

Financing Institutions and Systems of Higher Education: The American Experience

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Workshop Objectives

At conclusion of this session, participants will be able to:

1. Identify goals for financing higher education
2. Explain the categories of expenditures and revenues in use by American institutions and systems of higher education
3. Differentiate revenue sources by institutional classification
4. Describe Classification of Instructional Program (CIP) codes and their use in allocating faculty resources
5. Summarize the elements of a credit hour as a standard unit of resource allocation
6. Describe the Carnegie Classification of Institutions and its use in state allocations to colleges and universities
7. Calculate student and faculty FTE
8. role of financial aid in institutional allocations, revenues, and expenditures



Workshop Objectives

9. Describe the relationship between budgeting and the development of new instructional programs
10. Summarize funding relationships in state government
11. Identify changes in state appropriations to public institutions and in tuition v. appropriations
12. Compare elements used in statewide budgeting of public institutions
13. Differentiate among the basic higher education budget models
14. Calculate faculty allocations by CIP code earned under a standard formula
15. Compare the differences in college cost by sector of higher education
16. Connect tuition and allocation policies
17. Summarize the role of financial aid in institutional allocations, revenues, and expenditures



Goals for Financing Higher Education

- Promote access
- Promote efficiency
- Assure performance and accountability
- Maintain assets
- Improve quality and prestige
- Enhance the state's economic development
- Promote a reform agenda

Source: Mortimer, K. (2003). The Governance Context for State Policies on Appropriations, Tuition, and Financial Aid in [Policies in Sync: Appropriations, Tuition, and Financial Aid for Higher Education](#)



The Basic Building Blocks

For Financing Institutions and Systems of Higher Education



Classification of Institutional Revenues

- Tuition and fees
- Government appropriations
 - Federal
 - Through state channels
 - State
 - Local
- Government grants and contracts
 - Federal
 - State
 - Local
- Private gifts, grants, and contracts
- Endowment income
- Sales and services of educational activities
- Auxiliary enterprises
- Hospitals
- Other sources
- Independent Operations



Current Fund Revenue Distribution for Selected Types of Public Degree Granting Institutions, by Sector and Fund Source, Fiscal 2000 (percentages)

Fund Source	All Public	All Public Four-Year	Doctoral Extensive	Other Public Four-Year	Public Two-Year ¹
Tuition & Fees ²	18.5%	18.1%	17.0%	32.1%	20.4%
State Governments	35.8%	33.8%	31.4%	42.3%	45.0%
Local Governments	3.8%	0.6%	0.3%	1.7%	18.2%
Federal Government ³	10.8%	12.0%	13.5%	4.6%	5.3%
Private Gifts, Grants & Contracts	4.8%	5.6%	6.3%	2.3%	1.1%
Endowment Earnings	0.7%	0.9%	1.2%	0.3%	0.1%
Educational Activities	3.1%	3.6%	3.9%	1.4%	0.8%
Auxiliary Enterprises	9.6%	10.5%	11.1%	13.1%	5.7%
Hospitals	8.9%	10.9%	11.2%	0.0%	0.0%
Other Current Income	3.9%	4.0%	4.1%	2.1%	3.5%
Total Current Fund Revenue	100.0%	100.0%	100.0%	100.0%	100.0%

Notes:
 1. Includes federally supported aid received through students.
 2. Includes appropriations, grants, contracts, and revenues associated with major federally funded research and development centers.
 3. Excludes tribal colleges.

Source: National Center for Education Statistics, "Digest of Education Statistics," 2002, Table 334

Cited in State Higher Education Executive Officers, *State Higher Education Finance*



Program Expenditure Areas

- Instruction
- Academic Support
- Institutional Support
- Student Services
- Operation and Maintenance of Plant
- Research
- Public Service
- Scholarships and Fellowships
- Auxiliary Enterprises
- Hospitals
- Independent Operations
- Separately organized operations



Examples of Program Activities and Expenditures

Instruction	Academic Support	Student Services	Institutional Support	Operation and Maintenance of Plant
<ul style="list-style-type: none"> ■ Faculty salaries ■ Academic Department Operations 	<ul style="list-style-type: none"> ■ Academic administration (deans & below) ■ Libraries 	<ul style="list-style-type: none"> ■ Admission officers and registrars ■ Guidance and counseling ■ Financial aid administration ■ Student activities 	<ul style="list-style-type: none"> ■ Executive management and planning ■ Fiscal, legal, and personnel operations ■ Public relations ■ Campus safety and security 	<ul style="list-style-type: none"> ■ Building and grounds maintenance ■ Utility costs
Instructional Technology				



