

**MEMORANDUM**

**To:** Board of Regents  
**From:** Board Office  
**Subject:** Interim Unit Cost Study  
**Date:** July 6, 2001

**Recommended Action:**

Receive the interim unit cost study.

**Executive Summary:**

The Board of Regents' strategic plan outlines its accountability objective in Key Result Area 4. The Board is charged with exercising effective stewardship of the Regent institutions.

On a biennial basis, the Regent universities compile and report to the Board the unit costs of instruction. During the biennial unit cost report presented to the Board in June 2000, the Board requested that an interim report with comparative data be presented in 2001. Data comparable to the Regent unit cost of instruction information is not readily available due to the diverse ways in which states fund higher education institutions. In fact, national research entities suggest great caution regarding the limitations of comparative cost reporting for colleges and universities. There are no standard definitions or consistent criteria used to establish reliable comparative college and university data.

The Regent universities, however, have prepared unit cost calculations in alternate years since FY 1969. These calculations allow for comparable Regent data over time. Unit cost represents the general cost of instructing a full-time equivalent (FTE) student at a given level. The Board considers historical unit cost information when establishing tuition rates, reviewing the program emphases of the universities, and measuring instructional productivity and cost benefits. The Regent undergraduate unit cost is used as a basis to determine the funding goal for the Iowa Tuition Grant Program.

The state of Iowa does not appropriate funds for public higher education on a per student basis. Therefore, the unit cost calculation should not be utilized for this purpose. No state supports its public colleges and universities on a per student basis.

A unit cost of instruction is not prepared for other institutions of higher education in the state of Iowa.

## **Background and Analysis:**

During the Board's discussion of the biennial unit cost of instruction report at the June 2000 meeting, the Board requested that an interim report, with comparative data, be presented. The following sections highlight several national publications outlining comparative costs of colleges and universities, an update of the Regent unit cost of instruction for FY 2000, and some data regarding community college costs, taken from public audit reports.

### **National Unit Cost Discussion**

National unit cost of instruction data is currently not available. As indicated in the 1998 Report of the National Commission on the Cost of Higher Education, "Straight Talk About College Costs and Prices Report," no universal definitions exist to describe costs for colleges and universities. Defining a term such as "college costs" is not just a technical sidenote; it is a major semantic challenge. The Report attempts to clarify and distinguish multiple definitions.

The Commission's report and other national education organizations identify numerous limitations associated with comparing college cost data. The diverse nature of higher education institutions, for example, presents significant challenges in any comparative research. Higher education institutions vary in size and include public, private, comprehensive, research, two-year, four-year, broad-based curriculum, and singular-focus curriculum institutions.

The Report also states that there are wide disparities in expenditure levels between and among different instructional levels and disciplines. For example, courses in the "hard" sciences are typically more expensive to offer than courses in the humanities or social sciences. The Report further indicates that allocations of costs among teaching, research, and service are difficult to determine and equally hard to understand and discuss.

The Report identified the instructional cost per student for four-year public institutions for FY 1996 as \$12,416, but the detailed methodology for its calculation was not available. The definition for cost per student is "the average amount spent annually to provide education and related services to each full-time equivalent student." For reference, the Regent composite undergraduate unit cost of instruction was \$6,860 for FY 1995 and \$7,340 for FY 1997. The Regent overall composite unit cost was \$9,047 for FY 1995 and \$9,824 for FY 1997.

For many years, the National Association of College and University Business Officers (NACUBO) tried to develop a common formula for explaining college costs. NACUBO is continuing to discuss this subject. The NACUBO review recognizes that no national or common language exists, that types of institutions vary greatly, and that comparative cost measurements are merely one of several key indicators for institutions. In order to have meaningful comparisons, other factors would need to be analyzed, including qualitative and contextual information on missions, educational characteristics, and the nature and scope of services provided by higher education institutions.

