program improvement in a manner that achieves equalization.

19. **How will the equalization funds be distributed?**

The percentage that each district's current revenue is of the cost of funding program-based funding standards for that district is computed. The districts with the lowest percent of standard will receive equalization dollars to bring them to the highest percent of standard achievable with the funds that are available.

20. **How will growth funds be determined?**

If appropriated in the Budget Act, growth funds will be computed by applying the percentage change in adult population (minimum 1% or 100 FTES and 150 headcount) to the base workload measures for that year. For each workload measure, a rate is applied to convert to dollars and then an amount is added for institutional support.

21. **To qualify for maximum growth funds, must growth occur at the adult population change for each base workload measure?**

No. The funds for growth are aggregated in two portions. One portion includes growth in square footage and FTES in leased space. The other portion includes growth in credit FTES, non-credit FTES, new headcount, and continuing headcount. In each of the two portions, the dollars for growth and/or decline are aggregated, and the district will receive this aggregated amount, up to the amount computed for the adult population change for that portion.

22. **Are growth funds in the aggregate always restricted to the adult population change?**

No. In the maintenance and operations category, if a new state approved facility is placed in operation, and the square footage for this facility exceeds the square footage allowed under the adult population change, then the district is provided growth funds for all the square feet in the new facility. Furthermore, the regulations allow other factors in addition to the adult population change to be used in determining the growth cap. Some other factors have been proposed and will be implemented to the extent that funds are appropriated.

23. **For growth in non-credit FTES, will districts receive the same amount as they would have prior to program-based funding?**

The base growth rate per non-credit FTES for instruction, instructional services, and student services for 1993-94 is $1,254. Adding 16.55% for institutional support brings the rate to $1,462. For maintenance and operations a rate of $189.33 (plus 16.55%) is provided for each additional FTES in leased space. Combining this with $1,462, provides a potential total rate per non-credit FTES of $1,683.

24. **How will the loss of funds due to declines in square footage or FTES in leased space occur?**

Any declines that occur in a given calendar year in square footage will result in a corresponding loss of revenue in the fiscal year which begins on July 1 of the calendar year of the decline. Declines that occur in FTES in leased space will result in a corresponding loss of funds in the fiscal year in which the decline occurs.

25. **How will the loss of funds due to declines in FTES and/or headcount occur?**

If the aggregate changes in FTES and headcount results in negative growth revenue, (i.e., the dollar value of the declines outweigh the dollar value of the increases) then, except as noted below, funds will be deducted in the three subsequent years immediately following the decline. In each case, to provide stability, the loss of funds will be spread evenly over the three years. For high revenue districts, the loss for credit FTES and headcount will be at the full value, but for low revenue districts, the loss will be at 50% of the full value. The loss for non-credit FTES is at the same full value for all districts. For declines occurring in 1992-93, which were caused by the imposition of the differential fee, the loss of funds is delayed for one year and will occur in a three-year period beginning in 1994-95.

26. **Is any opportunity provided to restore the funds which are lost due to a decline?**

Yes. Funds will be allocated subject to availability for any FTES or headcount which are restored during the three years when funds would otherwise by deducted.

27. **What are stability funds?**

While we say the fiscal impact of decline is phased over three years, the program-based funding regulations require that initially, the funds be totally deducted. Then an augmentation is provided so that the result is to phase the fiscal impact over three years. The augmentations are called stability funds.

28. **How will funds be distributed for supplementally funded programs, such as, Basic Skills and GAIN?**

Basic Skills and GAIN will be funded on an FTES basis, where the amount per FTES will be computed on a district-by-district basis from the revenue computed for each district's growth cap. For maintenance and operations, an amount will be included which is equal to the rate for FTES in leased space. In addition, in both portions an amount for institutional support will be included. Thus, while the computation includes recognition of workload measures for all categories, the final rate will only reflect an amount per FTES.

29. **Are any efforts being made to develop standards for non-credit activities?**

A group of non-credit representatives are working on a set of standards which will hopefully be submitted into consultation within the next year.

30. **Does program-based funding give any recognition to the extra cost involved in operating a small institution?**

Yes. Recognition is given to size and is reflected in the allocations for COLA, growth, and equalization.

31. **How is recognition given to size in each of the program categories?**

In the Instruction category, a scale factor is applied in computing the cost of the standards and in computing the growth allotment. This factor phases out for single college districts at 10,000 FTES, and for colleges in a multi-college district at 5,000 FTES. For instructional services, recognition for size is given in computing the cost of the standards by including a block grant which reflects the cost of initiating a program. For student services, both a block grant and a scale factor are used. The scale factor phases out for single college districts at 15,385 headcount and for colleges in a multi-college district at 7,692 headcount. No recognition for size is included for maintenance and operations. For institutional support, recognition for size is included by virtue of the fact that this category is computed as a percentage of all other categories.

32. **Why is institutional support 14.2% of the total funds for all categories, but 16.55% of the remaining categories?**

The 14.2% is used because the most recent data shows that on a statewide basis, institutional support represents 14.2% of the total expenditures. That leaves 85.8% (100 minus 14.2) for the remaining four categories. If you divide 14.2 by 85.8, you find that 14.2 represents 16.55% of 85.8. That is, it represents 16.55% of the remaining categories.

Subchapter 8. Program-Based Funding

Article 1. General Provisions

§ 58700. Introduction.

(a) The criteria and standards set forth in this subchapter shall serve as the basis of making the Board of Governors annual budget request for the California Community Colleges to the Governor and the Legislature and as the basis for Board of Governors allocation of the state general apportionment revenues.

(b) For the 1991-92 fiscal year the provisions of this subchapter shall operate concurrently with the provisions of chapter 5, article 1 of part 50 of the Education Code, commencing with section 84700. Thereafter, the provisions of chapter 5, article 2.5 of part 50 of the Education Code and the provisions of this subchapter shall be the sole basis for budget requests and allocations of state general apportionment revenues.

(c) Notwithstanding the foregoing, adjustments for prior year apportionments shall be made using the funding mechanism applied for apportionment purposes in the year for which adjustments are made.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5-29-91 and submitted to OAL 6-3-91 for printing only pursuant to Education Code section 70901.5; operative 6-30-91 (Register 91, No. 28).

§ 58702. Scope of Subchapter.

This subchapter applies to the allocation of general state apportionment.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5-29-91 and submitted to OAL 6-3-91 for printing only pursuant to Education Code section 70901.5; operative 6-30-91 (Register 91, No. 28).

§ 58704. Program Based Funding Principles.

(a) General funding for community college districts shall be prior year general apportionment revenue (state and local) adjusted for any amount attributed to a deficit mechanism, with revenue adjustments being made for inflation, increases or decreases in workload measures, program improvement and such other adjustments as are authorized by law.

(b) The funding mechanism for credit instruction shall be based on the categories of operation provided for in section 84750 of the Education Code, articles 2-6 of this subchapter, and such other categories of operation as may, from time to time, be determined by the Legislature.

(c) The funding mechanism for community college noncredit activities shall be as specified in section 84750(h)(3) of the Education Code, and articles 6 and 7 of this subchapter.

(d) Standards determine the level of service and the corresponding funding deemed appropriate for each category. That corresponding funding level shall be referred to as the target allocation. From the target allocation, a simplified standard rate(s) shall be derived that when applied to the applicable workload measure(s) and scale factor will compute approximately the same result. The standards applicable to each category are as set forth in articles 2-7.

(e) Recognition shall be given to small colleges (up to 5,000 credit FTES) and small districts (up to 10,000 credit FTES) for special financial consideration to accommodate the additional cost of being small.

(f) The Board of Governors may, in conjunction with consultation, add new or refine existing factors for special financial consideration to provide incentives for particular programs, services or circumstances.

(g) Nothing in these regulations for state apportionment allocation shall require district governing boards to expend allocated revenues in

specified categories of operation or according to workload measures contained herein.

(h) The Chancellor may develop and provide for district use, any procedures, processes and formulas he or she deems necessary to the utilization of the criteria and standards specified herein.

(i) The prospective funding priority for state budget negotiations shall be

(1) base revenues and budget stability, pursuant to sections 58771 and 58776,

(2) inflation and program improvement adjustments pursuant to sections 58773 and 58775(a), and

(3) growth and restoration, pursuant to sections 58774 and 58777. Restoration shall be included in priority (1) if funds have been reserved in the base for this purpose.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5-29-91 and submitted to OAL 6-3-91 for printing only pursuant to Education Code section 70901.5; operative 6-30-91 (Register 91, No. 28).

§ 58706. Definitions.

For purposes of this subchapter:

(a) "Continuing credit enrollment" means the total number of unduplicated students whose attendance is eligible for state support and who are actively enrolled at the reporting college in a credit course for which census attendance accounting is taken as of the census date or for which positive attendance is taken and the student has generated at least eight student contact hours of positive attendance or was awarded a half unit of credit in any primary term, and who were enrolled in a credit course in a previous primary term within the last three academic years.

(b) "FTES in less than 100% leased space" means the state supported credit and noncredit FTES generated in facilities leased for less than 100% of the time (not reported as inventoried space) and paid for by general purpose funds of the district.

(c) "Gross square footage" means the sum of the floor areas of all facilities of the district reported on the annual inventory in accordance with Education Code, section 81821.

(d) "High revenue district" means a district that receives a level of funding as a percentage of the standard which is higher than the statewide average percent of standard.

(e) "Low revenue district" means a district that receives a level of funding as a percentage of the standard which is lower than the statewide average percent of standard.

(f) "New credit enrollment" means the total number of unduplicated students whose attendance is eligible for state support and who are actively enrolled at the reporting college in a credit course for which census attendance accounting is taken as of the census date or for which positive attendance is taken and the student has generated at least eight student contact hours of positive attendance or was awarded a half unit of credit in any primary term and who are not continuing credit enrollment as defined in subdivision (a).

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5-29-91 and submitted to OAL 6-3-91 for printing only pursuant to Education Code section 70901.5; operative 6-30-91 (Register 91, No. 28).
2. Amendment of subsections (a) and (f) filed 8-19-92; operative 9-18-92 (Register 92, No. 34).

Article 2. Credit Instruction

§ 58710. Description of Credit Instruction Category.

The credit instruction category of operation includes credit instructional activities involving students, academic administration (administration immediately above instructors), and course and curriculum development. These activities correspond to the California Community College Budget and Accounting Manual Classification of Expenditures by Activity, activity codes 0100 through 6000.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5-29-91 and submitted to OAL 6-3-91 for printing only pursuant to Education Code section 70901.5; operative 6-30-91 (Register 91, No. 28).

§ 58712. Credit Instruction Standards.

(a) The credit instruction standards per college shall be as follows:

(1) Teaching faculty ratio of 75% full-time and 25% hourly.

(2) The statewide average faculty salaries equal to those paid by the California State University.

(3) A student/faculty ratio of 25 to 1.

(4) An amount equivalent to 21% of instructor salaries for the cost of staff support and supplies.

(5) An amount equivalent to 12.5% of the above standards for academic administration.

(6) An amount equivalent to the average annual expenditure per student workload measure for credit instruction of the ten states with the highest annual expenditures per student workload for credit instruction.

(7) The standards derived in subparagraphs (1) through (6) above, shall be adjusted by the scale factor defined in section 58714.

(b) The standard rate derived from application of the above standards to be used in the 1991-92 allocation process, contained in article 8 of this subchapter, for the credit instruction category is $3,195.85, as adjusted by the scale factor pursuant to section 58714, increased by the inflation adjustment pursuant to subdivision (a) of section 58773. For 1992-93 and each year thereafter, the standard rate shall be the rate used for the prior fiscal year increased by the inflation adjustment pursuant to subdivision (a) of section 58773.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5-29-91 and submitted to OAL 6-3-91 for printing only pursuant to Education Code section 70901.5; operative 6-30-91 (Register 91, No. 28).

§ 58714. Credit Instruction Scale Factors.

(a) For single college districts:

(1) If credit FTES is less than 2,875, the scale factor is:

$1.4647 - 1.52173913(FTES/10,000) + 0.151222(FTES/10,000)^2$

(2) If credit FTES is greater than or equal to 2,875 and less than or equal to 10,000, the scale factor is:

$1.055719298175 - 0.055719298(FTES/10,000)$

(3) If credit FTES is greater than 10,000, the scale factor is 1.0.

(b) For each college in a multi-college district:

(1) If credit FTES is less than 2,875, the scale factor is:

$1.4249995135523 - 1.480492605(FTES/10,000) + 0.14712(FTS/10,000)^2$.

(2) If credit FTES is greater than or equal to 2,875 and less than or equal to 5,000, the scale factor is:

$1.0271041758361 - 0.054209034(FTES/10,000)$.

(3) If credit FTES is greater than 5,000, the scale factor is 1.0.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5-29-91 and submitted to OAL 6-3-91 for printing only pursuant to Education Code section 70901.5; operative 6-30-91 (Register 91, No. 28).

Article 3. Credit Instructional Services

§ 58720. Description of Credit Instructional Services Category.

The credit instructional services category of operation includes library, media, and learning center services that are supplemental to the in-

structional effort. These services correspond to the California Community Colleges Budget and Accounting Manual Classification of Expenditures by Activity, activity code 6100.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5-29-91 and submitted to OAL 6-3-91 for printing only pursuant to Education Code section 70901.5; operative 6-30-91 (Register 91, No. 28).

§ 58722. Credit Instructional Services Standards.

(a) The credit instructional services standards per college in 1990-91 dollars shall be as follows:

(1) Library staffing and materials based on the following model:

(A) The number of faculty librarians identified in Table 1 of section 58724 times the salary;

(B) The number of support staff identified in Table 1 of section 58724 times the salary;

(C) The number of periodicals identified in Table 1 of section 58724 times $73.50;

(D) 3% of the number of volumes identified in Table 1 of section 58724 times $40.32;

(E) Administrative and fixed costs of $21,777;

(F) Per student allocation of $1.89 per FTES;

(G) Book binding equal to [(FTES x 0.008) + $2,252] x $19.80;

(H) Technical processing costs equal to [3% of the number of volumes identified in Table 1 of section 58724] x $5.34;

(I) Contractual services for on-line bibliographic utility, automated library systems, and on-line data bases/indexes equal to $71,198.

(2) Media center staffing and materials based on the following model:

(A) The number of media faculty identified in Table 2 of section 58724 times the salary;

(B) The number of support staff identified in Table 2 of section 58724 times the salary;

(C) Number of video/film identified in Table 2 of section 58724 times 3% times $104.66;

(D) Number of other materials identified in Table 2 of section 58724 times 3% times $232.38;

(E) Per student allocation of $1.78 per FTES;

(F) Technical processing costs equal to [3% of the total number of video/film and other materials identified in Table 2 of section 58724] x $4.98.

(3) Learning center allocations calculated at $56.58 x FTES.

(b) The standard rate derived from application of the above standards to be used in the 1991-92 allocation process, contained in article 8 of this subchapter, for the credit instructional services category shall be

(1) $511,474 per college plus $60.41 per credit FTES, both increased by the inflation adjustment pursuant to subdivision (a) of section 58773, for colleges with less than or equal to 1,002 credit FTES, or

(2) $396,936 per college plus $174.76 per credit FTES, both increased by the inflation adjustment pursuant to subdivision (a) of section 58773, for colleges with credit FTES greater than 1,002 and less than or equal to 3,303, or

(3) $308,331 per college plus $201.59 per credit FTES, both increased by the inflation adjustment pursuant to subdivision (a) of section 58773, for colleges with credit FTES greater than 3,303. For 1992-93 and each fiscal year thereafter, the standard rates shall be the rates used for the prior fiscal year increased by the inflation adjustment pursuant to subdivision (a) of section 58773.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5-29-91 and submitted to OAL 6-3-91 for printing only pursuant to Education Code section 70901.5; operative 6-30-91 (Register 91, No. 28).

§ 58724. Tables of Minimum Standards for Libraries and Media Centers.

(a) Table 1 consists of ALA/ACRL-AECT described minimum standards for libraries as follows:

TABLE 1
ALA/ACRL—AECT—Minimum Standards for Libraries (*Modified*)

College Size	Type of Staff		Materials	
FTES	Faculty Librarian	Support	Periodicals (*No. Subscriptions*)	Volumes (*No. on Shelf*)
< 1,000	2.0	3.0	230	30,000
1,001–3,000	3.0	4.5	300	40,000
3,001–5,000	4.0	6.5	500	60,000
5,001–7,000	5.0	9.0	700	80,000
Each Additional 1K	0.5	1.0	50	7,500

(b) Table 2 consists of ALA/ACRL–AECT described minimum standards for media centers as follows:

TABLE 2
ALA/ACRL—AECT—Minimum Standards for Media Centers (*Modified*)

College Size	Type of Staff		Materials	
FTES	Media Faculty	Support	Video/Film (*No. on Shelf*)	Other (*No. on Shelf*)
< 1,000	0.5	1.5	140	2,500
1,001–3,000	1.0	3.0	400	5,100
3,001–5,000	1.5	4.5	750	8,000
5,001–7,000	2.0	6.0	1,250	10,000
Each Additional 1K	0.25	1.0	200	1,000

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5–29–91 and submitted to OAL 6–3–91 for printing only pursuant to Education Code section 70901.5; operative 6–30–91 (Register 91, No. 28).

Article 4. Credit Student Services

§ 58730. Description of Credit Student Services Category.

The credit student services category of operation includes the components of matriculation, financial aid, placement services, student activities and other student services. These services correspond to the California Community Colleges Budget and Accounting Manual Classification of Expenditures by Activity, activity codes 6200 through 6400.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5–29–91 and submitted to OAL 6–3–91 for printing only pursuant to Education Code section 70901.5; operative 6–30–91 (Register 91, No. 28).

§ 58732. Credit Student Services Standards.

(a) The credit student services standards per college in 1990–91 dollars shall be as follows:

(1) Admissions and records at $43.86 per credit headcount.

(2) Orientation: Twenty counselor days for development of materials and preparation; staff costs per orientation session equal to 3 hours of a counselor, 1 hour of a technician, 3 hours of a student worker, and 16 hours of clerical support; eighty percent of the fall credit enrollees are served with 50 students in each orientation session; $10.47 for supplies for each fall enrollee served.

(3) Testing and Assessment: One FTE technician plus one FTE clerical staff for administration of testing:

(A) General testing of 3 tests at one hour each at $41.86 per hour for administration; 80% of the fall enrollees are tested with 50 students per test session; $4.19 to purchase each test, plus $0.21 to score each standardized test and $19.28 to score each holistic test.

(B) Additional limited English proficiency testing of 2 additional tests at one hour each at $83.73 per hour for administration; 5% of the nonexempt fall enrollees are assumed to require testing with 15 students per test session; $4.19 to purchase each test, plus $0.21 for scoring; plus $2.09 per fall enrollee for notification costs.

(4) Counseling:

(A) Pre–registration: The FTE counselors plus 25% FTE clerical support necessary to counsel each nonexempt new fall enrollee on a one–to–one basis for one hour each;

(B) Post–registration: The FTE counselors plus 25% FTE clerical support necessary for student educational plans, general counseling, probation counseling, and Basic Skills counseling. Eighty percent of new fall enrollees will be counseled for 1 hour and 20 minutes for student educational plans. Fifty percent of fall continuing students will be counseled for 1 hour of general counseling. Twelve percent of the fall continuing students will receive probationary counseling for 1 hour. Basic Skills students will receive an additional 30 minutes of counseling. Basic Skills enrollment is estimated to equal 3.5 times Basic Skills FTES. Counselors are assumed to average 6.36 hours per day, 75% of which is spent with students. An allocation of $641 per counselor is calculated for supplies.

(5) Research and Evaluation: 1 FTE researcher plus 1 FTE programmer plus .5 clerical support staff plus $2,093 for supplies. Costs for this area are accounted for under institutional support and are not included in the standards rates derived in subdivision (b).

(6) Coordination and Training: 1 FTE administrator plus 1 FTE coordinator plus 1 FTE clerical support.

(7) Financial aid: 1 FTE director plus 1 FTE advisor plus 0.5 FTE technician plus 1 FTE clerical support plus $2,764 base fixed costs plus $31.38 per credit headcount.

(8) Placement services cost of 1 director salary plus 1 FTE academic staff per 10,000 fall credit enrollees plus 1 clerical FTE plus additional 1 clerical per 4 academic staff members.

(9) Credit student activities costs of 1 director salary plus 1 FTE academic staff per 10,000 fall credit enrollees plus 1 clerical FTE plus additional 1 clerical per 4 academic staff members.

(10) Flat rate of $50.04 per credit headcount for additional, unspecified student services.

(11) The standards derived in subparagraphs (1), (2), (3), (4), and (10) above, shall be adjusted by the scale factor defined in section 58734.

(b) The standard rate derived from application of the above standards to be used in the 1991–92 allocation process, contained in Article 8 of this subchapter, for the credit student services category shall be $617,257 per college, increased by the inflation adjustment pursuant to subdivision (a) of section 58773, plus $378.11 per new credit enrollment and $194.59 per continuing credit enrollment, both adjusted by the inflation adjustment pursuant to subdivision (a) of section 58773 and the scale factor, pursuant to section 58734. For 1992–93 and each fiscal year thereafter, the standard rates shall be the rates used for the prior fiscal year increased by the inflation adjustment pursuant to subdivision (a) of section 58773.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5–29–91 and submitted to OAL 6–3–91 for printing only pursuant to Education Code section 70901.5; operative 6–30–91 (Register 91, No. 28).

§ 58734. Credit Student Services Scale Factors.

(a) For single college districts:

(1) If credit headcount is less than 4,423, the scale factor is:

1.4647 – 0.989130434 (Headcount/10,000) + 0.06389 (Headcount/10,000)^2.

(2) If credit headcount is greater than or equal to 4,423 and less than or equal to 15,385, the scale factor is:

1.055719298175 – 0.036217543 (Headcount/10,000).

(3) If credit headcount is greater than 15,385, the factor is 1.0.

(b) For each college in a multi–college district:

(1) If credit headcount is less than 4,423, the scale factor is:

1.4249995135523 – 0.962320193 (Headcount/10,000) + 0.06215 (Headcount/10,000)^2.

(2) If credit headcount is greater than or equal to 4,423 and less than or equal to 7,692, the scale factor is:

1.0271041758361 – 0.035235871 (Headcount/10,000).

(3) If credit headcount is greater than 7,692, the factor is 1.0.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5–29–91 and submitted to OAL 6–3–91 for printing only pursuant to Education Code section 70901.5; operative 6–30–91 (Register 91, No. 28).

Article 5. Maintenance and Operations

§ 58740. Description of Maintenance and Operations Category.

The maintenance and operations category of operation includes the activities associated with the general operation and maintenance of buildings and grounds both owned and leased by the district. These activities correspond to the California Community Colleges Budget and Accounting Manual Classification of Expenditures by Activity, activity code 6500.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5–29–91 and submitted to OAL 6–3–91 for printing only pursuant to Education Code section 70901.5; operative 6–30–91 (Register 91, No. 28).

§ 58742. Maintenance and Operations Standards.

(a) The maintenance and operations standards are based upon the extensive work done by Clyde Gordon and Associates, Inc. for CSU and UC systems contained in the report entitled, "UC/CSU Maintenance Workload Standards Study – October, 1987."

(b) The standard rates derived from application of the above standards to be used in the 1991–92 allocation process, contained in article 8 of this subchapter, for the maintenance and operations category shall be $7.39 per gross square footage of the district owned or leased space under 100% control plus $315.76 per FTES generated in space that is not under the control of the district 100% of the time and is consequently not inventoried, both increased by the inflation adjustment pursuant to subdivision (a) of section 58773. For 1992–93 and each fiscal year thereafter, the standard rates shall be the rates used for the prior fiscal year increased by the inflation adjustment pursuant to subdivision (a) of section 58773.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5–29–91 and submitted to OAL 6–3–91 for printing only pursuant to Education Code section 70901.5; operative 6–30–91 (Register 91, No. 28).

Article 6. Institutional Support

§ 58750. Description of Institutional Support Category.

The institutional support category of operation includes activities associated with current and future management (planning and policy making) and the business services operations of the college and/or district. These activities correspond to the California Community Colleges Budget and Accounting Manual Classification of Expenditures by Activity, activity codes 6600 and 6700.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5–29–91 and submitted to OAL 6–3–91 for printing only pursuant to Education Code section 70901.5; operative 6–30–91 (Register 91, No. 28).

§ 58752. Institutional Support Standards.

(a) The institutional support standard is 14.2 percent of the amounts generated in all the categories specified in articles 2–7. It is based on actual statewide expenditure patterns in 1987–88 for the General Institutional Support and Policy Planning Activity as a percentage of total expenditures (less capital outlay).

(b) The standard rate derived from application of the above standard to be used in the 1991–92 and subsequent fiscal years allocation process, contained in article 8 of this subchapter, for the institutional support category is 14.2% of the revenue generated in categories specified in articles 2–7.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5–29–91 and submitted to OAL 6–3–91 for printing only pursuant to Education Code section 70901.5; operative 6–30–91 (Register 91, No. 28).

Article 7. Noncredit Activities

§ 58760. Description of Noncredit Activities.

Noncredit activities include the operations of instruction, instructional services, and student services for noncredit classes.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5–29–91 and submitted to OAL 6–3–91 for printing only pursuant to Education Code section 70901.5; operative 6–30–91 (Register 91, No. 28).

§ 58762. Noncredit Activities.

For the 1991–92 fiscal year, the amount per noncredit FTES shall be equal to the amount received for 1990–91 for noncredit average daily attendance less a proportionate amount for maintenance and operations, and institutional support, plus increases corresponding to the inflation adjustment specified in subdivision (a) section 58773. For the 1992–93 fiscal year and each fiscal year thereafter, the amount per noncredit FTES shall be equal to the amount received in the prior fiscal year increased by the inflation adjustment pursuant to subdivision (a) of section 58773.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5–29–91 and submitted to OAL 6–3–91 for printing only pursuant to Education Code section 70901.5; operative 6–30–91 (Register 91, No. 28).

Article 8. Allocation Process

§ 58770. State Apportionment Procedure.

(a) The fiscal year revenues for each community college district shall be the noncredit base revenues as defined in subdivision (i) of section 58771, plus the credit base revenues as defined in subdivision (j) of section 58771, plus the inflation adjustments specified in section 58773, plus the workload adjustments specified in section 58774, plus the program improvement adjustment specified in section 58775, plus the budget stability adjustment specified in section 58776, plus the one–time revenue distributed pursuant to subdivision (c) of section 58777.

(b) For each community college district, the Chancellor shall subtract from the revenues determined pursuant to subdivision (a), the local property tax revenue specified by law for general operating support, exclusive of bond interest and redemption, and motor vehicle license fees received pursuant to section 11003.4 of the Revenue and Taxation Code, timber yield tax revenue pursuant to section 38905 of the Revenue and Taxation Code, and 98 percent of the fee revenues collected pursuant to Education Code, section 72252 and moneys received for fees defrayed pursuant to subdivision (g) of Education Code section 72252. The remainder shall be the state general apportionment for each district.

(c) The Chancellor shall adjust the amount determined pursuant to subdivision (b) to provide for prior year adjustments required pursuant to section 58134.

(d) Warrants shall be drawn on the State Treasury by the Controller in favor of the treasurer of each county for the allocations certified by the Chancellor in accordance with the following schedule, as adjusted by the Chancellor in accordance with the provisions of subdivision (e):

(1) Eight percent of district eligibility shall be allocated in July.

(2) Eight percent of district eligibility shall be allocated in August.

(3) Twelve percent of district eligibility shall be allocated in September.

(4) Ten percent of district eligibility shall be allocated in October.

(5) Nine percent of district eligibility shall be allocated in November.

(6) Five percent of district eligibility shall be allocated in December.

(7) Eight percent of district eligibility shall be allocated in January.

(8) The remaining percent of district eligibility shall be allocated in the months for February through June on a schedule as certified by the Chancellor.

(e) The Chancellor may, upon the demonstrated need of any community college district for increased levels of allocations of state funds in any month based on district expenditure patterns and cash flow needs, adjust the allocations provided in subdivision (d), provided that the total of the allocations to be made between July 1 and February 1 shall not exceed 70 percent.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5–29–91 and submitted to OAL 6–3–91 for printing only pursuant to Education Code section 70901.5; operative 6–30–91 (Register 91, No. 28).

§ 58771. Base Fiscal Year Revenues.

(a) For the 1991–92 fiscal year, base revenues for each community college district shall be the sum of revenues received for the preceding fiscal year in accordance with Education Code, section 84700, funds subject to the allocation and expenditure provisions of Education Code, section 84755, and any unfunded shortage in local revenues identified pursuant to the provisions of Education Code, section 84712, less any adjustments for declining average daily attendance pursuant to Education Code, sections 84702, 84702.5 and 84704 in the preceding fiscal year.

(b) For the 1992–93 fiscal year and each fiscal year thereafter, base revenues for each community college district shall be the sum of the revenues received for the preceding fiscal year in accordance with section 58770, exclusive of section 58776 and subdivision (c) of section 58777, plus any unfunded shortage in revenues identified pursuant to the provisions of section 58779, less any adjustment for declining workload measures pursuant to 58774 in the preceding fiscal year.

(c) For the 1991–92 fiscal year, base new credit enrollment shall be the actual new credit enrollment of the prior fiscal year. For the 1992–93 fiscal year and each fiscal year thereafter, base new credit enrollment shall be the fully funded new credit enrollment of the prior fiscal year, less the adjustment for declining new credit enrollment in the preceding fiscal year.

(d) For the 1991–92 fiscal year, base continuing credit enrollment shall be the actual continuing credit enrollment of the prior fiscal year. For the 1992–93 fiscal year and each fiscal year thereafter, base continuing credit enrollment shall be the fully funded continuing credit enrollment of the prior fiscal year, less the adjustment for declining continuing credit enrollment in the preceding fiscal year.

(e) For the 1991–92 fiscal year, base credit FTES shall be the lesser of the actual credit FTES of the prior fiscal year or the product of the actual credit FTES of the prior fiscal year multiplied by the ratio of funded credit average daily attendance to actual credit average daily attendance for the 1990–91 fiscal year. For the 1992–93 fiscal year and each fiscal year thereafter, base credit FTES shall be the fully funded credit FTES of the prior fiscal year, less the adjustment for declining credit FTES in the preceding fiscal year.

(f) For the 1991–92 fiscal year, base noncredit FTES shall be the lesser of the actual noncredit FTES of the prior fiscal year or the product of the actual noncredit FTES of the prior fiscal year multiplied by the ratio of funded noncredit average daily attendance to actual noncredit average daily attendance for the 1990–91 fiscal year. For the 1992–93 fiscal year and each fiscal year thereafter, base noncredit FTES shall be the fully funded noncredit FTES of the prior fiscal year, less the adjustment for declining noncredit FTES in the preceding fiscal year.

(g) Gross square footage in new facilities may be counted in a fiscal year if beneficial occupancy has been certified or the Notice of Completion is filed between July 1 and December 31. If beneficial occupancy has been certified or the Notice of Completion is filed between January 1 and June 30, the increase in gross square footage shall be counted in the subsequent fiscal year. For the 1991–92 fiscal year, base gross square footage shall be the actual gross square footage of the prior fiscal year. For the 1992–93 fiscal year and each fiscal year thereafter, base gross square footage shall be the fully funded gross square footage of the prior fiscal year, less the adjustment for declining gross square footage in the preceding fiscal year.

(h) For the 1991–92 fiscal year, base FTES in less than 100% leased space shall be the actual FTES in less than 100% leased space of the prior fiscal year. For the 1992–93 fiscal year and each fiscal year thereafter, base FTES in less than 100% leased space shall be the fully funded FTES in less than 100% leased space of the prior fiscal year, less the adjustment for declining FTES in less than 100% leased space in the preceding fiscal year.

(i) The noncredit base revenue for each community college district shall be equal to the units of base noncredit FTES determined pursuant

to subdivision (f), multiplied by the funded standard rate for noncredit activities in the prior fiscal year, plus the applicable institutional support.

(j) The credit base revenue for all five categories for each community college district shall be equal to the district's base revenue determined pursuant to subdivision (a) or (b) as appropriate, less the district's noncredit base revenue determined pursuant to subdivision (i).

(k) Base percent of standard for the 1991–92 fiscal year shall be 100 times the quotient of the sum of the district's 1990–91 total credit revenue plus 1990–91 program improvement funds plus a proportionate amount of the 1990–91 noncredit rate for maintenance and operations and institutional support minus 16.550116550116% of the 1991–92 funding rate per base noncredit FTES, all divided by the district's total 1990–91 standard rates for credit instruction, instructional services, student services, maintenance and operations, and corresponding institutional support using 1991–92 base workload measures.

(*l*) Base percent of standard for the 1992–93 fiscal year and each fiscal year thereafter shall be 100 times the quotient of the sum of the district's credit base revenue divided by the district's total standards for the prior fiscal year for credit instruction, instructional services, student services, maintenance and operations, and corresponding institutional support using base workload measures.

(m) The current year percent of standard shall be 100 times the quotient of the sum of the district's credit base revenue determined pursuant to subdivision (j), the credit base inflation adjustment determined pursuant to subdivision (c) of section 58773, and the credit growth adjustment determined pursuant to subdivision (d) of section 58774, all divided by the district's total standards for credit instruction, instructional services, student services, maintenance and operations, and corresponding institutional support using current year funded workload measures.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5–29–91 and submitted to OAL 6–3–91 for printing only pursuant to Education Code section 70901.5; operative 6–30–91 (Register 91, No. 28).

§ 58772. Base Revenue and Workload Reduction.