Classification of Instructional Programs

- **Classification of Instructional Programs (CIP)** is a taxonomy of postsecondary instructional programs. It was developed to facilitate national (NCES) collection and reporting of postsecondary degree completions by major field of study.
- The 2000 edition of the CIP (CIP-2000) is the third revision of the taxonomy

Source: National Center for Education Statistics, CIP 2000 Accessed August 23, 2004 at <http://nces.ed.gov/pubs2002/cip2000/>



Credit Hours and Clock Hours

- Semester - minimum of 15 weeks in length
- One semester-credit hour is equal to:
 - **one** hour of lecture per week for a semester
 - **two** hours of lab per week for a semester
 - **three** hours of externship/clinical per week
- Therefore, different types of instruction require less direct faculty time. The credit hour/clock hour formula adjusts for this.



Uses for the Credit Hour

- Credit hour quantifies (makes measurable) these complex activities
- Enrollment to calculate a student FTE
 - Faculty workloads and productivity
 - Cost per student
 - Graduation requirements
 - Comparing activities among institutions
 - Competition among institutions
 - Student transfer
 - Financial aid
 - Time to degree accountability
 - Student learning (?)



Calculating Full-Time Equivalents

- Student FTE
 - Undergraduate credit hours divided by 15 for institutions operating on semester system (30 for annualized total)
 - Graduate student credit hours divided by 8, 9, or 12 for institutions operating on semester system (16, 18, or 24 for annualized total)
- Faculty FTE
 - 9 or 10 month faculty = 1.0 FTE
 - 11 or 12 month faculty = 1.2 FTE
 - Part-time Faculty, credit hours taught divided by 30
- Staff FTE
 - 12 month contract = 1.0 FTE



The Connections between Finance, Institutional Prestige, and Perceptions of Quality



Carnegie Institutional Type

Doctorate-granting Institutions

- Extensive: 50 or more doctoral degrees per year across at least 15 disciplines
- Intensive: ten doctoral degrees per year across three or more disciplines, or at least 20 doctoral degrees per year overall

Master's Colleges and Universities

- Master's Colleges and Universities I: 40 or more master's degrees per year across three or more disciplines.
- Master's Colleges and Universities II: 20 or more master's degrees per year.

Baccalaureate Colleges

- Baccalaureate Colleges—Liberal Arts: At least half of their baccalaureate degrees in liberal arts fields.
- Baccalaureate Colleges—General: Less than half of their baccalaureate degrees in liberal arts fields.
- Baccalaureate/Associate's Colleges: bachelor's degrees accounted for at least ten percent of undergraduate awards

Associate's Colleges

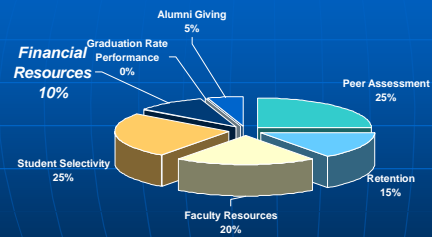
Specialized Institutions

Tribal Colleges and Universities

Source: The Carnegie Foundation for the Advancement of Teaching, Classification of Institutions of Higher Education



Ranking Weights US News Ranking of Master's and Comprehensive Colleges



Source: US News and World Report



A Brief History of College Rankings

- First American higher education rankings were published in 1910 by James McKeen Cattell entitled, "American Men of Science"
- First reputational rankings appeared in 1925
- Carter's 1965 report "An Assessment of Quality in Graduate Education" evaluated 106 institutions on two criteria: quality of graduate faculty and rating of doctoral training
- First professional school rankings appeared in 1973...found a low correlation between the ranking of the total institution and its professional school



Assuring Performance and Accountability

Performance Indicator
Systems and Program
Approval



Performance Funding, Budgeting, and Reporting

- Affects funding in 36 states and reporting requirements in 39
- Reporting is more cost-saving than funding
- Surge in reporting after the State-by-State Report Card
- Funding ranges from 1 to 3 percent
- Common Indicators
 - Graduation Rates
 - Placement Rates
 - Retention Rates
- Shift from inputs in the budget process to outcomes produced by institutions

Sources: Bedard-Voorhees (2004), Burke & Minnassians (2001), National Center for Public Policy and Higher Education (2002).



