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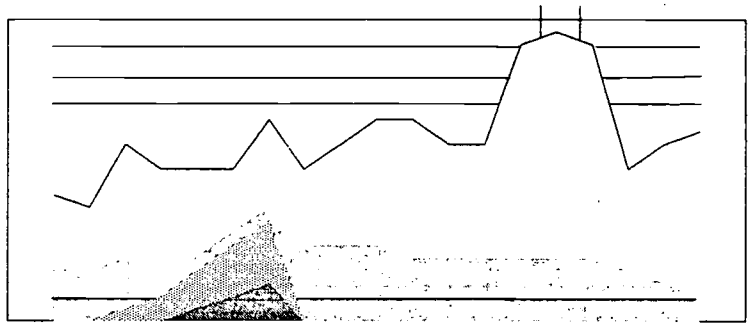
ABSTRACT

Comprehensive enrollment management (CEM) ensures that academic, student, and fiscal planning are done in concert in order to acknowledge the turbulence confronting an institution. A four-phase model of CEM has been developed that can be replicated at any college or university. In phase 1 of the model, the past 25 years of institutional enrollment patterns are "explained" through an examination of major tuition, fee, and financial aid policies; service area demographics and economics; and college budget, staffing, and curriculum. In phase 2, the model is modified to forecast future enrollments, while phase 3 involves connecting the forecast to a simulation model to determine possible results from college policies related to marketing, outreach, admissions; registration, and other efforts affecting first-time enrollments. Phase 4 then integrates enrollment management into a model of the entire institution to determine the effect of the enrollment management simulations on the institution's curriculum and budget. The following overheads from a demonstration of the model are attached: (1) a session outline; (2) the benefits of using models; (3) useful factors and methods for "explaining" enrollments; (4) enrollment forecasts through 2005 for Arizona's Maricopa County Community College District; (5) sample input and output measures for managing and adjusting enrollments; (6) and a sample database, planning variables, and simulations and scenarios for a fictitious college. (HAA)

SCUP 32

COMPREHENSIVE ENROLLMENT MANAGEMENT



CHICAGO

Paper presented at the Annual Conference of the Society for College and University Planning (Chicago, IL, July 12-16, 1997)

SCUP 32

COMPREHENSIVE ENROLLMENT MANAGEMENT

Session by

Chuck McIntyre
Director of Research,
California Community Colleges
and
Consultant on Computer–Aided Planning (CAP)

at

Sheraton Chicago Hotel & Towers Cityfront Center
10:30 am, Monday July 14, 1997

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Comprehensive enrollment management ensures that academic, student, and fiscal planning are done in concert and so as to acknowledge the turbulance confronting the institution. The advantage of this approach is that it allows policymakers to pose alternative future scenarios, their likelyhood or probable range of values, and - in conjunction with forecasting and simulation models - identify the long term consequences of decisions. Some actions may show short-term benefits, but long-term detriments for the college. Consequently, this kind of work should reduce the number of decisions that must be reversed after one or more years as conditions change.

Results

Much prior work of this kind has relied on enrollment demand models; see, for example, Brinkman and Leslie (1987) and McIntyre (1995). But, Brinkman and McIntyre (forthcoming 1997) argue that enrollment is jointly determined by both demand and supply; that is, by factors that are outside the institution's control, together with factors (policies and practices) largely within the institution's control. These latter, controllable or manageable, factors have been explored under the rubric of "enrollment management," a term that seems to have been coined by Hossler and Kemerer (1986). Since that time, different tools for this work have been examined and Dolence (1993) has advocated "strategic enrollment management" to effectively integrate these tools.

Our work begins by "explaining" the past 25 years of enrollment patterns in a large, multi-campus metropolitan college. Besides the major policies of tuition, fees and financial aid at the college and its nearest competitors, independent variables in the model include those about demand: service area demographics and economics, together with those about supply: college budget, staffing and curriculum. This model, the results of which are highly significant and robust, is then modified - in phase 2 of our work - to forecast future enrollments. To construct needed future values for key variables, an expert panel identifies an effective consensus value or range of values for each variable.

In Phase 3, the forecasting model is connected to a simulation model to look at possible results from what might be termed as the "micro" or at least "somewhat less than macro" policies for: marketing, outreach, admissions, registration; i.e., efforts that will impact first-time enrollments. In addition, the simulation facilitates analysis of course completions and inter-term persistence across academic levels. Increases in these latter variables, other things being equal (which they are not, but we take care of that problem simultaneously in other parts of our modeling), produce significant (a) increases in the level and (b) changes in the composition of the institution's enrollment. The cross-impact of various enrollment management simulations on the institution's curriculum and budget are then viewed once we complete - in Phase 4 - the integration of enrollment management within a simulation model of the entire institution. This model proves especially useful when used in an iterative fashion by an Enrollment Management Task Force to achieve certain institutional goals, and does, at times, produce results that are counter-intuitive.

Application

This work can be effectively replicated at any college or university with minimal modifications that may be needed to account for the unique needs of policymakers, different categories of students, or less-than-adequate data. It can be especially useful for private institutions and public liberal arts colleges that rely heavily on tuition and fees as a revenue source and whose viability depends upon effective enrollment planning and management. It is also useful for multi-campus college systems where difficulties of enrollment management and resource allocation are formidable.

References

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COMPREHENSIVE ENROLLMENT MANAGEMENT

Demonstration for SCUP-32

ABSTRACT

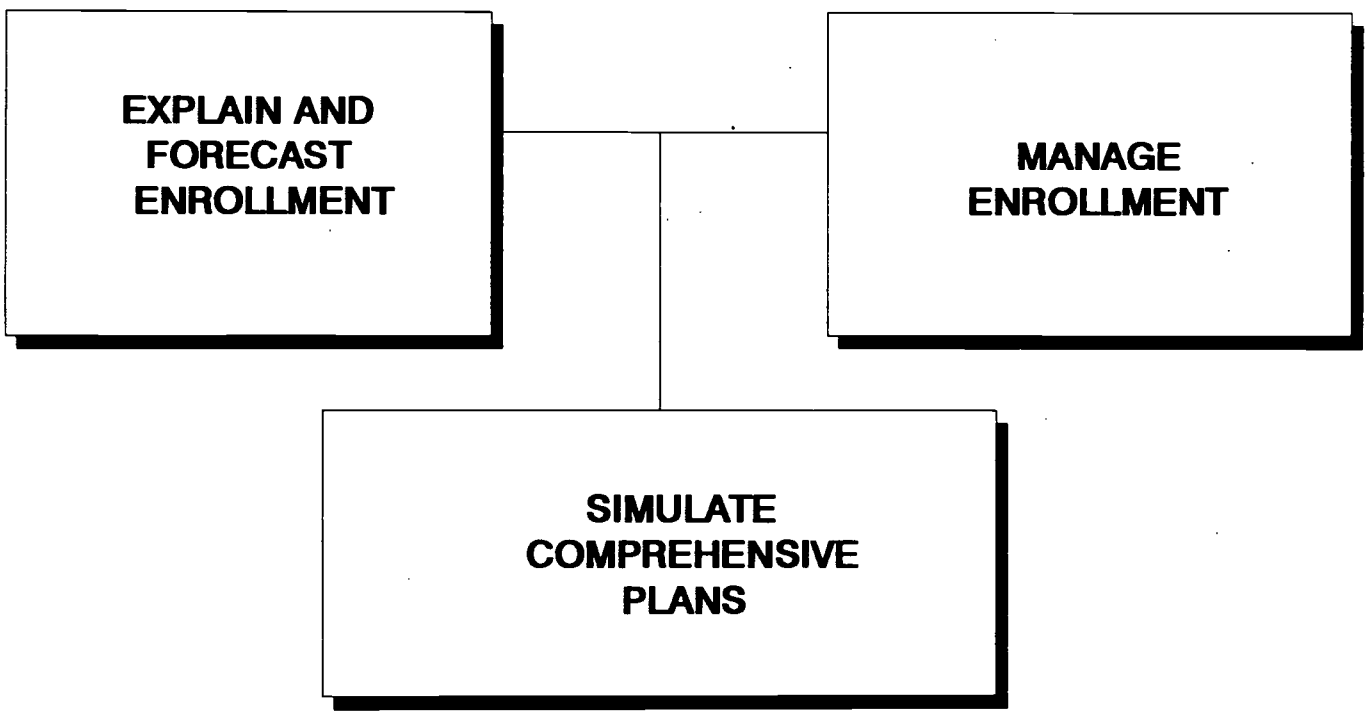
Emerging trends worldwide call for a basic transformation of higher education that is far beyond incremental changes typically proposed from strategic planning or TQM. But, the paradigm shift advocated is so substantial, that it isn't always clear where to start and what forms of compass, stabilizer, and keel; i.e., what kinds of policies and tools will help guide and steady the higher education "boat" through these turbulent waters to the desired port; i.e., vision of reform.