Notwithstanding sections 58771 and 58779, if it is known at the time of the adoption of the State Budget Act for the current year that revenues are not sufficient to fully fund base revenues pursuant to section 58771, district base revenues shall be reduced proportionally by the ratio of one statewide total revenue available for purposes of section 58771, to the statewide total calculated amount for purposes of section 58771, and all base workload measures pursuant to section 58771, shall be reduced proportionally by the ratio of the statewide total revenue available for purposes of section 58771, to the statewide total calculated amount for purposes of sections 58771 and 58773.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5–29–91 and submitted to OAL 6–3–91 for printing only pursuant to Education Code section 70901.5; operative 6–30–91 (Register 91, No. 28).

§ 58773. Inflation Adjustments.

(a) Inflation adjustments shall be made to reflect cost changes, using the percentage change of the Implicit Price Deflator for State and Local Government Purchases of Goods and Services for the United States, as published by the United State Department of Commerce, from the fourth calendar quarter of the prior year to the fourth calendar quarter of the latest available year rounded up to the next hundredth.

(b) The noncredit base inflation adjustment for each community college district shall be the product of the following:

(1) The noncredit base revenue computed pursuant to subdivision (i) of section 58771.

(2) The quotient of the inflation adjustment determined pursuant to subdivision (a), divided by 100.

(c) The credit base inflation adjustment for each community college district shall be the product of the following:

(1) The credit base revenue computed pursuant to subdivision (j) of section 58771.

(2) The quotient of the inflation adjustment determined pursuant to subdivision (a), divided by 100.

(3) The quotient of the statewide base percent of standard divided by the district's base percent of standard determined pursuant to subdivision (k) or (*l*) of section 58771, as appropriate, or 1.0 if the quotient is less than 1.0.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5–29–91 and submitted to OAL 6–3–91 for printing only pursuant to Education Code section 70901.5; operative 6–30–91 (Register 91, No. 28).

§ 58774. Growth and Decline.

(a) "Growth limit" means an increase in workload which shall be determined by the Chancellor based on such factors as the rate of change of the adult population, unemployment rate, the number of students graduating from California high schools, new or under utilized physical capacity for student enrollment and other statewide priorities including retention and transfer rates of underrepresented student populations. Each district shall receive a minimum growth allocation of 1% or a rate which will provide at least 100 total FTES and 150 total credit enrollment.

(b) A growth revenue cap for credit instruction, instructional services, student services, noncredit activities, and the corresponding institutional support for each community college district (aggregated college–by–college in a multi–college district) shall be the sum of the following:

(1) Instruction. The product of the standard rate defined in subdivision (b) of section 58712, multiplied by the base credit FTES defined in subdivision (e) of section 58771, multiplied by the growth limit defined in subdivision (a), multiplied by the college/district scale factor defined in section 58714 (using base credit FTES), and multiplied by the statewide base percent of standard defined in subdivision (k) or (*l*), as appropriate, of section 58771.

(2) Instructional Services. The product of the standard rate defined in subdivision (b) of section 58722, multiplied by the base credit FTES defined in subdivision (c) of section 58771, multiplied by the growth limit defined in subdivision (a), and multiplied by the statewide base percent of standard defined in subdivision (k) or (*l*), as appropriate, of section 58771.

(3) Student Services. The product of the standard rate for new credit enrollment defined in subdivision (b) of section 58732, multiplied by the base new credit enrollment defined in subdivision (c) of section 58771, multiplied by the growth limit defined in subdivision (a), plus the product of the standard rate for continuing credit enrollment defined in subdivision (b) of section 58732 multiplied by the base continuing credit enrollment defined in subdivision (d) of section 58771, multiplied by the growth limit defined in subdivision (a), all multiplied by the college/district scale factor defined in section 58734 (using base credit enrollment), and multiplied by the statewide base percent of standard defined in subdivision (k) or (*l*) as appropriate, of section 58771.

(4) Noncredit Activities. The product of the rate defined in section 58762, multiplied by the base noncredit FTES defined in subdivision (f) of section 58771, multiplied by the growth limit defined in subdivision (a).

(5) Institutional support. The product of the sum of subparagraphs (1) through (4) multiplied by 0.165501165501.

(c) An actual growth revenue computation for credit instruction, instructional services, student services, noncredit activities, and the corresponding institutional support for each community college district (aggregated college–by–college in a multi–college district) shall be the sum of the following:

(1) Instruction. The product of the standard rate defined in subdivision (b) of section 58712, multiplied by the difference between actual credit

FTES and base credit FTES defined in subdivision (e) of section 58771, multiplied by the college/district scale factor defined in section 58714 (using base credit FTES), and multiplied by the base percent of standard (the district percent of standard if the change is negative and the district is low revenue, otherwise the statewide percent of standard shall be used) defined in subdivision (k) or (*l*), as appropriate of section 58771.

(2) Instructional Services. The product of the standard rate defined in subdivision (b) of section 58722, multiplied by the difference between actual credit FTES and base credit FTES defined in subdivision (e) of section 58771, and multiplied by the base percent of standard (the district percent of standard if the change is negative and the district is low revenue, otherwise the statewide percent of standard shall be used) defined in subdivision (k) or (*l*), as appropriate, of section 58771.

(3) Student Services. The product of the standard rate for new credit enrollment defined in subdivision (b) of section 58732, multiplied by the difference between actual new credit enrollment and base new credit enrollment defined in subdivision (c) of section 58771 plus the product of the standard rate for continuing credit enrollment defined in subdivision (b) of section 58732, multiplied by the difference between actual continuing credit enrollment and base continuing credit enrollment defined in subdivision (d) of section 58771, all multiplied by the college/district scale factor defined in section 58734 (using base credit enrollment), and multiplied by the base percent of standard (the district percent of standard if the change is negative and the district is low revenue, otherwise the statewide percent of standard shall be used) defined in subdivision (k) or (*l*), as appropriate, of section 58771.

(4) Noncredit Activities. The product of the rate defined in section 58762 multiplied by the difference between actual noncredit FTES and base noncredit FTES defined in subdivision (f) of section 58771.

(5) Institutional Support. The product of the sum of subparagraphs (1) through (4) multiplied by 0.165501165501.

(d) If the amount computed in subdivision (c) is less than zero, the district's base revenue for the subsequent fiscal year shall be adjusted in accordance with subdivision (h). If the amount computed in subdivision (c) is greater than zero and less than or equal to the revenue cap computed in subdivision (b), the district revenue shall be adjusted by the amount computed in subdivision (c). If the amount computed in subdivision (c) is greater than the revenue cap computed in subdivision (b), the district's revenue shall be adjusted by the revenue cap computed in subdivision (b).

(e) A growth revenue cap for maintenance and operations for each community college district shall be computed as follows: The product of the standard rate for gross square footage defined in subdivision (b) of section 58742, multiplied by the greater of the product of the base gross square footage defined in subdivision (g) of section 58771 times the growth limit defined in subdivision (a), or the actual increase in gross square footage due to construction of new buildings approved under state guidelines, plus the product of the standard rate for FTES in less than 100% leased space defined in subdivision (b) of section 58742, multiplied by the base FTES in less than 100% leased space defined in subdivision (h) of section 58771, multiplied by the growth limit defined in subdivision (a), with this sum multiplied by the statewide base percent of standard defined in subdivision (k) or (*l*), as appropriate, of section 58771, plus 16.5501165501% of the product for institutional support.

(f) An actual growth revenue computation for maintenance and operations for each community college district shall be computed as follows:

The product of the standard rate for gross square footage defined in subdivision (b) of section 58742, multiplied by the difference between actual gross square footage and base gross square footage defined in subdivision (g) of section 58771, plus the product of the standard rate for FTES in less than 100% leased space defined in subdivision (b) of section 58742, multiplied by the difference between actual FTES in less than 100% leased space and base FTES in less than 100% leased space defined in subdivision (h) of section 58771, with this sum multiplied by the statewide base percent of standard defined in subdivision (k) or (*l*), as appropriate, of section 58771, plus 16.5501165501% of the product for institutional support.

(g) If the amount computed in subdivision (f) is less than zero, the district's revenue shall be adjusted in accordance with subdivision (h). If the amount computed in subdivision (f) is greater than zero and less than or equal to the revenue cap computed in subdivision (e), the district's revenue shall be adjusted by the amount computed in subdivision (f). If the amount computed in subdivision (f) is greater than the revenue cap computed in subdivision (e), the district's revenue shall be adjusted by the revenue cap computed in subdivision (e).

(h) "Declining workload adjustments" shall be defined as follows:

(1) "Declining workload adjustment for high revenue districts" means the full amount of the statewide average revenue per workload measure computed for decreases in workload when the sum of the computations for all colleges within such district for each category of operation using actual current year workload measures is less than the sum of the computations for all colleges within the district for each category of operation using current year base workload measures.

(2) "Declining workload adjustment for low revenue districts" means the full amount of the statewide average revenue per workload measure for maintenance and operations and noncredit classes and one-half of such district's average revenue per workload measure for credit instruction, instructional services, student services, and institutional support, for decreases in workload when the sum of the computations for all colleges within the district for each category of operation using actual current year workload measures is less than the sum of the computations for all colleges within the district for each category of operation using current year base workload measures.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5-29-91 and submitted to OAL 6-3-91 for printing only pursuant to Education Code section 70901.5; operative 6-30-91 (Register 91, No. 28).

§ 58775. Program Improvement.

(a) Revenues for low revenue community college districts shall be adjusted for equalization as follows:

(1) Compute an amount equal to ten percent of the statewide credit base inflation adjustment computed in subdivision (c) of section 58773.

(2) The amount computed in paragraph (1) shall be allocated to raise the revenue of low revenue districts to the highest common level possible in relation to the statewide current year percent of standard as defined in subdivision (m) of section 58771.

(b) For any program improvement funds available in excess of the amount computed paragraph (a)(1), thirty percent (30%) shall be allocated in accordance with the procedure defined in subparagraph (a)(2), and seventy percent (70%) shall be distributed to all districts on the basis of total current year funded FTES.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5-29-91 and submitted to OAL 6-3-91 for printing only pursuant to Education Code section 70901.5; operative 6-30-91 (Register 91, No. 28).

§ 58776. Budget Stability.

(a) Of the adjustment made pursuant to subdivision (h) of section 58774, which is related to credit instruction, instructional services, student services, noncredit activities, and the corresponding institutional support, the district shall receive an amount for budget stability, which is not to be included in subsequent year base revenue computations or in the computations affecting the distribution of program improvement revenue pursuant to section 58775, as follows:

(1) In the year after the decline, two-thirds of the adjustment less any increase due to restoration as specified in subdivision (b).

(2) In the second year after the decline, one–half of the amount specified in subparagraph (1), less any increase due to restoration as specified in subdivision (b).

(b) "Restoration workload" means an amount set by the Chancellor for allowable restoration based on any decline that occurred during the three prior years.

NOTE: Authority cited: Sections 66700, 70901 and 84570, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5–29–91 and submitted to OAL 6–3–91 for printing only pursuant to Education Code section 70901.5; operative 6–30–91 (Register 91, No. 28).

§ 58777. Decline Restoration.

(a) Districts shall be entitled to restore any reductions in apportionment revenue due to declines in the student workload measures for credit instruction instructional services, student services, noncredit activities, and the corresponding institutional support during three years following the initial year of decline if there is a subsequent increase in student workload measures.

(b) Restoration of revenue for declining workload shall be made at the rate the district lost the revenue plus the inflation adjustments made between the year of decline and the year of restoration.

(c) Of the funds made available pursuant to subdivision (h) of section 58774, that are not utilized for purposes of budget stability pursuant to section 58776, or decline restoration pursuant to subdivisions (a) and (b) of this section, the Chancellor may allocate the revenue on a one–time basis to districts based on FTES.

NOTE: Authority cited: Sections 66700, 709801 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5–29–91 and submitted to OAL 6–3–91 for printing only pursuant to Education Code section 70901.5; operative 6–30–91 (Register 91, No. 28).

§ 58779. Deficit Mechanism.

In the event that State General Fund appropriations, local property tax revenues, student enrollment fees, and other local tax revenues allocated to community college districts for general operating support, are less than the amounts computed for all districts for the fiscal year pursuant to subdivision (a) of section 58770, the Chancellor shall apportion state aid by multiplying the amount computed for each district pursuant to subdivision (a) of section 58770, by the ratio of the statewide total revenue available for purposes of subdivision (a) of section 58770, to the statewide total calculated amount for purposes of subdivision (a) of section 58770.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5–29–91 and submitted to OAL for printing only pursuant to Education Code section 70901.5; operative 6–30–91 (Register 91, No. 28).

Article 9. Reporting Procedures

§ 58780. Documentation Requirements.

The documentation requirements specified in this article are necessary to promote standardized and accurate reporting of district data used for calculating the state general apportionment allocation.

NOTE: Authority cited: Sections 66700, 709001 and 84760, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5–29–91 and submitted to OAL 6–3–91 for printing only pursuant to Education Code section 70901.5; operative 6–30–91 (Register 91, No. 28).

§ 58782. Computation and Limitations on State Aid.

(a) The provisions of subchapter 1 (commencing with section 58000) and subchapter 2 (commencing with section 58100) of chapter 9 shall be applicable in the computation of full–time equivalent student to the extent such provisions do not conflict with the principles or provisions of this subchapter.

(b) Notwithstanding any other provisions of law or regulation, full–time equivalent student (FTES) shall be computed as follows:

(1) Credit full–time equivalent student (FTES) generated by California residents are computed in accordance with the computation described in section 58003.1 without the count of student contact hours as of the second census week or day (three–fifths of the way through the term or course) or the application of the statewide attendance factor (.911), plus actual hours of attendance in positive attendance courses divided by 525, and, if applicable, adjusted by a factor derived pursuant to section 58188.

(2) Noncredit full–time equivalent student (FTES) generated by California residents and nonresidents attending courses described in Education Code section 84711 are computed in accordance with the computations described in section 58007 and, if applicable, adjusted by a factor derived pursuant to section 58188.

(c) In accordance with section 58704(h), the Chancellor shall, as necessary, interpret the provisions specified in subsection (a) for consistency with the provisions of this subchapter.

NOTE: Authority cited: Sections 66700, 70901 and 84750, Education Code. Reference: Section 84750, Education Code.

HISTORY

1. New section filed 5–29–91 and submitted to OAL 6–3–91 for printing only pursuant to Education Code section 70901.5; operative 6–30–91 (Register 91, No. 28).

Minimum Conditions:
Full-Time/Part-Time Faculty

1. Section 51025 of Subchapter 1 of Chapter 2 of Division 6 of Title 5 of the *California Code of Regulations* is amended to read:

51025. Full-time/Part-time Faculty.

This section relates to and should be read in conjunction with Subchapter 3 (commencing with section 53300) of Chapter 4 of this Division.

(a) Community College districts which have less than 75 percent of their hours of credit instruction taught by full-time instructors, as determined from their base data calculated pursuant to section 53311, shall apply the growth revenues received related to increases in credit FTES in accordance with section 58774 of this division and a portion of the program improvement allocation received in accordance with section 58775 of this division, as follows:

(1) Of the growth revenues received related to increases in credit FTES pursuant to section 58774 of this division, the districts shall increase the base number of full-time instructors, subject to subdivision (e) of this section, by fall of the succeeding fiscal year, by the product of their base number of full-time faculty multiplied by the percentage change in funded credit FTES, rounded down to the nearest whole number.

(2) Districts which, as determined from their base data, had 67 percent or greater, but less than 75 percent of their hours of credit instruction taught by full-time instructors shall apply up to 33 percent of their program improvement allocation pursuant to subdivision (b) of section 58775 of this division, as necessary to reach the 75 percent standard pursuant to paragraph (4).

(3) Districts which, as determined from their base data, had less than 67 percent of their hours of credit instruction taught by full-time instructors shall apply up to 40 percent of their program improvement allocation pursuant to subdivision (b) of section 58775 of this division, as necessary to reach the 75 percent standard pursuant to paragraph (4).

(4) Of the program improvement funds identified in paragraph (2) or (3), as appropriate, the district shall increase the number of full-time instructors, by fall of the succeeding fiscal year, by the quotient of the applicable program improvement funds divided by the statewide average replacement cost, rounded down to the nearest whole number.

(5) If the number of full-time faculty derived in paragraphs (1) and (4), result in the district exceeding the 75 percent standard, the Chancellor shall reduce the number that leaves the district as close as possible to, but in excess of, the 75 percent standard.

(b) Statewide average replacement cost is the statewide average faculty salary plus benefits, minus the product of the statewide average hourly rate of compensation for part-time instructors times the statewide average full-time teaching load.

(c) On or before December 31 of each year, the Chancellor shall determine, based on information submitted by districts, the extent to which each district, by fall of that year, has maintained or hired the number of additional full-time instructors determined pursuant to subdivision (a) for the prior fiscal year. To the extent that the number of full-time faculty has not been maintained or additional full-time instructors have not been retained, the Chancellor shall reduce the district's revenue for the current fiscal year by an amount equivalent to the average replacement cost for the prior fiscal year times the deficiency in the number of full-time faculty. To the extent a district hires the additional full-time instructors in subsequent fiscal years the reductions made to the district's revenue shall be restored.

(d) All revenues available due to reductions made pursuant to subdivision (c), shall be made available on a one-time basis for that fiscal year, for purposes of Faculty and Staff Diversity pursuant to Education Code section 87107.

(e) By January 20 of each fiscal year the Board of Governors shall determine whether adequate growth funds and adequate cost-of-living funds have been provided to allow full or partial implementation of the provisions of subparagraph (a)(1).

(f) For districts that experience a reduction in base credit FTES, the Chancellor shall make a proportionate reduction to their base number of full-time faculty.

NOTE: Authority cited: Sections 66700 and 70901, Education Code. Reference: Section 84750, Education Code.

Revisions to Full-Time/Part-Time Faculty Regulations

2. Section 53300 of Subchapter 3 of Chapter 4 of Division 6 of Title 5 of the *California Code of Regulations* is amended to read:

53300. Scope.

This subchapter relates to and should be read in conjunction with the requirements of section 51025 of Subchapter 1 of Chapter 2 of this Division concerning the proportion of full-time and part-time instructors on the faculty of community colleges.

NOTE: Authority cited: Sections 66700 and 70901, and Education Code. Reference: Section 84750, Education Code.

53302. Full-time Instructor.

For purposes of this chapter only, a full-time instructor shall be defined as any regular or contract faculty member teaching credit instruction.

NOTE: Authority cited: Sections 66700; and 70901, Education Code. Reference: Section 84750, Education Code.

3. Section 53310 of Subchapter 3 of Chapter 4 of Division 6 of Title 5 of the *California Code of Regulations* is amended to read:

53310. Hours of Instruction.

In computing the percentage of hours of credit instruction taught by full-time instructors, the following rules shall be applied:

(a) Overload. The hours of overload teaching by full-time instructors shall be excluded from both the total hours of credit instruction taught by full-time and part-time instructors and the total hours of instruction taught by full-time instructors.

(b) Sabbatical. The hours of a full-time instructor on sabbatical, whether paid or unpaid, shall be included in both the total hours of credit instruction taught by full- time and part-time instructors and the total hours of instruction taught by full-time instructors. The hours of instruction of replacement faculty, whether full-time or part-time, shall be excluded from both the total hours of credit instruction taught by full-time and part-time instructors and the total hours of instruction taught by full-time instructors.

(c) Released/Reassigned Time. The hours of a full-time instructor on released or reassigned time shall be counted as if the instructor was teaching full time and had not been provided released or reassigned time. The hours of instruction shall thereby be included in both the total hours of credit instruction taught by full-time and part- time instructors and the total hours of instruction taught by full-time instructors. The hours of instruction of replacement faculty, whether full-time or part-time, shall be excluded from both the total hours of credit instruction taught by full-time and part-time instructors and the total hours of instruction taught by full-time instructors.

(d) Unpaid Leave. The hours of a full-time instructor on unpaid leave shall be counted as if the instructor was teaching full time and had not been provided with unpaid leave. The hours of instruction shall thereby be included in both the total hours of credit instruction taught by full-time and part-time instructors and the total hours of instruction taught by full-time instructors. The hours of instruction of replacement faculty, whether full-time or part-time, shall be excluded from both the total hours of credit instruction taught by full-time and part-time instructors and the total hours of instruction taught by full-time instructors.

(e) Teaching by Others. The hours of instruction taught by counselors, librarians, classified staff or administrators who are appropriately qualified to teach shall, under the following conditions, be included in both the total hours of credit instruction taught by full-time and part-time instructors and the total hours of instruction taught by full-time instructors:

(1) Only the actual hours of teaching by such individuals shall be included;

(2) The hours of teaching by such individuals must be part of a regular contract, and not taught as an overload assignment.

(f) Outreach Locations. The hours of instruction taught by full-time and part-time instructors at any outreach location that is more than 25 miles from the main campus and generates less than 200 FTES, shall be excluded from both the total hours of credit instruction taught by full-time and part-time instructors and the total hours of instruction taught by full-time instructors.

(g) Late Retirement. The hours of a full-time instructor who resigned or retired and who provided written notice thereof within 45 faculty duty days of the end of the previous spring primary term and whose position has not been replaced by another full-time instructor by the current fall primary term, shall be included in both the total hours of credit instruction taught by full-time and part-time instructors and the total hours of instruction taught by full-time instructors. The hours of instruction of replacement faculty, whether full-time or part-time, shall be excluded from both the total hours of credit instruction taught by full-time and part-time instructors and the total hours of instruction taught by full-time instructors.

Districts are required to fill the position(s) by the following spring primary term unless designees for the district governing board and academic senate jointly agree that it is in the best interests of the district to delay the filling of the position. In such cases, replacement must be made by the following primary term or the Chancellor shall reduce the district's state apportionment revenues for the current year in accordance with the provisions of section 51025.

(h) Librarians. A number of hours equivalent to the number of hours taught by a full-time instructor shall be included in both the total hours of credit instruction taught by full-time and part-time instructors and the total hours of instruction taught by full-time instructors for each full-time librarian hired in excess of the number of full-time librarians in the previous year's base. A comparable number of hours shall be counted for each year thereafter unless the position(s) is vacant or eliminated. This subdivision shall become inoperative on July 1, 1994, unless a later-adopted regulation deletes or extends this date.

NOTE: Authority cited: Sections 66700 and 70901 Education Code. Reference: Section 84750, Education Code.

4. Section 53311 of Subchapter 3 of Chapter 4 of Division 6 of Title 5 of the *California Code of Regulations* is amended to read:

53311. Base Data.

For purposes of this subchapter, "base data" means the base percentage of hours of credit instruction taught by full time instructors and the base number of full-time faculty required to be maintained or additional hires to be made by the fall of the subsequent year shall be determined from the current year's fall management information system staff data submission to the Chancellor's Office.

NOTE: Authority cited: Sections 66700 and 70901, Education Code. Reference: Section 84750, Education Code.

5. Section 53312 of Subchapter 3 of Chapter 4 of Division 6 of Title 5 of the *California Code of Regulations* is amended to read:

53312. Additional Full-Time Faculty Positions.

(a) The Chancellor shall compute each community college district's number of full-time faculty (FTF) which are to be secured in accordance with the provisions of section 51025, as the result of additional funded growth in credit full-time equivalent students and through the use of the prescribed portion of program improvement revenue allocated to each district.

(b) This computation shall be made by dividing the applicable portion of program improvement revenue (0 percent, 33 percent, or 40 percent of the program improvement allocation), by the statewide average "replacement cost" (a figure which represents the statewide average faculty salary plus benefits, minus the statewide hourly rate of compensation for part-time instructors times the statewide average full-time teaching load).

(c) If the quotient determined in paragraph (b) is not a whole number, then the quotient shall be rounded down to the nearest whole number. If this quotient, once applied, will result in the district exceeding the 75 percent standard, the Chancellor shall further reduce the quotient to a whole number that will leave the district as close as possible to, but in excess of, the 75 percent standard.

(d) The computation for the funded growth in full-time equivalent student workload obligation to secure additional full-time faculty shall, when required pursuant to the provisions of section 51025(a)(1) and (e), be made by multiplying the percentage of funded credit FTES growth times the base number of full-time faculty that were to be in place by fall of the current year.

NOTE: Authority cited: Sections 66700 and 70901, Education Code. Reference: Section 84750, Education Code.

6. Section 53314 of Subchapter 3 of Chapter 4 of Division 6 of Title 5 of the *California Code of Regulations* is amended to read:

53314. Report to Districts.

The Chancellor shall report to districts by spring of each year the estimated number of FTF each district must secure by the following fall based upon the appropriation of revenues contained in that year's Budget Act and the Board of Governors action pursuant to section 51025(e).

NOTE: Authority cited: Sections 66700, and 70901, Education Code. Reference: Section 84750, Education Code.

CHANCELLOR'S OFFICE

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1994-95 PERSPECTIVE

The budgets for community colleges and K-12 for 1994-95 will undoubtedly be driven by Proposition 98. Because of the far-reaching, monumental impact of the voucher initiative on Proposition 98 and because it is very uncertain how it will be implemented if passed; this perspective does not include any potential impact from its passage.

The most difficult aspect of 1994-95 will be to absorb the impact of the allocation of one-time funds to both K-12 and community colleges during 1993-94. This is quantified in *Table 1*.

TABLE 1

1993-94 Allocations
(In billions)

	CCs	K-12	Total
1993-94 Proposition 98 Funds	$2.3	$21.4	$23.7
One-time Funds *(loan & prior year funds)*	.2	.6	.8
Fees	.2		.2
Total:	$2.7	$22.0	$24.7

While Proposition 98 provided $23.7 billion for 1993-94, the two systems were allocated a total of $24.7 billion with $800 million coming from one-time funds. These one-time funds were included in on-going apportionments to the districts in both systems and thus, must be made up before any increases can be provided in 1994-95. One "trailer bill" (SB 399) to the 1993 Budget Act required that loan repayments to the aggregate K-14 be made from Proposition 98 funds after providing normal growth to both K-12 and community colleges.

For 1994-95, the inflation and growth rates for Proposition 98 are projected to be 1.77% and 2.34% respectively. Combining these and applying them to the 1993-94 Proposition 98 guarantee of $23.7 billion gives a 1994-95 Proposition 98 guarantee of $24.7 billion. Assuming a community college statutory growth rate of 1.7% and a K-12 growth rate of 2.34% for 1994-95, then the community colleges would need $46 million for growth and K-12 would need $510 million for growth for a total growth need of $556 million. Combining this with the total 1993-94 on-going funds of $24.7 billion gives a 1994-95 need of approximately $25.3 billion.

Assuming community college fees remain the same, then the combined amount of funds available from Proposition 98 and students fees during 1994-95 would be $24.9 billion. Not only would no loan repayment be required, but the funding would be $400 million short of meeting the

minimal growth needs of K-14. And these assumptions provide no cost of living adjustment to community colleges or K-12 for the third straight year.

One potential saviour for 1994-95 stems from the fact that Proposition 98 has required a Test 3 computation for the prior two years. When Test 3 is used, the Proposition 98 base is less than under Test 2 and this shortfall in the base must be restored in years when the state's revenue exceeds a specified level. This restoration is called the maintenance allowance. If in 1994-95, the state's per capita general fund revenue increases by just over 3%, then the required restoration of the maintenance allowance would be large enough so that the growth amounts mentioned above would be met and a modest amount would be available for loan repayment. If the state revenue increase does not materialize, then some other alternative must be found.

Although most of them are less than desirable and some are not likely to occur, there are several other avenues available to accommodate the potential shortfall of $400 million. These would include:

1. Provide funds above the Proposition 98 minimum guarantee.
2. Provide an additional loan.
3. Provide no growth funds to community colleges.
4. Reduce community college funding below 1993-94 level.
5. Reduce K-12 funding per ADA below 1993-94 level.
6. Increase student fees at community colleges.

If the overall state budget is tight and cuts are occurring in other programs, then Item 1 is not likely to happen. Furthermore, because of the dramatic underfunding that now exists in K-12 and because of the political sensitivity, Item 5 is also not very likely.

The aggregate loan for K-14 now stands at almost $1.8 billion. This will only be increased if the economy clearly shows that significant repayments will occur beginning in 1995-96. Thus, Item 2. provides only minimal hope. This only leaves the prospect of additional cuts to community colleges and/or further increases in student fees. However, it is not likely that implementation of Items 3, 4, and 6, would accommodate a shortfall of $400 million. The first attempt to address this major problem will be seen on January 10, 1994, when the Governor introduces his proposed budget for 1994-95.

Full-Time Faculty Obligation

Included in AB 1725 were requirements involving the employment of full-time faculty. The intent was to improve the ratio of full-time to part-time faculty and to have that ratio reach 75% in all districts.

The law was written in a manner that required districts that had not achieved the 75% ratio to utilize a portion of their program improvement funds received in 1989-90 and 1990-91 to employ additional full-time faculty.

To quantify the process, Fall 1998 was chosen as the base and the districts were given until Fall 1991, to fulfill their obligation. The process is summarized below:

Base full-time number (Fall, 1988)

\+ 1989-90 Program Improvement Obligation
\+ 1990-91 Program Improvement Obligation
= Fall 1991 Obligation

This obligation resulted in the employment of over 1,100 additional full-time faculty.

To maintain this improvement, regulations were approved which required additional full-time faculty to be employed if growth funding was allocated. However, the regulations indicated that this provision could be waived if inadequate COLA was provided. Since no COLA has been allocated for 1991-92, 1992-93, or 1993-94, the provision has been waived for each of those years. The regulations also provide that a reduction in the full-time obligation will occur if a decrease in funded enrollment occurs.

This situation exists for 1993-94 and therefore, the full-time obligation has been adjusted for each district to the numbers shown on the next page.

California Community Colleges
Full-time Faculty Obligation For
Purposes of California Code of Regulations
Title 5, Section 51025 and 53300 ff
Fall 1993

District		District	
Allan Hancock Joint	101.9	North Orange Co.	459.4
Antelope Valley	97.7	Palo Verde	14.0
Barstow	26.0	Palomar	253.4
Butte	119.1	Pasadena Area	296.6
Cabrillo	153.2	Peralta	272.9
Cerritos	228.6	Rancho Santiago	216.7
Chabot-Las Positas	231.1	Redwoods	95.7
Chaffey	138.0	Rio Hondo	167.6
Citrus	125.9	Riverside	182.3
Coast	512.6	Saddleback	261.1
Compton	113.5	San Bernardino	183.1
Contra Costa	418.0	San Diego	440.2
Desert	85.9	San Francisco	405.1
El Camino	321.6	San Joaquin Delta	205.7
Feather River	16.6	San Jose/Evergreen	250.5
Foothill-DeAnza	458.9	San Luis Obispo Co.	92.6
Fremont-Newark	109.2	San Mateo Co.	385.6
Gavilan	57.1	Santa Barbara	163.0
Glendale	169.8	Santa Clarita	55.1
Grossmont-Cuyamaca	196.0	Santa Monica	234.3
Hartnell	93.5	Sequoia	137.1
Imperial	60.4	Shasta-Teh.-Tri.	120.8
Kern	253.3	Sierra Joint	120.0
Lake Tahoe	18.2	Siskiyou Joint	38.2
Lassen	47.9	Solano Co.	139.7
Long Beach	268.1	Sonoma Co.	244.8
Los Angeles	1514.9	Southwestern	180.9
Los Rios	583.6	State Center	284.0
Marin	144.2	Ventura Co.	295.3
Mendocino-Lake	38.1	Victor Valley	63.5
Merced	121.3	West Hills	49.2
MiraCosta	81.4	West Kern	21.6
Monterey Peninsula	109.9	West Valley-Mission	275.2
Mt. San Antonio	266.1	Yosemite	263.2
Mt. San Jacinto	43.9	Yuba	111.1
Napa Valley	96.5	**Statewide**	14401.3

FINANCIAL ACCOUNTING
IN THE
YOSEMITE COMMUNITY COLLEGE DISTRICT

In terms of the comprehensive planning process, it is important to keep budget development and management and financial accounting in the proper perspective. As a general philosophical position, accounting requirements should not direct the operation of instructional programs. Diligence is required to see that this does not occur.

The Yosemite Community College District accounting system is designed to comply with state requirements and to enable meeting federal requirements where required, but its primary function is to maintain viable, useful records of all fiscal transactions. The DSK (vendor name) software now being used is a powerful management tool which enables primary users (unit managers) to exert maximum control over their areas of responsibility. At the same time it provides immediate summation capability for overall monitoring.

Management of individual unit budgets and accounts is decentralized. Basic control lies with the unit manager. Normally there is no central intervention without the approval/direction of the unit manager.

In using the DSK software, unit managers can encumber accounts and transfer appropriations directly. However, the transfer of expenditures requires journal entries and must be made by the Controller upon the signed request of the unit manager. Since the system is designed to provide the unit manager with continuous, real time monitoring capability, the necessity for duplicate records is eliminated.

The information presented here consists primarily of the coding requirements and structure of the data. Specific guidelines and instruction for use of the system, including availability of reports, computer terminal screen design and use will be provided to all users on an ongoing basis.

Responsibility for Budget/Accounts. Generally, the responsibility for monitoring/managing the individual accounts of a unit rests with the unit manager. To implement this control, the unit manager:

1. Establishes the initial budget.
2. Revises the budget in accordance with college/central services decisions.
3. Authorizes all expenditures from unit accounts.
4. Initiates any necessary transfer within unit accounts.

5. Adjusts expenditures in accordance with revenues for unit activities funded from other than the general purpose apportionments.

