

**INSTRUCTIONAL COSTS AND  
PRODUCTIVITY: A COMPARISON  
BETWEEN THE SOUTH DAKOTA  
REGENTAL SYSTEM AND  
NATIONAL BENCHMARKS**

**RESULTS OF THE 2000 NATIONAL  
STUDY OF INSTRUCTIONAL COSTS  
AND PRODUCTIVITY**

**SOUTH DAKOTA BOARD OF REGENTS  
UNIFIED SYSTEM OF PUBLIC HIGHER EDUCATION**

## Executive Summary

Based on the results of the 2000 National Study of Instructional Costs and Productivity, the South Dakota Regental System of Higher Education's instructional costs were lower than national benchmarks while at the same time its faculty members had higher levels of instructional productivity. In comparison to national benchmarks, the Regental system:

- Had lower average instructional expenditures per student credit hour (\$144 vs. \$203) and per student (\$3,932 vs. \$5,645);
- Had a slightly lower average percentage of instructional expenditures dedicated to personnel costs (90% vs. 93%);
- Average faculty member taught more students (17.9 vs. 16.5), more total student credit hours (257 vs. 237), more undergraduate student credit hours (238 vs. 226), and more organized class sections (4.3 vs. 3.6, includes labs);
- Had a higher percentage of undergraduate organized class sections taught by regular faculty members (86% vs. 75%), a higher percentage of undergraduate lower division lecture/seminar class sections taught by regular faculty members (79% vs. 66%) and a higher percentage of undergraduate lab sections taught by regular faculty members (74% vs. 41%).

***Compared to national benchmarks, the Regental system had lower instructional costs and higher instructional productivity levels.***

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## Introduction

In Spring 2001, each of the Regental universities submitted data directly to the University of Delaware for inclusion in the National Study of Instructional Costs and Productivity. Using data submitted by universities across the nation, project staff develop national benchmarks for instructional costs and productivity on an annual basis. Results from the 2000 study were returned in Fall 2001.

The purpose of this report is to provide the results from the Regental universities participation in the study on a system-wide basis. While the information in this report is useful for academic management purposes, it also allows the Board of Regents to demonstrate to legislators and the public, how the system compares against national benchmarks for instructional costs and productivity.

### ***What is the purpose of the National Study of Instructional Costs and Productivity?***

The purpose of the national study is to establish national benchmarks for instructional cost and productivity comparisons. The study was originally established in 1992 and was funded by a FIPSE grant to the University of Delaware. The national director of the study is Dr. Michael E. Middaugh. A total of 153 universities participated in the 2000 study. The types of institutions, by Carnegie Classification, included research (48), doctoral (27), comprehensive (65), baccalaureate (12), and engineering (1).

Universities choosing to participate in the study share data on faculty teaching loads, instructional costs and productivity. Based on the collected data, national benchmarks are established at the academic discipline level. These benchmarks are available by Carnegie Classification, highest degree awarded and percentage of student body consisting of undergraduate students. By comparing its results against national benchmarks, a university gains useful academic management information regarding instructional costs and productivity.

## Data Collection Procedures

With assistance from Regents Information Staff, data collection procedures were performed at each of the Regental universities in accordance with the directions provided by the national director of the study. For each budgeted academic discipline, instructional workload data was submitted for the Fall 1999 semester. Cost and productivity data were submitted for Fiscal Year 2000. Student credit hour data were submitted for the major terms in Academic Year 1999-00.

## Compilation of Results

Data files containing the institutional results and national norms were received from the national director of the study. For the purpose of this report, results were compiled at the system level.

### ***How were national benchmark data compiled for comparison against institutional results?***

Institutional results were supplied by the national director at the discipline level. For each discipline, the local results for 2000 were matched with the 2000 national benchmark for that discipline based on CIP code and the highest academic degree awarded. National benchmarks were available for the majority of the academic disciplines within the Regental system.