This demonstration shows how the "rocking boat" problem is addressed by the tools of c*omprehensive enrollment management.* This work involves integrating three models: an explanation and forecasting model, simulation of enrollment policies, and a comprehensive institutional planning model. The models are validated and the integration proves useful in guiding institutional planning. This session should be of interest to planners, policymakers, and researchers who are responsible for planning and implementing enrollment, curriculum, and budget policies.

COMPREHENSIVE ENROLLMENT MANAGEMENT

SESSION OUTLINE:

1. WHY MODELS?
2. EXPLAINING ENROLLMENT
3. FORECASTING ENROLLMENT
4. MANAGING ENROLLMENT
5. PLANNING COMPREHENSIVELY



WHY MODELS?

NEED:

1. ANALYTICAL POWER
2. REPETITIVE CALCULATIONS
3. HIGH VOLUME
4. RESULTS, SENSITIVITY
5. SPEED
6. SYSTEMATIC

USE OF MODELS:

1989: 15–YEAR FACILITY NEEDS IN 107 CA COLLEGES

1990–95: PLANNING IN CONSORTIUM OF 3–DOZEN COLLEGES*

1993: ENROLLMENT FORECASTING FOR 71 CA COLLEGES

1995: ENROLLMENT STUDY FOR MARICOPA COLLEGES*

1996: ENROLLMENT MANAGEMENT AT LINCOLN UNIVERSITY*

1997: CA COMMUNITY COLLEGES 2005 PLANNING PROJECT

1997: CEM PROJECT FOR PIMA COLLEGE*

*BASIS FOR THIS SCUP PRESENTATION.

EXPLAINING ENROLLMENTS

SOME FACTORS ARE MANAGEABLE:

- OWN PRICING: TUITION, FEES, FINANCIAL AID
  - MARKETING AND REGISTRATION
- ADMISSIONS, PROBATION, AND DISMISSAL
  - CURRICULUM: PROGRAMS, SECTIONING...
- SUPPORT SERVICES: COUNSELING, ...
  - FACILITIES, SITES, ELECTRONIC DELIVERY...

SOME FACTORS ARE NOT MANAGEABLE*:

- COMPETITOR PRICING
  - COMPETITOR ADMISSION PRACTICES
- DEMOGRAPHICS, GEOGRAPHY
  - INCOME, EMPLOYMENT, PRICES...
- SOCIAL AND CULTURAL FACTORS
  - PUBLIC POLICIES

* ITS USEFUL TO KNOW THE POSSIBLE IMPACT OF ISSUES YOU CAN'T MANAGE; OTHERWISE, YOUR ACTIONS MAY HAVE

UNINTENDED RESULTS

EXPLAINING ENROLLMENTS

- o WHICH FACTORS ARE (EMPIRICALLY) RELATED?
- o WHAT IS BEST (FORM OF) MODEL TO EXPRESS THIS?
- o CAUSATION (SIMULTANEOUS EQUATION BIAS)?

RESULT OF SUPPLY AND DEMAND: $S = f(..., ..., D, ...)$
$D = f(..., ..., S, ...)$

- o INDEPENDENT FACTORS RELATED (MULTICOLLINEARITY)
- o MODEL ERRORS DEPENDENT (HETEROSCEDASTICITY)

USING: **ECONOMETRIC MODEL**

$E = f(P, Y, D, S)$

where,

E = ENROLLMENT

P = PRICE — OWN and COMPETITORS'
UNEMPLOYMENT (OPPORTUNITY COST)

Y = INCOME (ECONOMIC ABILITY TO PURCHASE)

D = DEMOGRAPHICS (OF POTENTIAL STUDENTS)

S = SUPPLY (OWN AND COMPETITORS')

MAKE GOOD USE OF STATISTICS AND GRAPHICS:

R–SQUARE	ELASTICITIES
F RATIO	DW STATISTIC
T VALUE(S)	AUTOCORRELATION

ERR — MODEL: POORLY SPECIFIED, FACTOR LEFT OUT!
MEASUREMENT: DATA MISSING OR INVALID...

SOLVE — IMPUTE MISSING DATA!
BUILD "DUMMY" VARIABLES ....= 0,1

ENROLLMENT EXPLANATION AND FORECASTING MODEL

DEVELOPED FOR

MARICOPA COLLEGES

by Chuck McIntyre

MODEL VARIABLES:

E = FULL–TIME STUDENT EQUIVALENTS (FTSE)