6. Determines that accounts are encumbered when requisitions are authorized.

This activity/control is achieved through:

1. Use of a computer terminal and appropriate programs.

2. Use of computer printouts.

3. Authorizing <u>all</u> requisitions issued.

4. Monitoring revenues generated.

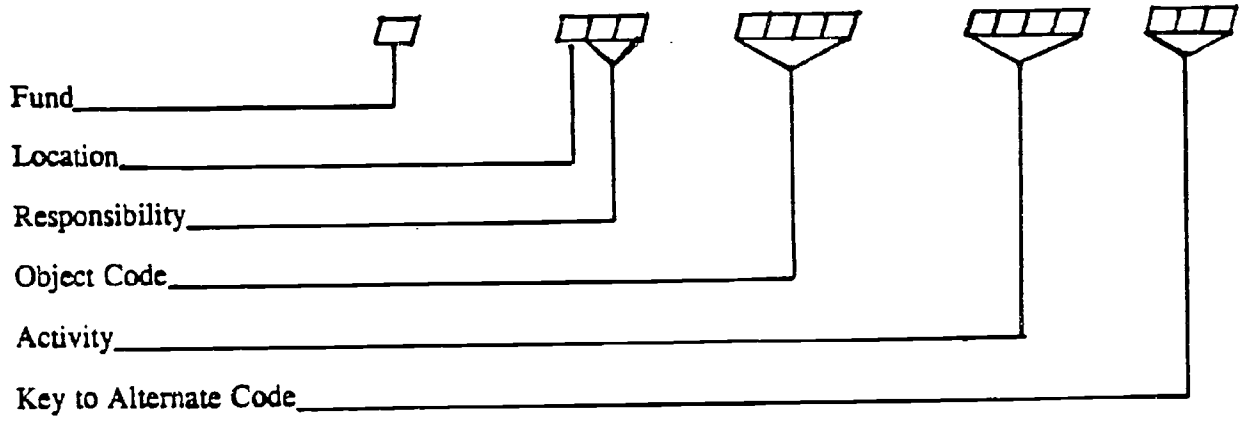
The general structure of the lines of accounting authority/responsibility is indicated in Figure 1, page 66.

Yosemite Community College District Accounting Code Structure

The accounting code structure is designed to provide information as follows:

Fund
Location
Responsibility
Object of Expenditure
Activity (TOP Code or Support Service Code)
Key to Alternate Code (Provides access to alternate number)

To accomplish these objectives and to coordinate the District's information system with those of State and Federal agencies, an account classification number using fifteen (15) positions is provided as follows:



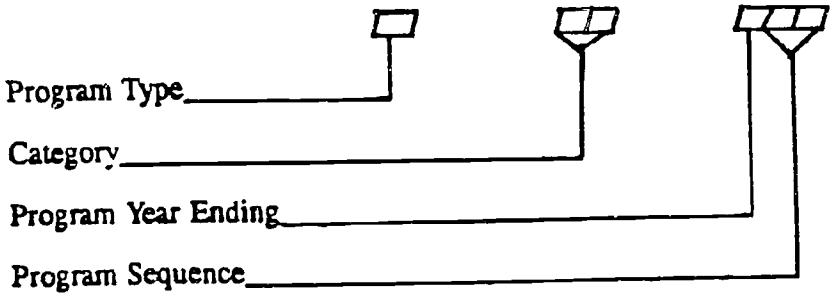
(Note: These three digits may be used in Fund 1 to make special sorts possible)

Use of Alternate Code (12 positions available; 6 in use)

The alternate file provides for additional separation and definition of accounts where necessary. At the present time the major use of the alternate file is by special programs (Fund 2).

Example:

Program Number Extension



Assignment of Codes

The lists which follow show the appropriate code numbers to use in utilizing the accounting system.

Fund

1 General Purpose-Unrestricted
2 General Purpose-Restricted
3 Community Service (restricted) and Auxiliary Accounts
4 General Purpose - Restricted Health Fee
5 Capital Projects
6 Financial Aid
7 Debt Service Fund
9 Self Insurance Fund

Location and Responsibility (3 digits)

The location code indicates the campus and general area to which the expenditure is charged. The location code is the first digit in the field.

Modesto Junior College
1 General Purpose

Columbia College
4 General Purpose

Central Services
7 District-wide Operations
8 Modesto Junior College
9 Columbia College

The responsibility designation completes the field. This two-digit code identifies the manager having the responsibility for control of that budget share. The colleges have control of this assignment.

90-91 Responsibility Codes by Unit and by Individual

No.	Unit	Individual
	Modesto Junior College	
01	Criminal Justice Training Center, PALF	Ron Martinelli
02	Admissions & Records	Julius Manrique
03	Agriculture & Biological Sciences	Homer Bowen
04	Arts, Humanities & Speech	Bob Gauvreau
05	Behavioral & Social Sciences	Bob Kerr
06	Business	Nels Overgaard
07	Asst to President, Public Rela., Dupl	Myra Rush
08	Instruction	Ron Manzoni, Steve Collins
09	Community Services/Outreach	Odessa Johnson
10	Counseling	Juan Alvarez
11	Instruction, Relations with Schools	Ron Manzoni, Steve Collins
12	Engineering, Math & Physical Sciences	Lance Thompson
13	Financial Aids	Maria Baker
14	Health Occupations	Lynda Wilson
15	Home Economics/Trade & Technical Ed	Gary Mendenhall
16	EOPS	Celia Barberena
17	Learning Resources	Dudley Roach
18	Literature & Language Arts	Betty Inclan
19	Media Services	Bill Woodard
20	Physical, Recreation & Health Ed	Doug Hodge
21	President	Stan Hodges, Myra Rush
23	Disability Services	Bob Williams
24	Student Services, Student Activities	Wilma McLeod
26	Special Programs/Contract Instruction	George Boodrookas
27	Vocational Education/College Services	Dean Colli
28	Computer Center	Jim Montalbano

Location and Responsibility (Continued)

Columbia College

51	Instruction	Ray Liedlich
52	Student Services	Judy Strattan
53	Community Services	Ray Liedlich
54	IMC	Larry Steuben
55	Library and Audio-Visual	Larry Steuben
56	Administrative & Business Office	Dean Cunningham
59	Summer School	Ray Liedlich
60	General Education	Ray Liedlich/Joan Barrett
61	Voc. Ed.	Ray Liedlich
90	Transportation	Ken Lucas
91	Buildings/Grounds	John Miller

YCCD Central Services

56	Fire Service	Ed Harte
80	District Council	Tom Van Groningen/Pam Fisher
81	Trustees	Tom Van Groningen
82	Chancellor	Tom Van Groningen
83	Negotiations	Tom Van Groningen
84	Personnel/Affirmative Action	Rich Peralta
85	Vice Chancellor, Educ. Services	Pam Fisher
86	Data Processing	Richard Jaspar
87	Business Services	Teresa Scott
89	Asst Chancellor, Business Services	Ed Harte
90	Transportation	Tom Harris
91	Buildings/Grounds	Larry Roskens
92	Energy/Conservation/Utilities/Purch	Robert Dinsmore
93	Security	Ed Harte
98	Cost of Debt	Teresa Scott
99	Employee Benefits	Teresa Scott

APPENDIX A

Chart of Accounts

FUND TITLES

GOVERNMENTAL FUNDS GROUP

10 General Fund	
11	Unrestricted Subfund
12	Restricted Subfund
20 Debt Service Funds	
21	Bond Interest and Redemption Fund
22	Revenue Bond Interest and Redemption Fund
29	Other Debt Service Fund
30 Special Revenue Funds	
31	Bookstore Fund
32	Cafeteria Fund
33	Child Development Fund
34	Farm Operations Fund
35	Revenue Bond Project Fund
39	Other Special Revenue Fund
40 Capital Projects Funds	
41	Capital Outlay Projects Fund
42	Revenue Bond Construction Fund

PROPRIETARY FUNDS GROUP

50 Enterprise Funds	
51	Bookstore Fund
52	Cafeteria Fund
53	Farm Operations Fund
59	Other Enterprise Fund
60 Internal Service Funds	
61	Self-Insurance Fund
69	Other Internal Services Fund

• = Account Code determined by district.
Underline = Account Code illustrative pending statewide automated reporting.

Chart of Accounts

FUND TITLES *(Continued)*

FIDUCIARY FUNDS GROUP

70 Trust Funds

71	Associated Students Trust Fund
72	Student Representation Fee Trust Fund
73	Student Body Center Fee Trust Fund
74	Student Financial Aid Trust Fund
75	Scholarship and Loan Trust Fund
76	Investment Trust Fund
77	Deferred Compensation Trust Fund
79	Other Trust Funds

80 Agency Funds

81	Student Clubs Agency Fund
82	Scholarship and Loan Agency Fund
83	Foundation Agency Fund
84	JPA Custodian Agency Fund
85	Deferred Compensation Agency Fund
89	Other Agency Funds

ACCOUNT GROUPS

90 Account Group (NOT A FUND)

91	General Fixed Assets Account Group
92	General Long-Term Debt Account Group

● = Account Code determined by district.
Underline = Account Code illustrative pending statewide automated reporting.

Chart of Accounts

REVENUE TITLES

8100 FEDERAL REVENUES

8110 Forest Reserve
8120 Higher Education Act
8130 Job Training Partnership Act
8140 Military Personnel Development Contracts
8150 Student Financial Aid
8160 Veterans Education
8170 Vocational and Applied Technology Education Act
8199 Other Federal Revenues

8600 STATE REVENUES

8610 General Apportionments
- Apprenticeship Allowance
- State General Apportionment
- Other General Apportionments

8620 Categorical Apportionments
- Child Development
- Extended Opportunity Programs and Services (EOPS)
- Disabled Students Programs and Services (DSPS)
- Other Categorical Apportionments

8650 Categorical Program Allowances
- Community College Construction Act
- Deferred Maintenance and Special Repair Program
- Instructional Improvement Grant
- Other Categorical Program Allowances

8670 Tax Relief Subventions
- Homeowners' Property Tax Relief
- Other Tax Relief Subventions

8680 State Non-Tax Revenues
- State Lottery Proceeds
- Other State Non-Tax Revenues

• = Account Code determined by district.
Underline = Account Code illustrative pending statewide automated reporting.

Chart of Accounts

REVENUE TITLES *(Continued)*

8600 STATE REVENUES *(Continued)*

8690 Other State Revenues
- 8691 State Mandated Costs
- 8692 Timber Yield Tax
- 8693 Trailer Coach Fees
- 8699 Other Miscellaneous State Revenues

8800 LOCAL REVENUES

8810 Property Taxes
- 8811 Tax Allocation, Secured Roll
- 8812 Tax Allocation, Supplemental Roll
- 8813 Tax Allocation, Unsecured Roll
- 8814 Voted Indebtedness, Secured Roll
- 8815 Voted Indebtedness, Unsecured Roll
- 8816 Prior Years Taxes

8820 Contributions, Gifts, Grants, and Endowments

8830 Contract Services
- • Contract Instructional Services
- • Other Contract Services

8840 Sales

8850 Rentals and Leases

8860 Interest and Investment Income

8870 Student Fees and Charges
- 8871 Child Development Services
- 8872 Community Service Classes
- 8873 Dormitory
- 8874 Enrollment
- 8875 Field Trips and Use of Nondistrict Facilities
- 8876 Health Services
- 8877 Instructional Materials Fees and Sales of Materials
- 8878 Insurance
- 8879 Student Records
- 8880 Nonresident Tuition

• = Account Code determined by district.
Underline = Account Code illustrative pending statewide automated reporting.

Chart of Accounts

REVENUE TITLES *(Continued)*

8800 LOCAL REVENUES *(Continued)*

8870 Student Fees and Charges

- 8881 Parking Services and Public Transportation
- 8882 Sales of Required Instructional and Other Materials
- 8883 Student Center Fee
- 8884 Student Representation Fee
- 8889 Other Student Fees and Charges

8890 Other Local Revenues

8900 OTHER FINANCING SOURCES

8910 Proceeds of General Fixed Assets

- Compensation for Loss of General Fixed Assets
- Sale of Equipment and Supplies
- Sale of Land and Buildings

8940 Proceeds of General Long-Term Debt

- Sale of Bonds
- Other General Long-Term Debt

8980 Incoming Transfers

- Interfund Transfers-In
- Other Incoming Transfers

●=Account Code determined by district.
Underline=Account Code illustrative pending statewide automated reporting.

Chart of Accounts

EXPENDITURE BY ACTIVITY TITLES

INSTRUCTIONAL ACTIVITIES

0100	Agriculture and Natural Resources
0200	Architecture and Environmental Design
0400	Biological Sciences
0500	Business and Management
0600	Communications
0700	Computer and Information Science
0800	Education
0900	Engineering and Related Technologies (Industrial Technologies)
1000	Fine and Applied Arts
1100	Foreign Language
1200	Health
1300	Consumer Education and Home Economics
1400	Law
1500	Humanities (Letters)
1600	Library Science
1700	Mathematics
1800	Military Studies
1900	Physical Sciences
2000	Psychology
2100	Public Affairs and Services
2200	Social Sciences
3000	Commercial Services
4900	Interdisciplinary Studies
5900	Instructional Staff—Retirees' Benefits and Retirement Incentives

• = Account Code determined by district.
Underline = Account Code Illustrative pending statewide automated reporting.

Chart of Accounts

EXPENDITURE BY ACTIVITY TITLES *(Continued)*

ADMINISTRATIVE AND SUPPORT ACTIVITIES

6000 Instructional Administration
- 6010 Academic Administration
- 6020 Course and Curriculum Development

6100 Instructional Support Services
- 6110 Learning Center
- 6120 Library
- 6130 Media
- 6140 Museums and Galleries

6200 Admissions and Records

6300 Counseling and Guidance

6400 Other Student Services
- 6420 Disabled Students Programs and Services (DSPS)
- 6430 Extended Opportunities Programs and Services (EOPS)
- 6440 Health Services
- 6450 Student Personnel Administration
- 6460 Financial Aid Administration
- 6470 Job Placement Services
- 6480 Veterans Services
- 6499 Other

6500 Operation and Maintenance of Plant
- 6510 Building Maintenance and Repairs
- 6530 Custodial Services
- 6550 Grounds Maintenance and Repairs
- 6570 Utilities
- 6599 Other

6600 Planning, Policymaking, and Coordination

● = Account Code determined by district.
Underline = Account Code illustrative pending statewide automated reporting.

Chart of Accounts

EXPENDITURE BY ACTIVITY TITLES *(Continued)*

ADMINISTRATIVE AND SUPPORT ACTIVITIES *(Continued)*

6700 General Institutional Support Services
- 6710 Community Relations
- 6720 Fiscal Operations
- 6730 Human Resources Management
- 6750 Staff Development
- 6760 Staff Diversity
- 6770 Logistical Services
- 6780 Management Information Services
- 6790 Noninstructional Staff—Retirees' Benefits and Retirement Incentives
- 6799 Other

6800 Community Services
- 6810 Community Recreation
- 6820 Community Service Classes
- 6830 Community Use of Facilities

6900 Ancillary Services
- 6910 Bookstores
- 6920 Child Development Centers
- 6930 Farm Operations
- 6940 Food Services
- 6950 Parking
- 6960 Student and Co-curricular Activities
- 6970 Student Housing
- 6999 Other

7000 Auxiliary Operations
- 7010 Auxiliary Classes
- 7099 Other Auxiliary Operations

7100 Physical Property and Related Acquisitions

7200 Long-Term Debt

7300 Transfers, and Payments to/for Students
- 7310 Transfers
- 7320 Payment to/for Students

7900 Appropriation for Contingencies

● = Account Code determined by district.
Underline = Account Code Illustrative pending statewide automated reporting.

Chart of Accounts

EXPENDITURE BY OBJECT TITLES

1000 ACADEMIC SALARIES

- **1100** Instructional Salaries, Regular Salary Schedule
- **1200** Noninstructional Salaries, Regular Salary Schedule
  - Administrators and Supervisors
  - Other
- **1300** Instructional Salaries, Nonregular Schedule
- **1400** Noninstructional Salaries, Nonregular Schedule
  - Administrators and Supervisors
  - Other

2000 CLASSIFIED SALARIES

- **2100** Noninstructional Salaries, Regular Full-time Schedule
  - Administrators and Supervisors
  - Other
- **2200** Instructional Aides, Regular Full-time Schedule
  - Direct Instruction
  - Other
- **2300** Noninstructional Salaries, Nonregular Full-time Schedule
  - Administrators and Supervisors
  - Other
- **2400** Instructional Aides, Nonregular Full-time Schedule
  - Direct Instruction
  - Other

3000 EMPLOYEE BENEFITS

- **3100** State Teachers' Retirement System (STRS) Fund
  - Academic Instructors and Instructional Aides (Direct Instruction)
  - Classified Employees and Instructional Aides (Noninstructional)
    - Administrators and Supervisors
    - Other
  - Other Academic Employees (Noninstructional)
    - Administrators and Supervisors
    - Other

●=Account Code determined by district.
Underline=Account Code illustrative pending statewide automated reporting.

Chart of Accounts

EXPENDITURE BY OBJECT TITLES *(Continued)*

3000 EMPLOYEE BENEFITS *(Continued)*

3200 Public Employees' Retirement System (PERS) Fund
- Academic Faculty Instructors and Instructional Aides (Direct Instruction)
- Classified Employees and Instructional Aides (Noninstructional)
  - Administrators and Supervisors
  - Other
- Other Academic Employees (Noninstructional)
  - Administrators and Supervisors
  - Other

3300 Old Age, Survivors, Disability, and Health Insurance
- Academic Instructors and Instructional Aides (Direct Instruction)
- Classified Employees and Instructional Aides (Noninstructional)
  - Administrators and Supervisors
  - Other
- Other Academic Employees (Noninstructional)
  - Administrators and Supervisors
  - Other

3400 Health and Welfare Benefits
- Academic Instructors and Instructional Aides (Direct Instruction)
- Classified Employees and Instructional Aides (Noninstructional)
  - Administrators and Supervisors
  - Other
- Other Academic Employees (Noninstructional)
  - Administrators and Supervisors
  - Other

3500 State Unemployment Insurance
- Academic Instructors and Instructional Aides (Direct Instruction)
- Classified Employees and Instructional Aides (Noninstructional)
  - Administrators and Supervisors
  - Other

●=Account Code determined by district.
Underline=Account Code Illustrative pending statewide automated reporting.

Chart of Accounts

EXPENDITURE BY OBJECT TITLES *(Continued)*

3000 EMPLOYEE BENEFITS *(Continued)*

3500 State Unemployment Insurance *(Continued)*
- Other Academic Employees (Noninstructional)
  - Administrators and Supervisors
  - Other

3600 Workers' Compensation Insurance
- Academic Instructors and Instructional Aides (Direct Instruction)
- Classified Employees and Instructional Aides (Noninstructional)
  - Administrators and Supervisors
  - Other
- Other Academic Employees (Noninstructional)
  - Administrators and Supervisors
  - Other

3700 Local Retirement Systems
- Academic Instructors and Instructional Aides (Direct Instruction)
- Classified Employees and Instructional Aides (Noninstructional)
  - Administrators and Supervisors
  - Other
- Other Academic Employees (Noninstructional)
  - Administrators and Supervisors
  - Other

3900 Other Benefits
- Academic Instructors and Instructional Aides (Direct Instruction)
- Classified Employees and Instructional Aides (Noninstructional)
  - Administrators and Supervisors
  - Other
- Other Academic Employees (Noninstructional)
  - Administrators and Supervisors
  - Other

4000 SUPPLIES AND MATERIALS

• = Account Code determined by district.
Underline = Account Code illustrative pending statewide automated reporting.

Chart of Accounts

EXPENDITURE BY OBJECT TITLES *(Continued)*

5000 OTHER OPERATING EXPENSES AND SERVICES

- Depreciation
- Dues and Membership
- Insurance
- Legal, Election, and Audit Expenses
- Personal and Consultant Services
- Postage
- Rents, Leases, and Repairs
- Self-Insurance Claims
- Travel and Conference Expenses
- Utilities and Housekeeping Services
- Other

6000 CAPITAL OUTLAY

6100 Sites and Site Improvements

- Sites
- Site Improvement

6200 Buildings

6300 Library Books

6400 Equipment

- Additional
- Replacement

7000 OTHER OUTGO

7100 Debt Retirement

- Debt Redemption
- Debt Interest and Other Service Charges

7300 Interfund Transfers-Out

7400 Other Transfers

7500 Student Financial Aid

7600 Other Payments to/for Students

7900 Reserve for Contingencies

• = Account Code determined by district.
Underline = Account Code illustrative pending statewide automated reporting.

Chart of Accounts

BALANCE SHEET ACCOUNT TITLES

ASSETS

9100 Cash, Investments, and Receivables
- Cash Awaiting Deposit
- Cash in Bank(s)
- Cash in County Treasury
- Revolving Cash Account
- Investments
- Accounts Receivable
- Due from Other Funds
- Student Loans Receivable
- Employee Advances Receivable

9200 Inventories, Stores, and Prepaid Items
- Inventories and Stores
- Prepaid Items

9300 Fixed Assets
- Sites
- Site Improvements
  - Accumulated Depreciation—Site Improvements
- Buildings
  - Accumulated Depreciation—Buildings
- Library Books
- Equipment
  - Accumulated Depreciation—Equipment
- Work in Progress

9400 Other Debits
- Amount Available in Debt Service Funds
- Amount to be Provided

LIABILITIES

9510 Current Liabilities and Deferred Revenue
- Accounts Payable
- Payable to Employees
- Due to Other Funds
- Temporary Loans
- Deferred Revenue

● = Account Code determined by district.
Underline = Account Code illustrative pending statewide automated reporting.

Chart of Accounts

BALANCE SHEET ACCOUNT TITLES *(Continued)*

LIABILITIES *(Continued)*

9560 Long-Term Liabilities
- Bonds Payable (GLTD)
- Revenue Bonds Payable (GLTD)
- Other Long-Term Liabilities

FUND EQUITY

9600 Fund Balance Reserved
- Noncash Assets
  - Investments
  - Student Loans Receivable
  - Stores and Inventories
  - Prepaid Items
- Amount Restricted by Law for Specific Purposes
- Reserve for Encumbrances (Credit)
  - Encumbrances (Debit)

9700 Fund Balance Unreserved
- Designated for Commitments by Contract or Other Legal Obligation
  - Capital Outlay
  - Collective Bargaining Contracts
  - Leases and Lease—Purchases
  - Personal Services and/or Consulting Contracts
  - Other
- Designated for Self-Insurance Programs
- Designated for Payments Resulting from Court Orders
- Designated for Specific Future Purposes
  - Capital Outlay
  - General Reserve
  - Leases and Lease/Purchases
  - Personal Services and/or Consulting Contracts
  - Revolving Cash Accounts
  - Other
- Nondesignated Fund Balance

9800 Investment in General Fixed Assets

• = Account Code determined by district.
Underline = Account Code illustrative pending statewide automated reporting.

GLOSSARY OF FINANCE TERMS

Accounting - The process of identifying, measuring, and communicating financial information to permit informed judgments and decisions by users.

Base Revenue - The districts' total prior year revenue from state general apportionments, local property tax revenue, and student enrollment fees, adjusted when applicable for projected deficits.

Allocation - Division or distribution of resources according to a predetermined plan.

Apportionment - Federal or state taxes distributed to college districts or other governmental units according to certain formulas.

Appropriation - An allocation of funds made by a legislative or governing body for a specified time and purpose.

Assessed Value - The value of land, homes or businesses set by the county assessor for property tax purposes. Assessed value is either the appraised value of any newly built or purchased property or the value on March 1, 1975, of continuously owned property, plus an annual increase. This increase is tied to the California Consumer Price Index but may not exceed 2%.

Auxiliary Operations - Supportive services and/or specialized programs for the general benefit of the college(s). Food service and dormitories are examples of auxiliary operations.

Base Year - A year to which reference is made when projecting a current condition.

Block Grant - A fixed sum of money, not linked to enrollment/FTES measures.

Board of Governors - The statewide governing board of the community colleges. The members are appointed by the Governor. The Board hires the Chancellor of the California Community Colleges and makes policy decisions that affect all districts. The Board may be directed by the Legislature to regulate certain matters and it may choose to regulate others.

Board of Trustees - The local governing board of each community college district. Its members are elected from the service area. The board hires the chief administrator of the district and directs the operations of the district. It makes policy decisions that are permitted or mandated at the local level.

Budget - A plan of financial operation for a given period for a specified purpose consisting of an estimate of revenue and expenditures. (Ideally, an educational plan expressed in dollars.)

Budget Act - The legislative vehicle for the state's budget appropriations. The Constitution requires that it be passed by a two-thirds vote of each house and sent to the Governor by June 15 each year. The Governor may reduce or delete, but not increase, individual items.

Budgeting - The process of allocating available resources among potential activities to achieve the objectives of an organization.

Categorical Funds - Funds received by a district for a certain purpose which can only be spent for that purpose. Examples: Funding for the disabled, EOPS, deferred maintenance, and matriculation.

Chart of Accounts - A systematic list of accounts applicable to a specific entity.

Consumer Price Index *(CPI)* - A measure of the cost of living compiled by the United States Bureau of Labor Statistics. These indices of inflation are calculated regularly for the United States, California, some regions within California, and selected cities. The CPI is one of several measures of economic change.

Cost of Living Adjustments *(COLA)* - an increase in funding for revenue limits or categorical programs. Current law ties COLAs to indices of inflation, although different amounts are appropriated in some years.

Course Classification - All courses offered by a college are classified by area (Examples: Letters and Science, Vocational, Community Services, etc.), by credit given, and by transferability, and this information is submitted to the State Chancellor's Office.

Current Expense of Education *(CEE)* - ECS 84362 - The current General Fund operating expenditures of a community college district excluding expenditures for food services, community services, object classifications 6000 (except equipment replacement) and 7000, and other costs specified in law and regulations.

Deferred Maintenance - Major repairs of buildings and equipment which have been postponed by college districts. Some matching state funds are available to districts which establish a deferred maintenance program.

Education Code - The primary body of law which regulates education in California. Additional laws are contained in the California Code of Regulations, Title 5, the Government Code, and general statutes.

Encumbrances - Obligations in the form of purchase orders, contracts, salaries, and other commitments for which part of an appropriation is reserved.

Enrollment/FTES Cap - A limit on the number of students (FTES) for which the state will provide funding.

Equalization - Funds allocated by the Legislature to raise districts with lower revenue limits toward the statewide average.

Expenditures - Amounts disbursed for all purposes. Accounts kept on an accrual basis include all charges whether paid or not. Accounts kept on a cash basis include only actual cash disbursements.

Fifty Percent Law - Requires that fifty percent of district expenditures in certain categories must be spent for salaries and benefits of classroom instructors and some instructional aides. Salaries of counselors and librarians are not included in this classification.

Foundation Program - An early funding principle for the colleges that set a revenue floor per ADA funded from a combination of state and local sources. The district's local board could raise money beyond that amount through local taxation.

Full-time Equivalent Student - An FTES is a student workload measure that represents 525 class (contact) hours of student instruction/activity in credit and noncredit courses. Full-time equivalent student (FTES) is one of the workload measures used in the computation of state support for California community colleges.

Fund - An independent fiscal and accounting entity with a self-balancing set of accounts for recording cash and other financial resources, together with all related liabilities and residual equities or balances, and changes therein.

Fund Balance - The difference between assets and liabilities.

General Fund - The fund used to account for the ordinary operations of the district. It is available for any legally-authorized purpose not specified for payment by other funds.

Inflation Factor - An increase in apportionment provided by the state to reflect the increased cost of operation due to inflation.

Lottery - Approved by voters in November 1984, lottery games began in October 1985. Of the total lottery revenues generated, a minimum of 34% must be distributed to public schools and colleges for "education of pupils." Lottery income has added about 3% to 4% to community college funding.

Mandated Costs - College district expenditures which occur as a result of federal or state law, court decisions, administrative regulations, or initiative measures.

Marginal Funding - A procedure whereby the gain or loss in funds for growth or decline in FTES is computed at a rate which is less than the average revenue per FTES.

Noncredit FTES - FTES earned in noncredit courses, generally adult education.

Object - Expenditure classification category of an item or a service purchased.

Per Capita Personal Income - Income before taxes as estimated by the U.S. Department of Commerce.

Program-Based Funding - A system whereby a program or activity generates revenue based on a formula or allocation without specifying where and how the funds must be spent.

Proposition 13 - An initiative amendment passed in June 1978, adding Article XIII A to the California Constitution. Tax rates on secured property are restricted to no more than 1% of full cash value. Proposition 13 also defined assessed value and required a two-thirds vote to change existing or levy other new taxes.

Reserve - Funds set aside in a college district budget to provide for future expenditures or to offset future losses, for working capital, or for other purposes.

Restricted Funds - Money which must be spent for a specific purpose either by law or by local board action.

Revenue - Income from all sources.

Revenue Limit - The specific amount of student enrollment fees, state and local taxes a college district may receive per pupil for its general education program. Annual increases are determined by Proposition 98 formula or the Legislature.

Shortfall - An insufficient allocation of money, requiring an additional appropriation or resulting in deficits.

Split Roll - A system for taxing business and industrial property at a different rate from individual homeowners.

State Apportionment - An allocation of state money to a district based on total available general revenues less property taxes and enrollment fees.

Subventions - Provision of assistance or financial support, usually from higher governmental units to local governments or college districts, for example, to compensate for loss of funds due to tax exemptions.

Sunset - The termination of the regulations for a categorical program or regulation.

Tidelands Oil Revenues - Money from oil on state-owned lands. When available, some of the revenues are appropriated for community college capital outlay needs.

TOP Code - Taxonomy of Programs code number used in budget.

Unencumbered Balance - That portion of an appropriation or allotment not yet expended or obligated.

Unfunded FTES - FTES which are generated in excess of the enrollment/FTES cap.

CRB

Occasional Paper

Beyond Business As Usual:

A Framework and Options for Improving Quality and Containing Costs in California Higher Education

By
Kirk L. Knutsen

(Occasional papers present provocative analyses and policy options that pertain to current issues.)

May 6, 1993

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Preface

This Occasional Paper aims to provide a relatively comprehensive introduction to an important discussion taking place nationally on issues relating to both higher education finance and quality. The intent is to accurately articulate the issues raised in this national debate and, where possible, relate it to the experience in California. Because many of these issues are both important and relatively new concepts in the higher education policy debate, in the interests of clarity and accuracy this report relies heavily and directly on the recent national literature covering these topics. As evidenced by the extent to which their text appears in this report, the author is particularly indebted to two excellent articles published elsewhere. The first, prepared as part of the Pew Charitable Trust's Higher Education Research Project, is titled "The Lattice and the Ratchet." The second is an article by William Massy and Andrea Wilger entitled "Productivity in Postsecondary Education: A New Approach," published in the Winter 1992 issue of *Educational Evaluation and Policy Analysis.*

For readers interested in exploring the issues raised in this report in greater detail, the author especially recommends the broad body of work produced by the Pew Charitable Trust, Robert Zemsky and William Massy.

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Section 1. Introduction

HIGHER education in California faces the last decade of this century in a state of unparalleled crisis. The reasons are apparent. Unrelenting population growth and the birth of the information age are combining to drive enrollment demand to historic highs; the State's financing system is structurally ill-equipped to meet higher education's needs because of expenditure growth in competing programs that enjoy statutory or constitutional funding protection; and a three year recession, with no end in sight, continues to compound and obscure the budgetary pressure caused by the first two factors.

But there may be yet another force at work. Despite deep funding cuts over the past three years, there is still the sense among some that higher education's costs rose faster than necessary prior to the current budget crisis, and might possibly still be too high. At the very least, there is frustration in some quarters that funds expended in higher education are not being deployed consistent with the state's highest priorities. Right or wrong, these perceptions are not unique to California, as Dr. Jim Mingle, Executive Director of the State Higher Education Executive Officers Association (SHEEO) pointed out recently: "There is a persistent problem that nags at higher education. It is the increasing cost of the enterprise, and in the views of some observers, its declining effectiveness, especially with undergraduates. In the words of one of the participants of our seminar, "Students seem to be paying more and getting less."[1]

At any rate, and regardless of how much California's higher education systems currently spend to accomplish their missions, population growth and the current budget crisis both make it apparent that the need to contain costs and enhance productivity will be high priorities in all three public segments for the foreseeable future. Any businessperson knows that whether the goal is to reduce organizational slack or to cope with long-term revenue shortfalls, the strategies are the same: to reduce costs and increase productivity, while preserving and where possible enhancing institutional performance and dynamism. In recognition of these trends, this Occassional Paper describes the current thinking in the national literature on the subject of cost-containment and productivity in higher education. Based upon this literature, *Beyond Business as Usual* presents a framework for characterizing the major factors driving higher education costs, outlines potentially promising areas to pursue in identifying cost-containment and resource reallocation strategies, and provides examples of several colleges and universities across the country that are not only significantly reducing costs, but in doing so are actually improving institutional performance. But first, the following two sections briefly outline the history and evolution of California's public higher education system, as well as the major budgetary and demographic challenges facing it in the future.

[1]Mingle, Jim. *The Dynamics of Academic Productivity*, (Denver: State Higher Education Executive Officers Association), March 1990, (Foreword).

Section 2. History and Missions of California Higher Education

IN order to relate California's experience to the broader national context, it is important to begin with a sound understanding of the major historical developments and current organization missions that have shaped the form of California's public higher education system over the years. The following paragraphs from a recent staff report prepared for the Assembly Higher Education Committee provide an excellent summary of these issues:[2]

University of California

"Like many public universities in other states, the University of California began with its Berkeley campus as a federal land-grant institution. In exchange for the federal land given to the state to establish a university, the university was required to conduct and disseminate research in the agricultural and mechanical sciences. As a result, even today agricultural research is the largest area of state-funded UC research, and the cooperative extension service (which links California agriculture to UC research) and related programs are the largest component of the University's public service budget.