### ***How were system-wide results compiled from the institutional data?***

After each institution's academic programs were matched with the corresponding national benchmark, the information for the six universities were aggregated into a single system-wide file. In order to calculate overall system and national means, discipline data were weighted to reflect differences in population characteristics.

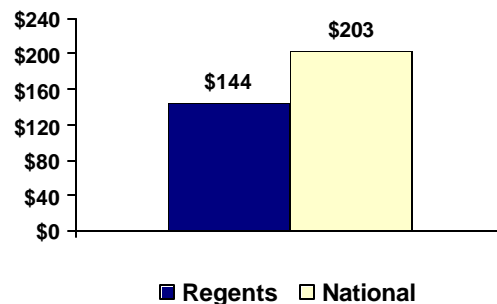
## Instructional Costs

Instructional costs were studied by examining direct instructional expenditures per student credit hour and per full-time (FTE) student.

### ***Were instructional costs for delivering a student credit hour in the Regental System above or below national benchmarks?***

The average instructional expenditure for delivering a single student credit hour within the Regental system was below the national average. The average instructional expenditure per student credit hour within the Regental system was only \$144 while the national average was \$203. (Graph 1)

**Graph 1. Average Instructional Expenditure per Student Credit Hour**

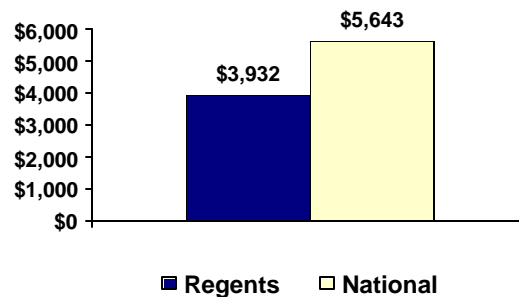


Source: 2000 National Study of Instructional Costs and Productivity

### ***Were instructional costs per full-time student in the Regental System above or below national benchmarks?***

The Regental system had an average instructional expenditure per full-time (FTE) student that was well below the national benchmark. The average instructional expenditure per FTE student within the Regental system was only \$3,932 while the national average was \$5,643. (Graph 2)

**Graph 2. Average Instructional Expenditure per FTE Student**



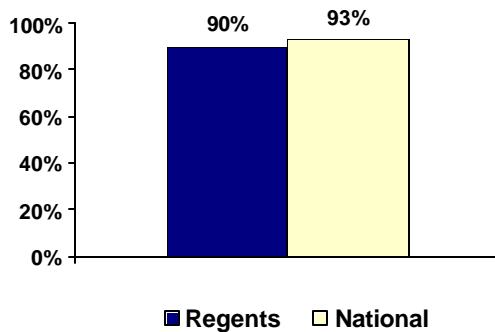
Source: 2000 National Study of Instructional Costs and Productivity

*The average instructional expenditure per FTE student within the Regental system was only \$3,932 while the national average was \$5,643.*

**What percentage of instructional expenditures were dedicated to personnel costs and how does that compare against national benchmarks?**

According to the results of the study, 90% of the direct instructional expenditure were dedicated to personnel costs. The Regental system's percentage was slightly lower than the national benchmark of 93%. (Graph 3)

**Graph 3. Average Personnel Cost as % of Direct Instructional Expenditure**



Source: 2000 National Study of Instructional Costs and Productivity

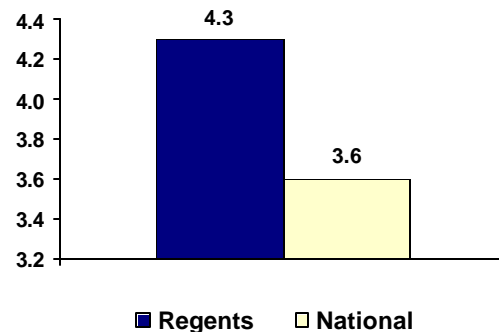
### Instructional Productivity

Instructional productivity measures in the Cost Study included number of sections taught, number of students taught and number of student credit hours taught. The results also indicate the percentage of courses taught by each of the different types of faculty members. Regular faculty have a recurring contractual relationship with the universities and include tenured, tenure-track and non-tenure track faculty. Other faculty types include supplemental (adjunct) faculty and graduate assistants.