P = MARICOPA COLLEGES TUITION AND FEES PER FTSE

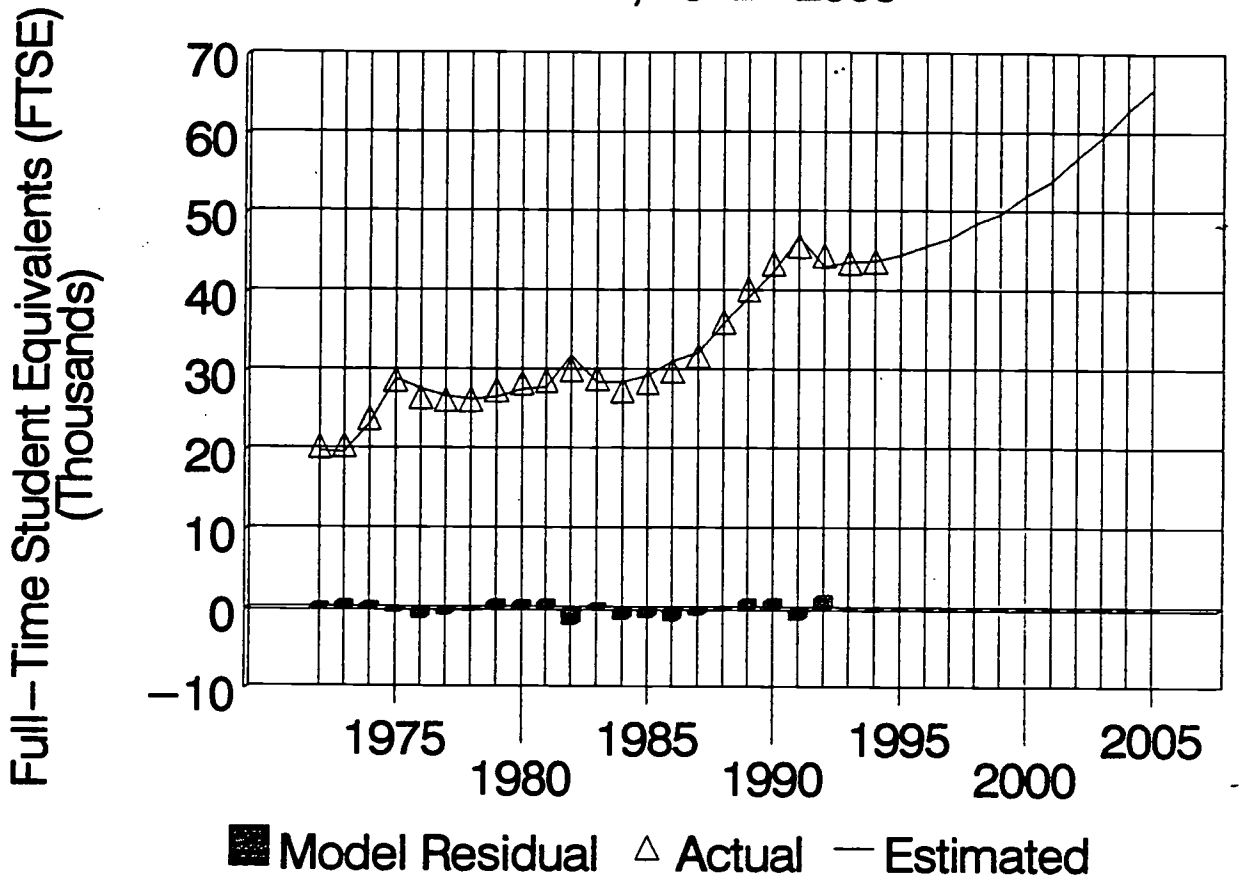
ARIZONA STATE UNIVERSITY TUITION AND FEES

Y = MARICOPA COUNTY INCOME PER CAPITA

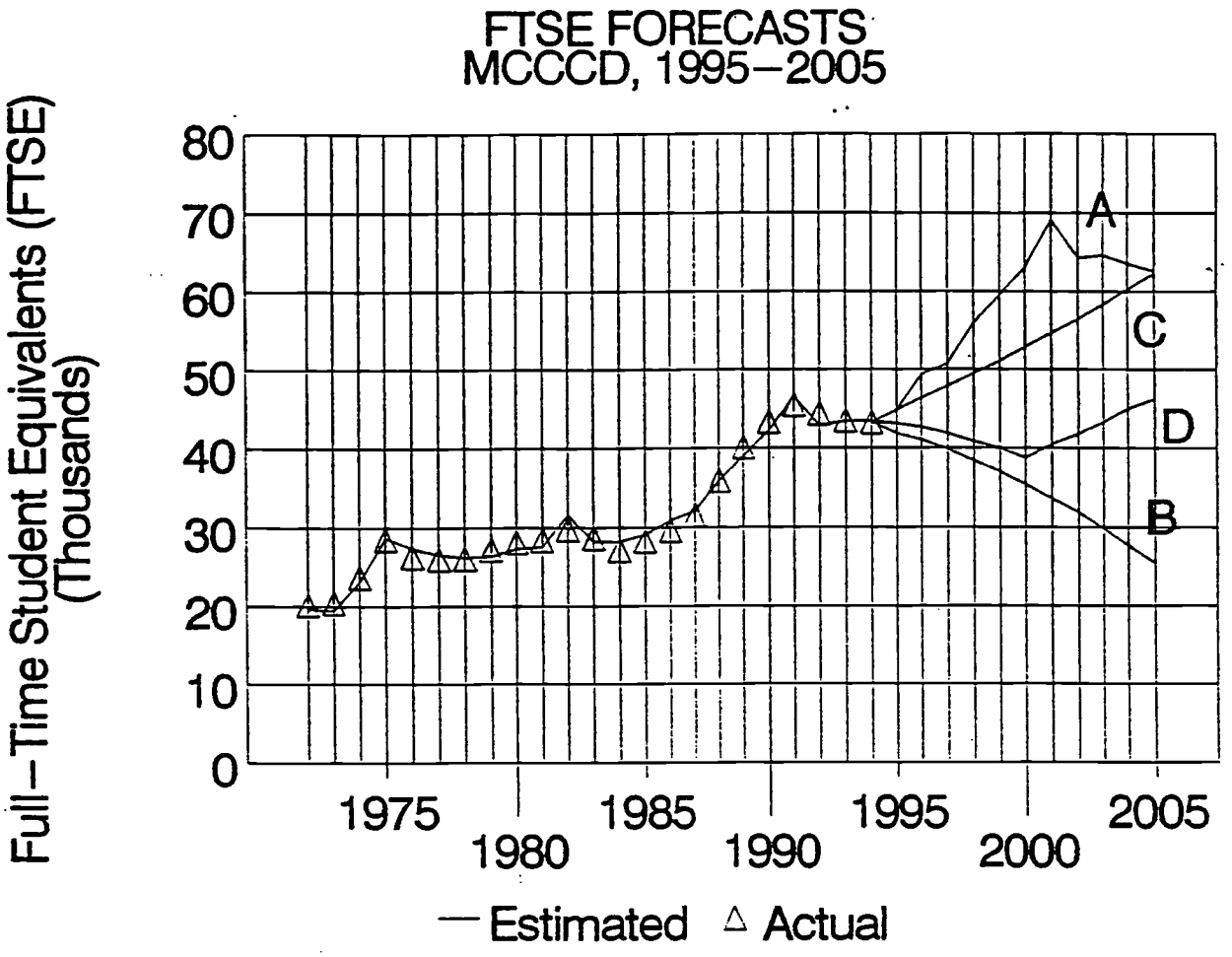
D = MARICOPA COUNTY POPULATION

S = MARICOPA COLLEGE OPERATING BUDGET

FTSE FORECAST
MCCCD, 1972–2005



Regression Results:					
R Squared	0.987		F =	320.1	
Observations	23		DW =	1.87	
independent variables:					
	income	asu fee	popn	price	budget
Coefficient	–2.7	10.3	0.019	–15.9	0.000149
Std.Error	0.7	4.02	0.005	2.8	0.000053
T Values	–4.1	2.6	3.8	–5.6	2.8
Elasticity	–1.7	0.5	1.1	–0.4	0.6



Source: Appendix E.

FUTURE SCENARIOS:

A: History "repeats itself;" the next ten years repeat the pattern of the past ten years.

B: The next ten years will trend like the past four years (since 1991).

C: The next ten years will trend like the average of the past 22 years (since 1972).

D: The local economy improves substantially until 2000, after which there is a downturn. CPI increases at slightly higher rate until 2000. Budgets continue to be tight, and basic tuition and fees increase by $2/unit per year (including continued proportionate increases in other fees, a 9% per year increase). MAG projects a slowing of Maricopa County population growth rates.

MANAGE ENROLLMENTS

ENRLMGMT provides five specific routines or ways in which enrollments – as forecast – may be ADJUSTED:

1. market: advertise, recruit and articulate
2. admit: assess, accept, and inform
3. register/enroll: counsel and schedule
4. retain: teach, follow–up and counsel
5. price: set tuition, fees, and financial aid

THESE ADJUSTMENTS USE SEVERAL MEASURES

1. market:	MARKETING–ELASTICITY OF ADMISSIONS
	DISTRIBUTION OF FALL APPLICATIONS
2. admit:	FALL ADMISSIONS:APPLICATIONS RATIOS
3. register/enroll:	NEW FALL ENROLLMENT:ADMISSIONS RATIOS
	NEW ENROLLMENT RATIOS ACROSS TERMS
4. retain:	RETENTION RATIOS ACROSS TERMS
5. price:	TUITION, FEES, AND FINANCIAL AID
	ROOM AND BOARD

REVIEW INPUTS FOR ENROLLMENT MANAGEMENT

ASSUMPTIONS/ACTIONS for ENROLLMENT MANAGEMENT, Scenario: B
07/09/97 15:47

MARKET TO NEW STUDENTS

Projected # apps based on: "elasticity" method. Mktg E = 2.00
Distribution of apps: Future distribution based on PLUGGED VALUES!
NOTE: Increase marketing budget to $145,000 (up 25%) in 1995 and to $175,000 in 1999.

ADMIT NEW STUDENTS

Ratio Admits to Apps: Future admissions based on CURRENT YEAR practices!
NOTE: No change: 90% from local; 80% from nearby metro areas; 85% from elsewhere in state; 75% from out−of−state.

REGISTER AND ENROLL NEW STUDENTS

Ratio of Fall to Admits: Future enrollment based on CURRENT registration practices!
Ratio Spring to Fall: Projection uses "PLUGGED" values for future ratios!
Ratio Summer to Fall: Projection uses CURRENT year ratio!
NOTE: No change in registration processes...constant ratio for fall: 75%. Correction for Spring 1994 miscount...

FUTURE CURRICULUM CHANGES LIKELY TO IMPACT ENROLLMENT? NO

RETAIN CONTINUING STUDENTS

From Fall to Spring Term:	Current ratio!	0.77 : now	0.77 : in 6 years
From Spring to Summer Term:	Current ratio!	0.27 : now	0.28 : in 6 years
From Spring to Fall Term:	Current ratio!	0.62 : now	0.62 : in 6 years

NOTE: Virtually no change....

PRICE ALL STUDENTS

Price elasticity = −1.2 .....by income level:

low:	mid:	high:
−2.1	−1.05	−0.45

Percent of students on aid, by income level:

low:	mid:	high:
60%	25%	5%

Students on aid? 1= Yes, 0=No.

Types:	In Res.Halls	Commuting	Graduate
Resident, FT	1	1	1
Resident, PT	1	0	0
Nonres. FT	1	1	1
Nonres. PT	1	0	0

NOTE:

CHANGE INPUTS FOR ENROLLMENT MANAGEMENT

SCREENS PRESENT ACTUAL DATA ON, SAY, MARKETING AND ADMISSIONS AND PROVIDE INSTRUCTIONS ON HOW TO PROCEED WITH FORECASTS AND PROJECTIONS.