Although the federal land grant provided the impetus for its creation, UC began as a comprehensive institution with undergraduate and graduate programs in the liberal arts and sciences. The initial agricultural research mission broadened quickly as universities throughout the country embarked on more intensive (and better funded) efforts to expand the frontiers and applications of knowledge.

Unlike the California State University and the community colleges, no overriding or preeminent mission has ever been articulated for the University of California in any of the iterations of the *Master Plan*. Rather, the mission statement for UC has focused on areas in which it holds exclusive or near-exclusive responsibility: doctoral education, postbaccalaureate professional training in medicine, law dentistry, and veterinary medicine, and state-supported research. Undergraduate and graduate instruction in other academic and professional subject areas are also part of the University's mission. Although the relative emphasis on the various functions has shifted toward research over time, UC's mission has remained essentially unchanged as the State's higher education framework developed.

California State University

From the establishment of the San Jose Normal School in 1857 up until 1935, California operated teacher colleges (originally called "Normal Schools") to train elementary and secondary instructors. Legislation in 1935 renamed these institutions "State Colleges" (now State Universities) and authorized them to grant the baccalaureate degree in liberal arts fields. The State Colleges, operating under the State Board of Education until

[2]Assembly Higher Education Committee. "Discussion Paper #1: Mission and Function," *Master Plan for Higher Education in Focus*, 1993.

codification of the 1960 Master Plan, gradually evolved into comprehensive regional institutions actively involved not only in teacher training, but in meeting the state's growing demand for expanded access to undergraduate degree programs.

With the University of California already charged with offering undergraduate education as the State's public university system, why was a second system created, rather than simply expanding UC? Largely because CSU did not emerge at once as a full-fledged university; rather, the number and scope of its campuses grew incrementally throughout the first half of this century. Although UC acquired its Los Angeles and Santa Barbara campuses from the State College system, in 1943 the Regents rejected the possibility of merging the two systems. Sentiment within the State Colleges was not much more positive and in 1946 the State Constitution was amended to prohibit the transfer of any school or college from the State Board of Education to any other authority.

In 1955, a study commissioned by the legislature recommended that the State Colleges be permitted to grant the master's degree. The 1960 Master Plan reaffirmed and codified this recommendation, and further authorized the colleges to grant the doctorate jointly with UC (later, with independent institutions as well). Instruction was to be the primary function of CSU, with doctoral programs and instructionally-related research as authorized activities.

The 1989 Master Plan broadened the mission of CSU considerably. The new assignments included a "broad responsibility to the public good and welfare of the state," and "programs of public service" for students and faculty. The state committed itself to finance research related to the institution's instruction and public service missions. An effort by CSU to secure authority to independently award the doctorate in education, however, was rejected.

Although CSU's mission has shifted over time for some faculty and campus presidents, undergraduate education and teacher training remain the core functions of the institution.

California Community Colleges

The legislature in 1907 authorized high school districts to offer lower division coursework in order to serve students who could not attend a baccalaureate institution. The first community college (then called junior college) was established in Fresno three years later, in large measure because the nearest four-year institution was geographically inaccessible (University of the Pacific in Stockton). Within a decade after the enactment of the enabling legislation, nearly 20 school districts were offering general education, vocational, and remedial coursework through community colleges.

By 1960, the state's network of community colleges had expanded in number to include 63 campuses, in scope to include adult education and community service courses, and in service population to include a large proportion of adults as well as traditional college-age students. The 1960 Master Plan affirmed the diverse missions of the community colleges, but placed new emphasis on transfer education. It also recommended an increase in the

service area of community colleges to cover the entire territory of the state. In doing so, the Master Plan placed community colleges at the core of California's commitment to universal access to higher education; community colleges were to be accessible (through open admissions, geographic proximity, and no fees) to every Californian interested in postsecondary educational opportunities.

The 1989 Master Plan defined lower division and vocational education as the primary missions of the community colleges, with instruction in basic skills, English as a second language, community service, and adult education as "essential and important functions." Responsibility for adult education is shared with secondary schools."[3]

California's Relationship to Higher Education Nationally

Higher education leaders in California often observe that their systems are unique to any other college or university system operating in America -- and in many ways they are correct. The size and complexity of California's three public higher education systems are unmatched anywhere else in the country. The breadth and scope of degree offerings, the wide diversity of courses and programs, the enormity of the research and teacher preparation programs, and the sheer numbers of students are all unprecedented in American history. As individual systems, and when taken as a whole, it is certainly fair to say that on many levels California higher education is unique and thus not comparable with higher education systems in other states.

Yet at the same time, California's colleges and universities are in many ways typical of the American collegiate landscape. On individual campuses, at the department and unit levels, California's colleges and universities have much in common with institutions across the country. Funding for faculty salaries is based upon compensation surveys of "comparable" institutions in other states; faculty and campus leadership are recruited from national candidate pools; tuition levels are often compared to national averages of comparable institutions; athletic teams compete at the national level; and administrators, faculty, and staff all belong to national academic and professional associations, where ideas are shared and national networks are built. While at the mega-organizational level California higher education is certainly unique, at the departmental level California's colleges and universities are as much a product of the national academic culture as they are the product of anything intrinsic to California.

Thus, while California higher education may be completely unique as to size, scope, and in the specifics of its organizational structure, at the departmental level its growth and evolution have broadly mirrored national patterns. For example, recent work conducted by California Postsecondary Education Commission (CPEC) indicates that faculty distribute their time between research and instruction at UC very similarly to faculty at other research universities nationally.[4] Likewise, studies have shown that for both UC and CSU, in areas as diverse as faculty retirement patterns, average time-to-degree, faculty hiring and promotional practices, and average per-student instructional costs, their experiences are more reflective of national norms than they are

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[3]Ibid.

[4]California Postsecondary Education Commission *Expenditures for University Instruction: A Report to the Governor and Legislature in Response to Supplemental Report Language to the 1991 Budget Act*, (Sacramento: The Commission), 1993.

strikingly different.

One major historical development in which California higher education clearly reflected major national trends was described by Frank Newman in *Teaching Undergraduates*: "One can describe American higher education as having gone through two historic phases. The first, which lasted until the late 19th century, was focused on the development of character and the transmission of knowledge; the second and current period is dominated by research and the generation of new knowledge."

He continues: "With the creation of...competitive grant systems for research and scholarship immediately after World War II...the American research university developed. The result was an academic pecking order with the great private universities at the top, followed by the great public research universities, the comprehensive universities, the liberal arts colleges, the four-year public institutions, and finally the community colleges."[5]

Through the mission differentiation contained in the *Master Plan*, the rest of the nation views California as having its "pecking order" defined as precisely as anyone. Couple this with UC's unparalleled research breakthroughs and its management of the Los Alamos and Lawrence Livermore National Laboratories, and it is easy to see why California is seen as the very embodiment of these historic national developments in public higher education. In fact, California's tripartite system has worked so well for so long that it has come to be seen as a model to be emulated, not so much by other states because of their smaller size, but by numerous other nations.[6]

Summary

The question now facing California is whether it will be possible to maintain the current system as it has evolved, while at the same time accommodating needed growth at historic levels of funding. A recent study of California higher education, conducted by the Organisation for Economic Cooperation and Development, identified this as the critical issue facing educators and policy makers in this state:

- "The Californian higher education system is recognised throughout the OECD world[7] as a bold blueprint for providing widespread post-secondary education while preserving the separate missions of the three types of public institutions -- the Community Colleges, the State University and the University of California. It seeks to reconcile populist with elitist institutions, access with success, equality with excellence, and the market with the state in developing educational solutions to political, social, and economic problems.

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[5]Newman, Frank. *Teaching Undergraduates*, ed. Bruce Kimball, 1988.

[6]Organisation for Economic Cooperation and Development. *Reviews of National Policies for Education: Higher Education in California*, (Paris, France: OECD), 1990.

[7]OECD is an international organization committed to promoting economic development and world trade among its member nations. Member nations include: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Japan, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

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"The most significant feature of the California system is the established collective commitment to provide places in public institutions at comparatively low cost to students, a policy which has permitted social and professional integration of the successive waves of immigrants. For such a policy (to continue to work), the choice of a public financial strategy which can meet the growing educational needs is essential. Competition for public funds between education sectors as well as with other social needs are increasing. (The central issue now facing California is whether) the sum of these admirable ambitions may be greater than that of public willingness to vote their necessary funds."[8]

The following section addresses this central issue.

[8] *Reviews of National Policies for Education: Higher Education in California*, op. cit.

Section 3. The Clear and Present Challenge: Growth, Diversity, and Deficits

IN spite of the proud history of higher education in California, the challenges facing the three public systems are mounting at an alarming rate in both number and scope. As a result, it is becoming increasingly clear that either the systems must together find new ways to accomplish the sum of their various missions, or long-term funding limitations will make it necessary to either implicitly or explicitly scale back the state's educational goals.

Demographic Inevitabilities

Students, More Students, and Still More Students

As described earlier, each of California's three public higher education systems has individual admissions standards defined in the *Master Plan for Higher Education*. Due to the budget crisis there are now numerous proposals which aim in various ways to shift enrollment demand between the systems into more economical configurations. Notwithstanding these proposals, there is still little debate that, when taken together, the three systems should still aspire to accommodate and provide educational services, in some manner or other, to all adult residents able and willing to benefit from instruction. While there may be some efficiencies to be gained by rearranging the mix of total enrollment demand between the systems, unless the state wants to consider changing the fundamental assumption of open access *somewhere* in the system, then current population projections imply tremendous enrollment growth in California's public higher education system over the next 15 years.

"There is a broad statewide consensus that as a result of both population growth and the evolving demands of the state's economy, California should be planning to accommodate about 800,000 additional college students by the year 2005 than at present. But instead of planning for desperately needed expansion, ongoing budget cuts are now forcing higher education to examine the need to reduce enrollment and maybe even close some existing campuses in future years."[9] Just to put these estimates in perspective, the projected net enrollment growth of 800,000 students is larger than the total current college enrollment in all but one other state.[10] Even if California was to deny access to half of these future eligible students -- a full 400,000 -- the remaining enrollment increase of 400,000 would still be larger than the total current enrollment in all but six states.

The Imperative of Diversification

Not only is California's population growing at a rapid rate, but the racial/ethnic composition of its population is diversifying even faster. By the year 2000, California will be the first mainland state whose population has no absolute racial/ethnic majority. And since the population distribution of non-White Californians is weighted toward younger age groups, the effects of these changes are being felt in California's educational system earlier and more profoundly than in many other parts of society. "In many respects the future is now. In the Los Angeles Unified School District, 80

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[9]Education Roundtable, The. *The Golden State at Risk: A Joint Statement on the Crisis Facing California Higher Education*, (Sacramento: The Commission) 1993, p. 3.

[10]U.S. Department of Education. *Education Statistics*, 1992, p. 188.

distinct languages are now spoken, and over the next 15 years only 15 percent of the new workers entering the work force will be White males. Fully 85 percent of the net additions to the work force will be women and non-White males -- many of them recent immigrants."[11]

As the Education Roundtable has stated: "Without question, these students deserve at least the same education opportunities provided to previous generations, and preserving the health of California's economy probably requires more...Our future as a state -- and as a nation -- literally depends on it. Our society has evolved to the point where it is now obvious that ideas, and the ability to develop and articulate them, will be to nations in the twenty-first century what oil, timber, and steel were to countries in the nineteenth and twentieth centuries.

"The bitter irony is that the current crisis is emerging just as the K-12 school reforms of the 1980s begin to bear fruit. At precisely the time that more and more school children are working and studying harder to improve themselves through education, and at just the time when these students are coming from more diverse racial/ethnic backgrounds, society is applauding them with one hand and slamming the college door shut with the other. Now more than ever, it is imperative that California deliver on its historic promise of high-quality and affordable education for all those capable and willing to benefit."[12]

The Never-Ending Budget Ax

In spite of this obvious and compelling need to expand educational opportunities, "Whether we choose to recognize it or not, for the past several years Californians have been making the decision to slowly dismantle their world renowned higher education system."[13]

From the point of view of the higher education establishment, the Education Roundtable described the scope of the problem in a recent joint statement entitled *The Golden State at Risk*:

> "Like a beautiful building that is not properly maintained, California's higher education system is still more or less intact, but the telltale signs of decline are all around us. Fewer class sections, larger class size, huge tuition increases, faculty layoffs, elimination of departments, and declining enrollment in the face of dramatic population growth are just a few examples of the pervasive forces at work. No one in higher education is exempt from these destructive pressures. The four systems which make up California's higher education system -- the independent colleges and universities, the University of California, the California State University, and the California Community Colleges -- whether through student financial aid or direct appropriations, are all facing substantial and ongoing reductions in State support.
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> "If these trends continue, the immediate result will be a diminished pool of college graduates (and by extension, high skill workers), despite a rapidly growing population. The long-term effect will be to see high-quality instruction and unprecedented research efforts sink into mediocrity. The implications of a systematic decline in both the size and

[11] *The Golden State at Risk*, op. cit., p. 4.
[12] Ibid.
[13] Ibid., p. 2.

skill-level of the State's labor force are obvious, as are the implications of allowing California to lose its reputation as the world's leader in high-tech research and innovation. Simply stated, by allowing the slow erosion of higher education, California's economic future is being placed in serious jeopardy."[14]

The Big Squeeze:
Higher Education's Vulnerability as a Non-Protected Budget Category

Many experts, such as the State Department of Finance and the Commission on State Finance (COSF), now believe that the current economic climate is only exacerbating a deeper structural imbalance between state revenues and expenditures. As one legislative leader noted during last year's budget crisis, the state could eliminate all public universities, all prisons, both the legislative and executive branches of government, and still not cover the current-year budget deficit. This view maintains that we are not experiencing a primarily recession-induced deficit; that at its core, this budget crisis is structural and not cyclical.

In 1991 the COSF projected annual state budget deficits through the rest of the decade, even in the event of immediate economic recovery and consistent growth thereafter. Needless to say, California did not experience immediate economic recovery in 1991, and as a result these projections are now probably underestimates. At any rate, COSF projects that state deficits will persist throughout the 1990s, with a $5-7 billion single-year deficit projected for the year 2001.[15]. The State Department of Finance has agreed with the general direction of these trends, except that it has projected even higher structural deficits. This basic mismatch between projected revenues and expenditures is shown graphically in the display presented on the next page.

The reasons for these grim forecasts are fairly obvious and their implications for higher education have been outlined repeatedly over the years in various CPEC studies. Specifically, those groups most in need of state services -- namely the young and senior citizens -- are growing rapidly, while population among working-age persons is declining as a proportion of the total population. At the same time, most areas of the state budget enjoy statutory or constitutional protection of base funding, with guaranteed funding for increases related to caseload growth. These increases are required either in statute or the constitution, whether or not state revenues are available to pay for the programs. The result is that it is nearly impossible to significantly adjust funding levels in constitutionally protected programs, and while there is more willingness to look at statutorily protected programs now than in previous years, as a practical matter they are still far more difficult to adjust than completely unprotected programs. Since the university systems are among the few remaining areas of the budget where funding levels are not somehow guaranteed, higher education is extremely vulnerable to disproportionate and ongoing cuts in response to annual budget deficits. (The Commission; 1992)[16] "Ominously, that portion of the state budget committed to legally protected programs is expected to reach 100 percent of total projected revenues within ten years. According to these forecasts, by the end of the decade no state

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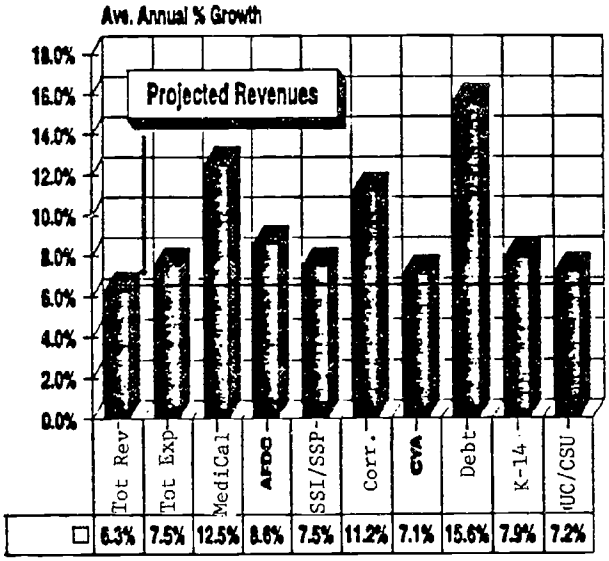
[14]Ibid., p. 3.
[15]Commission on State Finance. *Long-Range General Fund and Expenditure Forecast: 1990-2000*, (Sacramento: COSF), 1991.
[16]California Postsecondary Education Commission. *Prospects and Methods for Financing California Higher Education*. (Sacramento: The Commission), March 1992.

resources will be left to finance unprotected programs such as higher education. In fact, these trends are already well under way. Between 1984-85 and 1992-93, a period that includes several good budget years, the percentage of state general funds devoted to higher education fell from 15.5 percent of the budget to 11.4 percent."[17]

Projected Expenditure Growth in Major St. Budget Categories 1989-2001



Percentages are estimated average annual percentage changes in caseload driven expenditures. No adjustments have been made for increases related to inflation or anticipated program improvements.
Source: Commission on State Finance and CPEC.

Projection: Deficit After Deficit, At Least Through the 1990's

While there is room for debate, there are strong indicators that imply that the current budget crisis is long-term, structural, and not primarily a result of the recession. To the extent that this assessment is accurate, then is it unrealistic to expect that basic structural imbalances now built into the state's financing system will disappear entirely with economic recovery. Instead, without significant tax increases, reform of the state budgeting process, and/or a fundamental change in state spending patterns, then the past three budget years may be typical of what California can expect for the rest of the decade.

In fact, the depth and longevity of the current budget crisis have already pushed California higher education well down the cost-containment road, but up to this point it has not been a particularly thoughtful or forward looking path. Not only have recent state budget reductions placed intense pressure on higher education, but the manner in which these cuts have been absorbed has also contributed to a situation that was unthinkable just a few years ago. Short of making basic changes in its manner of operation, higher education has either already or shortly will become unable to accommodate all eligible students. One-time cuts are by definition limited; hiring freezes cannot continue forever, maintenance cannot be deferred permanently, early retirement programs are a short-term fix, and fees cannot rise by 40 percent every year. Worse yet, a broad reliance on across-the-board cuts has sent all the wrong messages to institutions and individual departments: it says that the crisis is short-term; that priorities and hard choices will not be made; and that units and departments should maximize their expenditures now and in the future as a hedge against the effect of possible future across-the-board reductions.

In sum, these cost-cutting measures have been decidedly short-term and crisis-oriented. More importantly, they do nothing to strategically position higher education for coping with either the enrollment pressure or the long-term state "revenue diet" that is now being anticipated.

[17]Ibid.

Summary: Given Current Policy Commitments, Additional Resources Will Be Needed Even If Costs Are Reduced

Regardless of the need to pursue promising opportunities for achieving new efficiencies and long-term cost-containment, the sheer weight of population growth and its associated enrollment demand will require that additional resources be made available to higher education in the future. 800,000 additional students cannot be accommodated within current funding levels, no matter which system they attend for lower-division instruction. But even though enrollment pressure will legitimately require real funding increases, it is also highly unlikely that California will be able to finance that growth in the manner to which higher education has become accustomed. This is likely to be true even if the recession ends tomorrow and the structural deficiencies in the state's financing system are corrected immediately.

These dual pressures have created some contention in the higher education policy debate because the cases for increasing funding and containing costs are both true, but at a superficial level appear for some to be in conflict. But they are both true. Unrelenting enrollment pressure will necessitate that additional resources be made available to higher education in the coming years; but with or without economic recovery and/or state finance reform, this same enrollment pressure will also dictate a new imperative: that higher education find ways to do more with each dollar it receives. As John Ashcroft, the Missouri governor who headed the Governor's Task Force on College Quality noted: "We need not just more money for higher education, we need more education for the money."[18]

[18]Ashcroft, John. National Governor's Association; Washington, DC; 1986.

Section 4. Higher Education Finance Made Simple

THE specific budgetary methods used to determine financing levels for California's university systems are technical and somewhat arcane,[19] but broadly speaking the major tradeoffs at work in these deliberations can be thought of in terms of a relatively simple formula:

State General Fund Appropriation +
Unrestricted Non-State Funds (primarily tuition and unrestricted endowments) =

Full-Time Equivalent (FTE) Enrollment X Cost per FTE Student

While this characterization is too general to capture all dimensions of the financing puzzle confronting state decision makers, it is nevertheless a useful approach for identifying and categorizing the broad strategies available to state and higher education leaders. Simply stated, governmental appropriations (primarily State General Fund) and unrestricted non-state revenues (primarily tuition) must together equal a system's total FTE enrollment multiplied by its average cost per FTE student.

Despite efforts to keep the finance equation as simple as possible, the scope of research activities conducted at the University of California necessitates some additional discussion as to what is included in its "Cost per FTE Student." While "Cost per FTE Student" is a fair proxy for real student instructional costs at the State University, it is not so simple at the University of California.

Because of the unique research mission at UC, much more is necessarily embedded in the "Cost per FTE Student" component of its finance equation. Externally funded research money is completely excluded from the above equation; but still, these vast resources are not spent in a vacuum. It takes a significant amount of faculty time to conduct research and spend the external research grants. The University of California recently estimated that approximately 46 percent of faculty time could be reasonably attributed to non-instructionally related research or public service activities.[20] While sponsored research is generally funded from non-state money, *the time faculty devote to research* (as with their other duties) is financed mainly through salary funds provided by the state in the "Instruction" line-item of the University's general fund appropriation. In addition, a significant amount of funding for non-sponsored research (often referred to as departmental research) is also provided from the General Fund in the "Instruction" line-item. The same is also true for some of the support and administrative overhead costs related to these non-instructional activities, although they are accounted for in different line-items.

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[19]Because of their multiple revenue sources and Proposition 98 protections, the community colleges are excluded from this discussion, although it applies fully with regard to analysis of student fee and expenditure issues. For a more complete discussion of community college finance, as well as a more comprehensive description of the financing mechanisms used for the university systems, see: *Prospects and Methods for Financing California Higher Education*, op. cit..

[20]*The Cost of University Instruction*, op. cit.

As a result, the "Cost per FTE Student" component of the University's finance equation is not so much a proxy for per-student "instructional costs" as it is a broad per capita measure of all general campus operations funded through either student fees or the General Fund. As the following equation shows, the University of California's "Cost per FTE Student" can be seen as having several critical subcomponents, some of which are completely unrelated to instruction:

U.C. "Cost per FTE Student" =

(Actual "Instructional and Related" Expenditures +
State-Funded Faculty Compensation for Non-Instructional Activities +
State-Funded Departmental Research Expenditures +
State-Funded Administrative and Support Overhead for these Non-Instructional Activities)
\ FTE Enrollment

A sound understanding of both these instructional (for all three systems) and non-instructional (for U.C.) sub-components of the "Cost per FTE Student" is central to identifying potential alternatives for cost-containment or improving productivity.

Keeping in mind the complications introduced by the multiple missions of the University of California, by returning to the original financing formula and taking it one step further, it is possible to broadly characterize the four general strategies available to decision makers for addressing fundamental imbalances in this equation. In fact, anyone working with higher education budgets for the past several years will recognize that of the many approaches suggested for dealing with the current budget crisis, nearly all can be easily identified as addressing one of the four variables in this equation:

Increase State Appropriations **Increase Student Charges**

State General Fund Appropriation + Non-Government Funds (primarily tuition) =

Full-Time Equivalent (FTE) Enrollment X Cost per FTE Student

Decrease Enrollment/Reduce Access **Reduce Average per Student Costs**

Given the current state budget crisis and significant ongoing enrollment pressure, it is probably safe to assume that for the foreseeable future there is little chance that the state will be able to fund current operations and enrollment growth at historic levels (see Section 3). For the immediate crisis that leaves three remaining strategies for policy makers to consider in the effort to balance the budget equation: 1) increase student fees further, 2) reduce the number of students enrolled, or 3) reduce average per-student costs.

The California Postsecondary Education Commission spoke to the first of the remaining options in a report released earlier this year: "(T)he State has charged the Commission to work with a wide-ranging advisory group to develop recommendations for change in (student fee policies). The Commission expects to submit its views later this year on a series of alternative student fee and financial aid policies stemming from that project...Yet general agreement exists that

continually raising student fees, regardless of building in protections of increased financial aid, cannot by itself solve California's problem of adequately financing higher education."[21]

Thus, if increases in State General Fund appropriations and student tuition cannot be expected by themselves to eliminate the apparent gap in needed funding, that makes the final two options critical in efforts to balance higher education's collective budget. In fact, with regard to the third strategy -- lower enrollment -- higher education's leaders are already seriously considering limiting enrollment to levels below current demand projections. As yet there has been no explicit change in policy, though administrative steps such as earlier application deadlines have the same effect.

This should not be surprising, since limiting enrollment has a certain surface attractiveness for institutional leaders: It enables campuses to accommodate a static or declining revenue base while propping up, to the extent possible, current per-student expenditures. Because this approach has the effect of spreading available funds over fewer students, it represents the least disruptive option with regard to forcing changes in higher education's current instructional and general institutional routine. As a budgetary strategy, limiting enrollment serves to preserve and protect the current approach to institutional operations, albeit on a more limited scale.

However, of all available strategies, limiting enrollment is also probably the most disruptive for the affected students, and may be the most disruptive with regard to California's long-term economic and social health. The risks associated with reducing enrollment as a budgetary savings strategy have led CPEC to state that: "(Reducing enrollment) would have such severe economic and social consequences for California that even though some limits on enrollment may be inevitable, given the depth of the state's budget crisis, for the long run it should be seen only as a last resort after all strategies for raising revenues and reducing per-student costs have been explored."[22]

By process of elimination we are led to the last of the available budgetary options -- reducing average per-student costs. This option is the least popular to higher education leaders because it, among all other options, carries with it the greatest threat of affecting the manner in which institutions now carry out the day-to-day business of delivering instructional and other services. Nevertheless, and as CPEC has pointed out: "(O)n the assumption that institutions may be able to reduce per-student expenditures at least a bit without sacrificing quality, ...this alternative must be carefully examined prior to systematically limiting student access in response to chronic budget cuts."

However, at least at the University of California only three strategies, including reduced access, are being recognized as viable approaches for coping with the current crisis. In recent testimony presented to the Assembly Higher Education Committee, University officials explained: "For the long term we have three options. Clearly the most desirable is that the State fund current enrollment and the future growth needed to provide access. If that doesn't occur, as we stated before, we will have no choice but to raise student fees or reduce enrollment, or do both."[23]

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[21]Ibid., p. 64.
[22]Ibid., p. 65.
[23]University of California. *Testimony Presented to the Assembly Higher Education Committee*, October 20, 1992.

That the fourth option was not addressed at all speaks volumes about relative institutional priorities, as a recent *Sacramento Bee* editorial noted: "Arthur Levine, editor of the higher education journal *Change*, wrote a piece a few months ago in which he said that while 'preserving access has frequently remained a rhetorical goal' when university budgets are threatened, 'maintaining morale has been a higher priority.' That means 'inconveniencing faculty...as little as possible.' He compares that to a case of a foundering ship in which the captain announces that the highest priority is saving the crew 'though...if time and resources permitted, every human effort would be made to rescue the passengers.'"[24]

These priorities are shaped partly by political pressures that make institutional leaders wary about announcing the need to achieve long-term reductions in per-student expenditures, no matter how inevitable they may be. Patrick Callan, executive director of the California Higher Education Policy Center, frankly described these pressures: "The leader of a public institution who concludes that state support will not grow at a rate sufficient to maintain past expenditure patterns or to compensate for inadequate budgets of past years is not likely to receive kudos for foresight. Even if all trend lines point toward the need for internal savings and purposeful reallocation, it is much easier -- and safer -- for presidents and governing boards to blame the state for their financial woes and to hang their hopes on an upturn in the economy, tax increases, or a more sympathetic governor and legislature than it is to risk alienating internal constituencies by announcing plans for retrenchment."[25] The result is the now familiar rite of seeing higher education budget officers lurch from one crisis-driven budget process to the next, clinging fervently to the hope that things will somehow return to normal next year. A secondary effect is that almost no time is allowed for systematic long-range planning on how to fit the institution's *long-range* projected expenditures into their *long-term* projected revenues.

In addition to internal political considerations, there are also well-founded concerns among higher education's leaders that ill-conceived cost-containment strategies will be adopted that will result in a deterioration of institutional quality. While these concerns deserve careful consideration, the experience in other states indicates that cost-containment efforts do not invariably result in a degradation in academic quality, even among the most prestigious of public institutions. The Director of the Office of Academic Planning at the University of Michigan made this point clearly when she wrote that: "The natural reaction to the idea of managing or containing costs is a fear of a reduction in quality. The University of Michigan has a long tradition as a comprehensive research university of outstanding quality, and any potential threat to that quality is a legitimate cause for concern. We have become convinced, however, that in many areas of the University's operations there is an inverse relationship between cost and quality, so that cost-containment (and even cost reduction) can go hand-in-hand with quality improvement."[26]

Thus this fourth option -- reducing average per-student expenditures -- assumes a central role in

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[24]Schrag, Peter. "Priorities of Retrenchment," *Sacramento Bee*, February 24, 1993.
[25]Callan, Patrick M.. "Reflections on Cost Control in the Public and Private Sectors;" in *Policy Perspectives*, February 1991, p. 20B.
[26]Knepp, Marilyn G.. "Renewal in the 1990s: The University of Michigan Initiatives," *New Directions for Institutional Research*, Fall 1992.

the discussion of how higher education might cope with the current fiscal crisis. The mounting crisis in higher education and the prospect of another year of deep cuts argued persuasively that the first California Research Bureau Occasional Paper focus on issues surrounding this fourth option -- identifying strategies for reducing average per-student expenditures.

Section 5. Are Higher Education's Costs Going Up?

ANY examination of the issues surrounding cost-containment must necessarily begin with an analysis of the extent to which costs have increased in recent years, as well as an exploration into the reasons behind any observed increases. This section addresses the first of those two issues while Section 6 addresses the second.

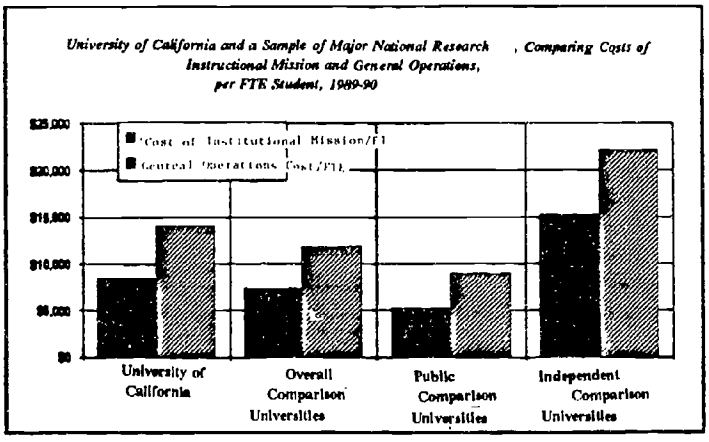
Have Costs Risen Nationally?

There is a broad consensus that higher education costs have increased significantly in recent years, at least at the national level. The available data indicate that between the years 1975-85 the cost of operating an average college and university increased 23 percent faster than the rate of inflation.[27] In addition "there is little doubt that (this) cost rise has been the primary driver of tuition,"[28] at least nationally, where between 1980-1990 "tuition and fees increased by an average of 9.5 percent annually, nearly twice the rate of inflation."[29] To place these tuition increases in context, they are significantly higher than growth in housing costs and even health care costs over the same period.[30] "At many research institutions, the growth in a variety of revenues not only permitted an increase in faculty salaries but also a decrease in teaching loads. This reduction in teaching loads, and the continued and growing use of teaching assistants in lieu of faculty, have made the research universities frequent targets of recent criticisms."[31]

Have Costs Risen in California Public Higher Education?

Institutional Costs

In a recent analysis of per-student expenditures for university instruction in California, compared to other institutions nationally, CPEC found that as of 1989-90 the University of California and the California State University had higher per-student instructional costs than most other public "peer" institutions, as the following displays show.[32]

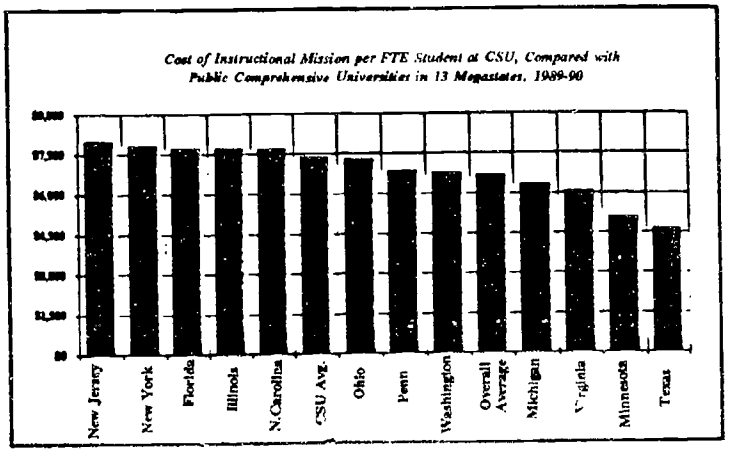


Note: General Operations Cost is defined as total general expenditures, less separately budgeted research and public service. Cost of Instructional Mission is General Operations Cost less administrative and support overhead expenses for non-instructional activities.
Source: California Postsecondary Education Commission.