New Program Approval at the State Level, Budget and Financial Elements

- A. Projected FTE enrollment (4 years)
- B. Anticipated revenue for the program (4 years)
 - Student Tuition
 - Fees
 - Grants
 - Gifts
 - Other
- C. Projected new personnel and expenditures (4 years)
 - Faculty FTE
 - Salaries and Fringe
 - Supplies
 - Equipment

Source: Minnesota State Colleges and Universities, Research and Planning Office.

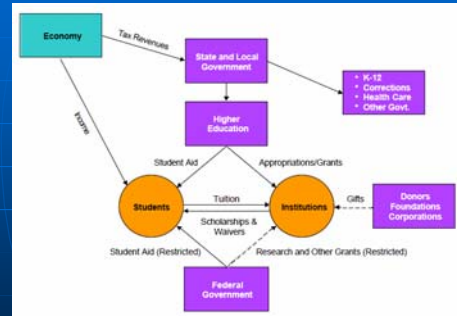


Promoting Efficiency

The Use of Formulae in Determining Institutional Allocations



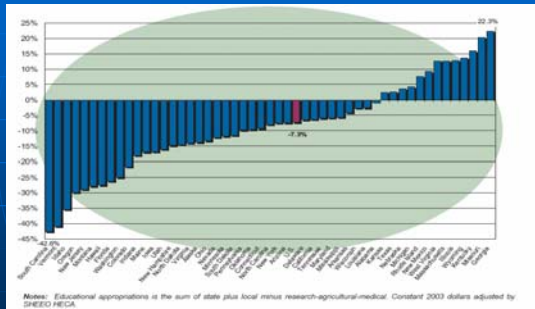
Flow of Funds



Source: Jones, D. (2003) Aligning Fiscal Policy with State Objectives in Policies in Sync: Appropriations, Tuition, and Financial Aid for Higher Education



Education Appropriations per FTE, Percent Change by State Fiscal 1991 to 2002



Notes: Educational appropriations is the sum of state plus local minus research-agricultural-medical. Constant 2000 dollars adjusted by SREED/NECA

Source: State Higher Education Executive Officers, State Higher Education Finance FY2003



Elements in State Formulae

- Headcount enrollment, usually to fund student services
- Number of positions, usually as a percentage of enrollment
- Square footage or acreage (utilities may be separate)
- FTE students or staff
- Credit hours, usually different funding rates by field of study (CIP Codes) and level of courses
- Institutional classification
- Institutional performance. Graduation rates, placement rates,
- Organized research, either a percentage of instruction or an amount that matches incentive funds
- Public service, either a percentage of instruction, a certain amount per continuing-education

Source: MGT of America, Funding Formula Use in Higher Education



Examples of Factors in Used to Determine State Allocations to Institutions

Instruction	Academic Support	Student Services	Institutional Support	Operations and Maintenance of Plant
<ul style="list-style-type: none"> ■ FTE Students ■ Institutional Type ■ Student Level ■ Program Mix 	<ul style="list-style-type: none"> ■ Faculty Headcount ■ Student Headcount ■ Program Array ■ Research and Public Service Activities 	<ul style="list-style-type: none"> ■ Student Headcount ■ Full-time/Part-time Student mix 	<ul style="list-style-type: none"> ■ Number of Employees ■ Mission-Specific Activities and Institutional Complexity 	<ul style="list-style-type: none"> ■ Square Footage ■ Acreage Maintained ■ Building Utilization ■ Type of Building Construction



Examples of Formulae Used to Manage Faculty Allocations

- Student/Faculty Ratios and CIP Codes**
 - An institution generating 28 FTE students in upper division Agricultural Sciences classes would earn 2 FTE faculty. (student/faculty ratio = 14)
 - An institution generating 16 FTE students in graduate Engineering classes would earn 4 FTE faculty. (student/faculty ratio = 4)
 - A vocational institution generating 100 FTE in nursing would earn 10 FTE faculty.



Promoting Workforce Development

Policy Imperatives



Workforce Development and Financing

- Identify state needs based on capacities of the workforce, the needs of existing employers, and the needs of the employers that state would like to attract;
- Analyze the programs and institutional resources that can serve adult learners, and determine whether state policies and practices promote greater participation and success.
- Set explicit statewide goals and develop statewide strategies for reaching these goals, as well as for monitoring the state's progress;
- Determine which goals require direct state action and state subsidy—take action and allocate resources to achieve these goals