MARKETING AND APPLICATIONS

	MARKETING OUTLAYS (MO)		APPS,INQS RECEIVED (AI)	ELASTICITY E=%dAI/%dMO
	Nominal	Real		
1990	$100,000	$115,890	2,203	
1991	$125,000	$137,468	2,725	1.27
1992	$135,000	$142,527	3,078	3.52
1993	$125,000	$128,500	2,581	1.64
1994	$120,000	$120,000	2,110	2.76
			average E	2.30

Your estimates of marketing outlays are adjusted for price changes in order to measure their impact on the number applications (AI). Elasticity, E: the % change in AI from a a 1% change in marketing outlays (MO), assumes that other factors - like population and demand changes - are neutral.

Review, then press ENTER to proceed!

"Elasticity" Option

YEAR	MARKETING OUTLAYS
1990	$100,000
1991	$125,000
1992	$135,000
1993	$125,000
1994	$120,000
1995	$145,000
1996	$145,000
1997	$145,000
1998	$145,000
1999	$175,000
2000	$175,000

IN ORDER TO CHANGE YOUR MARKETING STRATEGIES, and, therefore, the likely number of future applications, enter your planned future marketing outlays to the left, USING THE ARROW KEY.

Next, press ENTER to view your "real" (price-adjusted) marketing outlays and the resulting estimated future applications/inquiries.

MENUS ENABLE THE USER TO PROJECT THE DISTRIBUTION OF APPLICATIONS, BY AREA, AND TO SET PROPOSED ADMISSION RATIOS CONSISTENT WITH POLICIES AND PRACTICES

CURRENT 3YR AVE. 5YR TREND PLUG NO PRIOR-MENU
Yes, change the estimate using the current distribution.

Distribution Ratios
FALL APPLICATIONS/INQUIRIES

	CnMO	StL/KC	OtMO	NonST
1990	0.55	0.19	0.09	0.17
1991	0.55	0.19	0.09	0.17
1992	0.55	0.19	0.09	0.17
1993	0.54	0.19	0.10	0.17
1994	0.51	0.21	0.11	0.17
1995	0.51	0.21	0.11	0.17
1996	0.51	0.21	0.11	0.17
1997	0.51	0.21	0.11	0.17
1998	0.51	0.21	0.11	0.17
1999	0.51	0.21	0.11	0.17
2000	0.51	0.21	0.11	0.17

Review the recent trends, and select your projection technique. OR, if your marketing will be TARGETED to specific groups, choose "plug" and enter the ratios to reflect that strategy.

When done, press ENTER to proceed!

Future distribution based on CURRENT YEAR!

CURRENT 3YR AVE. PLUG NO PRIOR-MENU
Estimate future admissions using admit:apply ratios from the current year.

Ratios of
ADMISSIONS,ACCEPTANCES TO APPLICATIONS,INQUIRIES

	CnMO	StL/KC	OtMO	NonST	TOTAL
1990	0.90	0.80	0.85	0.75	0.85
1991	0.90	0.80	0.85	0.75	0.85
1992	0.90	0.80	0.85	0.75	0.85
1993	0.90	0.80	0.85	0.75	0.85
1994	0.90	0.80	0.85	0.75	0.85
1995	0.90	0.80	0.85	0.75	0.85
1996	0.90	0.80	0.85	0.75	0.85
1997	0.90	0.80	0.85	0.75	0.85
1998	0.90	0.80	0.85	0.75	0.85
1999	0.90	0.80	0.85	0.75	0.85
2000	0.90	0.80	0.85	0.75	0.85

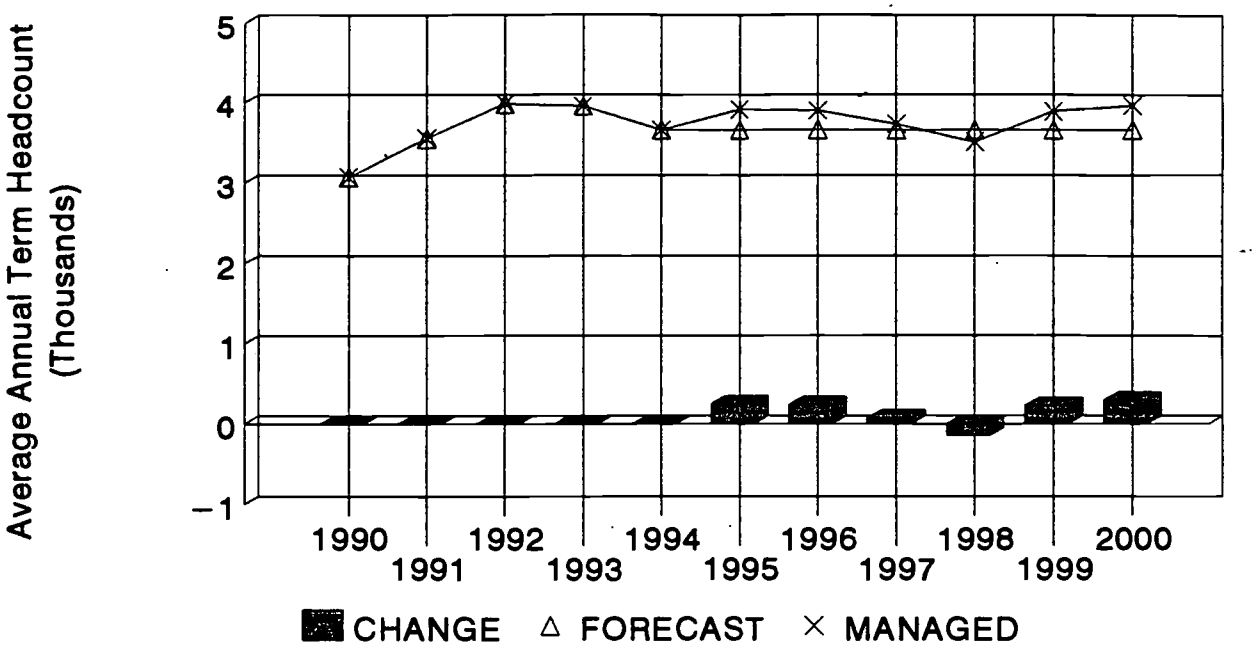
Review, then pick option that best reflects planned future admissions policies and practices!

Review results, press ENTER to proceed!

Future admissions based on CURRENT YEAR practices!

REVIEW OUTPUTS FROM ENROLLMENT MANAGEMENT

CHANGES FROM ENROLLMENT MANAGEMENT
Forecast and Managed Enrollment



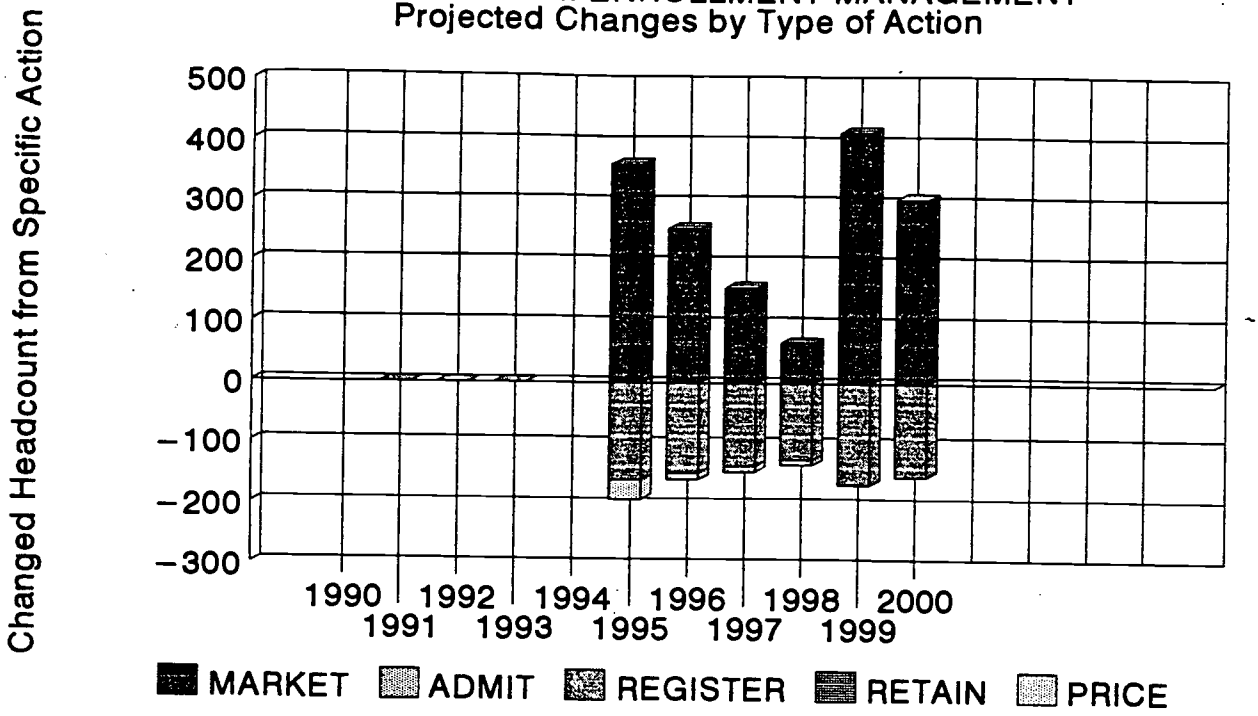
Changes in ENROLLMENT from ENROLLMENT MANAGEMENT
Compared to DEMAND POTENTIAL AVERAGE ANNUAL ENROLLMENT