Unfortunately, there is no means to precisely assess how budget

[27]Pew Charitable Trusts. "Seeing Straight Through a Muddle," *Policy Perspectives*, September 1988, p. 2.
[28]Massy, William and Andrea Wilger. "Productivity in Postsecondary Education: A New Approach," *Education Evaluation and Policy Analysis*, Winter 1992, p. 361.
[29]Ibid.
[30]Ibid.
[31]Hauptman, Arthur M. *Higher Education Finance Issues in the Early 1990s*, Consortium for Policy Research in Education (CPRE), Center for Research in Education Finance, June 1992, p. 12.
[32]*Expenditures for University Instruction*, op. cit.

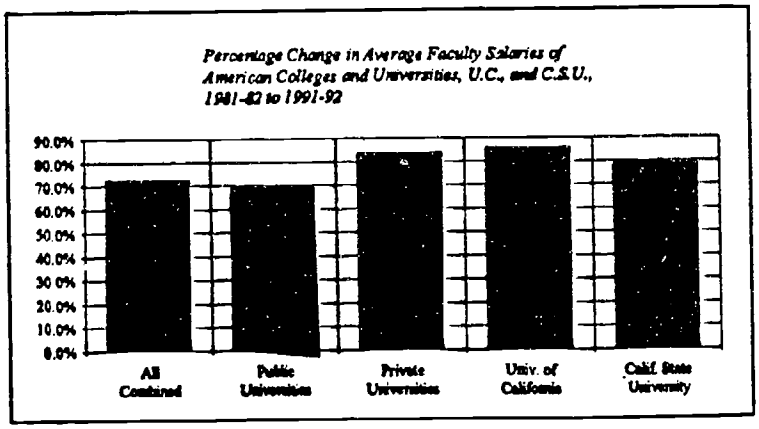
reductions since that time may have affected California's relative instructional expenditures in comparison with other states. However, based upon national data on state appropriations to higher education from 1990-1992, CPEC estimates that the gap between university instructional expenditures in California has narrowed, but that the basic relationships seen in the preceding graphs have not changed. Unfortunately, it would be a major analytic effort to examine long-term expenditure trends, because accurate data on per-student expenditures *over time* are not readily available. Nevertheless, there are some reasonable proxies that, however imprecise, may still provide some clues.



Note: Cost of Instructional Mission is General Operations Cost less administrative and support overhead expenses for non-instructional activities.
Source: California Postsecondary Education Commission.

One approach to estimate these long-term cost trends is simply to track changes over time for those revenue sources that are responsible for financing the bulk of the instructional mission. In fact, in an analysis conducted as part of CPEC's recent cost-of-instruction study, the Commission tracked changes in student fee revenue and adjusted State General Fund revenue in just that way. CPEC found that between 1970-71 and 1992-93, both the University of California and the California State University experienced a 14 percent constant dollar increase in the amount of per-student revenues available for expenditure on instructional activities. While a 14 percent per-student increase in the revenues primarily dedicated to instruction does not necessarily mean that there has been a 14 percent increase in per-student instructional costs, it is an important indicator, and would be consistent with instructional expenditure data compiled nationally for other institutions.

Finally, since faculty compensation accounts for the lion's share of instructional costs, it is difficult to see how UC and CSU could remain nationally competitive with regard to faculty salaries and student/faculty ratios (as they have) without their expenditure profiles simultaneously reflecting the national trends outlined earlier. (see Display to the right)
Besides, even if California is bucking the national trend and costs have not increased, it does not necessarily follow that past cost



Note: National samples include 1,672 institutions for 1981-82 and 1991-92.
Source: AAUP, 1992 and CPEC, 1993.

stability means that there is no chance of finding new efficiencies or identifying areas where expenditures could be responsibly contained, especially given the alternatives in a protracted fiscal crisis.

Student Costs

With regard to students' educational costs, significant tuition[33] increases have certainly become a regular feature of California's annual budget process. "On March 19, 1993, the Regents increased annual, full-time, undergraduate student fees from $2,824 to $3,819 -- a 36.7 percent increase."[34] If implemented, this increase means that from 1980-81 to 1993-94 average resident student charges at the University of California will have grown from $776 to $3,819, a whopping 492 percent increase.[35] If current proposals adopted by the CSU Trustees on March 17, 1993 are implemented, student charges will have increased in this system from $226 to $1,788 over the same thirteen-year period, a 791 percent rate of increase. Because the base for tuition levels in the community colleges was essentially zero in 1980, statistical comparisons are not especially meaningful. However, an annual tuition level averaging $100 was authorized in 1985, increased to $300 in 1992, and numerous proposals are currently being considered that would increase this amount again by as much as a factor of three.

However, in contrast to national trends, tuition increases in California higher education have not resulted from efforts to increase institutional spending, but rather have resulted from attempts to maintain historic expenditure levels in the face of ongoing state budget cuts. The 1993-94 budget year will be no exception. If currently proposed tuition hikes are enacted, these increases will mark the fourth straight year that university students and their families will be asked to offset reductions in state support by paying significantly higher tuition. Tuition increases levied since 1990 already backfill more than $500 million a year in reduced state appropriations.[36]

In response to questions about the recently proposed tuition increases at UC and CSU, Patrick Callan noted: "Its almost become an annual ritual, everyone cries these big crocodile tears and yet there is still a knee-jerk reaction to turn to the students. Allowing fees to go up way too fast has helped institutions from having to be more productive."[37]

As the *Sacramento Bee* reported on March 13 of this year, "The State's tendency to turn to students for cash is being widely criticized as poor public policy--a quick-fix that lacks predictability for students, and may give universities an easy way to avoid more painful reorganization." The fact is, in recent years there have been instances when students didn't know what the final tuition bill would be until only weeks before classes were scheduled to begin.

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[33]The author uses the term "tuition" deliberately, recognizing that the "student fee" euphemism has become a distinction without a difference, given the current level of student charges.

[34]Callan, Patrick M., *The California Higher Education Policy Vacuum: The Example of Student Fees*, (San Jose: The California Higher Education Policy Center), April 1993, p. 5.

[35]California Postsecondary Education Commission. *Fiscal Profiles 1990*, (Sacramento: The Commission), 1991, p.33, and recent public announcements.

[36]*Sacramento Bee*, March 13, 1993, p. B-1.

[37]Ibid.

The State Role in Encouraging Cost-Containment in Higher Education

In the face of rapidly increasing tuition and institutional expenditures, as well as limitations in state resources, the national literature indicates that it is extremely important that state-level policy makers participate in the process of identifying and encouraging possible cost-containment strategies, largely because of the absence of internal incentives for colleges and universities to pursue it themselves. Howard Bowen described the current institutional incentive system and how it discourages cost-containment in higher education in what has come to be known as *Bowen's Basic Law of Higher Education Finance*: "The dominant goals of institutions are educational excellence, prestige, and influence...In quest of (these goals) there is virtually no limit to the amount of money an institution could spend for seemingly fruitful educational ends...Each institution raises all the money it can...Each institution spends all the money it raises."[38]

John Dunn recently expanded on this point in his article *Retrench or Else*: "Simply put, the internal pressures in an institution are for expansion of spending; it will continually expand its spending, subject only to availability of funds and to internal constraints related to its mission and imposed by institutional leadership, or to external constraints imposed by market conditions. In effect, there is no *internal* motivation for cost-containment." (emphasis added)[39] He continues: "We measure prestige, influence, and educational excellence, in other words, in terms of the amount of resources devoted to them. If our own self-image depends on how much we get to spend, no wonder we push to spend more. In this context it is easy to understand why state legislators and others have pushed so hard for accountability, assessment, graduation rates, faculty credit-hour productivity, and statewide and even national testing. They understand the vicious circle of prestige and spending and want to find output measures to substitute for higher education's input (enrollment) measures."[40]

The political context in which funding is sought from state governments has also created strong disincentives for colleges and universities to acknowledge the potential for cost-containment, as Robert Zemsky and William Massy explain: "Given political realities, few public colleges or universities are prepared to admit that they can reduce current programs without suffering substantial harm. If savings are possible, then clearly the institution can get by with a smaller appropriation -- and there's the rub. To admit savings are possible is to admit past inefficiencies without deriving any direct benefit from one's candor. All the incentives go in the wrong direction -- the way to get more money...is to 'prove' that no real savings are possible....The real danger is that the leaders of public higher education will come to believe this rhetoric..."[41]

Summary

While the available data cannot conclusively demonstrate that per-student instructional costs have risen in California over the years, as they have nearly everywhere else in the country, there are

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[38]Bowen, Howard R.. *The Costs of Higher Education: How Much do Colleges and Universities Spend and How Much Should they Spend?* (San Francisco: Jossey-Bass), 1980, pp. 19-20.

[39]Dunn, John A., "Retrench or Else: Public and Private Institutional Responses," *New Directions for Institutional Research*, Fall 1992, p. 5.

[40]Ibid., p. 8.

[41]Zemsky, Robert and William Massy. "Cost Containment: Committing to a New Economic Reality," *Change*, November/December 1990, pp. 19-20.

indirect indicators that imply that this may have been the case, in spite of the effects of recent budget cuts. Regardless of whether costs have escalated or not, the press of the current crisis as well as promising examples in other states argue for an exhaustive search for opportunities to achieve new efficiencies and contain costs. Finally, it is important for state-level policy makers to be involved in these discussions, at least insofar as they can identify ways in which the state has contributed to the existence of campus-based incentive systems that work against the identification and implementation of systematic cost-containment strategies.

Section 6. A Framework to Explain the Causes of Cost Escalation in Higher Education

AN important dialogue has emerged in recent years regarding the underlying causes for the apparent nationwide cost escalation in higher education. This dialogue does not explicitly speak to the current crisis facing higher education in California, but neither does it exclude it. The dialogue takes the form of an analytic framework developed by William Massy (professor of Education and Business Administration and Vice-President for Finance at Stanford University) and Robert Zemsky (professor and director of the Institute for Research on Higher Education at the University of Pennsylvania). The Massy/Zemsky framework attempts to describe the major forces driving cost escalation in higher education, and in so doing provide insights into promising strategies that could be employed to counter those forces. It is important to note that the particulars of the Massy/Zemsky framework have not been critically analyzed with regard to their applicability to the California experience. However, this framework speaks largely to the broad incentive systems at work at the state financing and academic department levels. As discussed earlier, these are areas where California looks much more like the rest of the nation than it looks different. Consequently, to the extent that the Massy/Zemsky framework is an accurate description of the scene nationally, it is likely to be at least somewhat relevant in California.

Particularly promising is the extent to which the Massy/Zemsky framework is attracting growing support within the national higher education community. Numerous individual colleges and universities, of all sizes and missions, have explicitly embraced those aspects of the Massy/Zemsky framework that are relevant to their experience, and are using it as a template to examine their own operations and identify cost-containment strategies for the future -- some with startling results.

While some of these promising case studies are examined in more depth in Section 8, highlighting a few examples here of the growing support for the Massy/Zemsky framework may prove useful in establishing its initial credibility:

- *University of Delaware*

  "Zemsky and Massy have distilled the factors contributing to the cost pressures in higher education into a useful conceptual framework that they refer to as the "academic ratchet and administrative lattice." ...Data developed by the University of Delaware clearly support the (Massy/Zemsky) framework"[42]

  --Dr. David Hollowell, Senior Vice-President, Administration, University of Delaware; National Chair of SCUP 27, the 1992 meeting of the Society for College and University Planning

[42]Middaugh, Michael F. and Hollowell, David E.. "Examining Academic and Administrative Productivity Measures," *New Directions for Institutional Research*, Fall 1992, p. 61.

- *University of Michigan*

  "Many recent publications have helped define the problems facing higher education as we enter the last decade of this century. (The University of Michigan has) benefited particularly from the works of the Pew Higher Education Research Program and other works by Robert Zemsky and William Massy, which both frame the issues and offer solutions."[43]

  -- Dr. Marilyn Knepp, Director of Academic Planning and Analysis, University of Michigan

- *State Higher Education Executive Officers Association*

  "To understand the dynamics which led to declining productivity in higher education, we asked William Massy of Stanford University to present to us his model of the forces operating in academic departments in the modern university. He and his colleague, Robert Zemsky of the University of Pennsylvania, provide a powerful explanation of why and how costs are increasing and what we are getting in return. In terms of outputs of academic departments, the 'gainers' have been curriculum specialization and unsponsored research activity; the losers, structure in the curriculum and the quality of undergraduate teaching."[44]

  --Dr. James Mingle, Executive Director, State Higher Education Executive Officers Association

The following paragraphs outline and describe the four major factors identified in the Massy/Zemsky framework as the primary drivers of cost escalation in higher education. They are:

- The Cost Disease
- The Growth Force
- The Administrative Lattice
- The Academic Ratchet

It is important to note that not all the factors described below apply to each of California's three public higher education systems in the same way. For example, while "The Growth Force" and the "Academic Ratchet" may apply to the community colleges with regard to incentives for expanding existing or developing new academic and administrative programs, they clearly do not apply insofar as increasing pressure for research is concerned. Likewise, the research pressures described later apply more directly to the University of California than to the California State University. However, to the extent that the prevailing academic culture and prestige hierarchy are largely defined by the major research institutions, then the CSU is also subjected to many of the pressures and incentive systems embedded within that national academic value system. This is especially true with regard to the existence of internal faculty pressure to expand the State University's research and instructional missions beyond the scope currently defined in the *Master Plan*.[45]

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[43] *The University of Michigan Initiatives*, op. cit., p. 79.

[44] *The Dynamics of Academic Productivity*, op. cit.

[45] A specific discussion of how these pressures may apply to the California State University is presented on p.

Cost Driver #1: "The Cost Disease," or, Can't You Play that Waltz Any Faster?

Like everyone else in the economy, higher education must pay more every year for the products and other services it needs in order for it to perform its mission. This is especially true for salaries, which comprise the bulk of the cost of operating colleges and universities.

It is argued that these salary increases are needed to keep valued personnel from moving into the private sector or to competing institutions. Faculty salary setting methodologies at many institutions (including UC and CSU) certainly reinforce the notion of "institutional competition" by basing salary parity targets on the average compensation provided by "peer institutions." This has led some to wonder whether a salary "leapfrogging" effect may be occurring between institutions that compare themselves to each other, or whether the approach is an effective measure of private sector competition at all.

At any rate, the argument goes that to remain salary competitive, then to some degree there must be real wage growth in higher education. This growth must occur despite the fact that instructional productivity is intended to be more or less constant, whereas real wage increases in the private sector are generally financed through improvements in productivity/efficiency or product quality (which justifies price increases). With regard to higher education nationally, it is estimated that a 2 percent annual increase in costs, after inflation, can be attributed to the cost disease.[46]

Higher education intends for instructional productivity to be more or less constant because it assumes that certain student/faculty ratios and a certain length of study are both required to maintain educational quality, which in turn creates real limits on the potential productivity of the institution. The oft-used analogy of the string quartet illustrates the point: A string quartet requires two musician hours to complete a half-hour waltz. The basic productivity of the quartet can be changed by either dropping a musician or speeding up the performance, but either would fundamentally diminish the quality of the waltz. Thus, the productivity of the quartet is assumed to be relatively constant, lest there be a significant degradation in musical quality. Nevertheless, the analogy goes, musicians' salaries must also rise along with real salary increases in the economy as a whole, even if overall salary gains are being driven by real productivity and quality improvements in the private sector. Otherwise, the entire profession will eventually sink into comparative poverty and no one will be attracted to music as a career.

Critically, and as Massy points out, "it is important to remember...that (the cost disease) assumes technology to be fixed. The possibility that the quartet can increase its effective productivity by selling compact disks...is not considered."[47]

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[46]Massy, William F.. "Resource Allocation Reform in Higher Education," *Paper presented at the CPRE/USC/Stanford Conference on Decentralized Management in Higher Education;* November 1992, p. 1.

[47]*Productivity in Higher Education: A New Approach*, op. cit., p. 366.

Cost Driver #2: "The Growth Force"

The Growth Force is premised on the notion that new knowledge is constantly being discovered or created, while old knowledge remains largely relevant. This results in a preservation of the status quo, while constantly augmenting it through the layering on of new and increasingly specialized courses, new areas of research inquiry, and establishment of entirely new academic fields. At their best, the underlying motives driving the Growth Force represent the very heart of a vital and engaged college or university. California intends to hire the best and brightest minds into its faculties, and it should not be surprising that they constantly generate new ideas, new approaches, and new research and curricular interests. But even under the best of circumstances, it is easy to see how the motives behind the Growth Force are something institutions encourage but still must reign in. When one hears someone proclaim that a college or university "cannot be all things to all people," they are talking about the Growth Force.

As a result, when taken to its extreme the Growth Force has been held responsible for contributing to a lack of attention to primary institutional missions, hyper specialization, a fracturing of the curriculum, and even the proliferation of academic journals.[48] The argument goes that academic prestige is based almost exclusively on achievements within the discipline -- meaning research. The pressure of the Growth Force is therefore directed toward those activities that generate professional prestige, and may serve to encourage the leveraging of faculty away from a commitment to institutional goals (instruction) when those goals are in conflict with disciplinary priorities (research).

This can result in the incremental detachment of the faculty from institutions' primary goals and missions. In fact, "The Association of American Colleges' *Integrity in the College Curriculum* has declared that American colleges and universities no longer have a 'firm grasp of their goals and missions,' partly because the faculty's 'allegiance to academic disciplines [is] stronger than their commitment to teaching or to the life of the institutions where they are employed.'"[49] As previously noted, the key is the academic prestige hierarchy, as Reece McGee and Theodore Caplow point out in *The Academic Marketplace:* "Academic rank is conferred by the university, but disciplinary prestige is awarded by outsiders, and its attainment is not subject to the local institution's control. Everyone in the universe recognizes that almost everyone lives by disciplinary prestige."[50]

The noted higher education critic, Charles Sykes, parodies the Growth Force and its hyper specializing influence on research as follows: "The driving force behind the (proliferation of) academic journals is the atomization of knowledge: the dividing and subdividing of tinier and tinier bits of information about smaller and smaller subjects. In English, for example, the journals include: *Shakespeare Quarterly, Blake Quarterly, The Dickensian, Texas Studies in Literature and Language, ESQ, A Journal of the American Renaissance, American Literary Realism: 1870 to 1910, Early American Literature, Western American Literature, Studies in American Fiction, The Great Lakes Review, the Southern Literary Journal, The Southern*

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[48]Bracey, Gerald W.. "The Time Has Come to Abolish Research Journals: Too Many Are Writing Too Much About Too Little," *The Chronicle of Higher Education*, March 25, 1987, p. 44.

[49]*Seeing Straight Through a Muddle*, op. cit., p. 1.

[50]Caplow, Theodore and McGee, Reece. *The Academic Marketplace*, (New York: Basic Books), 1958, p. 206.

Humanities Review, Modern Fiction Studies, The Review of English Studies, The Mark Twain Journal, The Thoreau Quarterly, Poe Studies, The Wallace Stevens Journal, The D.H. Lawrence Review, James Joyce Quarterly, Browning Society Notes, Doris Lessing Newsletter, Evelyn Waugh Newsletter, Jack London Newsletter, The Baker Street Journal: An Irregular Quarterly of Sherlockiana, and even the *Menckeniana Quarterly Review."*[51]

If the Growth Force encourages hyper specialization in research and the curriculum, as well as an increasing emphasis on research volume (discussed later in this report), then it has obvious cost implications for higher education. But it also raises questions about the effect it may have on instructional quality. This debate is long-standing, but recent research on the subject (Gilmore; 1992) provides food for thought:

> "Does research compete with or complement teaching?...For all three types of institutions, on both student outcome variables, the underproductive institutions generally had *more* federal and total grants and contract revenue per faculty member than did the productive institutions...Since both federal and total grant and contract revenue per faculty are proxies for research emphasis and productivity, it would seem that there might be a tradeoff between the teaching and research function."[52]

Another approach in examining this issue has been to compare institutions with regard to the rate at which their undergraduate instructional components produce students who go on to obtain the doctorate. An analysis by Carol H. Fuller looked at this very issue by ranking all accredited baccalaureate-granting institutions nationally in terms of their productivity in graduating students who eventually obtained the Ph.D. (controlling for institution size). The Fuller study found that small, highly selective liberal arts colleges and a few leading technical institutions dominated these rankings, rather than large, graduate-oriented research universities.[53] In commenting on the implications of this study, CPEC has noted that: "It was not clear whether the high baccalaureate-to-Ph.D. productivity achieved by the institutions in Fuller's study was a function of the selectivity of the leading institutions or some other institutional characteristics that encourage the pursuit of advanced programs; but a strong focus on undergraduate instruction is certainly one of the distinguishing characteristics of these highly effective colleges.

"The U.C. Riverside campus may be a case in point. While it is selective in its own right, it generally would not be considered among the most selective institutions in the nation. Nevertheless, it was one of the few institutions nationally that ranked as among the most productive in *all* fields of study measured. Similarly, the University's campuses at Irvine, San Diego, Santa Barbara, and Santa Cruz, which were much smaller during the period of Fuller's study, were all ranked highly productive in several fields of study. Like Riverside, these

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[51] Sykes, Charles J.. *ProfScam: Professors and the Demise of Higher Education*, (Washington, D.C.: Regnery Gateway), 1988, p. 118.

[52] Gilmore, Jeffrey L., "Evaluating Academic Productivity and Quality," *New Directions for Institutional Research*, Fall 1992, p. 43.

[53] Fuller, Carol H., "Ph.D. Recipients: Where Did They Go to College?" *Change Magazine*, November-December 1986, pp. 42-51.

campuses all shared relatively low proportions of graduate students during the period captured in this study...On the other hand, the Berkeley and Los Angeles campuses are highly selective undergraduate institutions with high levels of graduate enrollment, and both ranked near the bottom among the University's campuses in the rate of their baccalaureate recipients who completed doctoral programs."[54]

The Gilmore and Fuller studies raise important issues regarding mission differentiation and the relationship between narrowness of mission focus and institutional quality. CPEC also commented on this critical issue when they said: "The evidence thus far indicates that graduate education is most productive and efficient in those programs and institutions that focus substantial resources and attention on instruction and research at the graduate level. Conversely, at the undergraduate level the greatest productivity, efficiency, and by many measures, quality, are enjoyed by those campuses whose mission and resources are focused on undergraduate instruction."[55]

Summary of the Growth Force

In good times the Growth Force is indicative of institutional dynamism, but when uncontrolled it can also lead to a blurring of the focus on institutional mission and a lack of coherence in the products and services an institution provides. During bad times the effect of the Growth Force is compounded in that it continues placing financial pressure on institutions, even if enrollment stabilizes and the revenue base erodes. If an institution is unwilling or unable to enforce budgetary and programmatic discipline, then regardless of the revenue picture, the Growth Force will provide unrelenting internal budget pressure. This is true at the institutional level, as new programs are proposed on top of old, as well as at the individual faculty level, as the following example from Vassar President Alan Simpson illustrates: "You can have a person studying the herring industry from 1590 to 1600 in Scandinavia, and when he gets his Ph.D. and is employed by a university, the first request he makes to them is, 'May I teach the herring industry from 1590 to 1600 in Scandinavia?'"[56]

Unless countered, the ultimate effects of the Growth Force can be a dilution of mission and purpose for both individual departments and entire institutions. "The avoidance of responsibility for defining purpose extends throughout the (higher education) enterprise. An institution vests in its schools the responsibility for deciding what does and does not fit -- only to discover that the decision is left to academic departments, individual faculty members, and administrative entrepreneurs across the institution. In the name of serving an institution's varied missions, it becomes nearly impossible to rule out anything -- to resist demands for new programs and services...to forego entering new ventures or seeking new clientele. It is this muddling of mission that leads colleges and universities to be all things to all people, saying no to no one and, as a result, spawning enterprises that later gain autonomous life and power."[57]

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[54]California Postsecondary Education Commission. *Planning for a New Faculty: Issues for the 21st Century*, (Sacramento: The Commission), September 1990, pp. 23-24.
[55]Ibid., p. 24.
[56]Dugger, Ronnie. *Our Invaded Universities*, (New York: W.W. Norton), 1974, p. 175.
[57]Pew Charitable Trusts. "An End to Sanctuary," *Policy Perspectives*, September 1991, p. 3A.

Notwithstanding the importance of the Cost Disease as a cost-driver in higher education, the Massy/Zemsky framework argues that the Administrative Lattice and the Academic Ratchet, working in concert with the underlying incentives caused by the Growth Force, account for most of the cost escalation witnessed nationally in higher education over the past twenty years.

Cost Driver #3: "The Administrative Lattice"**

The Higher Education Finance Project of the Pew Charitable Trusts describes the Lattice and the Ratchet as follows:

> On most campuses there is an inherent tension between academic and administrative units, between faculty and staff. Sometimes that tension is genuinely creative, as each half of the institution strives to strengthen itself while recognizing the inherent value of the other. More often, that tension yields an unproductive competition for resources. The faculty remind themselves and the community that they are "the business" of the institution, all other activities being nonessential and frequently wasteful. For their part, the staff gleefully recount tales of faculty mismanagement and waste, secure in their sense that the only thing business-like about the institution is their own ability to discharge increasingly complex management tasks.
>
> We now know that it is the administrative function that has grown most over the last decade. In the March 28, 1990, issue of the *Chronicle of Higher Education*, Karen Grassmuck used data submitted by institutions to the U.S. Equal Employment Opportunity Commission to chart that growth. She found that "other professionals"--academic support personnel filling such roles as financial aid counselor, auditor, or systems analyst -- rose in number by more than 60 percent between 1975 and 1985, a period during which the number of faculty rose on average less than 6 percent. Increases were also substantial for many institutions among the ranks of executive, administrative, and managerial personnel.[58] No less telling than the data is Grassmuck's report of the impression among some higher education officials that, in spite of this growth, "many universities are making do with smaller staffs than they need."
>
> The analysis in the *Chronicle* suggests that the growth of administrative personnel is pervasive--that it is not a case in which all of higher education receives blame for the profligacy of a few rich, largely private research universities. Just as most institutions

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** *(Because the Administrative Lattice and the Academic Ratchet are both critical and relatively new concepts in the higher education policy debate, in the interests of clarity and accuracy the following paragraphs rely heavily and directly on two excellent descriptions of these factors published elsewhere. The first, prepared as part of the Pew Charitable Trust's Higher Education Finance Project, is entitled "The Lattice and the Ratchet." The second is an article by William Massy and Andrea Wilger entitled "Productivity in Postsecondary Education: A New Approach," published in the Winter 1992 issue of Educational Evaluation and Policy Analysis.)*

[58] Grassmuck, Karen. "Colleges Feel Effects of Economic Downturn in Student Aid, Endowments, Job Hunting," *The Chronicle of Higher Education, 37(14), A1, A27, (1990).*

enjoyed real revenue growth in the 1980s,[59] so apparently did most institutions substantially expand their administrative and academic support staff.[60]

As the following table shows, similar trends can be seen in California higher education in the upper administrative levels, most consistently at the University of California:

Percent and Numerical Change in Administrative Staff, by System and Category, 1979-1989

	Community Colleges		California State University		University of California	
	Percent Change	Number Change	Percent Change	Number Change	Percent Change	Number Change
Exec./Admin./Manegerial	0.7%	18	392.5%	1,884	87.6%	1,369
Professional/Non-Faculty	124.3%	1,653	35.2%	932	69.6%	8,408
Secretarial/Clerical	-5.2%	-392	-18.9%	-1,035	27.5%	4,506
Technical/Paraprofessional	29.2%	708	30.2%	686	20.3%	1,088
Other Staff	-9.0%	-473	-26.7%	-998	9.1%	628
Total Staff	8.0%	1,514	10.1%	1,469	37.8%	15,999

Source: Composition of the Staff in California's Public Universities from 1977-1989; CPEC; 1991.

The result of these trends has been an extension of the scale and scope of an administrative lattice that has grown, much like a crystalline structure, to incorporate ever more elaborate and intricate linkages within itself. Controlling this lattice, perhaps even reducing its complexity and capacity for completing itself, means coming to terms with the three principle causes of administrative growth.

The persistence of regulation and micromanagement

Though they often protest too much, college and university officials are right when they claim that increased regulation and external micromanagement have resulted in substantially increased administrative staffs. CalOSHA, CEQA, EEOC, EPA, FISAP, IPEDS, A21, OFCC -- the lexicon of regulatory and reporting acronyms is all too familiar. Each new state and federal program carries with it substantial monitoring requirements that often lead to the establishment of new internal bureaucracies whose principle function is to create more work for others. Health and safety regulations are a prime example. Most research universities have had to increase their staff of health and safety inspectors five-fold or more. These inspectors then find problems that others must be hired to fix.

Micromanagement, principally by state agencies and legislatures in the public sector and by energetic and sometimes intrusive governing boards, has had much the same result -- more paper, more procedures, more staff, all with significant questions as to whether it has improved the quality of the product. Ironically, it is the job of some of these personnel to explain the continual rise in administrative costs to governing boards and state leaders.

[59]Pew Charitable Trust. "Profiles," *Policy Perspectives*, September 1989.
[60]*The Lattice and the Ratchet*, op. cit.

The embrace of consensus management

In the 1980s, more and more American firms were persuaded to adopt new explicitly participatory ways of making decisions. Across the span of business enterprises, efforts were made to get employees to buy into decisions that affect their working lives and futures -- to make the employees part of the process and hence part of the solution. The rationale for this movement was drawn from both the work of human resource professionals and from a peculiarly American understanding of the use of quality circles in Japan to improve production. The ironic result was that increased participation was often purchased at the cost of decreased accountability and productivity.

On college campuses across the country, this commitment to consensus management was a natural complement to a renewed emphasis on community. Out of the turmoil of the 1960s and early 1970s there grew a distaste for hierarchy in any form, an affirmation by most institutions that they were, in fact, communities with equally important members. On most campuses, systems of governance were changed to incorporate students and staff, in addition to faculty, as consulting partners whose opinions and preferences were to be sought and frequently heeded. Good communication became a goal in itself.

The next step was to extend to staff functions the consultative models that had historically dominated faculty deliberations. Without any demonstrable increase in coordination or planning, decisions were framed, reviewed, and ultimately made by working groups whose very representatives substantially increased the probability that their recommendations would find broad acceptance -- that is, a consensus -- within the administrative community.

Colleges and universities, like businesses and service organizations, are just beginning to understand the scope of the direct and indirect costs associated with consensus management. Building a consensus, it turns out, takes time and extra personnel in the form of more and larger working groups that need to meet more frequently. Brokering between administrative groups becomes an explicit function, requiring additional personnel and introducing extra steps into the consultative process. Perhaps the most directly measurable costs associated with consensus management are represented by the amount of time administrative staff spend negotiating with one another. At more than one institution, senior staff, much to their chagrin, have come to view themselves as diplomats who are required to display the demeanor and language of negotiators as they shuttle between the major officers each of them serves.

Indirect costs associated with consensus management have to do with the quality of the decisions that are reached. Because consensus management encourages collective judgment, it becomes increasingly less clear who is in charge of what--who is responsible, who gets credit for success, who is accountable for failure. Consensus management thus becomes an attractive strategy for distributing to everyone the

responsibility -- and hence the blame -- for bad decisions.

Such risk aversion is not unique to higher education. In her study of managerial behavior, *Managers Managing: The Working of an Administrative System* (1989), Jane Hannaway notes, for example, that "Risk avoidance has been singled out as particularly problematic in the peacetime U.S. military bureaucracy. Stories are told of generals who were coming up for promotion and refused to take any actions in the weeks before the promotion boards met for fear of making a mistake." Hannaway argues that in the administrative systems of the private as well as public sectors "the chances of being held responsible for a negative outcome are greater than the chances of being rewarded for a success," and that this fact encourages managers to adopt risk-reducing behaviors.[61]

Finally, consensus management inherently protects the organizational status quo. Since nearly every party is represented in the decision-making process, there is little chance that the group will decide to reorganize in response to changing circumstances, and thereby run the risk of finding itself without a viable assignment. The tendency instead is to solve problems by adding to the lattice -- by elaborating staff functions that inevitably require further expansion of the administrative lattice.

The expansion of administrative entrepreneurism

Less understood is the pressure for growth created by the administrative staff's own energies and the willingness of the faculty to consign to them traditionally academic service functions. Because colleges and universities were expanding administratively and had the reputation for being "good places to work," higher education attracted a new cohort of experts who brought an important sense of professionalism to the industry, and who expected energy and creativity to be rewarded with increased responsibility, enhanced status, and better pay.

One result was much better management. Colleges and universities have become better at managing their moneys, at acquiring sophisticated technologies, at making their campuses more efficient in the use of utilities, and at servicing the needs of their students, faculty, and staffs. A second, unforeseen result is that these experts have come to "own" their jobs, much as faculty "own" their appointments. This outcome was less a product of implied administrative tenure (though such understandings often accompanied the expansion of administrative services) as of the staffs' ability to define the content of their positions, much as the faculty define the content of their teaching and research. Professional staff, precisely because they know what is best administratively, have acquired the capacity to put into place their visions of how a well-run institution should look. They define their goals, build their staffs, and use their successes to reach out for broader responsibilities, for opportunities to do their jobs even better.

[61] Hannaway, Jane. *Managers Managing: The Working of an Administrative System*, 1989.

The shift in responsibility for advising from faculty members to professional staff is one example of how such expansion can feed on itself. On most campuses where faculty have largely given up responsibility for undergraduate advising, there has been a corresponding shift in the scope and scale of advising now available. Having arrived in the hands of competent professionals whose sole job is to develop and deliver academic advising, the advising function has come to require more and better computer support, greater flexibility of hours, and a broader range of services, including career placement, tutoring and counseling. Where advising had once been subsumed within the faculty role, it has become instead an enterprise in itself with its own impulse for expansion.