NACUBO has recently issued a cost-related report that cited two major areas of difficulty in gathering accurate, comparative data: no well-established definitions for such terms as “full time equivalent student”; and the lack of consistency in institutional reporting. The NACUBO report also states:

- “There is no way to establish truly homogeneous peer groups for institutions. Major factors, such as mission, location, academic preparation of entering students, local area salary levels, local non-salary costs, and methods of financing, create unique financial and operating patterns.”
- “There is not a typical institution ... Diversity is clearly a characteristic — and a great strength—of higher education.”

The Regent peer group review process should be distinguished from the unit cost discussion above. Over 14 years ago, the universities and the Board Office conducted a study to determine a peer group of institutions for each university. The Board of Regents challenges its institutions to become the best public education enterprise in the United States; therefore, great effort is exerted to identify quality components of comparativeness. To become the best, comparisons with quality universities are essential. The evaluation to establish an appropriate group of peer institutions for each university includes factors such as type of institution, national status/rankings, research category, taxonomy of programs, enrollments, program mixes, grant awards, distinguished faculty, and ownership/governance style.

The Board utilizes data from the established peer groups on a routine basis in analyses of faculty salaries and benefits, tuition and fees, room and board rates, tenure, and graduation rates.

#### Regent Unit Cost of Instruction

The Board of Regents mission statement challenges its institutions to become the best public education enterprise through unique teaching, research, and outreach programs. The Board’s tripartite mission is clearly articulated in each of the university’s mission statements.

The Regent universities have prepared general fund unit cost calculations in alternate years since FY 1969. This information is compiled to analyze unit cost changes over time, assist in the Board’s tuition rate discussion, review program emphases, and measure productivity and cost benefits consistent with the Board’s stewardship responsibilities.

In its simplest terms, an average cost of instruction could be determined by dividing total costs by the total number of students. However, the cost of instruction varies significantly according to student level and educational programs offered at each institution. The unit cost of instruction determines which institutional costs are related to instruction and classifies these costs according to student level. Since inception, the Regent formula for computation of the basic unit cost has remained essentially unchanged. FTE enrollments are based on 31 credit hours per student per fiscal year for undergraduates.

The level of educational programs offered at a Regent university significantly affects costs. The unit costs of instruction are calculated assuming that instructional costs vary by student levels. A unit cost is determined for each of five student educational levels: lower division (freshman, sophomore), upper division (junior, senior), master's, advanced graduate (i.e. Ph.D.), and professional (i.e. MD, DVM, DDS, JD). The Regent universities have substantial responsibilities and costs associated with the more costly graduate and professional programs. The graduate and professional unit cost information is not presented within this interim report.

The nature of programs offered at the Regent universities affects costs in distinct ways. Higher cost undergraduate programs such as engineering, the physical and biological sciences, and pharmacy are prevalent at the Regent universities. The University of Iowa, for instance, offers undergraduate degrees in microbiology and biochemistry and has a large number of students enrolled in pre-medicine and pre-dentistry programs. Iowa State University offers degrees in agriculture and molecular biology and has a large number of students enrolled in pre-medicine and pre-veterinary medicine programs. Providing these various educational opportunities makes for a dramatically diverse cost structure.

Expenditures used for the unit cost computation include those for instruction, research, academic support, student services, institutional support, and plant operations and maintenance (excluding building repairs). Expenditures for building repairs, public service, scholarships and fellowships, auxiliary enterprises, and health care units are excluded from the computation because such items are not considered to be a cost of instruction.

**REGENT UNIT COST OF INSTRUCTION  
FY 2000**

	<b>SUI</b>	<b>ISU</b>	<b>UNI</b>	<b>COMPOSITE</b>
Lower Division	\$6,501	\$7,017	\$6,081	\$6,628
Upper Division	10,156	9,813	9,290	9,802
Overall Undergraduate	8,378	8,563	7,978	8,365

In calculating the unit cost of instruction for FY 2000, the universities allocated costs between variable and fixed costs.