	(demand forecast)	(managed)			Difference
	AVE.ANNUAL	FALL	SPRING	AVE.ANNUAL	
1990	2978	3063	2893	2978	0
1991	3453	3619	3287	3453	0
1992	3885	4101	3669	3885	0
1993	3855	4031	3679	3855	0
1994	3560	3623	3498	3560	0
1995	3561	3953	3699	3814	253
1996	3561	3962	3645	3799	239
1997	3561	3799	3473	3632	72
1998	3561	3574	3258	3412	−148
1999	3561	3907	3670	3788	228
2000	3561	4018	3703	3861	300

SOURCE: Office of Institutional Research and Planning.

REVIEW OUTPUTS FROM ENROLLMENT MANAGEMENT

CHANGES FROM ENROLLMENT MANAGEMENT
Projected Changes by Type of Action



Changes in ENROLLMENT from
ENROLLMENT MANAGEMENT ACTIONS AND ASSUMPTIONS

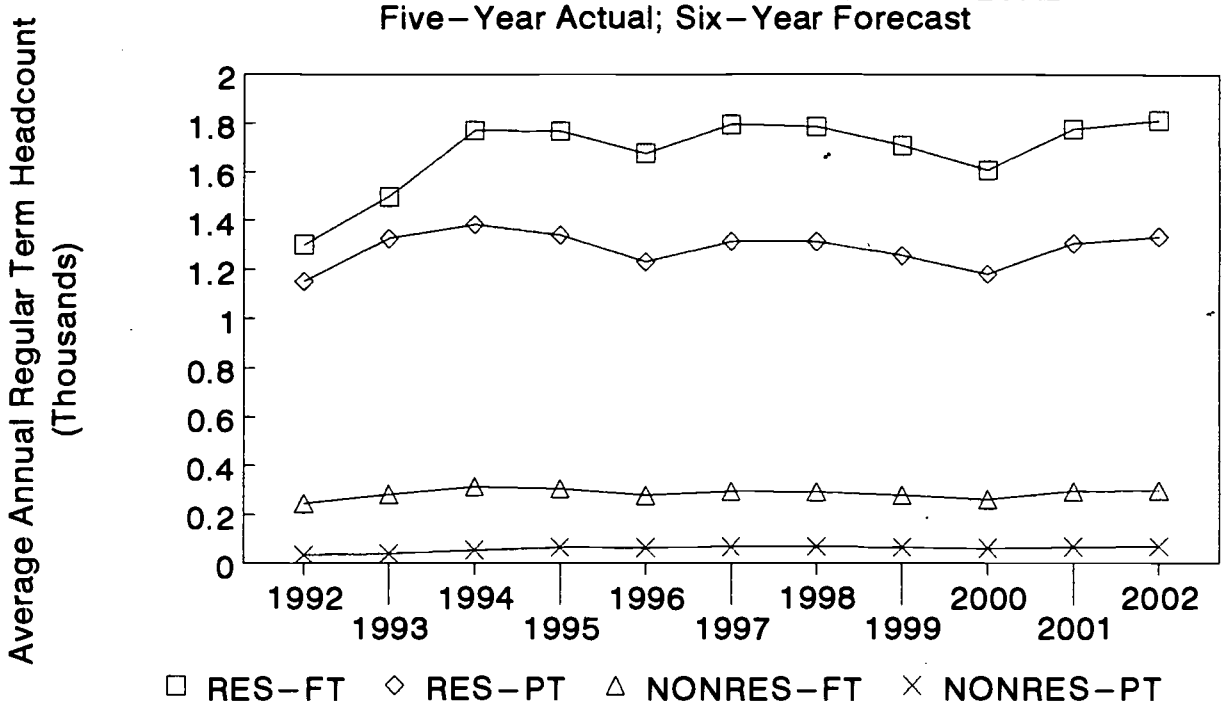
	MARKET	ADMIT	REGISTER	RETAIN	PRICE
	(Average Annual Values)			(Average Annual Values)	
1990					
1991					
1992					
1993					
1994					
1995	360	3	−161	0	−31
1996	253	3	−149	0	−11
1997	155	3	−138	0	−10
1998	64	2	−127	0	−9
1999	414	3	−168	0	−1
2000	303	3	−155	0	0

NOTE: The changes attributable to each action are independently calculated; therefore, their sum will not equal the net overall impact of these interrelated actions!

SOURCE: Office of Institutional Research and Planning.

REVIEW OUTPUTS FROM ENROLLMENT MANAGEMENT

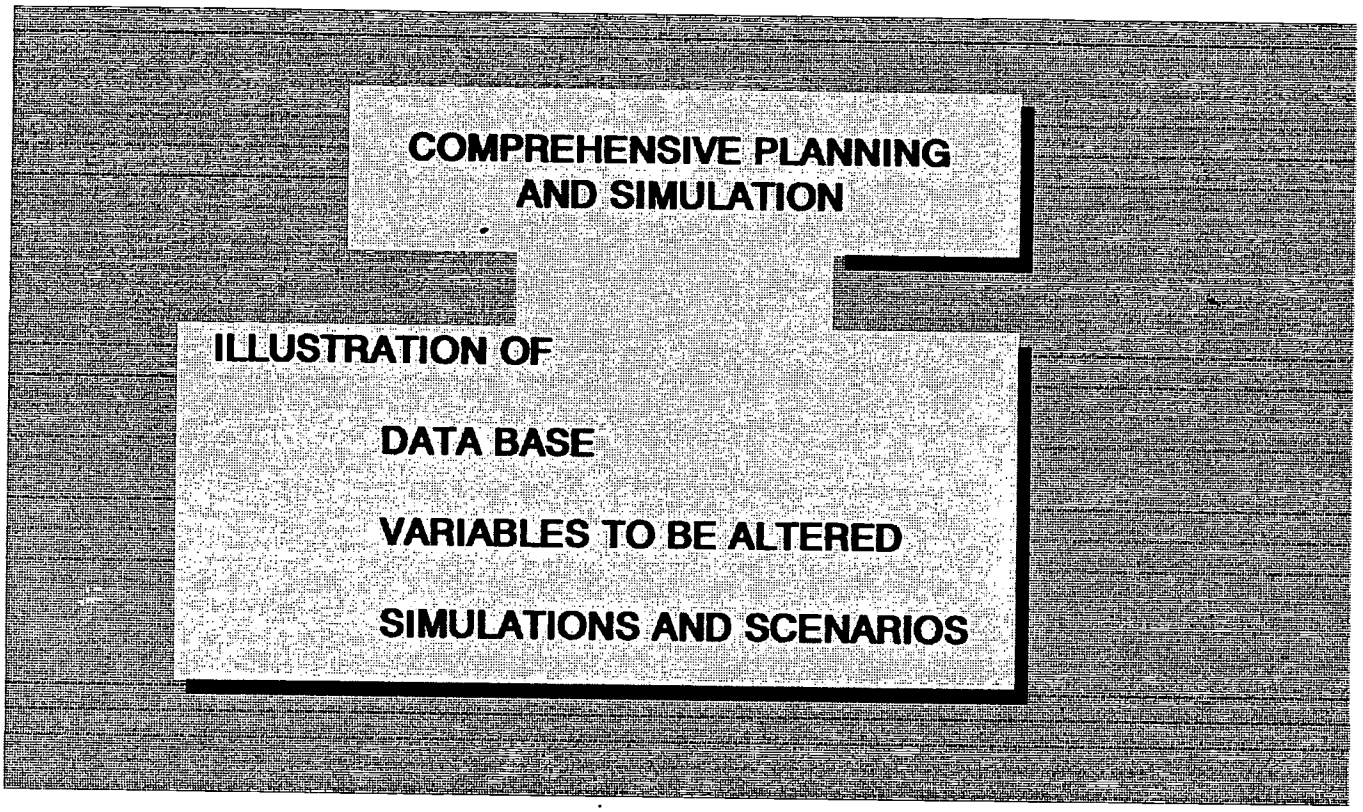
UNDERGRADUATES BY RESIDENCE AND LOAD
Five–Year Actual; Six–Year Forecast