This impulse for growth is not unique to student services, but drives and compounds expansion of the lattice at all administrative levels. "With administrative status increasingly tied to the number of people who directly report to a given officer, personal advancement requires a constantly expanding empire of subordinates and an entrepreneurial base to extend one's own administrative lattice. Little wonder that so few managers, at any level, volunteer their ranks, even when staff functions have grown outmoded....(T)o accept less is to acknowledge inefficiency in past performance and a diminution of stature within the organization."[62]

As a result, most administrative activities have become similarly complex, a development justified largely in terms of improved services and greater efficiencies at the unit level. The result has been a proliferation of increasingly independent agencies, each competing to be the very best at delivering its administrative specialty. The impulse at almost every turn has been to develop the lattice further, rewarding administrative personnel who show initiative with larger staffs and increased responsibilities.

At the same time, colleges and universities have seldom managed to apply the principle of "growth by substitution" to administrative personnel -- to substitute one kind of administrative or support function for another. Most new problems are tackled separately; new groups are formed, new administrative functions are defined, more ad hoc relationships with on-going administrative functions are required. The more discretionary revenue an institution generates, the more likely it is to make further investments in administrative "add-ons," often with the implicit acceptance of a faculty who see substantial improvements in their work conditions deriving from quite visible improvements in administrative services.

Cost Driver #4: "The Academic Ratchet"

While the faculty often complain about administrative growth, it is ironic that some of the principle beneficiaries of this administrative entrepreneurism have been the faculty members themselves. The nearly five decades since the close of the Second World War have witnessed a fundamental transformation of the American professoriate. In

[62]Pew Charitable Trusts. "The Other Side of the Mountain," *Policy Perspectives*, February 1991, p. 2.

1940 there were approximately 147,000 full-time faculty in just over 1,700 colleges and universities. By the mid-1980s, the number of institutions had nearly doubled, while the number of faculty members more than quadrupled. Over the decades, a shift has also occurred in the focus of faculty's efforts.

State officials across the country believe that many colleges and universities, particularly research institutions, have lost sight of their essential mission -- the teaching of undergraduate students -- as faculty members spend more time away from the classroom engaged in research and other professional activities. In effect, they argue that institutions are charging students more and at the same time they are delivering less. To combat this trend, several states have launched investigations into how much time faculty spend working with undergraduates. Surveys of faculty workload have been administered in Mississippi, New York, and Virginia. Arizona and North Carolina have similar studies under way. State officials believe that workload studies have the potential to produce both cost savings and better undergraduate education.[63]

National research covering the years 1965-1975 indicate that faculty workload has indeed shifted, as the proportion of faculty time devoted to instructional activities declined from 70 percent to 50 percent.[64] A recent CPEC study confirmed these general findings when it estimated that in 1989-90, University of California faculty divided their time between 54 percent instruction and 46 percent non-instructionally related research and public service.[65]

Despite a maddening absence of recent and reliable data, there is a general feeling nationally that faculty today spend less time advising, teach fewer courses outside their specialties, and are less committed to a commonly defined curriculum.

These shifts are the visible evidence of a pervasive change in the definition of the academic task -- *what it is that faculty are formally paid to do and for whom* (emphasis added). At work for almost a half century has been an "Academic Ratchet" that has loosened the faculty members' connection to their institution. Each turn of the ratchet has drawn the norm of faculty activity away from institutionally defined goals and toward the more specialized concerns of faculty research, publication, professional service, and personal pursuits.

It is a process that has produced gains as well as losses--increased research productivity, a more expansive set of courses, more freedom for students, particularly those prepared to join their faculty mentors in specialized study. Such gains have been achieved, however, at substantial costs--the need for academic support personnel to leverage faculty time, administrative staff to perform tasks once routinely assigned to the faculty, and a need to increase the size of the faculty. The larger cost, however,

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[63] *The Lattice and the Ratchet*, op. cit.

[64] James, E. "Product Mix and Cost Disaggregation: A Reinterpretation of the Economic of Higher Education," *Journal of Human Resources*, 1978.

[65] *Expenditures for University Instruction*, op. cit.

lies in the shift of faculty attention and effort away from institutionally defined goals and toward personally and professionally defined pursuits.[66]

This is reflected in a near total absence of broad incentive or reward systems which encourage focus on and a commitment to outstanding teaching. Instead, published research, former Harvard President Derek Bok says, "emerges as the common currency of academic achievement, a currency that can be weighed and evaluated across institutional and even national boundaries."[67]

If published research is the common currency in academia, then teaching may be the ruble: "A 1987 survey of more than 1,300 academic vice presidents found that, for the most part, schools have put little time or money into improving the quality of teaching despite public claims to the contrary. The author of the report, Leslie H. Cochran, provost of Southeast Missouri University, said that the findings indicated that: 'We're not strongly committed to improving and developing quality teaching. I hear a lot more rhetoric. But what we do not have on most campuses is a systematic plan.'" (The Chronicle of Higher Education, March 16, 1988)[68]

The effect of a lack of incentives for outstanding teaching is especially pronounced with regard to tenure deliberations. As Professor George LaNue, who has studied hundreds of tenure-related lawsuits pointed out: "Schools all say we take teaching very seriously. But when pushed, it just disappears. They can't show they evaluate it very thoroughly or very consistently."[69] Stephen Jay Gould, a renowned Harvard professor, agrees that teaching is seldom a serious factor in deciding whether to grant tenure. "I've never heard it seriously considered," he says. "There's lip-service given to it."[70] A former member of the promotion and tenure committee of Northwestern's College of Arts and Sciences says: "Teaching is often discussed at some length in the deliberations. But in the final vote, it doesn't count for much."[71]

Harry H. Avis, now an instructor at a California community college, articulated the problem in the extreme when he recalled his attitude as a young graduate student, immersed in the values of the academic culture. On reading an article that quoted an unnamed professor at the University of California at Berkeley saying "The sight of an undergraduate makes me sick," he recalled that his reaction was: "Someday I too, would be in a position to say those words."[72]

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[66] *The Lattice and the Ratchet*, op. cit.
[67] Bok, Derek. *Higher Learning*, (Cambridge, MA: Harvard University Press), 1986, p. 77.
[68] *ProfScam*, op. cit., p. 56.
[69] Ibid., p. 57.
[70] Ibid.
[71] Ibid.
[72] Avis, Harry. "The Satisfying Switch from Research to Teaching," *The Chronicle of Higher Education*, June 18, 1986.

The Dynamics of the Ratchet

As Massy and Wilger explain, the Academic Ratchet results from the interaction of several departmental processes. The processes are (a) pursuit of faculty lines, (b) leveraging faculty time, (c) reduction of structure in the curriculum, and (d) "enactment" of group norms and internalization of perceived property rights. While it sounds complicated, in fact its little more than elevated common sense. Nevertheless, a clear understanding of the dynamics of these processes is crucial to understanding the direction that cost-containment efforts must necessarily take.

Pursuit of Faculty Lines

Most department chairs list the hiring of new faculty as a top priority. This is true even if enrollments are level. Likewise, most faculty want additional colleagues. Both faculty and chairs view the addition of new faculty as a way to serve students more effectively, increase the amount and visibility of research emanating from the department, and bring lively, interesting individuals into the faculty fold. The push to hire more faculty is strong whether they are wanted for their ability to enhance department prestige, teach introductory courses, or just to increase the intellectual climate of the department.

Leveraging Faculty Time

Productivity increases in labor-intensive industries such as higher education are difficult to achieve (see above discussion of the Cost Disease). The primary way in which productivity is improved is by substituting individuals with lower levels of training and expertise for those with higher levels of training and expertise. In academic departments, this means hiring graduate teaching and research assistants, administrative assistants and secretaries, and technicians to take over certain faculty functions. Utilizing less costly individuals frees up faculty time for research and other professional activities. In many cases, colleges and universities spend considerable sums of money on additional personnel whose primary purpose is to leverage faculty time (see above discussion of advising, mentoring, and tutoring, and the administrative lattice). In addition to hiring personnel, departments have increased their use of computers and other technological advancements to further leverage faculty time.

It is clear that in most cases, leveraging faculty time drives up the costs of education. Whether this expense is justified depends largely upon the audience. While faculty might argue that increased time for research ultimately results in major breakthroughs and improves their classroom performance, students paying increasing tuition for classes taught by graduate students, taking classes on narrowly defined topics, and receiving limited out-of-class contact with faculty might believe otherwise.

Destructuring the Curriculum

Beginning in the 1960s, students demanded an increased involvement in the structure and content of the curriculum. They wanted to be free to choose from a large menu of courses, unconstrained by traditional sequence requirements. They wanted to work closely with faculty in designing individual courses of study.

To a large extent, many of their desires have been realized -- the curriculum is less structured than it used to be. Unfortunately, curriculum destructuring has been accompanied by several unanticipated consequences. Less overall structure places additional burdens on faculty and departmental staff who must coordinate individual courses. This requires time and effort, which in some cases may be significant. So rather than allowing students to interact more closely with faculty to make curricular decisions, destructuring has made yet another demand on faculty time. (It is important to note that destructuring has not occurred equally across disciplines. In general, high-paradigm natural sciences and mathematics departments have been less affected by the trend than lower-paradigm humanities and social science departments.) Overall, destructuring the curriculum can potentially decrease costs. In this case, the more likely outcome is increased leverage of faculty time.

Enactment of Group Norms and Propagation of Perceived Property Rights

Yet another process is at work in the academic department which reinforces the ratchet -- the enactment of group norms and propagation of perceived property rights. This final, and perhaps most powerful dynamic, solidifies and even magnifies the three processes described above.

Faculty members in all academic departments possess "enacted norms," which are strongly held, shared beliefs about their relationship to their environment. On the basis of these norms, they develop certain "property rights" that they believe are inherent in the faculty position and that they use to govern their activities. In essence, enactment occurs because individuals must interpret the multiple organizational, professional, and cultural environments in which they exist. Whether their interpretations are correct or not matters little, for individuals will act upon their perceptions of the environment.

In the case of large organizations, members sometimes collectively come to an understanding of their environments. Specific mappings between resources and desirable outcomes are enacted into shared understandings or norms. Norms are subject to simple rules of appropriateness.[73] A norm has an acceptable range or variation based upon past experience and in comparison with the norms of similar organizations or other units. Norms become embedded in the routines of the organization and, most of the time, are taken for granted by individuals.[74]

In the context of higher education, many norms stem from enactment of local environments, both in departments and in colleges, and from larger professional and multi-institutional environments. The process of enactment includes accepting as reality certain behavioral and technological formulations such as student-faculty ratios, number of courses taught per term, the division of teaching between upper and lower division courses, and ideal class sizes. Norms are strongly rooted in disciplinary professions (e.g., introductory science is best taught in large lecture courses; academic

[73]Steinbruner, J.D. *The Cybernetic Theory of Decision*. (Princeton, NJ: Princeton University Press), 1974.
[74]March, J.G.. "Footnotes to Organizational Change," *Administrative Science Quarterly*, vol. 26, 1981, pp. 663-677.

programs should exist as long as reasonable levels of quality are maintained, regardless of how well they relate to the goals and mission of the institution). They also involve comparisons with peer institutions or national leaders in higher education (e.g., "at Harvard, faculty teach only two courses per term").

The enactment of norms within a group often leads to the exercise of a set of perceived property rights. The economic theory of property rights refers to the ability of some organizational participants to use resources in their own interest in ways that might differ from those of other stakeholders or the organization's clients.[75] In the case of higher education, desirable circumstances and working conditions are seen as entitlements, or rights, once they are achieved. For example, certain teaching load levels, student-faculty ratios, department support for research, and so on, are expected to continue.

Phases of the ratchet

Planning and budgeting gets intertwined with property rights at many institutions, resulting in the creation of a ratchet mechanism that reinforces desirable activities at the expense of less desirable activities. In effect, this shifts the output mix of departments in the direction of research and away from teaching. This ratcheting process can be described in five phases:

In phase 1, enrollment in a given department rises for external reasons; the number of faculty is fixed in the short run, so faculty are forced to teach more. This causes departmental research to fall below the level considered to be normal.

In phase 2, the resulting reduction in departmental research represents a violation of perceived property rights, which triggers a demand for more faculty. When this is acceded to, which usually happens if the problem lasts long enough, teaching loads and departmental research return to their normal levels.

In phase 3, enrollment drops back to its original level (again for external reasons), and a combination of perceived property rights and faculty employment contracts (e.g., tenure) prevents immediate downsizing; faculty members teach less, so departmental research rises above its normal level.

In phase 4, the stickiness in faculty size (due again to tenure) persists long enough for the new departmental research level to become embedded in the department's sense of social reality, that is, it becomes a perceived property right.

In phase 5, there is a new enrollment surge; the process starts over again, but now from a higher research base (or, conversely, from a lower instruction base). The "Ratchet" has operated.

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[75]Levin, H.M.. "Raising Productivity in Higher Education," Prepared for the Higher Education Research Program of the University of Pennsylvania and the Pew Memorial Trust, 1991.

The academic ratchet is shaped by several factors that may exist more strongly in some institutions than in others. These include (a) strongly held beliefs about the intrinsic worth of teaching and research programs, (b) a collegial approach to decision making which places consensus at the center and allows little room for alternative points of view, (c) powerful beliefs about academic freedom, which are sometimes interpreted as forbidding interference in faculty activities, and (d) the influence of students and alumni who do not want to see the reputation of their program or department negatively impacted.

It is difficult to underestimate the force of enactment and faculty property rights. Their power comes from the ultimate threat of losing unhappy faculty to competing institutions. The academic ratchet is reinforced internally, by faculty members who prefer research to teaching and administrators who see the benefits of sponsored research, and externally, by students, alumni, and donors who want their programs and departments to be perceived as being of the highest caliber.

To reiterate, the interaction between perceived rights to "normal" departmental research and the downward-stickiness of faculty size, coupled with the external variations in enrollments, produces a slow shift upward in the normal and actual levels of departmental research. Significant cuts in funding can break the ratchet temporarily, resetting the process to a lower base, *but unless the basic system dynamics are altered, the upward shift will begin again when the crisis has passed.*

Mission Drift, the Academic Ratchet, and the University of California

It is important to remember that the issues raised by the academic ratchet thesis have not been critically examined with respect to their relevance or applicability to the University of California. However as noted earlier, UC is widely considered to be the archetype of the modern elite public research university. The *potential* relevance is obvious and has been described graphically throughout this section. Former UC President, David Gardner, articulated these underlying institutional priorities and their attendant problems in a much more subtle way at a 1990 international conference held on California higher education:

> "...I think it is also fair to say that (undergraduates) receive less attention than our graduate students do. Nevertheless, the quality of the faculty that we can attract to the University of California arises from the quality of our graduate program, not from the quality of our freshman students, and the presence in the University of California of a very distinguished faculty, whether they teach freshmen or not, sets the intellectual tone for the university and permeates and infuses every aspect of its work. So for students who are quite independent, capable of taking initiative, able to live with a less directive environment, the University of California is a good place to be. If the student is dependent, looking for a lot of help, it would be an uncomfortable place."[76]

[76] *Reviews of National Policies for Education: Higher Education in California*, op. cit., p. 105.

Mission Drift, the Academic Ratchet, and the California State University

While the potential relevance of these issues to the University of California may be obvious to many, it is not so clear how they may relate to the California State University. As William Massy has pointed out: "Not all institutions suffer from the academic ratchet to the same extent. The phenomenon occurs most dramatically at elite research institutions, where competition for admission allows institutions to dictate the 'output mix' that students buy. However, the prestigious research institutions receive most of the publicity, and to the extent that other institutions emulate their behavior, the academic ratchet affects much of higher education."

Concerted efforts by colleges to become universities and by doctoral universities to become research universities have been familiar sights across America in past decades, witnessed here in California in 1971 when the "California State College" system requested that the system be given the designation of the "California State University and College" system. The process was completed in 1980 when all remaining California State Colleges were renamed California State Universities. In some instances this impulse is representative of healthy growth and development. In other cases it can be indicative of "mission drift," a phenomenon referred to in some quarters as "mission envy."

Is mission drift and/or the academic ratchet at work in the California State University, induced largely by the prevailing national academic culture and prestige system? Again, time and resource limitations have made it impossible to critically or quantitatively analyze these issues, however, a cursory examination of some well-known attitudes and practices within this system may provide some clue as to whether there is reason for concern:

To begin, San Diego State University (SDSU) is widely hailed as the "flagship" campus of the California State University System. Why is this? It is among the largest, but is not *the largest* institution in the system. There are no broadly administered assessments or comparisons of instructional quality between campuses. With regard to undergraduate admissions, SDSU is among the most selective institutions, but it is not *the most selective*.

The explanation for San Diego State's regaled status is simple. SDSU is considered the flagship campus because it, among all CSU campuses, most closely resembles a full-blown research university. SDSU attracts far and away the largest amount of external research funding in the system, not to mention that it hosts fully two-thirds of this 20-campus system's active joint doctoral programs. As outlined earlier, the California State University's priority missions in the *Master Plan* are undergraduate instruction and teacher training. Research is authorized only to the extent that it supports the instructional mission and institutions are prohibited from offering independent doctoral degrees.[77] Yet despite these explicitly stated priorities, San Diego State is generally considered by both the general public and those within the system to be the flagship campus, largely on the basis of its research and joint doctoral

[77]Joint doctoral programs, wherein CSU offers the doctorate "jointly" with a UC campus or a private doctoral granting university, have become an exception to this rule.

programs. Institutional status at CSU, both public and within the system, seems to be based at least in part on factors that are in potential conflict with the institution's primary missions.

If this very superficial observation was the only example of a possible drift away from primary institutional missions, then it would still probably not be cause for concern. However, there are several other indirect indicators that, when taken together, might be interpreted to imply that the State University has been influenced by the national preference for research and graduate education over the instruction of undergraduates.

For example, a major sticking point in the development of the original *Master Plan* was the California State College's desire to offer the doctoral degree independently. This proposal was spurred and widely supported by CSU faculty.[78] They often argued that the establishment of full-scale doctoral programs, and the associated increase in research activities, were intended to actually improve the quality and dynamism of the undergraduate program. While no doubt the supporters of this proposal genuinely believed their arguments, it is hard to believe that improvement in the undergraduate program was the sole, or even most important, motivation for their efforts.

Having failed to win authorization for offering its own doctoral degrees, the State Colleges reached a compromise in which it was allowed to grant "joint doctorates" in cooperation with UC and independent doctoral granting universities. Opposition to establishment of these programs was substantial and has been persistent over the years.[79] Considering that in 1990 a total of only 275 students were enrolled in these programs and that only 97 degrees were conferred between 1980 and 1990,[80] the investment of administrative and faculty time devoted to supporting and defending the joint doctoral program has been remarkable.

Another interesting and highly sensitive example of possible mission drift is the approach employed by both the state and CSU to determine faculty salary parity levels. While the "peer institution" comparison approach used for CSU faculty salary setting is typical for many states, the institutions included in the State University's "peer group" is nonetheless telling. As CPEC has commented, "(the State University's peer institutions) are as notable by their dissimilarities to CSU as for what they have in common.[81] Sixteen of the twenty institutions offer free standing doctoral programs, with three of the sixteen classified by the Carnegie Commission as Research I (including USC and Arizona State University), three as Research II, four as Doctoral I, and six as Doctoral II. Ten of these institutions have law schools and three have medical schools. Conversely, only two of the State University's faculty salary comparison institutions are similarly classified as Comprehensive I, with the remaining institutions -- Bucknell and Reed College -- classified as Liberal Arts I."[82] As more than one

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[78]California Postsecondary Education Commission. *California's Joint Doctoral Programs*, (Sacramento: The Commission), 1992, p. 5.
[79]See *California's Joint Doctoral Programs*, *op. cit.* p. 7, for a full discussion of recommendations by the Office of the Legislative Analyst to discontinue these programs.
[80]Ibid., p. 15.
[81]*Expenditures for University Instruction*, op. cit.
[82]Ibid.

state official has been known to comment, "the process has always been a salary target in search of a methodology."[83]

While law school faculty salaries are excluded from these salary parity calculations, it is still ironic that the composition of the State University's "peer group" could itself be contributing to the problem of mission drift. While it may not be fair, and is yet another nationwide indicator of the low regard for instruction compared to research, the fact remains that research faculty get paid significantly more than faculty employed at primarily instructional institutions.[84] The inclusion of so many research and doctoral institutions in the State University's peer comparison group thus means that CSU has been able to offer salary packages that are competitive with many successful research universities. Hence, the California State University is at least hypothetically capable of attracting faculty from a labor pool whose professional focus (research) is in potential conflict with the institution's primary mission (instruction).

Most recently, in 1991, the CSU Trustees adopted recommendations stemming from a long-range planning process that outlined this system's vision of the future for its graduate programs.[85] This graduate education plan recommended, among other things, that additional funding be made available to increase the proportion of graduate enrollment in the system; that faculty take on expanded research activities in support of this enlarged graduate component; and that undergraduate instructional loads be reduced to generate part of the faculty time needed for these new activities. Does this sound familiar? The onset of the budget crisis has made it politically impossible for the State University to seriously propose implementing this plan, but the fact that it was produced as late as 1991 may provide insight into the prevailing attitudes and priorities of at least some parties within the system, especially among the faculty.

None of this is intended to imply that the California State University is somehow uncommitted to its teaching mission, or that there is a dearth of outstanding instructors in the system. Far from it. CSU is home to many of the most committed, vocal, and articulate advocates for undergraduate instructional excellence, many of them at the highest administrative and faculty levels. Rather, the intent is to point out that regardless of the institution's overall commitment to teaching, there are still several contrary indicators that when taken together imply that the State University, like many other institutions, may be subject to the influence of a dominant national value system that favors research and graduate education at the expense of undergraduate instruction.

Summary

Page Smith, in *Killing the Spirit* (1990), summarizes many of the worst effects of mission drift and the academic ratchet. Among the most troubling for Smith are: (a) reduced faculty

[83]For fairly obvious reasons, these officials would prefer to remain nameless.
[84]American Association of University Professors. "AAUP Annual Faculty Salary Survey," *Academe*, March/April 1992.
[85]California State University. "Implementation Plan for the Recommendations on Graduate Education," *CSU Trustees Agenda*, September 10-11, 1991.

teaching loads resulting from the imbalance between teaching and research and the associated reliance on part-time instructional staff and graduate teaching assistants; (b) overreliance on external funding and the erosion of faculty loyalty to the institution; (c) the increasing demand by all institutions for faculty research, regardless of its value, and the associated attempt by many colleges to achieve university status, duplicating the role of research institutions; and (d) excessive specialization in academic disciplines. The results of these problems include greatly increased institutional costs, which are then passed on to students in the form of higher tuition. Even more important to Smith is the apparent neglect of the primary task of colleges and universities: the teaching of undergraduates.[86]

This section concludes with some closing thoughts from William Massy:

> "Before the Second World War, faculty were largely extensions of their institutions, identified with and part of a collectivity that linked them together in common endeavor. The curriculum was collectively developed. Students were guided through a series of courses in which there was a clear introduction, a variety of middle-level experiences, and a final set of advanced courses that constituted the major. Faculty members devoted as much time, if not more, to teaching general courses within the department as to teaching their own specialties. Teaching loads were heavier than now, but seldom onerous, leaving sufficient time for advising and mentoring, as well as the more limited amount of publication expected of most faculty at that time.
>
> "A sad paradox has come to describe the changing responsibilities and perceptions of the American professoriate. Many of those who chose an academic career did so as a result of having been taught well as an undergraduate, often at smaller, teaching-oriented institutions. After years of graduate training and experience in the academic profession, however, college faculty learn to seek 'relief' from the responsibilities of teaching, mentoring, and developing their college's and department's curriculum; they soon realize that the real gainers are those faculty members who earn more discretionary time to pursue their own definitions of purposeful work. They understand that professional status depends as much, if not more, on one's standing within a discipline -- and less on one's role as a master instructor within an increasingly complex institution.
>
> "Because of the growth of the administrative lattice, faculty no longer numerically dominate their institutions, are generally more concerned about their standing within their disciplines, and are more ready to move in search of better deals. The irony is that while administrative units have become more like academic departments -- more committed to group processes and collective decision-making -- more and more faculty have become independent contractors largely unfettered by the constraints of institutional needs and community practices."[87]

(As previously noted, the Administrative Lattice and Academic Ratchet portions of this

[86] *Killing the Sprit*, op. cit.
[87] *The Lattice and the Ratchet*, op. cit.

section are based largely, and in many cases directly, on two articles published elsewhere. The first. prepared as part of the Pew Charitable Trust's Higher Education Finance Project, is entitled "The Lattice and the Ratchet." The second is an article by William Massy and Andrea Wilger entitled "Productivity in Postsecondary Education: A New Approach," published in the Winter 1992 issue of Educational Evaluation and Policy Analysis.)

A New Lexicon for Higher Education

For the past several years the Pew Higher Education Research Program, sponsored by the Pew Charitable Trusts, has worked to focus attention of higher education's national agenda. Recent issues of the program's quarterly publication, *Policy Perspectives*, have helped introduce four key terms to describe higher education finance:

Cost-plus Pricing: The reliance on price setting as a primary means to finance not just the cost of delivering a service, but of supporting additional undertakings within an enterprise. For higher education (nationally), it represents the practice of setting tuition/fees to support all programs at current levels after inflation ("cost"), and to fund new initiatives requiring an augmentation of current capacity ("plus"). Cost-plus pricing proceeds from the philosophy that evoking public criticism over price increases is less painful than stirring internal discontent over the attempt to shift funds away from programs that have outlived their purpose or effectiveness.

Growth by Substitution: Known as "the antidote to cost-plus pricing," this practice builds on the principle that sheer expansion beyond a certain point weakens an institution by skewing its focus, diluting its sense of mission, and compromising its ability to provide a quality service in an efficient way. Growth substitution acts on the recognition that resources are finite, and that supporting growth in one area requires a corresponding reduction in another.

The Administrative Lattice: A term to describe the proliferation and entrenchment of administrative staff in American colleges and universities over the past two decades. The term connotes not just the fact that this increase in staff -- estimated at 60% nationwide between 1975 and 1985 -- but its effects on an institution's operations and costs. These include the transfer of tasks formerly accorded to faculty; the growth of "consensus management," which effectively diffuses risk and responsibility for decisions; and the increase of costs and decline of efficiency as administrative bureaucracy extends and solidifies its ties within an institution.

The Academic Ratchet: A term to describe the steady, irreversible shift of faculty allegiance away from the goals of an institution, toward those of an academic specialty. The ratchet denotes the advance of an independent entrepreneurial spirit among faculty nationwide, leading to increased emphasis on research and publication and on teaching one's specialty in favor of general introduction courses, often at the expense of coherence in an academic curriculum. Institutions seeking to advance their own prestige may contribute to the ratchet effect by reducing faculty teaching and advising responsibilities across the board, thus enabling faculty to pursue their individual research and publication with fewer distractions. The academic ratchet raises an institution's costs, and it results in undergraduates paying more to attend institutions in which they receive less faculty attention than in previous decades. □

Source: *Change Magazine*, November/December, 1990, p.22

Section 7. Options for Improving Quality and Containing Costs in California Higher Education

WHILE the options outlined on the following pages attempt to directly address the Cost Disease, the Growth Force, the Administrative Lattice, and the Academic Ratchet, they should not be viewed as a coherent reform package, an exhaustive laundry list, or anything other than what it was intended to be -- a representative sampling of the *types* of reform strategies being considered nationally. In most cases, specific options have been taken straight from the national or state literature and the descriptions and rationale are directly quoted from experts in the field. In the interests of brevity, descriptions of options are sometimes paraphrased. Where necessary, additional narrative has been added to relate specific options to the experience in California.

The first group of options address the broad environmental factors that serve to connect and mutually reinforce the different cost drivers outlined in the previous section. Since these four cost-drivers are often interrelated, it should not be surprising that many individual options are intended to simultaneously address more than one. Most typically, these options relate to the Growth Force, the Administrative Lattice, and/or the Academic Ratchet. Subsequent groups of options are organized according to their specific relationship to the individual causes of cost escalation previously outlined. Finally, some options are intended to be initiated at the state level, others are clearly institution based, while still others require involvement at both levels. These designations are noted parenthetically after each option.

Broad Based Options for Containing Costs and Improving Quality in Higher Education

1. *Develop a Shared Statement and Commitment to Mission*
(State and Institution Based)

The state and the higher education systems should jointly define and commit themselves to broad, coordinated, and clearly prioritized missions so that decisions can be made congruent to them. In addition, individual campuses, units, and departments, whether administrative or academic, should also explicitly articulate and embrace their individual missions, and should explicitly relate these missions to the goals of the institution as a whole. By precisely defining the mission for a campus and for each functional unit within it, it becomes possible to set realistic goals and encourage innovation at all levels in meeting them. Because defining missions at the unit level also facilitates a widespread understanding of and commitment to the campus' broad mission, it serves to allow greater freedom in local decision making, reduces the need for bureaucratic oversight or approval of individual decisions, and establishes the basis for greater accountability in ensuring that unit-based missions are accomplished. Finally, it helps to shape and reinforce both an incentive system and an organizational culture in which there is little tolerance for personal

agendas that are in conflict with the goals of the institution.[88]

2. *More narrowly define system and/or campus missions.* (State and Institution Based)

As just noted, all individuals working in higher education need to be able to ascertain and state the institution's mission, vision, values, and, most important, to base decisions on them. Systems, campuses, and individual departments, like all others, cannot do everything, cover every subspecialty, or accede to all demands for new services or new activities. This commitment to mission, focus, and *targeted areas of excellence* must be brought to pervade all levels of higher education.[89] The nature of the current crisis means that "[i]ncreasingly, colleges and universities will be in the business of determining which programs and services are unique, rather than those that simply add value."[90]

The California Postsecondary Education Commission recognized as early as 1990 that historic levels of funding might not be available to accommodate needed enrollment growth. At that time CPEC discussed the need to explore more narrowly defined system and/or campus missions in response to future funding shortfalls:

> "The policy priority of maintaining access and quality, insofar as it is still possible, should guide the development of these options, which must include -- at minimum -- the following possibilities:
>
> - The differentiation of function among the segments of higher education might have to become more sharply defined, with the state forced to direct the segments to prioritize scarce resources to those aspects of their operations that are unique to their mission. Under this scenario, the University of California would have to focus more on graduate education and research, and either increase admissions standards to reduce undergraduate access or else reduce some aspect of undergraduate education altogether. The State University would have to turn away from hopes for expansion of their public service and research missions, to focus on upper-division instruction and professional education.
>
> - As an alternative to sharper delineation of function between the segments, the state should be prepared to explore increased differentiation *among campuses within systems*. Under this scenario, individual campuses within systems might have roles and functions that are narrowly drawn within the overall segmental mission, allowing for maintenance of excellence within the segment as a whole, but recognizing that limitations in resources no longer allows for all campuses to provide the full range of programs possible under the broad segmental mission.

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[88] *The University of Michigan Initiatives*, op. cit.
[89] Ibid.
[90] Maydew, Mary Jo, "Assessing Noninstructional Costs and Productivity," *New Directions for Institutional Research*, Fall 1992, p. 50.

- The recent Master Plan policy of accommodating all eligible applicants to the University of California and the State University would have to be reexamined, with more diversion of lower-division students to the community colleges....

- If funds are severely constrained, resources would have to be diverted to programs of greatest demand, with low-usage and high-cost programs closed on a selective basis."[91]

Also intending to promote the dual goals of improving efficiency and quality, the Assembly Higher Education Committee has recently identified several similar options for how system or campus missions might be more narrowly defined. While several of these options were articulated by the Committee as rhetorical questions, for clarity they are restated here in the declarative form:[92]

- Substantially reduce lower division education as a primary mission of UC and CSU, and provide funding for the Community Colleges sufficient to absorb the shifted students.

- Each UC and CSU campus should be directed to develop a curricular specialization (e.g. natural science, agriculture, or liberal arts), and where possible academic departments in disciplines outside the specialization should be consolidated.

- Academic programs at UC and CSU campuses, particularly at the graduate and professional level, and vocational programs at community colleges, should be eliminated if sufficient capacity is available in comparable programs at either (1) other public and private institutions in the region or (2) other campuses in the respective system.

- Four UC campuses should be designated as state research centers, with a substantial reduction in state support for non-instructional research at the remaining campuses.[93]

In sum, the national literature clearly indicates that there is potential for improving both quality and productivity by more clearly and narrowly differentiating institutional missions. In the case of more narrowly differentiating campus missions, the extent of possible long-term budgetary savings is not clear. However, speaking generally, "Cohn, Rhine, and Santos (1989) did find evidence of positive returns to scale for research; scale economies also occur in instruction, but the effects are not large except at the low end of the enrollment range. On the other hand, scale economies are more readily apparent in the

[91]California Postsecondary Education Commission. *Higher Education at the Crossroads: Planning for the 21st Century*, (Sacramento: The Commission), 1990, pp. 7-8.
[92]Assembly Committee on Higher Education. "Discussion Paper #1: Mission and Function," February 1993.
[93]Assembly Committee on Higher Education. "Discussion Paper #1: Mission and Function," and "Discussion Paper #3: Faculty, Instruction, and Research," *Master Plan for Higher Education in Focus*. 1993.

support areas (Brinkman and Leslie, 1986)."[94] In addition, both the Gilmore[95] and Fuller[96] studies (discussed in more detail on pp. 29-30) indicate that academic quality might also be expected to rise as a result of more focused instructional missions.

However, and in spite of a public consensus that all promising alternatives should be carefully examined in light of the current crisis, it can be expected that at least the University of California would object strenuously to a serious exploration of any of these options. Notwithstanding compelling evidence to the contrary, the public rationale for the University's opposition to these types of options has been the argument that comprehensive research and graduate programs are necessary on *each* University campus because they are integral to the vibrancy and vitality of the undergraduate program. However, the primary reason driving the University's resistance appears to be grounded in a much different problem -- a problem rooted in the operational mechanism of the Academic Ratchet.