- Variable costs of instruction are those costs which change in proportion to the number of students. These costs include direct instructional costs, general administration, and student services and are computed by subtracting specified fixed costs from total costs.
- Fixed costs include research, library books, physical plant operations, and equipment. These costs are expected to remain stable within a reasonable enrollment range.

**REGENT VARIABLE COST OF INSTRUCTION  
FY 2000**

	<b>SUI</b>	<b>ISU</b>	<b>UNI</b>	<b>COMPOSITE</b>
Lower Division	\$5,247	\$5,084	\$4,220	\$5,004
Upper Division	8,208	7,287	7,302	7,653
Composite Undergraduate	6,768	6,289	6,071	6,454

**REGENT FIXED COST OF INSTRUCTION  
FY 1999**

	<b>SUI</b>	<b>ISU</b>	<b>UNI</b>	<b>COMPOSITE</b>
Total Fixed Costs	\$57,101,685	54,102,736	20,742,597	\$131,947,018
Composite Fixed Unit Costs	2,331	2,293	1,790	2,211

Data on Higher Education Institutions in Iowa

For the last two years, the Legislative Fiscal Bureau (LFB) has prepared a summary table of education funding for Iowa students. The table identifies the various educational groups that receive state funding (K-12 public schools, the Regent special schools, community colleges, private colleges, and the Regent universities), uses the amount of state, local, and federal funding, and determines an education dollar amount per Iowa student based on reported headcounts. The LFB spreadsheet for FY 2000, for example, shows state funding per Iowa Regent student at a substantially higher amount than the per student funding for Iowa community college students.

Pursuant to legislative request, the Board Office has provided the following comments about this data to the LFB and the Legislative Fiscal Committee:

The state traditionally has not funded its state universities on a per "pupil" or student basis. The mission of each state university has three distinct components: teaching, research, and service/outreach. The Regent universities have extensive research and service activities, supported in part by the state appropriations, that make comparisons with the other sectors difficult.

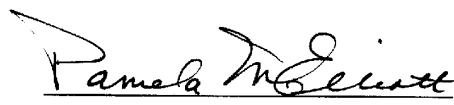
The level of educational programs offered at an institution (graduate vs. undergraduate) significantly affects costs. The Regent universities assess educational costs by undergraduate, graduate, and professional education. Costs associated with undergraduate education are further detailed between upper division (junior and senior) and lower division (freshman and sophomore). The Regent universities have substantial responsibilities and costs associated with the more expensive graduate and professional programs such as engineering, medicine, and dentistry.

The type of educational programs offered at each higher education institution affects costs in distinct ways. The Regent universities have a responsibility to offer undergraduate instruction in areas such as engineering, the physical and biological sciences, architecture, and pharmacy – these are generally more costly than many other undergraduate offerings. The University of Iowa, for instance, offers undergraduate degrees in microbiology and biochemistry and

has a large number of students enrolled in pre-medicine and pre-dentistry programs. Iowa State University offers degrees in agriculture and molecular biology and has a large number of students enrolled in pre-medicine and pre-veterinary medicine programs. Providing these educational opportunities makes for a dramatically different cost structure, a factor that should be recognized in an analysis of data that is intended to be comparative.

The methodology used to make the calculations purports to be based on head count student enrollments rather than full-time equivalent (FTE) students. When analyzing dollars per unit, FTE students would be more comparable. For example, one FTE student could be one student taking five courses or five students taking one course each. In either of these situations, the equivalent numbers of student spaces are needed. However, the cost per student utilizing a headcount enrollment is seriously diluted. If the average cost of providing five student spaces is \$10,000, the cost per student calculation based on headcount is \$2,000 whereas the calculation based on an FTE student is \$10,000.

All of the mentioned reports are available as part of the Regent Exhibit Book.

  
Pamela M. Elliott

Approved:   
Frank J. Stork