AVERAGE ANNUAL HEADCOUNT ENROLLMENT
BY RESIDENCE, LOAD, AND LEVEL

	TOTAL	RESIDENT–UG		NONRESIDENTUG		RESIDENT–GR		NONRESIDENTGR	
YEAR		FT	PT	FT	PT	FT	PT	FT	PT
1992	2939	1300	1150	244	34	22	179	5	5
1993	3453	1497	1324	281	40	32	265	8	8
1994	3885	1770	1383	311	54	48	308	5	6
1995	3855	1767	1340	304	66	39	331	4	6
1996	3561	1677	1232	277	64	45	257	6	4
1997	3810	1795	1315	294	67	49	279	6	4
1998	3793	1786	1314	291	68	48	275	6	4
1999	3626	1709	1256	278	65	46	262	6	4
2000	3405	1605	1180	261	61	43	245	6	4
2001	3780	1777	1306	293	67	49	279	6	4
2002	3852	1813	1334	297	69	49	280	7	4

SOURCE: Office of Institutional Research and Planning.



DISPLAYS: Data Base

Variables to be altered in simulations

Scenario 1A
Run 1A: Summary of key planning information
Run 1A: Techniques and assumptions for projections
Charts

Scenario 1B
Charts

Scenario 1C
Charts

DATA BASE

41

FULL–TIME FACULTY

Fiscal Year	No. of of FT Faculty	FT Faculty Hires
1991	70	3
1992	71	3
1993	72	5
1994	73	2
1995	75	6

Probabilities of Losing a FT Faculty Member in One Year:

Resign	0.015
Retire	0.010
Die	0.001

PART–TIME FACULTY

Hours per PT Faculty
5.50
6.00
6.00
5.00
5.00

Enter data in highlighted cells.

51

EXEMPT SUPPORT STAFF*

Fiscal Year	No. of FTE Staff	No. of FT Staff
1991	46.2	44
1992	45.7	44
1993	47.0	45
1994	47.5	45
1995	47.5	45

CLASSIFIED SUPPORT STAFF

No. of FTE Staff	No. of FT Staff
85.6	75
87.8	76
88.3	77
89.4	78
90.3	79

Enter data in highlighted cells.

*Executive, managerial, and other nonfaculty professionals.

SOME OF THE 70 VARIABLES THAT MAY BE ALTERED IN ORDER TO BUILD PLANNING SCENARIOS

Variable	Current Projection Technique
1 FT Students	Trend
2 PT Students	Trend
3 Avg SCH per FT Student	Plug
4 Avg SCH per PT Student	Plug
5 No. of Sections per Term	FTE Step *
6 Credit Hours per Section	Current
7 Sections per FTE Faculty	Plug
8 Weekly Cont Hrs per Section	Current
9 FT as % of FTE Faculty	Trend
10 Hours per PT Faculty	Plug
11 FTE Exempt Staff	HDCT Step *
12 FT as % of FTE Exempt Staff	Current
13 FTE Classified Staff	HDCT Step *
14 FT as % of FTE Class. Staff	Current
15 % Chg in Avg Sal of FT Faculty	CPI
16 % Chg in Avg Sal of PT Faculty	CPI
17 % Chg in Avg Sal of FT Staff	Plug
18 % Chg in Avg Sal of PT Staff	Current
19 Avg Mandatory Ben's for FT Emp	Trend
20 Avg Mandatory Ben's for PT Emp	Trend
21 Avg Non–Mand Ben's for FT Emp	Current
22 Avg Non–Mand Ben's for PT Emp	Current
23 % Chg in Supp & Serv Exps	CPI
24 % Chg in Library Acq's Exps	3–YrAvg
25 % Chg in Utilities Expenses	Plug
26 % Chg in Equipment Expenses	Current
27 % Chg in Other Expenses	4–YrAvg
28 % Chg in Tuition per SCH	Plug
29 % Chg in Fees per HDCT Student	CPI
30 % Chg in State Appropriations	FTES+CPI *
31 % Chg in Local Appropriations	Plug
32 % Chg in Other I Revenues	3–YrAvg
33 % Chg in Other II Revenues	4–YrAvg
34 % Chg in Other III Revenues	CPI
35 Mandatory Transfers	Plug
36 Non–Mandatory Transfers	Plug

*If FTES or HDCT appears in the projection technique, this variable will react to a change in enrollment, otherwise it will not.

Illustrious College, Summary Planning Data
Run No. 1A
12/07/94

MODEL OUTPUT

Data Elements	1994	1995	1996	1997	1998	1999	2000	2001
			Projection -->					
Avg Enrollment per Term								
FTE	3,955	4,137	4,254	4,361	4,463	4,566	4,671	4,779
Headcount	6,100	6,220	6,346	6,460	6,574	6,688	6,802	6,916
Curriculum								
Sections	516	521	529	536	543	550	557	564
Section Size	34.7	35.9	36.4	36.8	37.2	37.6	37.9	38.3
Faculty								
FTE	122.3	123.5	126.3	128.8	131.5	134.1	136.9	139.6
Stu:Fac Ratio	32.3	33.5	33.7	33.8	33.9	34.0	34.1	34.2
FT	73	75	78	80	83	86	89	92
Percent FT	59.7%	60.7%	61.8%	62.1%	63.1%	64.1%	65.0%	65.9%
FT Hires	2	6	6	5	6	6	6	6
Staff								
FTE Exempt	47.5	47.5	48.0	48.5	49.0	49.5	50.0	50.5
FTE Classified	89.4	90.3	90.8	91.3	91.8	92.3	92.8	93.3
Stu:Staff Ratio	28.9	30.0	30.7	31.2	31.7	32.2	32.7	33.2
Fac:Staff Ratio	0.89	0.90	0.91	0.92	0.93	0.95	0.96	0.97
Annual Change:								
Average Salaries								
FT Faculty	4.0%	4.6%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
FT Staff	3.5%	6.4%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Total Compensatior	5.8%	7.6%	5.3%	5.5%	5.1%	5.7%	5.1%	5.7%
Operating Expenses								
Utilities	6.0%	4.0%	2.0%	2.0%	2.5%	2.5%	3.0%	3.0%
Equipment	8.5%	7.2%	7.2%	7.2%	7.2%	7.2%	7.2%	7.2%
Total Expenses	5.7%	5.6%	3.9%	4.0%	4.1%	4.2%	4.3%	4.4%
Total Expenditures	5.8%	7.0%	4.9%	5.1%	4.8%	5.3%	4.9%	5.3%
Revenues								
Tuition & Fees	6.1%	10.2%	8.8%	8.5%	8.3%	8.2%	6.3%	6.4%
State App's	5.7%	9.0%	6.8%	6.5%	6.3%	6.3%	6.3%	6.3%
Local App's	8.6%	5.3%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Total	5.4%	7.6%	5.5%	5.4%	5.4%	5.4%	4.9%	5.0%
Annual Totals (000s)								
Revenues	$12,632	$13,597	$14,350	$15,130	$15,946	$16,815	$17,644	$18,534
Expenditures	$12,781	$13,671	$14,337	$15,063	$15,791	$16,621	$17,434	$18,358
Net Revenues	($149)	($74)	$13	$66	$155	$194	$210	$175
Transfers	$346	$464	$42	$42	$42	$42	$42	$42
Ending Balance	$0	$0	($29)	($4)	$109	$261	$429	$563
Expenditures								
Per FTE Student	$3,231	$3,305	$3,370	$3,454	$3,538	$3,640	$3,733	$3,842

Source: Office of Institutional Analysis.