To lay the groundwork for understanding one of the University's main (and unstated) concerns regarding more narrowly differentiating campus missions, it is important to understand that for years the state's financing system has provided more or less block funding for most aspects of the University's state-supported operations. This funding is tied to overall enrollment levels, as well as enrollment growth, without regard to the level of instruction being provided. In other words, the University receives the same increment of funds for an additional freshman English major as it receives for an additional Ph.D. student in Engineering. This approach has provided the University with much needed budgetary flexibility, but at the state level it has also served to conceal the actual costs of providing instructional services at different levels (e.g. undergraduate, Ph.D., and professional programs), as well as changes in those cost profiles over time. As noted earlier, this funding system has also served to obscure the extent to which State General Funds finance departmental research and faculty compensation for non-instructional activities, as well as changes in these areas over time.

In part because this state-level "information gap" has existed for so long, it appears to be the University's view that it must be preserved. The fear has been that state leaders cannot be allowed to know the real instructional cost differences by level of instruction, because if they did know, they would be unwilling to adequately finance either the University's graduate programs or departmental research activities. Consequently, a careful examination of the budgetary implications of more narrowly defined campus missions poses a severe threat to the University because it would isolate expenditure patterns between campuses with different instructional focuses, thus revealing programmatic cost differences between the University's various programs.

Responding to a question posed by an international review panel, former UC President

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[94]Brinkman, Paul T., "Factors That Influence Costs in Education," *New Directions for Institutional Research*, Fall 1992, p. 25.
[95]*Evaluating Academic Productivity and Quality*, op. cit., p. 43.
[96]*Ph.D. Recipients: Where Did They Go to College?*, op. cit., pp. 42-51.

David Gardner frankly addressed this fear at a 1989 OECD meeting in Paris, France:

> "Yet the question of research and teaching remains a sore point. We defend our arrangement as best we can, although we freely acknowledge its weaknesses. We don't know any other way of doing it. The State of California would not pay for a research university if we only offered instruction to graduate students. Indeed, they would not pay, in my opinion, for a university that only offered the last two years in graduate instruction. The only way we manage is to admit students at the freshman level in large numbers, and redirect the money that is appropriated for them to the graduate program. There is no other way of managing at the moment other than the way in which I have very honestly described it to you."[97]

In essence, President Gardner is arguing that it is necessary to use undergraduates as cash cows to finance graduate education, because if state leaders knew what these graduate programs actually cost, they wouldn't pay. To the extent that this view persists in the University today, it not only expresses a deep distrust in elected officials to do right by their university systems, but in light of the current crisis it also effectively forecloses a number of potential options, which at the very least deserve careful and critical scrutiny. Obviously, overcoming this distrust and breaking down the current instructional cost "information gap" are both necessary prerequisites to assessing the mission-based options outlined here, as well as the budgetary options that follow.

This problem further illustrates the need for state and higher education leaders to reestablish a measure of mutual trust by specifically articulating their shared understandings regarding institutional missions, expectations for degree and research production, as well as relative priorities when financing is not available to accomplish all stated missions. Implicit within former president Gardner's concern is the view that the University's goals have somehow become incongruent with those of the state, and that block-funding, based on aggregate enrollment, is the only way to preserve the University's vision of how its institutions should be configured. However, instead of obfuscating the available tradeoffs, it is essential that state and educational leaders confront them directly, jointly defining not only admissions goals, but also goals regarding needed degree production at different instructional levels, needed research production, as well as estimates of the funding necessary to accomplish them all under various scenarios.

Zemsky and Massy describe the potential of these strategies as follows: "Substantial savings would be possible if each institution could narrow its offerings to a set of 'core' products and reduce its expenditures on faculty and facilities in 'non-essential' areas. Different institutions might make different choices -- collectively, perhaps, or through an independent search for the right 'market niche.' Ideally, the result would be to maintain today's array of choices for students, but with more institutional differentiation."[98] The following group of options address the role that the state budget process might play in this effort.

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[97] *Reviews of National Policies for Education: Higher Education in California*, op. cit., pp. 104-105.
[98] *Cost-Containment: Committing to a New Economic Reality*, op. cit., p.21.

3. *Use Funding Formulas as a Means to Articulate Broad State Goals and Priorities*
(State Level)

3A. One suggested approach is to split the "Instruction" line-item in the state budget to recognize both "Instruction" and "Departmental Research."

As noted in the previous paragraphs and in Section 4, it is a peculiar feature of state financing for research universities, in California and nationally, that the "Instruction" line-item includes far more than just funds related to instruction. In addition to instruction and related activities, the "Instruction" line-item also includes significant amounts of funding for departmental research and faculty compensation for time spent on non-instructional activities (See Section 4). The same is true of the funds the state provides "on the margin" to finance enrollment growth. In short, funding for additional departmental research and faculty non-instructional time are provided as a function of enrollment growth, and funding for these areas grows along with the rest of the base instructional budget as it is adjusted upward over the years for inflation and the like.

The issue is not that departmental research or faculty time spent on non-instructional activities is unimportant. Far from it. Adequate funding for both of these areas is critical to maintaining the viability of the University's graduate education and research programs. Instead, the issue is that the state's appropriation to UC for "instruction" is currently justified on the basis of overall student enrollment levels, despite the fact that student enrollment bears no relationship to the state's need for either departmental research or the total amount of time faculty should spend pursuing non-instructional activities.[99] Yet despite this fact, in California and many other states, funding for non-instructional functions have been growing on auto pilot over the years, tied to and moving upward in lockstep with enrollment growth, embedded and unseen in states' overall appropriations for instruction. As discussed in the previous group of options, the need to adequately finance these non-instructional expenses is obvious, but equally clear is that these separate and distinct components of the "instruction" budget should be justified and financed on their own merits, with the full understanding of all participants in the decision-making process.

William Massy addressed this issue at a 1990 SHEEO[100] seminar held on higher education finance: "(Longanecker and Mingle) have suggested that maybe we should separate the instructional and departmental research budget. I agree. That just has to be done. It's a start and it has to be done in a way that you do not cheat the departmental research budget. If there's even a smell of that then you will be done in. It may come first to those universities and those systems who most clearly value teaching and research and feel

[99]This very point was argued persuasively by U.C. officials recently when they maintained, as part of CPEC's *Cost of University Instruction* study, that these non-instructional expenditures should be excluded from the University's "cost-per-student" calculation.

[100]State Higher Education Executive Officers Association.

confident enough that they will be able to make the distinction. I think that's the first step, a structural step."[101] To reiterate, the point is not that these non-instructional items should somehow be slashed, but rather that they should be funded based upon some rational and explicitly recognized assessment of the state's need and willingness to pay for them.

3B. Move from cost-based to incentive budgeting

Another option is to break the instruction line-item down even further, financing educational activities by level of instruction as a means to articulate relative state priorities in the budget process.

Massy describes this option as follows: "You can deliberately build financial incentives into the formula coefficients. Assume that you know what the approximate cost of a Ph.D. program is, and you decide you do not really want this to be a state priority any longer. You set a price formula a little bit below the cost, in order to produce a negative gross margin for the Ph.D. program. In the same way, you could increase the margin for undergraduate programs. You don't hide these differences. Instead, you tell the institutions you are departing from 'cost-based pricing' and moving to 'incentive pricing.'"[102]

3C. Explicitly change the faculty workload assumptions built into State funding formulas.

Faculty workload is a particularly popular place for state leaders to focus in the effort to affect institutional priorities, because faculty workload assumptions feed directly into state funding formulas. This is an appropriate area of inquiry for decision makers and has been a focus for leaders in other states.

> "State officials across the country believe that many colleges and universities, particularly research institutions, have lost sight of their essential mission -- the teaching of undergraduate students -- as faculty members spend more time away from the classroom engaged in research and other professional activities. In effect, they argue that institutions are charging students more and at the same time they are delivering less. To combat this trend, several states have launched investigations into how much time faculty spend working with undergraduates. Surveys of faculty workload have been administered in Mississippi, New York, and Virginia. Arizona and North Carolina have similar studies under way. State officials believe that work-load studies have the potential to produce both cost savings and better undergraduate education."[103]

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[101] Massy, William. State Higher Education Executive Officers Association; "The Dynamics of Academic Productivity," March 1990, p. 36.
[102] Ibid., p. 40.
[103] *The Lattice and the Ratchet*, op. cit.

In addition, there is much that institutions can do to improve both public and internal understanding of this complex issue. The following paragraphs outline how the University of Michigan has chosen to address this challenge:

> "One of the major constraints that inhibits our ability to improve quality is the traditional rigidity in the definition of faculty 'workload.' Despite ample evidence that individual faculty members differ greatly in the relative importance with which they view various tasks and in their abilities to perform them, we persist in defining the expected task in the same way for everyone...For much of the University the expectation is that the teaching proportion of a regular faculty member's responsibility is two courses per term for two terms per year. Further, there is an understanding that the balance of a faculty member's time is expected to be devoted to research with some contribution to a variety of 'service' activities. This description of faculty workload is typical, with teaching expectations carefully defined in terms of classes taught and with the research expectation vague, particularly for tenured faculty. Even the teaching definition is not careful since the class size, the level of the students, the amount of support provided, as well as many other factors are not considered. The result of the false precision of one of these factors and the vagueness of the other tasks is that any two individuals are difficult to compare, and concerns about efficiency as well as equity may be raised. All too often this or a similar standard load is applied to everyone, year after year, with little or no variation relating to individual abilities or preferences. We (the University of Michigan) encourage the development of a more flexible approach to the definition of workload, and to the allocation of individual faculty efforts. We should be ready to adjust the proportions so as to take advantage of individual differences.
>
> "In place of this rigid structure, from which the only variation is downward in each component [e.g. instruction, research, and public service], we suggest the substitution of a more global, broadly defined expectation, made up of varying amounts of the several components (varying both among individuals and for a single individual over time). A symptom of the problem we wish to address is that while we speak of a teaching 'load,' we never refer to a research 'load;' we see strong research sometimes resulting in reduced teaching, but weaker research rarely resulting in increased teaching. The 'standard' obligation in each of the components is an effective maximum, from which variation is only in one direction. We believe it should be treated more like a true average, with variations permitted and even encouraged in both directions. It is clear that changes of this sort must be carried out at the department or school and college level with considerable active discussion and participation by the entire set of individuals involved.
>
> "Obviously, this greater flexibility will be beneficial only if the proper incentives and reward structure are created in tandem. Faculty members must be valued and rewarded for their total contribution, teaching and service as well as research. A one-dimensional reward structure will induce a one-dimensional effort. But those

who do less research and more teaching make it possible for others to do the reverse, and their contribution must be recognized appropriately. A clear outcome of this process is likely to be quite different teaching (for example, some faculty teaching more and/or larger classes and some teaching less) and research assignments for individuals at various times. We recognize the difficulty of tackling these issues but also know that it has been done successfully in some circumstances. It is unlikely to be successful if the changes are dictated from the top because the data on workload and individual skills and preferences are best known at the level where the work takes place. We believe that costs can be saved, and that the quality of teaching and research can be improved with this decentralization of decision making on (individual) faculty workloads. Indeed, this may be the only hope for dealing with the inability to add resources."[104]

*3D. **Shift the focus of incentives away from individual faculty members and toward their departments, divisions, and schools.***

For example, instead of distributing all funds appropriated for Merit Salary Adjustments to individual faculty based on individual performance, the State could set a portion of this money aside for allocation to all faculty in a department, based upon locally determined assessments of instructional performance for the department as a whole.

Massy addressed this and related issues at the same seminar: "Provosts and deans need to communicate to departments that they are going to be rewarded or punished according to their teaching as well as their research productivity. Once one has separated the teaching and instruction budget, one can let the dean know that his or her instructional budget will grow along as the value (not just the quality) of the research grows. And overall, the pay structure within the department will reflect both of these productivities. So everybody in the unit will benefit if both of these factors go up. Then you will begin to get an environment that allows tradeoffs, because the person in research is going to value the person who is helping the revenue stream with teaching. The revenue stream is not just based on numbers of teachers in relation to enrollments -- not just the old enrollment formulas. To make this work we must have ways of knowing what is good teaching just as we have ways of knowing what is good research. Both the quality and quantity of teaching (and research) must be related to the department's resources and its members' pay."[105]

*3E. **Allow institutions to retain achieved savings***

Simply stated, "if an institution cuts its costs but is not permitted to reinvest savings in its own future, there is no incentive to save..."[106]

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[104]University of Michigan. *"Enhancing Quality in an Era of Resource Constraints,"* The University of Michigan Task Force on the Costs of Higher Education, June 1990, pp. 27-28.
[105]Ibid., p. 37.
[106]*Reflections on Cost Control in the Public and Private Sectors*, op. cit., p. 20.

4. *Finance new initiatives through "Growth by Substitution"*
(State and Institution Based)

Recognizing that the combined forces of enrollment pressure, a dysfunctional state finance system, and a persistent economic recession result in a very bleak fiscal future for higher education, institutions and the state should consider embracing the concept of "growth by substitution." Growth by substitution recognizes the need for priority setting and long-term fiscal discipline by maintaining that, aside from funds related to enrollment growth, for every new activity an institution, administrative unit, or academic department chooses to pursue, some other existing activity must be discontinued in order to free up the resources for the new activity. This principle can be applied at the broadest level; for example, by a campus choosing to consolidate or eliminate some academic departments to finance major expansion in others, to the narrowest level where a student services unit might choose to finance expansion of its hours by giving up some portion of its office space and saving on the associated overhead charges.[107]

Finally, Growth by Substitution is especially important as a means to maintain institutional dynamism and avoid the tendency of campuses and departments to freeze up organizationally as a result of long-term budgetary restraints. "Growth by Substitution allows campuses and individual departments to become more aggressive in setting priorities and in identifying, preserving, and enhancing those programs and services that are unique, and distinguishing them from those that merely add value."[108]

5. *Impose Revenue (Tuition) Discipline*
(State and Institution Based)

Currently, most colleges and universities budget *expenditures first*, using last year's costs as a starting assumption, then adjusting upward for inflation, salary increases, projected enrollment growth, and the like. Institutions then make assumptions about appropriate tuition increases, negotiate with the state over their appropriations, and when necessary, impose additional last minute tuition increases to mitigate the effects of major shortfalls in state support.[109]

In California, this process has generally resolved itself in recent years with a last minute effort to generate additional tuition revenue, to at least close the gap between state revenues and institutional expenditure estimates. As a result, this approach has been extremely difficult on students and their families because it has eroded any predictability in estimating colleges costs; but it has also served to erode budgetary discipline within institutions themselves. "Xerox"-based budgeting encourages a "use it or lose it" mentality at the unit and departmental level, and encourages budget planners and other

[107] *The University of Michigan Initiatives*, op. cit.
[108] Ibid.
[109] Ibid.

decision makers to resist making hard choices.[110] Only after efforts to close the "revenue gap" through additional tuition increases fall short, do institutions generally begin publicly determining where specific cuts will be made.

There is a vigorous debate currently underway at the state level over whether public sector entities should begin their fiscal planning by first budgeting likely revenues, or by first budgeting the expenditures necessary to meet current policy goals. The intent of this Occasional Paper is not to address that important discussion, although its resolution has serious implications for higher education finance. Instead, the issue addressed here is the extent to which colleges and universities should be able to view tuition as a "revenue source of last resort" in the event of significant state funding shortfalls.

One alternative pursued by the University of Michigan is to begin its planning process by budgeting revenues first, primarily student fees, but also building in rough estimates of likely state support. Programmatic priorities are then defined, and if significant deficits emerge when building the expenditure side of the budget, or when negotiating financing from the state, then the process revolves around systematically identifying ways to get expenditures within the adjusted revenue projection. As noted, the University of Michigan now employs this internal budgeting process, and it was intended, their provost says, to put the university on a "revenue diet" and force it to exercise budgetary discipline and to employ tighter decision making.[111] Regardless of the process or enforcement mechanisms employed, the overriding point is that no student fee policy can be effective, no matter how brilliantly conceived, if either institutions or the state lack the discipline to follow it during times of budgetary crisis.

6. *Recognize Full Costs*
(Institution Based)

It is crucial that local departments and units be forced to recognize and bear the full costs of the decisions they make. For example, at some colleges across the country staff salaries are paid out of departmental budgets while benefits are paid out of a central account. Thus, while a department bears the same expense if it replaces one full-time person with two part-timers, it doesn't recognize (or doesn't care) that the central account must now pay benefit costs for two people. In another example, "In many instances current budgeting practices do not include recognition of the costs of the general fund space used by a department or unit. Utilities, custodial services, maintenance, and security are all significant cost drivers within a campus, as are capital expenses and ongoing expenditures for space increases. If campus budgeting practices were to consistently recognize that space is not a free good, then it might result in more prudent and creative uses of existing space as well as mitigate the need for new buildings, all of which hold down costs."[112]

Identifying central accounts where expenses are not charged back to local units is one

[110]Ibid.
[111]Ibid.
[112]Ibid.

promising place to start in the process of identifying areas where departments may not be basing decisions on the full cost implications of their actions.

7. *Tie Unit Budgets to Cost-Containment Efforts in a Direct Way*
(State and Institution Based)

While it is critical that individual units and departments bear the costs of their decisions, it is equally critical that they receive at least a portion of the savings they can accrue through improved efficiency.[113]

8. *Avoid across the board cuts*
(State and Institution Based)

"Across the board reductions, in which each operation receives the same (savings) target...generally fail for several reasons. First, they deny the reality that operations have different abilities to reduce cost...Second, they make institutional choices at the wrong level. Rather than consider at the outset that some programs and services will receive fewer resources, the decisions about where to reduce costs are forced into the divisions, sometimes into the departments. This fragmentation is unlikely to result in a set of outcomes that represents a coherent whole, much less the best choices for the institution over time. Finally, the vital opportunity to couple reductions in cost with improvements in productivity is lost."[114] "Across the board cuts (also) bring on a climate of rear-view planning, which transforms all initiatives into private strategies for reinstating what was severed."[115]

Instead of across the board cuts, "(t)he focus should be specific programmatic cuts and restructuring of functions in both academic and administrative operations."[116]

Options for Addressing "The Cost Disease"

9. *Strategies aimed at shortening time-to-degree*
(State and Institution Based)

9A. Encourage accelerated degree programs.

These approaches aim to increase the speed, and hence the efficiency, with which students move through the higher education systems. The goal here is not to reduce *annual* per-student costs, but to decrease the *total* per-student cost by reducing the number of years they are incurred. If successful, this approach allows institutions to accommodate more students and produce more degree recipients within a static enrollment and revenue base.

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[113]Ibid.
[114]*Assessing Noninstructional Costs and Productivity*, op. cit., p. 51.
[115]*The Other Side of the Mountain*, op. cit., p. 5A.
[116]*Examining Academic and Administrative Productivity Measures*, op. cit., p. 74.

To be sure, just raising these options implicitly questions whether historic degree configurations and requirements constitute the optimal arrangement for California's educational future; but the implications go far beyond that. Most importantly, a serious examination of these strategies would require a careful conversation among the faculty about what learning experiences are necessary to prepare California's next generation of students for the future. Instead of the current "shopping mall" approach to the undergraduate curriculum, in which completion of a gross number of units across general subject areas constitute the primary basis for graduation in many disciplines, an alternative somewhat akin to the curriculum frameworks developed in the K-12 system might be considered.[117]

In considering these issues, it is important to note that current disciplinary divisions and degree requirements have not been the result of a careful calibration between the structure of academia and the needs of either society or students. Instead, the current configuration is largely the result of uncoordinated historical evolution, sometimes over centuries, with the direction of change being almost invariably in the direction of greater specialization and additional disciplinary divisions. As outlined in Section 6, the direction of this evolution is driven largely by the Growth Force and the Academic Ratchet, whereby an area of academic inquiry gains respectability and prestige by becoming a distinct "subspecialty," and yet additional prestige by becoming a full-blown academic field. In short, the proliferation of academic departments has been motivated more by the imperatives of increasingly specialized research and graduate programs than by the curricular needs of undergraduates.

While the division of knowledge into increasingly discreet subunits *may* be necessary at the graduate level, its appropriateness at the undergraduate level is a matter of vigorous debate. Many critics now openly question whether these narrow disciplinary objectives are even compatible with the goal of the broad-breadth general education normally associated with the Bachelor's degree. The following paragraphs outline several types of options that are intended to address these issues:

9B. Engage the faculty in rethinking the structure, content, and duration of the undergraduate program to ensure that current degree requirements are appropriate to the needs of both individual students and the State as a whole.

9C. Consolidate the lower-division curriculum into one or more prescribed general education course patterns. Reserve more specialized discipline-based courses for the junior and senior years.

This approach attempts to consolidate lower division course offerings into

[117] *The Dynamics of Academic Productivity*, op. cit.

a narrower, more efficient, and hopefully more coherent general education curriculum. By establishing a common general education core, or a range of core options, it is possible to impose more structure and less variability in the undergraduate curriculum. Advocates argue that since this approach results in more sections of fewer courses, it encourages faculty collaboration, enhances the quality of courses offered, and promotes more breadth and coherence in the curriculum. By increasing the integration of subject matter within and between classes in core course patterns, there may also be opportunities for reducing the total number of courses necessary to complete the general education program.

9D. Consolidate or reduce the number of general education courses in selected "high-paradigm" disciplines.

This second approach attempts to recognize that the curricular rigors of certain disciplines may have already made the mastery of required discipline-based knowledge and skills, a meaningful general education, and reasonable time-to-degree incompatible. In some undergraduate programs (e.g. Engineering) the discipline-based degree requirements are already so daunting that relatively little time is left for "electives." For example, in some programs upper division breadth requirements may be so general as to require eight units in the humanities or fine arts, and eight units in the social sciences. Because these programs tend to be highly competitive, with a premium placed on Grade Point Averages, students often pursue a risk-averse strategy in fulfilling these requirements. Enterprising students on some campuses even publish underground catalogs of extremely easy courses (known as "gut" courses) for precisely this purpose.

While some breadth requirements (e.g. basic writing) will always be necessary, this strategy aims to recognize the modern reality in these programs by either significantly reducing general education requirements or consolidating them into a more focused core curriculum.

9E. Establish 3-year bachelor degree programs.

Similar to the first option in this group, but more focused on the goal of reducing the time for degree completion, this option is based on the many undergraduate programs in Europe and Japan that are shorter than the typical four-year bachelor's degree offered in America. Some higher education leaders in California have privately contemplated the notion of a highly structured three-year general education program in which students could take the first two years in a community college and the final year at a four-year university. Stanford University is also currently examining the possibility of shortening the length of some of its undergraduate programs.

9F. Reassess the various program components necessary for graduate degrees.

As with their undergraduate counterparts, the California Postsecondary Education Commission recently reported that average time-to-degree for Ph.D. programs has also increased over the years. The reasons for this increase are numerous, but one major factor was the lack of clarity in degree requirements.[118] In addition, doctoral programs were originally designed to prepare students for a life in academia, even though increasing numbers now pursue careers in the private sector or in government. It may be appropriate at this time to question whether identical emphasis between different program requirements is the best approach for all students, especially given their increasingly diverse career goals. For example, if a student aspires to a career in the private sector, should they be expected to spend as much time in teaching assistantships as a student aiming for academia? Developing specific and clearly articulated graduation requirements is one means to shorten graduate time-to-degree, and developing discreet program tracks for students with different career goals may be another.

9G. Improve student financial support.

The need to provide adequate financial support to ensure student access has been extensively examined elsewhere.[119] Less frequently discussed is the role that inadequate financial support plays in extending student time-to-degree at both the undergraduate and graduate levels. It stands to reason that the more students must work to stay in school, the less time they have to study and take classes. If rising tuition and an erosion in student financial aid are contributing to lower student course-loads and longer time-to-degree, then General Fund and institutional savings resulting from these actions may ultimately result in higher long-term state costs by extending the total period of time in which general educational subsidies must be provided to students prior to degree attainment. Definitive data on these issues are not readily available, but the implications for both cost and efficiency of even slight increases in time-to-degree are significant, and as a result warrant careful examination.

10. Non-traditional modes of delivering instruction

10A. Increase use of distance learning and emerging information technologies.

The potential cost-effectiveness of non traditional instructional techniques

[118]California Postsecondary Education Commission. *Shortening Time to the Doctoral Degree.* (Sacramento: The Commission) 1991.

[119]Cite CPEC financial aid study.

improves significantly as colleges and universities pursue strategies to establish a more coherent and limited number of general education course offerings. The unit costs of delivering individual classes through distance learning (telecourses, remote location instruction, etc.) can be high, but if a commonly articulated curricular core could be developed, then the production costs for a limited number of core courses could be spread among a much larger number of potential students. As CPEC has noted, in addition to providing instruction more efficiently to current students, these approaches may hold the greatest potential for providing educational opportunities to persons who otherwise would not have been in the educational system at all. Annenberg/CPB multi-episode productions such as *The Western Tradition* and *The Africans* are marvelous examples of the potential for telecourses.

In addition to distance learning opportunities, on-line networks, electronic document retrieval, and other emerging information technologies hold tremendous promise for consolidating library and other information resources between campuses and systems. This is one of those areas where emerging technologies may provide opportunities for both containing costs and improving access to educational and research materials for students and faculty.

10B. Year-Round Operation.

This option has been suggested repeatedly in California over the years,[120] and on the grounds that it would actually increase costs, it has been just as consistently rejected. Perhaps the context for that historic debate has changed.

It is true that year-round-operation (YRO) increases per-student costs, *if a static number of students are being accommodated*, because the state does not currently subsidize college or university summer sessions. In this instance, mandating YRO would require that state subsidies be established for summer session at levels commensurate with those provided for students during the other terms. If the total number of students accommodated by the institution does not change as a result, clearly state costs will increase.

However, if the issue is that the state cannot afford to accommodate all projected enrollment growth to begin with, then YRO may provide a means to absorb *additional* students for less additional money than traditional means of expansion. In this case, YRO may provide a mechanism to accommodate more students within the same physical space than would otherwise be possible. In addition, a campus' administrative and student services expenditures could be spread over a broader (year-round) enrollment base, containing costs in this area as well.

As CPEC has noted, YRO is currently in effect at several State University

[120]California Postsecondary Education Commission. *Technical Background Papers to Higher Education at the Crossroads.* (Sacramento: The Commission), 1990.

campuses, and appears to work best on urban commuter campuses, where part-time and other non traditional (often older) students are more prevalent.[121]

Options Countering "The Administrative Lattice"

11. *Take account of administrative growth*
(State and Institution Based)

"(Measuring) the dimensions of the administrative lattice and noting where and why it has grown...will not be easy. For good and understandable reasons, the administrative staff will resist -- citing the difficulty of making meaningful comparisons, the paucity of accurate data, and the extent to which actual growth has been a function of external regulation, the increased size of the physical plant, and faculty and student demands for increased services."[122] Nevertheless, for reasons relating to both state-level accountability and basic internal management controls, it is essential that institutions be able to track, describe, and justify both the level of administrative growth and the factors driving it.[123]

12. *Replace Control and Oversight with Clear Accountability Measures*
(State and Institution Based)

"Many state, system, and campus-level administrative and oversight policies are designed to elicit multiple layers of approval or reporting for every action prior to or immediately after its occurrence. These policies contribute to increased bureaucracy and its attendant frustrations and costs." Instead, reward systems should be put in place which serve to focus mission and encourage efficiency. Units and managers should be left to respond to these incentive systems, and they should be held accountable for their decisions and actions.[124]

13. *Move Decision Making Down in the Organization*
(Institution Based)

"Decisions should be made at the lowest level possible, encouraging innovation and reduction in bureaucracy, and local decision makers should understand their rights and responsibilities in making these decisions."[125]

14. *More Risk Taking, Less Consensus Management*
(Institution Based)

"The preferred style of decision making in higher education is consensual, both when

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[121] Ibid.
[122] *The Lattice and the Ratchet*, op. cit. p. 6.
[123] Ibid.
[124] *The University of Michigan Initiatives*, op. cit.
[125] Ibid.

appropriate and when not."[126] Institutions must carefully assess their various administrative functions and distinguish between administrative decisions where consensus decision making is necessary and decisions where it is not.

15. *Define Continual Improvement as a Goal*
(Institution Based)

While higher education institutions have always aspired to continual improvement, it is important that this be explicitly stated and directly related to both institution-wide and unit-specific missions and goals, so that it can become a widely shared and understood ideal. It is also important to remember that more is not necessarily better and that improvement needs to be related, both in principle and in budgetary practices, to the efficient accomplishment of mission, rather than the size or growth of an operation. In doing so, the current incentive system can be turned on its head. Under this new organizational culture, instead of presiding over a territorial unit with constantly growing functions and staff, managing the efficient accomplishment of a precisely defined mission becomes the basis for budgetary and personal reward.[127]

16. *Consolidation of organizations*
(State and Institution Based)

"There are important opportunities to improve program and service delivery and simultaneously to reduce costs through a more streamlined organization structure. In some cases, it may be as straightforward as combining two departments with similar and overlapping functions into a single overall operation with an integrated focus, for example, development and public relations."[128]

In the case of California, consolidation may also provide opportunity for improving efficiency and/or effectiveness at the state and system levels. Legislation has been introduced which proposes to consolidate the California Postsecondary Education Commission, the California Student Aid Commission, and the Commission on Private Postsecondary and Vocational Education.[129] Other possibilities that have been suggested over the years include eliminating or reducing the number of locally governed community college districts, consolidating systemwide governance of the community colleges and the California State University, as well as consolidating governance of all three public higher education systems under one "super-board."[130]

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[126]Ibid.
[127]Ibid.
[128]*Assessing Noninstructional Costs and Productivity*, op. cit., p. 53.
[129]See Assembly Bill 319 (Archie-Hudson), 1993 legislative session.
[130]Master Plan Review Commission. *The Master Plan Revisited*, (Sacramento: The Commission), 1988.

17. *Consolidation of administrative functions.*
(Institution Based)

"(Consolidation of functions) applies the same consolidation principle to a different dimension, that of function rather than structure (Massy, 1992). The benefits are similar. The targets here are similar tasks that are performed at several places. How many people in different departments are involved in publications, or computing, or managing supplies inventories? There are dozens of opportunities in all but the smallest institutions for consolidating similar functions."[131]

18. *Contracting for services*
(Institution Based)

"The 'make versus buy' decision is a fundamental productivity analysis, and one that is being applied to an ever-widening variety of services. The contractual arrangements for campus bookstores, food service operations, and janitorial services are very familiar. But many other possibilities for purchasing services exist that may result in cost savings for colleges and universities: publications, student loan processing, payroll and accounting services, catering, copy services, campus security, construction management, and so on."[132]

19. *Joint Ventures*
(Institution Based)

"Cooperation with other institutions of higher education is another approach that may provide a means of emulating economies of scale. Some institutions such as the Five Colleges Consortium in Massachusetts and the Claremont Colleges have a long tradition of intercollegiate cooperation, others have not yet explored such opportunities. At one level, purchasing consortia, insurance captives, and similar joint ventures, which have existed for a number of years, continue to provide cost-effective access to such services. In addition, a number of other opportunities for shared programs and services exist that might be cost-effective in areas as diverse as career counseling, joint health insurance programs, and student loan collections. Finally, new opportunities are developing, either through joint funding or by purchasing services from a larger neighbor in technically specialized fields such as environmental health and safety, employee assistance programs, and diagnostic testing for students with learning disabilities."[133]

"Fundamentally, the administrative lattice can be scaled back only by redesigning administrative organizations, by redefining the nature of administrative authority and responsibility on the one hand, and, on the other, the content of administrative tasks."[134]

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[131] *Assessing Noninstructional Costs and Productivity*, op. cit., p. 53.
[132] Ibid., p. 55.
[133] Ibid., p. 58.
[134] *The Lattice and the Ratchet*, op. cit., p. 7.