**Were faculty teaching loads in the Regental system higher or lower than national benchmarks?**

The average faculty teaching load in the Regental system was higher than the national benchmark. The average number of course sections (including labs) taught by faculty in the Regental system was 4.3 sections while the national benchmark was 3.6 sections. (Graph 4)

**Graph 4. Average Number of Organized Class Sections (including Labs) per FTE Faculty (Fall 1999)**



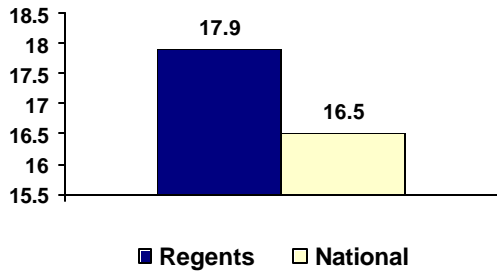
Source: 2000 National Study of Instructional Costs and Productivity

*The average faculty teaching load in the Regental system was higher than the national benchmark.*

**Was the number of students taught by Regental faculty members higher or lower than national benchmarks?**

The number of students an average faculty member taught each semester in the Regental system was higher than the national benchmark. In the Regental system, the average faculty member taught 17.9 students per semester. The national benchmark was 16.5 students per semester. (Graph 5) These numbers are not a reflection of average class sizes. The difference in the average number of students taught is driven by the aforementioned difference in the average number of course sections taught per faculty member.

**Graph 5. Average Number of FTE Students Taught (Fall 1999)**

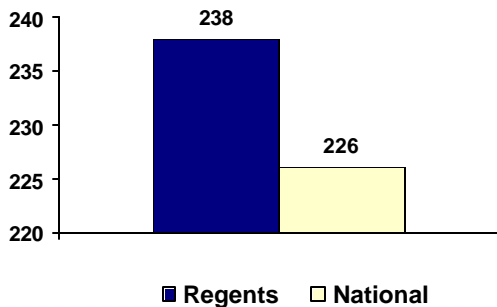


Source: 2000 National Study of Instructional Costs and Productivity

***Was the number of student credit hours taught by Regental faculty members higher or lower than national benchmarks?***

The average number of undergraduate student credit hours taught per faculty member in the Regental system was higher than the national benchmark. In the Regental system, the average number of undergraduate student credit hours taught per faculty member was 238 hours. The national benchmark was 226 hours. (Graph 6)

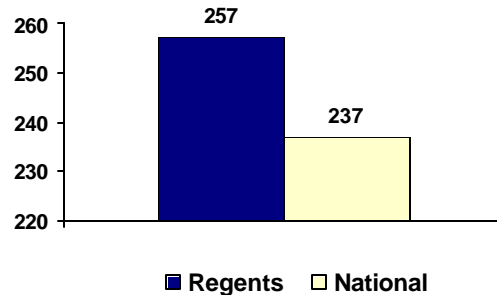
**Graph 6. Average Number of UG Student Credit Hours Taught per FTE Faculty (Fall 1999)**



Source: 2000 National Study of Instructional Costs and Productivity

The average number of total student credit hours (undergraduate plus graduate) taught per faculty member in the Regental system was also higher than the national benchmark. The average faculty member in the Regental system taught 257 total student credit hours. The national benchmark was 237. (Graph 7)