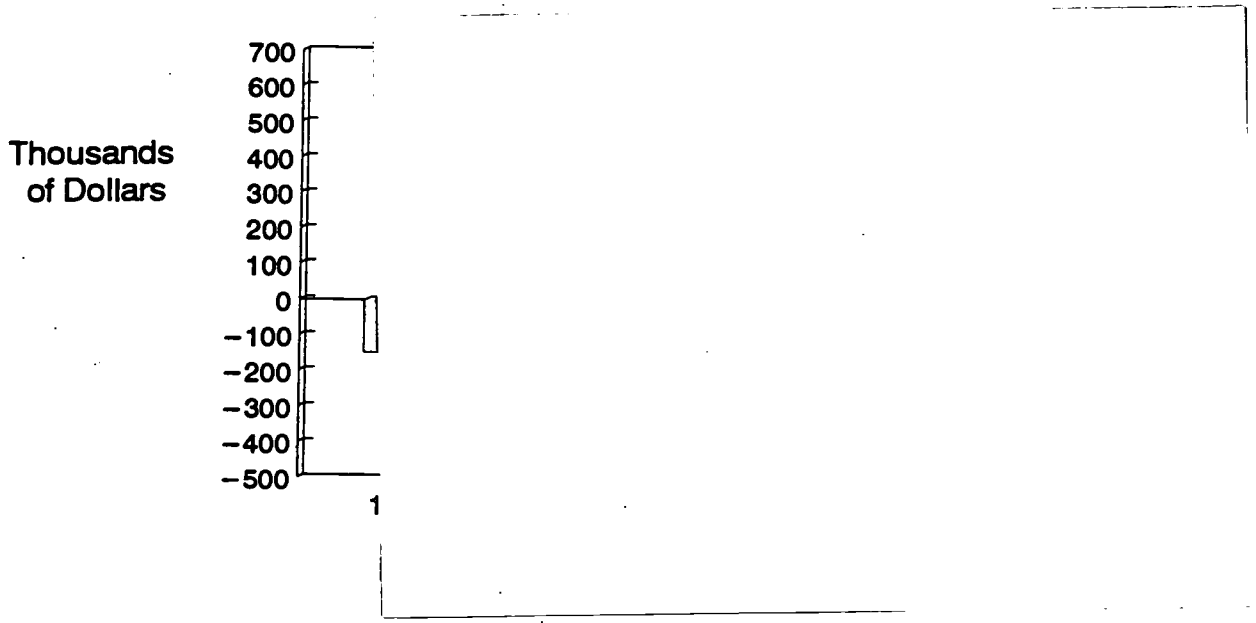
Projection Techniques Used to Generate Summary Planning Values
Run No. 1A
12/07/94

Element	Technique	Comments:
Avg Enrollment per Term		
FTE	Derive	PT students will increase their academic loads slightly.
Headcount	Derive	
Curriculum		
Sections	FTE Step	No major changes anticipated in curriculum.
Section Size	Derive	Increases slightly.
Faculty		
FTE	Derive	Slight decrease expected in section load.
Stu:Fac Ratio	Derive	
FT	Derive	
Percent FT	Trend	Like past, continues to increase each year.
FT Hires	Derive	
Staff		
FTE Exempt	HDCT Step	
FTE Classified	HDCT Step	
Stu:Staff Ratio	Derive	
Fac:Staff Ratio	Derive	
Annual Change:		
Average Salaries		
FT Faculty	CPI	
FT Staff	Plug	To increase at three–fourths of CPI.
Total Compensation	Derive	
Operating Expenses		
Utilities	Plug	
Equipment	Current	
Total Expenses	Derive	
Total Expenditures	Derive	
Revenues		
Tuition & Fees	Derive	
State App's	FTES+CPI	
Local App's	Plug	Projected at fraction of historical rate!
Total	Derive	
Annual Totals (000s)		
Revenues	Derive	
Expenditures	Derive	
Net Revenues	Derive	
Transfers	Derive	Special reserve funds used to balance general fund.
Ending Balance	Derive	
Expenditures		
Per FTE Student	Derive	

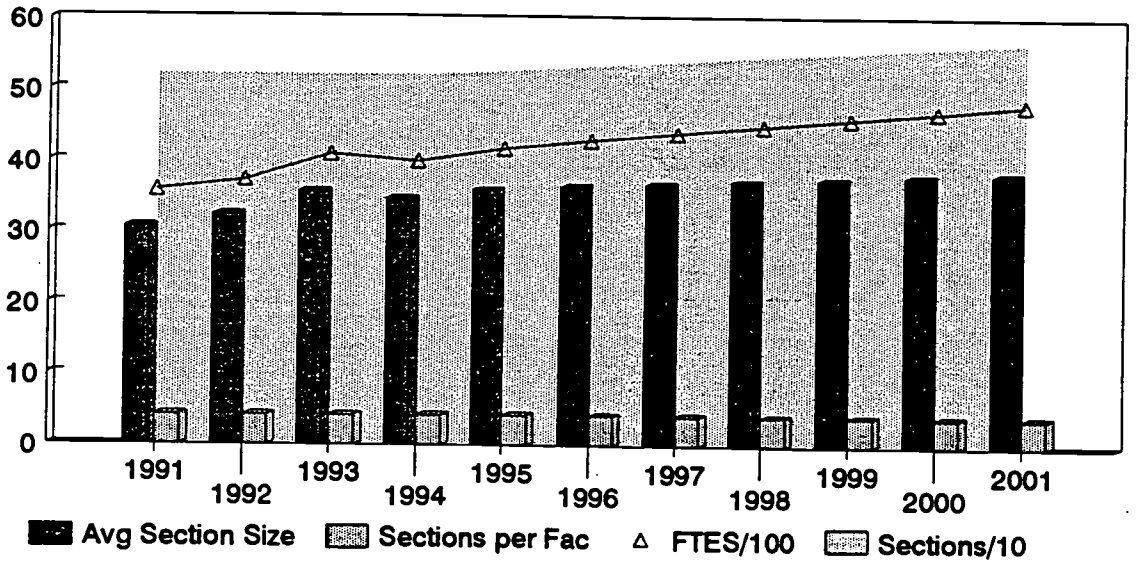
Source: Office of Institutional Analysis.

Scenario 1A:

ILLUSTRATIVE COLLEGE
Net Revenues, Transfers, and Fund Balances



Students, Sections, Faculty Load

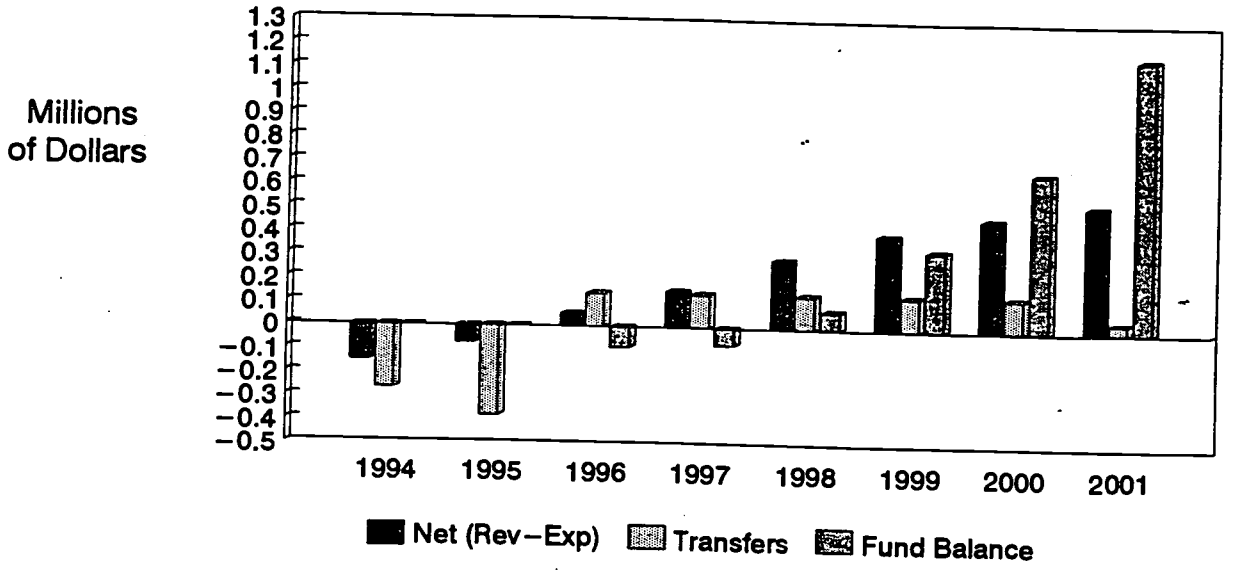


HISTORY: Aside from 1994, FTES have increased over the past five years. The number of sections and faculty has been constant and, therefore, section size has increased.
Due to five years of overspending, the College has had to borrow $850,000 from a "special reserve" fund to balance the General Fund.