Options Countering "The Academic Ratchet"

20. *Consider Alternatives to the Ph.D. for Some College Instructional Positions* *(Institution Based)*

"We are heading for a faculty shortage and that is very good news because a faculty shortage, even though it will drive up the unit cost of faculty with research degrees, will force us to consider a lot of things that we have discussed today. We face in this country an enormous crisis in science and math education. We are never going to work out of this crisis if we assume that the only way to teach science or math at a university level is with somebody with a Ph.D. There are many things that students ought to learn that do not require didactic exchange between a research faculty member and a learner. Calculus is a good example, language another. The skills needed to teach a foreign language are quite different from the skills needed to get a research degree in French literature." Calculus, writing, and foreign language instruction are all examples of areas where non research faculty or even non-Ph.D. faculty could be considered as a means to focus resources and find new efficiencies.[135]

21. *Consider "Competency-Based" Education in Selected Disciplines* *(Institution Based)*

"Calculus, writing, (and) foreign language should (also) be taught in ways that make the 'course-credit' irrelevant. Competency-based education has never received the attention it deserves in major research universities. If it did, it would change the nature of the curriculum and the kind of instructors we employ."[136]

22. *Establish positive rewards for both instructional quantity and quality, and assess the extent to which each are being accomplished* *(State and Institution Based)*

Considerable time was spent in Section 6 describing the almost total absence of meaningful reward systems for teaching in research universities, as well as the pervasive effect this has throughout higher education. William Arrowsmith summarized both the problem and the solution quite colorfully in *The Future of Teaching*: "At present the universities are as uncongenial to teaching as the Mojave Desert to a clutch of Druid priests. If you want to restore a Druid priesthood you cannot do it by offering prizes for Druid-of-the-Year. If you want Druids, you must grow forests."[137]

In attempting to grow these metaphorical forests, "American colleges and universities are

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[135] *The Dynamics of Academic Productivity*, op. cit., p. 34.
[136] Ibid., p. 34.
[137] Arrowsmith, William. "The Future of Teaching," in *Improving College Teaching*, Washington, D.C.: American Council on Education, 1967, pp. 58-59.

coming to better understand that higher education is fundamentally a service industry in need of a better understanding of the educational products it is being asked to deliver....The literature on management has taught that three elements are key to the success of a service enterprise: (1) know the customer; (2) commit the organization to specific service goals; and (3) establish strong feedback loops that continuously measure the providers' success in achieving these goals."[138]

22A. Make teaching a central subject of discourse, with institutional leaders taking primary responsibility for the quality of the discussion. (Institution Based)

22B. Make teaching a subject of intellectual curiosity and creativity, providing faculty with a forum for demonstrating the importance of teaching to their disciplines and to one another. (Institution Based)

22C. Create programs and/or incentives to encourage collaborative teaching within and among departments to stress the importance of context and relation in the acts of learning, thinking, and knowing. (Institution Based)

22D. Make effective teaching a criterion weighted equally with research in the hiring of faculty, as well as in tenure and promotion decisions. (Institution Based)

"Granting tenure to the superior teacher who chooses to focus on teaching rather than research will go a long way toward changing how faculties measure their worth."[139]

22E. Make direct investments in teaching and curricular development that parallels the institution's direct investments in research and publication. (State and Institution Based)

22F. Restructure graduate education to make teaching, the effective packaging of concepts for teaching, and the development of instructional materials central components of degree attainment. (Institution Based)

The need to greatly increase the extent to which graduate students are "taught to teach" was pointed out in a 1985 report prepared by the Association of American Colleges: "(T)he teaching assistantship is now a device for exploiting graduate students in order to relieve senior faculty from teaching undergraduates. The tradition in higher education is to award the degree and then turn the students loose to become teachers without training in teaching or, equally as ridiculous, to send the students off without (graduate) degrees, with unfinished research and incomplete dissertations hanging over their heads while they wrestle with the responsibilities of learning how to teach. Only in higher education is it generally assumed that teachers need no preparation, no supervision, no introduction to

[138]Pew Charitable Trusts. "Learning Slope," *Policy Perspectives*, November 1991, p. 1.
[139]Pew Charitable Trusts. "Back to Business," *Policy Perspectives*, September 1990, p. 5.

teaching."[140] The AAC report was especially pointed in its remarks about the quality of training for most teaching assistants when it said: "As an initiation rite, the teaching assistantship is almost invariably a disaster: It says to the initiate that teaching is so unimportant, we are willing to let you do it."[141]

23. *Make clear who is in charge.*
(Institution Based)

23A. Strengthen the hands of department chairs.

23B. Give deans the capacity to make personnel changes more easily and with less political consequence.

Summary

The options outlined in this section are not presented with the intent that they be considered exhaustive, or even that the individual options necessarily represent good ideas. Instead, it is intended to provide a fair representation of the kinds of reform initiatives that are being considered, and often implemented, at colleges and universities across the country. While many specific approaches are offered, the national literature revealed several common threads that connect them all:

- *A renewed focus on mission and targeted areas of excellence;*
- *An avoidance of micromanagement in favor of developing incentive and reward systems which encourage efficiency, quality, and accountability; and*
- *A recognition that a high-quality undergraduate instructional program must lie at the heart of every college and university.*

The following quotations, also taken from this body of literature, convey quite accurately a sense of the general direction that the higher education policy debate is taking nationally:

> "What is clear is that the challenge facing higher education is no different from that facing most American enterprises. The nation's colleges and universities need to become more competitive -- leaner, perhaps meaner, certainly more focused, with simpler organizations and a greater ability to make collective investments in targeted programs and projects."[142]

> "The calls urging colleges and universities to improve their productivity are coming thick and fast (*Economist* 1992; AGB 1992; Bok 1992). Many institution leaders now agree on the need for restructuring: the questions are "what" and "how?" One useful formulation holds that, *to restructure, an institution should realign itself with its missions and markets, reengineer administrative and support services, regain the ability to deploy the*

[140] Association of American Colleges. *Integrity in the College Curriculum: A Report to the Academic Community*, (Washington, D.C.: Association of American Colleges), 1985.
[141] Ibid., p. 41.
[142] *The Lattice and the Ratchet*, op. cit., p. 5.

faculty resource, and reform its resource allocation and information systems."[143] (Emphasis added)

"A final comment. We are in the midst of a major discussion in American higher education about restructuring K-12 education. I think the better word is redesign. There is no reason we should not also be prepared to talk about a restructuring or redesign of higher education. For example, why are we so locked into the 'course' as a basic building block? What we should be asking is this: how do you put together learning experiences? If we change the building block structure and break the mold on the curriculum, we would begin to get at the (academic) ratchet effect. And if you get at the ratchet effect, then you also get at the underlying problem of cost-price spiral. This may be the moment in our history when we have to find the internal fortitude to ask basic questions about how this enterprise is put together, and do it in such a way that over a period of years we can begin to change the enterprise itself."[144]

[143] *Resource Allocation Reform in Higher Education*, op. cit., p. 1.
[144] *The Dynamics of Academic Productivity*, op. cit., pp. 30-31.

Section 8. A Framework for Institutional Change and Promising Examples in Other States

INSTITUTIONS have found that there is no quick-hit strategy that will transform them overnight into fundamentally more efficient or effective organizations. There are no large centers of profligate waste and mismanagement to identify and correct. If it were only that simple. Instead, as the previous sections show, the current problems facing higher education exist largely at the margin, the result of an incremental shift over time in relative emphasis and focus. While the process of refocusing institutional priorities and resources must be started and consistently encouraged from the top, it takes time and is difficult, if not impossible, to mandate. Instead, the process of meaningful change ultimately depends on the cumulative effect of individual efforts undertaken by faculty, administrators, and support staff working at the local level.

State and higher education leaders have an important role to play in encouraging, prodding, and even goading institutions into being as effective and efficient as they can be, but there are limits to what can be accomplished "from the top." Colleges and universities across the country are discovering that to be truly successful in these efforts, real change can only be brought about as the result of a widespread institutional commitment to do so. Thus, while it is important to identify what policy makers might do to encourage this process (see Section 7), it is equally important to state clearly what cannot be done, what must of necessity be left to campus and departmental processes to accomplish. Consequently, this section does not focus on quantifying the likely effects of specific state-level or institutional "options," so much as it highlights the pivotal role that institution-based mechanisms must play in encouraging a commitment to *local* change and improvement.

Many of the options outlined in Section 7 are being implemented by colleges and universities right now in other states. However, individual options are not being pursued in isolation; they are being implemented in the context of broad institutional strategies that are designed to simultaneously improve institutional efficiency and effectiveness. While there are any number of approaches that aim to bring about widespread organizational change of this kind, one in particular is drawing attention from higher education leaders nationally. Specifically, a review of the current national literature shows that a growing number of institutions are attempting to reshape their operations at all levels through application of the basic principles of Total Quality Management (TQM). In order to understand the context underlying these strategies, and the manner in which they seek to encourage the pursuit of improved efficiency and quality at the local level, this section provides a brief summary of the basic principles of TQM and how they relate to the academic setting. Several examples of specific institutional initiatives are also provided.[145]

[145]This description of TQM and its relationship to higher education is synthesized in part from an article by Mary Ann Heverly and Robert Cornesky entitled "Total Quality Management: Increasing Productivity and Decreasing Costs," *New Directions for Institutional Research*, Fall 1992, pp. 103-114.

Total Quality Management

Definition of TQM

While it is probably not useful here to describe in great detail the Total Quality Management approach, in general terms it is based on the premise that work can be conducted more efficiently and effectively without requiring additional resources. TQM begins with data gathering on customer requirements (e.g., students, society at large, and internal and external clients of services), operational measures of those requirements, and data gathering on these measures to determine how well the requirements are being met. That is, how effective the processes are in delivering what the customers need. Efficiency is improved by gathering data on the processes in order to bring to light areas of rework or complexity. Removal of rework and complexity frees resources within a campus that can then be directed toward the real mission of the institution.

TQM offers an institutional culture that drives everyone in the organization to use data as a means to promote and achieve ongoing improvements in quality and efficiency. In addition, it provides specific methods and tools for accomplishing those goals. The potential impact on an institution implementing TQM can be profound and far-reaching, eventually transforming it into what Senge (1990)[146] calls a "learning organization."

Applying TQM to Higher Education

During the 1980s, many American businesses turned to TQM as a means of retaining or regaining a competitive position in the marketplace. During the last half decade, businesses in the service sector, nonprofit organizations, and government agencies have adopted TQM to help them run more efficiently in a time of diminishing resources. Although education has lagged behind in exploring TQM, a groundswell of interest is now emerging as executives and administrators seek new and better ways to conduct their educational operations.

To give an example of the very local level at which change occurs when using this approach, Coate (1990)[147] has reported on productivity gains resulting from TQM at Oregon State University, where a team from physical plant studied the process of conducting a remodeling project, implemented changes based on the data, and reduced the average cycle time by 23 percent. Another team studied a problem with unanswered telephone calls to the office handling staff benefits. Study of the process led to improvements that boosted answered calls by 40 percent and reduced staff time spent on these calls from 35 percent to 1 percent. The improvements reaped the additional benefit of reduced complaints from internal customers (employees).

The importance of the process focus in TQM is illustrated by an example from a team studying the photocopying system at Delaware County Community College. The volume of copying had been a concern and it dropped by over 400,000 copies in the first nine months of 1989-90. However, if this were the only effect of the team's work, one might question whether the results

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[146]Senge, P.M.. *The Fifth Discipline: The Art and Practice of the Learning Organization*, (New York: Doubleday), 1990.

[147]Coate, L.E.. *An Analysis of Oregon State University's Total Quality Management Pilot Program*, (Corvallis, OR: Oregon State University), 1990.

justified the expenditure of resources to attain them. The most striking result was an average daily reduction of 11.5 hours in the time secretaries were spending on photocopying.

In another example, TQM was implemented in the School of Science, Management, and Technologies at Edinboro University of Pennsylvania. In initial surveys during the implementation period, academic department chairs reported that their major problem was an unresponsive and adversarial administration (the faculty is unionized on this campus). After two years of refining and instituting the long-range plan and TQM, the department chairs no longer perceived "we versus them" (union versus administration) to be a problem. The problem, as perceived by the chairs, was not with the people but with the processes and systems. Although solid academic programs were initially perceived to be a strength, *in two years every program had been substantially or completely revised.*

As a result of the new openness and enthusiasm, several faculty members began to experiment with different teaching methods: teleclasses, video courses, team projects, case studies, inquiry methods, and discussion. The experiments were presented at an academic festival and provided ideas for future research. Faculty became interested and attended seminars on teaching-learning styles and syllabus preparation.

Although institution-wide trend data on expenditures are still scarce because implementation has been recent on many campuses, these specific examples are typical of those found in the literature. Also, the nature of the TQM approach requires a long-term view because its implementation takes time and effort. It is not a quick-fix solution, and a significant part of the return on investment emerges only after a careful and locally based analysis of an institution's functions. Nevertheless, the literature is replete with anecdotal examples of the kind previously described.

Implications of TQM: Ongoing Training and Education

Implementation of TQM requires that institutional leaders make a firm and enduring commitment to changing organizational culture, as well as to educating staff in the specific methods and tools of Total Quality Management. Opportunities and incentives for putting the method to actual use must be provided. The effort demands a substantial investment in resources, but if the institution maintains its commitment to implementing TQM, evidence shows that the time and effort eventually will be rewarded by a continuing stream of improvement projects, both large and small, that over time will continue to improve both institutional efficiency and effectiveness.

In one study of the implementation of TQM in educational settings, the results varied according to the degree to which TQM had actually been adopted.[148] If employees had assimilated the concepts and were encouraged by managers to use the tools, the return on investment was $33 per $1 invested. If either the process focus or the quality tools was adopted by employees and supported by managers, the break-even point was reached. If there were no follow-up efforts to ensure on-the-job applications, the return on investment was negative. The lesson drawn was that top management had to drive the transformation, not merely give it lip service.

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[148]Wiggenhorn, W.. "Motorola U.: When Training Becomes an Education," *Harvard Business Review*, 1990, 68, pp. 71-83.

Summary

TQM is not the only approach available to institutions in the effort to systematically improve efficiency and quality at the local level, but its application is becoming increasingly prevalent as colleges and universities grapple with the challenge of accomplishing more with fewer resources. One strength of TQM, as it relates to higher education, is its reliance on broad incentives coupled with local decision-making authority. The keys are to set realistic outcome goals; to construct rational incentive, reward, and accountability systems; and to provide local units with the tools and authority they need to make decisions consistent with them.

(The preceding discussion of Total Quality Management is based in large part on "Total Quality Management: Increasing Productivity and Decreasing Costs," by Mary Ann Heverly and Robert A. Cornesky, New Directions for Institutional Research, Fall 1992, pp. 103-114.)

The University of Michigan: A Case Study

In 1990, recognizing that it was facing substantial fiscal challenges in the years ahead, the University of Michigan began a lengthy process of open and honest introspection, the goal being to engage the entire campus community in a frank conversation about the future of the institution. Of critical importance from the beginning was the willingness of institutional leaders to address the need for fundamental long-term change. Like many other institutions, one of the products of this process was a decision by the University of Michigan that it begin implementing its own version of TQM. However, far more important to California than the specific recommendations the process generated, is the manner in which leaders created an environment in which the campus community not only accepted but embraced the need to set priorities and make difficult choices.

The University of Michigan began its "process of renewal" by forming a Task Force on College Costs and conducting three major analyses which "intended to provide a factual basis for the discussion of the institution's position, problems, and remedies." They included:

Cost Analysis

"The first analysis was a major review of the University of Michigan's costs during the 1980s. This study was intended to be the major data source for the work of the task force and was guided by the most prevalent criticisms aimed at higher education in general (e.g., the Massy/Zemsky framework) ...

Staffing Analysis

"The second major analysis looked at trends in staffing patterns. The staffing analysis sought to increase understanding about the amount and sources of growth that had occurred by looking at funding source, job families, and organizational placement ...

Revenue Analysis

"The third analysis was a revenue crystal ball that focused on the revenue streams of the general fund. It presented the history of each revenue source over the past decade, explaining how increases had been achieved, and then projected each revenue stream to 1995 based on a set of

realistic assumptions. The revenue analysis was an important tool for promoting recognition of the constrained circumstances that (UM) faces...in the years ahead."[149]

Task Force Report

The resulting task force report, *Enhancing Quality in an Era of Resource Constraints*, was released in June 1990. "The task force viewed the report as the first step in a longer process. It was not a perfect report with a well-formulated plan, but rather a conceptual 'think-piece' for change. The intent was to lay issues and recommendations before the university community in order to begin the process of change. The task force deliberately chose not to make specific recommendations about budget priorities or reductions but tried instead to provide a framework for change that, if followed, would lead to significant improvements in the university's ability to achieve its objectives over the coming years."[150]

The University of Michigan and TQM

The University of Michigan has chosen to address its challenges, in part, by applying the principles of Total Quality Management. After a period of careful internal scrutiny and analysis, this institution's broad recommendations were grouped into three categories: (1) Cultural Change, (2) A Quality Approach, and (3) Budgeting and Planning Systems.[151] Many of the specific recommendations resulting from this process were listed and discussed in more detail in Section 6, however they are reproduced here in summary form to show how, for the University of Michigan, they have been incorporated into broad, yet coherent, cost-containment and quality improvement strategies.

Cultural Change

- More focus on Institutional and Local Missions
- Less control and oversight, more accountability
- Move decision making down in the organization
- More risk taking, less consensus management
- Realize the full potential of people in the organization

A Quality Approach

- Customer orientation
- Take work out of the system
- Statement of mission
- Innovation by substitution
- Have continual improvement as a goal

Budgeting and Planning Systems

- Recognize full costs
- Tie unit budgets to activities in a direct way
- Expand the time frame of budgeting and planning
- Budget revenues first

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[149] *The University of Michigan Initiatives*, op. cit.
[150] Ibid.
[151] Ibid.

While the process under way at the University of Michigan has not been in place long enough to demonstrate its overall effectiveness, or to quantify the long-term potential for improvement in quality and efficiency, institutional leaders are convinced that they will succeed. Marilyn Knepp, Director of the Office of Academic Planning at the University of Michigan recently expressed that confidence: "We believe that the 1990s will be years of change for us, as significant as that experienced in the 1980s. Our institutional goal is to meet and shape the challenges that lie ahead, with the overall excellence of the university as the primary objective. Anticipation of hard times to come has not lessened our expectations for the university, but we recognize that those expectations will be harder to realize. The recommendations of the task force provided the university with a new conceptual framework for identifying solutions to the problems of the 1990s. The University of Michigan has made progress in many areas mentioned in the report, but the process of change is ongoing and lengthy...Nevertheless, the leaders of the university are not daunted by the size of the task that faces them."

For readers interested in exploring additional case studies of institutions that are pursuing their own comprehensive cost-containment and quality enhancement initiatives, the following works are recommended :

University of Michigan

Knepp, Marilyn. "Renewal in the 1990s: The University of Michigan Initiatives," *New Directions for Institutional Research*, Fall 1992.

Oregon State University

Coate, L.E. *An Analysis of Oregon State University's Total Quality Management Pilot Program*, (Corvallis: Oregon State University), 1990.

Syracuse University

Mooney, C.J. "Syracuse Seeks a Balance Between Teaching and Research," *Chronicle of Higher Education*, March 25, 1992, pp. A1, A14-A16.

University of Delaware

Middaugh, Michael F., and David E. Hollowell. "Examining Academic and Administrative Productivity Measures," *New Directions for Institutional Research*, Fall 1992.

Franklin and Marshall College

Hoffman, Richard B. "Repositioning for the Future: Franklin and Marshall College," *New Directions for Institutional Research*, Fall 1992.

Bryn Mawr College

Pew Higher Education Research Program. "Bryn Mawr College: Achieving Financial Equilibrium," *Policy Perspectives*, 1991, 3 (2), 14B-15B.

Fox Valley Technical College
Spanbauer, S.J. *Measuring and Costing Quality in Education*, (Appleton, Wis.: Fox Valley Technical College Foundation), 1989.

Motorola University
Wiggenhorn, W. "Motorola U.: When Training Becomes an Education," *Harvard Business Review*, 1990, 68.

Section 9. Conclusion

THERE is no silver bullet or quick fix that will improve institutional efficiency and quality, as the preceding pages clearly show. The process is long-term, laborious, and has as much to do with changing organizational culture as it has to do with spreadsheets and ledger books. Indeed, the implications for higher education of both resource reallocation and cost-containment go far beyond simply finding a way to balance the books during periods of state budget deficits.

The State role for encouraging efficiency and quality improvement in higher education is substantial. The national literature indicates that for state policy makers to be a productive influence in this process, it is especially important that they establish reward, incentive, and accountability systems that recognize broad state goals, while avoiding micromanagement (which drives up costs at little demonstrable benefit). For these efforts to be successful, however, the literature is just as clear that institutions must also embrace the challenge themselves.

The common feature of successful initiatives elsewhere in the country seems to be that campuses, at all organizational levels, have adopted the notion that it is possible to significantly improve institutional focus and performance without spending more money. By making this quantum leap in organizational outlook, colleges and universities are discovering that in many areas they can significantly reduce costs while improving quality and productivity.

On the other hand, achieving basic changes in institutional culture can also be a difficult and even painful process. Some fear (incorrectly) that they are admitting to past mismanagement and waste if they acknowledge that they can now contain costs without sacrificing quality. A joke overheard at the 1985 Cal-Stanford "Big Game" illustrates the point: A student partisan asks his companion: "What do Stanford and the Soviet Union have in common?" The companion has no idea, so the student answers: "Neither can improve, since they both claim they're already perfect."[152]

There is much truth in that joke as it relates to the former USSR (although it no longer applies), and there is some truth in it today with regard to elite institutions of all kinds. When one aspires to be (and maybe even is) the best in the world, there is a natural reluctance to display vulnerability by conceding that there is still significant room for improvement. This problem could be particularly pronounced in California, where for decades all three public systems have legitimately prided themselves as being among the very best in the world at what they do. Still, being the best is not the same as being perfect, as TQM studies invariably show.

In recent years, institutions as prestigious as Stanford and the University of Michigan have taken courageous first steps toward reshaping their operations to meet the challenges of the future. Remarkably, the leaders of these outstanding universities are finding that sustained cost-containment efforts and a firm commitment to refocus their institutions are enabling them to actually improve institutional performance. In light of the monumental challenges facing

[152]Stanford students tell the same joke about Cal.

California higher education, perhaps the time has also come to consider similar strategies here.

At the same time, this conversation must stay grounded in the understanding that certain aspects of California's experience are unique. The need for enrollment growth will require that higher education receive significantly more, rather than fewer, resources in coming years. This means that instead of generating cash savings for the state, successful cost-containment will produce opportunities for the internal reallocation of resources in an attempt to maximize efficiency and hence the number of students who can be accommodated. Over the next twelve years 800,000 more eligible students will seek college admission, ready, willing, and able to succeed. As CPEC has stated repeatedly, the overriding priority is to preserve quality while accommodating as many of these students as possible. The real challenge, as the University of Michigan, Stanford, and others have discovered, is to define quality in terms that are more meaningful than just the status quo, plus funding for inflation, cost-of-living-allowances, merit salary adjustments, and enrollment growth.

In higher education's defense, "draconian" is not too strong a word to describe the effect that the last three years have had on colleges and universities. The budget process has been unpredictable and non stop, allowing no time for careful planning for the future. Little wonder institutions feel under siege, given the speed and depth of recent cuts. Nevertheless, this is also one of those rare occasions when it is possible to ask fundamental questions about how and why we carry out the business of higher education in the manner we do. California higher education has achieved greatness on an unprecedented scale, but at this critical juncture institutions cannot afford to cling blindly to past arrangements, evading a realistic appraisal of what the future now holds for them. The fact is, the prospect that higher education faces a decade of mounting enrollment pressure and a declining share of state resources leaves little choice. The real options are evident: California's public colleges and universities can continue to lurch from year to year, taking cuts on an ad hoc basis as they bemoan the destruction of a once great system; or, they can begin the process of setting priorities and planning rationally on how to live, and maybe even flourish, on a "revenue diet."

It may seem difficult to believe from our current vantage point, but reform efforts under way in other states tell us that if the crush of the moment can be set aside just long enough to allow for some careful and systematic planning for the future, then in the end, with commitment, determination, and patience, California's public colleges and universities may even emerge from this crisis all the better for having been through it. Recent comments by some higher education leaders in California are encouraging, as they articulate both an understanding that this is a long-term challenge, as well as a willingness to consider major organizational changes as a response. The views and priorities of these leaders will be critical, since the future of California's next generation of potential college students will almost certainly depend on which path they choose to follow. One thing is clear, and as the title of this Occasional Paper implies, business-as-usual will not suffice.

Bibliography

Alpert, Daniel. "Performance and Paralysis: The Organization Context of the American Research University," *The Journal of Higher Education*, May/June 1985, pp. 241-281.

Arrowsmith, William. "The Future of Teaching," in *Improving College Teaching*, (Washington, D.C.: American Council on Education), 1967.

Ashcroft, John. National Governor's Association; Washington, D.C., 1986.

Assembly Higher Education Committee. "Discussion Paper #1: Mission and Function," *Master Plan for Higher Education in Focus*, 1993.

____. "Discussion Paper #3: Faculty, Instruction, and Research," *Master Plan for Higher Education in Focus*. 1993.

____. "Discussion Paper #4: Governance, Administration, and Coordination" *Master Plan for Higher Education in Focus*. 1993.

Association of American Colleges. *Integrity in the College Curriculum: A Report to the Academic Community*, (Washington, D.C.: Association of American Colleges), 1985.

Astin, Alexander W. "Why Not Try Some New Ways of Measuring Quality," *Education Record*, Spring 1982, pp. 10-15.

Avis, Harry. "The Satisfying Switch from Research to Teaching," *The Chronicle of Higher Education*, June 18, 1986.

Bok, Derek. *Higher Learning*, (Cambridge, MA: Harvard University Press), 1986.

Bowen, Howard R.. *The Costs of Higher Education: How Much do Colleges and Universities Spend and How Much Should they Spend?* (San Francisco: Jossey-Bass), 1980.

Bracey, Gerald W.. "The Time Has Come to Abolish Research Journals: Too Many Are Writing Too Much About Too Little," *The Chronicle of Higher Education*, March 25, 1987.

Brinkman, Paul T. "Factors Affecting Instructional Costs at Major Research Universities," *The Journal of Higher Education*, May/June 1981, pp. 265-279.

____. "Factors That Influence Costs in Education," *New Directions for Institutional Research*, Fall 1992.

____. "Instructional Costs per Student Credit Hour: Differences by Level of Instruction," *Journal of Education Finance*, Summer 1989, pp. 34-52.

California Postsecondary Education Commission. *California's Joint Doctoral Programs*, (Sacramento: The Commission), 1992.

____. *Expenditures for University Instruction: A Report to the Governor and Legislature in Response to Supplemental Report Language to the 1991 Budget Act*, (Sacramento: The Commission), 1993.

____. *Faculty Salaries in California Postsecondary Education 1980-81*, (Sacramento: The Commission), 1981.

____. *Faculty Salaries in California Postsecondary Education 1991-92*, (Sacramento: The Commission), 1993.

____. *Fiscal Profiles 1990*, (Sacramento: The Commission), 1991.

____. *Higher Education at the Crossroads: Planning for the 21st Century*, (Sacramento: The Commission), 1990.

____. *Planning for a New Faculty: Issues for the 21st Century*, (Sacramento: The Commission), September 1990.

____. *Prospects and Methods for Financing California Higher Education*. (Sacramento: The Commission), March 1992.

____. *Shortening Time to the Doctoral Degree*, (Sacramento: The Commission), 1991.

____. *Technical Background Papers to Higher Education at the Crossroads*. (Sacramento: The Commission), 1990.

California State University. "Implementation Plan for the Recommendations on Graduate Education," *CSU Trustees Agenda*, September 10-11, 1991.

Callan, Patrick M., *The California Higher Education Policy Vacuum: The Example of Student Fees*, (San Jose: The California Higher Education Policy Center), April 1993.

____. "Reflections on Cost Control in the Public and Private Sectors;" in *Policy Perspectives*, February 1991.

Caplow, Theodore and McGee, Reece. *The Academic Marketplace*, (New York: Basic Books), 1958.

Coate, L.E.. *An Analysis of Oregon State University's Total Quality Management Pilot Program*, (Corvallis, OR: Oregon State University), 1990.

Commission on State Finance. *Long-Range General Fund and Expenditure Forecast: 1990-2000*, (Sacramento: COSF), 1991.

Dallek, Robert. "UC Can Learn to Do More With Less," *Los Angeles Times*, March 10, 1993.

Dunn, John A., "Retrench or Else: Public and Private Institutional Responses," *New Directions for Institutional Research*, Fall 1992.

Dugger, Ronnie. *Our Invaded Universities: Form, Reform, and New Starts*, (New York: W.W. Norton), 1974.

Education Roundtable, The. *The Golden State at Risk: A Joint Statement on the Crisis Facing California Higher Education*, (Sacramento: The Commission) 1993.

Feigenbaum, Armand V. *Total Quality Control*, (New York: McGraw-Hill), 1983.

Finn, Chester. "Higher Education on Trial: An Indictment," *Current*, October 1984, pp. 14-24.

Fuller, Carol H.. "Ph.D. Recipients: Where Did They Go to College?" *Change Magazine*, November-December 1986.

Gilmore, Jeffrey L., "Evaluating Academic Productivity and Quality," *New Directions for Institutional Research*, Fall 1992.

Goodman, Henry H. "The Concept of Output in Education," *The Educational Forum*, vol. 44., no. 1, November 1979, pp. 71-82.

Grassmuck, Karen. "Colleges Feel Effects of Economic Downturn in Student Aid, Endowments, Job Hunting," *The Chronicle of Higher Education, 37(14), A1, A27, (1990).*

Hannaway, Jane. *Managers Managing: The Working of an Administrative System*, 1989.

Hauptman, Arthur M. *Higher Education Finance Issues in the Early 1990s*, Consortium for Policy Research in Education (CPRE), Center for Research in Education Finance, June 1992.

Heverly, Mary Ann and Robert Cornesky. "Total Quality Management: Increasing Productivity and Decreasing Costs," *New Directions for Institutional Research*, Fall 1992.

Hoffman, Richard B. "Repositioning for the Future: Franklin and Marshall College," *New Directions for Institutional Research*, Fall 1992.

Iosue, Robert V. "How Colleges Can Cut Costs," *The Wall Street Journal*, January 27, 1987.

James, E. "Decision Processes and Priorities in Higher Education," in S.A. Hoenack and E.L. Collins (eds.), *The Economics of American Universities*, (Albany NY: State University of New York Press), 1990.

____. "Product Mix and Cost Disaggregation: A Reinterpretation of the Economics of Higher Education," *Journal of Human Resources*, 1978, pp. 157-186.

Knepp, Marilyn G.. "Renewal in the 1990s: The University of Michigan Initiatives," *New Directions for Institutional Research*, Fall 1992.

Layzell, Daniel T., and Jan W. Lyddon. *Budgeting for Higher Education at the State Level: Enigma, Paradox, and Ritual*, ASHE-ERIC Higher Education Report No. 4, (Washington, D.C.: George Washginton University), 1990.

Lee, Calvin B.T. (ed). *Improving College Teaching*, (Washington D.C.: American Council on Education), 1967.

Levin, H.M.. "Raising Productivity in Higher Education," Prepared for the Higher Education Research Program of the University of Pennsylvania and the Pew Memorial Trust, 1991.

March, J.G.. "Footnotes to Organizational Change," *Administrative Science Quarterly*, vol. 26, 1981.

Massy, William and Andrea Wilger. "Productivity in Postsecondary Education: A New Approach," *Education Evaluation and Policy Analysis*, Winter 1992.

Massy, William F.. "Resource Allocation Reform in Higher Education," *Paper presented at the CPRE/USC/Stanford Conference on Decentralized Management in Higher Education;* November, 1992.

Master Plan Review Commission. *The Master Plan Revisited*, (Sacramento: The Commission), 1988.

Maydew, Mary Jo, "Assessing Noninstructional Costs and Productivity," *New Directions for Institutional Research*, Fall 1992.

Middaugh, Michael F. and Hollowell, David E.. "Examining Academic and Administrative Productivity Measures," *New Directions for Institutional Research*, Fall 1992.

Mingle, Jim (ed.). *The Dynamics of Academic Productivity*, (Denver: State Higher Education Executive Officers Association), March 1990.

Mooney, C.J. "Syracuse Seeks a Balance Between Teaching and Research," *Chronicle of Higher Education*, March 25, 1992.

Newman, Frank. *Teaching Undergraduates*, ed. Bruce Kimball, 1988.

O'Keefe, Michael. "Where Does the Money Really Go?: Case Studies of Six Institutions," *Change*, November/December 1987.

Organisation for Economic Cooperation and Development. *Reviews of National Policies for Education: Higher Education in California*, (Paris, France: OECD), 1990.

Pew Higher Education Research Program. "An End to Sanctuary," *Policy Perspectives*, September 1991.

____. "Bryn Mawr College: Achieving Financial Equilibrium," *Policy Perspectives*, 1991.

____. "Learning Slope," *Policy Perspectives*, November 1991.

____. "Profiles," *Policy Perspectives*, September 1989.

____. "Seeing Straight Through a Muddle," *Policy Perspectives*, September 1988.

____. "The Other Side of the Mountain," *Policy Perspectives*, February 1991.

Reagan, Gerald M. "The Concept of Academic Productivity," *The Educational Forum*, vol. 50, no. 1, Fall 1985.

Rees, Albert. "The Salaries of Ph.D.'s in Academe and Elsewhere," *Journal of Economic Perspectives*, vol. 7, no. 1, pp. 151-158.

Sacramento Bee, March 13, 1993, p. B-1.

Schrag, Peter. "Priorities of Retrenchment," *Sacramento Bee*, February 24, 1993.

Schuttenberg, Ernest M., Lewis Patterson, and Rosemary Sutton. "Self-Perceptions of Productivity of Education Faculty: Past, Present and Future," *Education*, Winter 1986, pp. 161-172.

Senge, P.M.. *The Fifth Discipline: The Art and Practice of the Learning Organization*, (New York: Doubleday), 1990.

Slaughter, John B. "Rebuild Master Plan – for Students," *Los Angeles Times*, March 22, 1993.

Spanbauer, S.J. *Measuring and Costing Quality in Education*, (Appleton, Wis.: Fox Valley Technical College Foundation), 1989.

Steinbruner, J.D. *The Cybernetic Theory of Decision*. (Princeton, NJ: Princeton University Press), 1974.

Sykes, Charles J.. *ProfScam: Professors and the Demise of Higher Education*, (Washington, DC: Regnery Gateway), 1988.

Tuckman, Howard, Susan Coyle and Yupin Bae. *On Time to the Doctorate: A Study of the Increased Time to Complete Doctorates in Science and Engineering*, (Washington, D:C.: National Academy Press), 1990.

U.S. Department of Education. *Education Statistics*, 1992.

University of California. *Testimony Presented to the Assembly Higher Education Committee*, October 20, 1992.

University of Michigan. *"Enhancing Quality in an Era of Resource Constraints,"* The University of Michigan Task Force on the Costs of Higher Education, June 1990.

Wiggenhorn, W.. "Motorola U.: When Training Becomes an Education," *Harvard Business Review*, 1990, vol. 68.

Zemsky, Robert and William F. Massy. "Cost Containment: Committing to a New Economic Reality," *Change*, November/December 1990, pp. 16-22.