**Graph 7. Average Number of Total Student Credit Hours Taught per FTE Faculty (Fall 1999)**

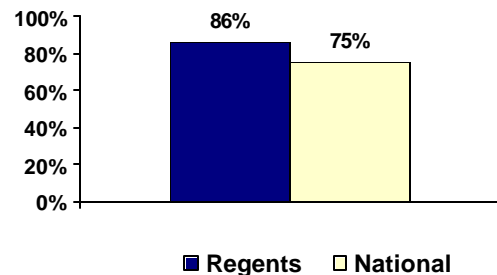


Source: 2000 National Study of Instructional Costs and Productivity

***Was the percentage of undergraduate courses taught by regular faculty members in the Regental System higher or lower than national benchmarks?***

The average percentage of organized class sections at the undergraduate level that were taught by regular faculty members in the Regental system was higher than the national benchmark. In the Regental system, 86% of the organized class sections taught at the undergraduate level were taught by regular faculty members while the national benchmark was 75%. (Graph 8)

**Graph 8. Average % of Undergraduate Organized Class Sections Taught by Regular Faculty (Fall 1999)**

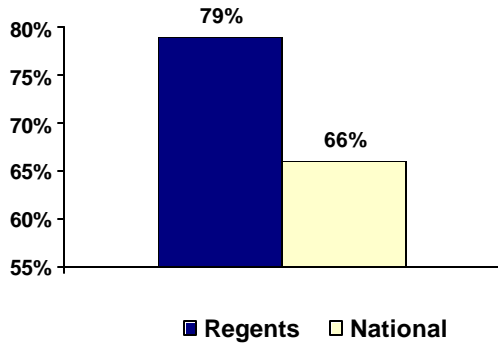


Source: 2000 National Study of Instructional Costs and Productivity

***A greater percentage of the undergraduate course sections in the Regental System were taught by regular faculty members as compared to the national benchmark.***

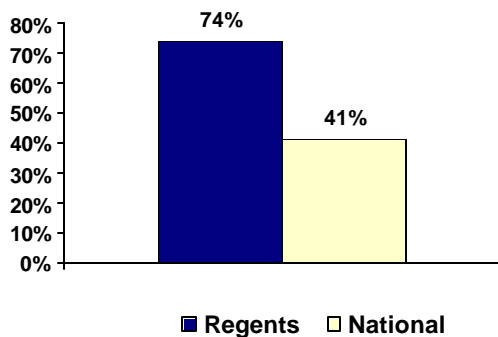
The average percentage of lower division undergraduate courses and the average percentage of undergraduate lab sections in the Regental system taught by regular faculty members were also higher than national benchmarks. (Graphs 9 & 10)

**Graph 9. Average % of Lower Division Undergraduate Organized Class Sections Taught by Regular Faculty (Fall 1999)**



Source: 2000 National Study of Instructional Costs and Productivity

**Graph 10. Average % of Undergraduate Lab Sections Taught by Regular Faculty (Fall 1999)**



Source: 2000 National Study of Instructional Costs and Productivity

## Definition of Terms

**FTE:** Full-time Equivalent. Method used to include part-time individuals by adding fractional representations. Example: two half-time individuals would equal one FTE.

**Instructional Costs:** Expenses necessary for the fulfillment of the instructional mission of a discipline or academic program. Includes salaries, benefits, and non-personnel costs (supplies, services, etc.), that are typically part of a department or program's cost of doing business. Excluded from the study are centrally allocated computing costs, centrally supported computer labs and graduate student tuition remission and fee waivers.

**Instructional Productivity:** Indicators of instructional workload. Usually measured in terms of the number of sections, credit hours, or students taught.

**Lower Division:** Courses typically associated with the first and second year of college study.

**Organized Class Section:** A course which is provided principally by means of regularly scheduled classes meeting in classrooms or similar facilities at stated times.

**Personnel Costs:** Expenditures related to the payment of salaries and benefits for individuals performing instructional functions within the discipline or academic program.

**Regular Faculty Members:** members of the instructional faculty with a recurring contractual relationship with the university. Includes: tenured faculty, tenure-track faculty, and non-tenure track faculty.

**Weighted Data:** Data whose values have been adjusted to reflect differences in the number of population units that each case represents.