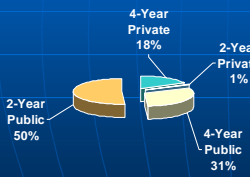


Source: Voorhees, R. & Lingenfelter, P. Adult Learners and State Policy

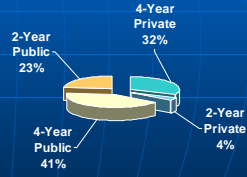


Adult Enrollment by Sector as Percent of Total Enrollment

Part-Time Adult Enrollment



Full-Time Adult Enrollment



Source: National Center for Education Statistics, Fall 1999 IPEDS Enrollment. Cited in Voorhees & Lingenfelter

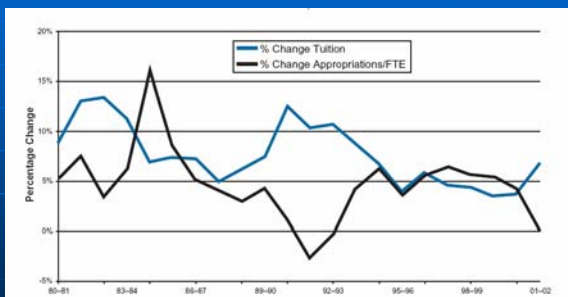


Promoting Access

The Use of Student Financial Aid to Meet Access Goals



Annual Percentage Change in Institutional Appropriations and Tuition at Public 4-Year Institutions in Current Dollars, 1980-81 to 2001-02



Source: College Board, Trends in College Pricing 2003



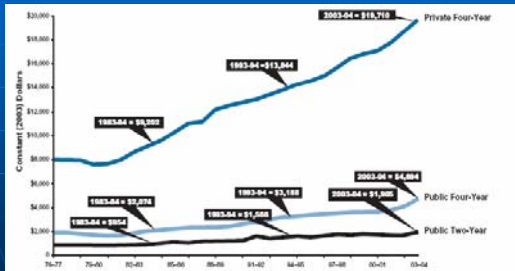
Average College Costs, 2003-04

	4-year public colleges			4-year Private colleges		2-Year Colleges
	Residen	Commute	Out-of-State	Residen	Commute	Commute
Tuition and fees	\$4,694	\$4,694	\$11,740	\$19,710	\$19,710	\$1,905
Books and Supplies	817	817	871	843	843	745
Room and Board	5,924	5,796	5,942	7,144	6,476	5,681
Transportation	743	1,052	743	661	990	1,083
Other	1,737	1,900	1,637	1,183	1,434	1,567
Total	\$13,833	\$14,259	\$20,879	\$29,541	\$29,453	\$10,981

Source: College Board, Trends in College Pricing 2003.



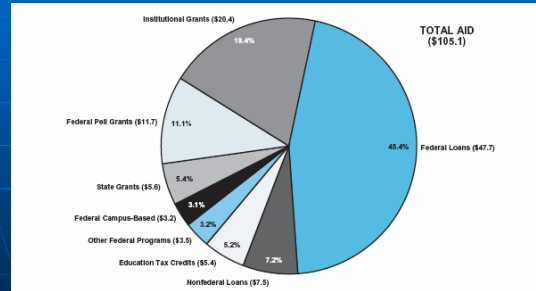
Average Tuition and Fee Charges, in Constant Dollars 1976-77 to 2003-04



Source: College Board, Trends in College Pricing 2003.



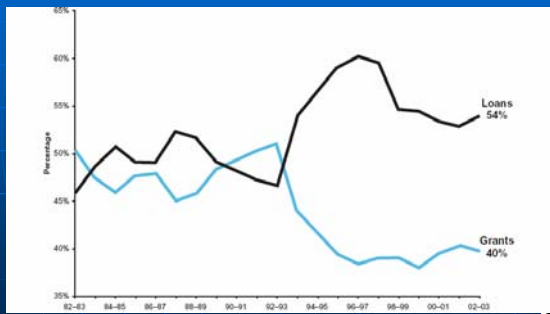
Estimated Student Aid by Source for Academic Year 2002-03



Source: College Board, Trends in Student Aid 2003



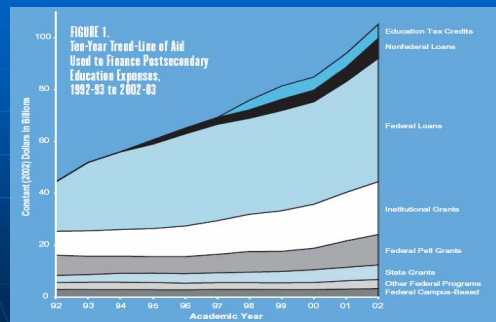
History of Grants v. Loans



Source: College Board, Trends in Student Aid



Trends in Aid used to Finance Postsecondary Education Expenses



Source: College Board, Trends in Student Aid 2003



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