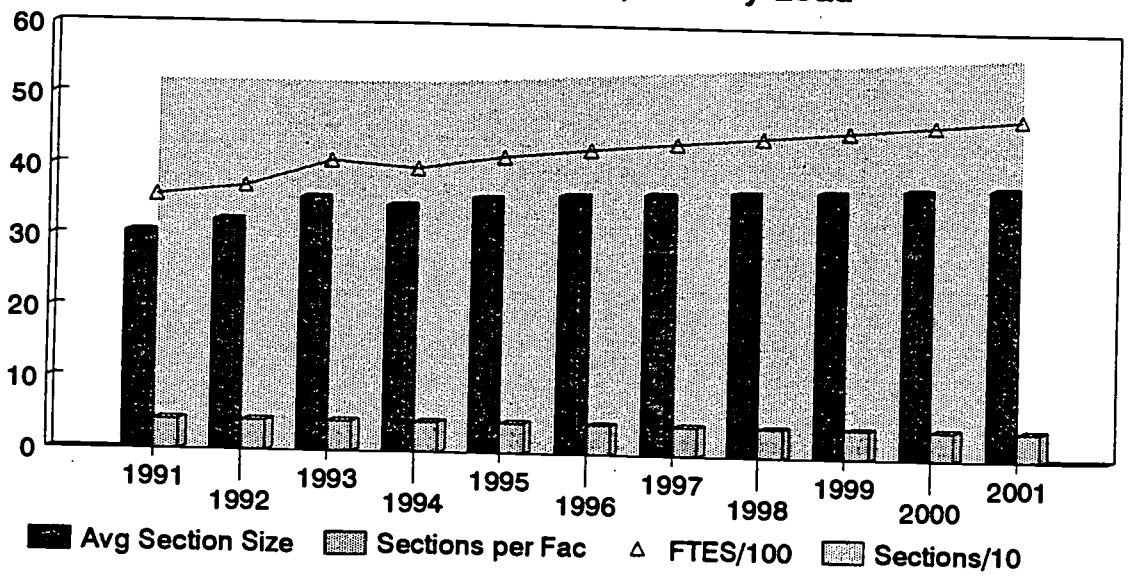
Scenario 1A:
FTES is expected to increase by just over 2% annually. Plans call for a moderate increase in course sections and slight decrease in faculty section load, allowing section size to increase, but at a lower rate than in the past. However, General Fund deficits are expected during the next two years, improving somewhat thereafter. Moreover, local appropriations are projected at a lower rate (2% annual increase) than recent history would support.

Scenario 1B:

ILLUSTRATIVE COLLEGE
Net Revenues, Transfers, and Fund Balances



Students, Sections, Faculty Load



Scenario 1B:

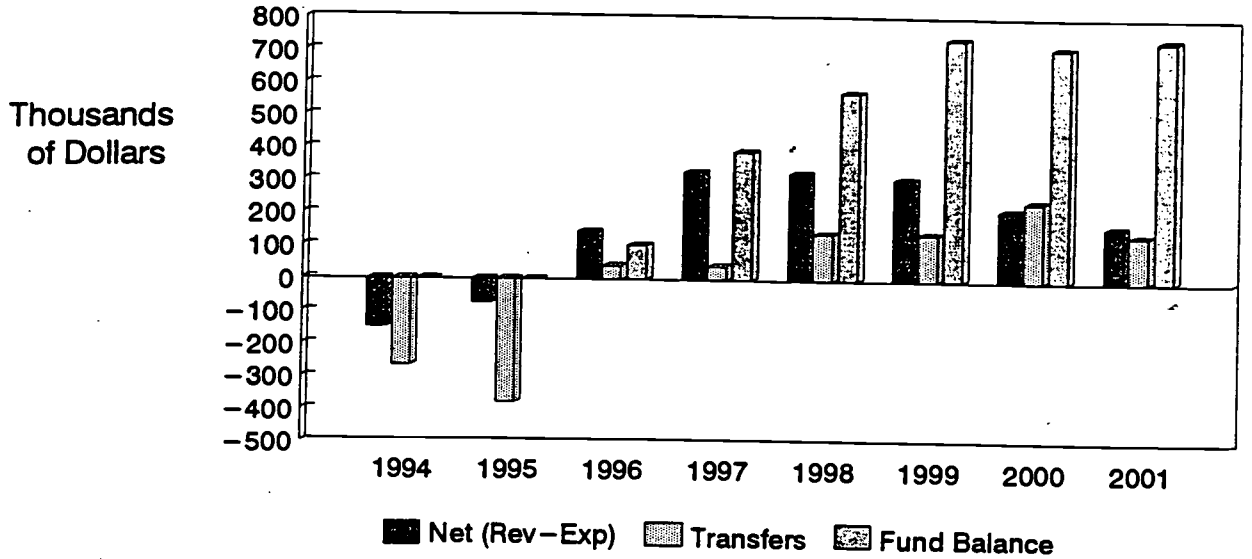
1. Repay "special reserve" fund $500,000 over next five years.
2. Slightly more optimistic projection of local appropriations: 3% annual increase, rather than the 2% estimated in Scenario 1A.
3. Hold full−time/part−time faculty ratio at current levels (60%), rather than have it increase up to 65% as in Scenario 1A.

Results:

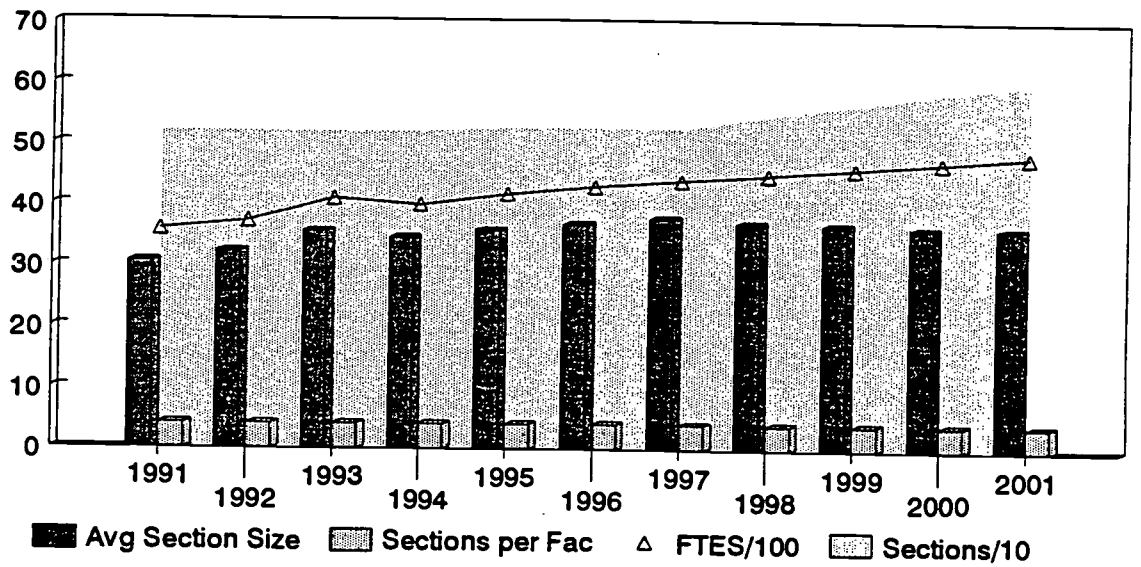
Ending balances build to an acceptable level of 6% (of budget) by 2001, but there are still deficits during the next two years. Moreover, plans to continue course section size increases meet with faculty resistance. Need to reduce expenditures in the near term and reconsider plans for the future number of course sections.

Scenario 1C:

ILLUSTRATIVE COLLEGE
Net Revenues, Transfers, and Fund Balances



Students, Sections, Faculty Load



Scenario 1C:

1. Repay special reserve fund $500,000 over 5 years, but begin in 1997−98, with increased payments later.
2. Slightly more optimistic projection of local appropriations: 3%, rather than 2% annually, like Scenario 1B.
3. Hold full−time/part−time faculty ratio at current levels (60%), like Scenario 1B.
4. Delay increasing course sections until 1997−98, then add sections to reduce section size to current level by 2001.
5. Reduce equipment expenditures in near term (2% increase next year), then increase in long term.

Results:

Near term ending balance deficits are eliminated and balances build to an acceptable level of 4% (of budget) by 2001.

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