FACULTY PRODUCTIVITY ISSUES IN THE STATE UNIVERSITIES

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JANUARY 2002

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EXECUTIVE SUMMARY

PURPOSE OF STUDY

The following report provides an analysis of the issue of faculty productivity from both a national perspective and from a detailed examination of ten public universities in Florida. Using detailed longitudinal data for the past ten academic years, as provided by these universities and by the Division of Colleges and Universities, this legislatively mandated report attempts to simplify, to the extent possible, the accounting of faculty workload within the context of the unique mission and goals of each university.

OBJECTIVES

This study has five interrelated objectives:

1. to ensure a complete understanding of the current state of faculty workload/productivity measurement and research;

2. to determine university workload policies and/or measures in place in Florida public universities in support of effective management of faculty resources;

3. to identify those workload policies and/or measures in place in other states that would likely be helpful in establishing guidelines for best practices;

4. to identify longitudinal trends in the productivity of state university faculty and other instructional positions; and

5. to evaluate trends in assigning faculty teaching, research, and service responsibilities.

THE NATIONAL ISSUE OF FACULTY PRODUCTIVITY IN HIGHER EDUCATION

As efforts to measure faculty productivity have become more refined over the years, researchers have confronted some of the challenges that have historically plagued such research. In particular, recent studies have addressed:

- definitions of faculty included in workload and productivity analyses;

- the transition from a focus on input measures to a focus on output measures; and

- development of measures related to quality in addition to those that are quantitative in nature.

Establishing successful models that assess faculty work productivity must be accomplished through appropriate comparisons among peer institutions. In light of the fact that faculty activities differ greatly across institutional types, it would be imprudent to compare all institutions, regardless of type, to a single standard. Therefore, peer institutions must be selected and agreed upon by legislative and institutional representatives in order to make appropriate and useful comparisons.

APPROACHES TO FACULTY PRODUCTIVITY ISSUES IN SELECTED SYSTEMS OF HIGHER EDUCATION

Considerable information can be derived from our interviews of State Higher Education Executive Officers (SHEEO) to develop best practice guidelines for measuring faculty productivity in the State of Florida. In view of trends and practices in other states, the following issues should be considered in refining a faculty productivity model for Florida.

- National faculty performance benchmarks (such as the Delaware Study) should be systematically applied by all institutions. Otherwise, statewide performance data are limited in usefulness.

- National benchmarking should involve peer institution comparisons by academic discipline and department level, as recommended in the Delaware Study.

- Analysis of instructional activities alone provides an incomplete picture of faculty activities. Research and service activities, with a focus on outcomes, should be included in analyses of faculty productivity.

- Outcome assessments involving input from current students, graduating students, alumni, and employers have provided useful feedback in other states concerning outcomes resulting from faculty activities.

- The most innovative approaches to faculty productivity that we observed involved embedding faculty productivity within outcome measures of institutional effectiveness. The focus on overall institutional effectiveness outcome measures is intended to promote accountability and effectively communicate objectives and accomplishments of higher education to all key constituents (students, legislators, parents, employers, and others).

- Published reports on institutional effectiveness can serve to guide policymakers with information to support effective crafting or revising of policies to promote continuous improvement and accountability.

FLORIDA PUBLIC UNIVERSITY APPROACHES TO MEASURING FACULTY PRODUCTIVITY

The data on faculty productivity contained in this report make clear that all of the Florida's public universities have in place a system by which faculty productivity and effectiveness are monitored and evaluated. Although the methods employed may vary

to some degree across universities, a few notable points about these procedures are evident:

- Each of the universities have established procedures for assigning, measuring, and reporting faculty activity that are derived from and adhere to Florida's "12-Hour" law, which requires that full-time equivalent faculty spend at least twelve contact hours per week in instructional activities.
- Measures of productivity are specifically tailored to each institution.
- Measures of faculty productivity focus on all aspects of faculty activity, i.e. instruction, research, and service.
- Faculty Productivity is a crucial element of the review process for individual faculty members.
- Measures of productivity are used to rationally allocate institutional resources.

OVERVIEW OF FACULTY PRODUCTIVITY AT FLORIDA'S PUBLIC UNIVERSITIES

- Across all of the institutions, tenured and tenure track faculty comprised slightly more than half of all university instructional staff (54.7%) in 1999-00, having declined about ten percent since 1991-92.
- While FTE enrollments at the state universities grew almost 33 percent between 1991-92 and 1999-00, the number of FTE tenured and tenure earning faculty grew only 19.9 percent. The institutions have utilized non-tenure track faculty and graduate student assistants to fill additional academic positions needed to accommodate the expanding enrollments.
- Formal class lectures comprised 60% of total class sections offered in 1999-00. The next most frequent course section types offered during that year were directed study (8.8%) and laboratories (8.1%).
- Tenured and tenure-earning faculty provided the majority of instructional effort and generated more than half of the student credit hours over the last nine years.
- Average class size declined slightly between 1991-92 and 1999-00.
- Lower level instructional effort was primarily provided by staff other than tenured or tenure earning faculty.
- Tenured and tenure-earning faculty produced in 1999-00 almost 375 student credit hours per FTE across all of the institutions.
- In 1999-00, tenured and tenure earning faculty spent almost two-thirds (61%) of classroom contact hours and equivalencies in credit generating

instruction. The other 39 percent were spent on non-credit generating activities such as research, public service, and student advising.

- Contract and Grant expenditures for the ten universities totaled almost $900 million in 1999-00.

When all of these conclusions are considered together, it is apparent that faculty members have increased their productivity during the 1990s. While the average number of courses taught and contact hours generated by tenured and tenure-earning faculty have remained constant, contracts and grants revenues have increased dramatically, indicating a substantial increase in research activity.

OVERVIEW OF THE POSITION CONVERSIONS ISSUE

Due to the lump sum funding formula used to allocate funds to the state universities, institutions tend to engage in the practice of "position conversions," i.e. the conversion of funds allocated for salaries (positions), for which cost-of-living increases are provided each fiscal year, into non-salary dollars in several program components. Institutions often find this practice necessary to accommodate for normal inflationary increases in non-salary expenditures. Other standard expenses that institutions often face, but for which allocations are not categorically given, include overtime payments and annual and sick leave payouts. These types of expenses are often covered utilizing this practice.

Salary dollars, primarily in the Instruction and Research program component, are overestimated by the institutions in order to provide funds that may then be converted to non-salary dollars for other purposes as specified above. This practice is routine and the universities have authority to make such conversions. The net effect of the conversions are relatively small, as *estimated* and *actual* total expenditures differ by about 2.5 percent across all educational and general (E&G) funds among Florida's public universities.

RECOMMENDATIONS

- Productivity measurement should always encompass both qualitative and quantitative aspects of faculty work, and should include the three major faculty assignments – teaching, research, and service.

- Any productivity improvement strategies deemed necessary by the institutions should be developed collaboratively among all institutional stakeholders – faculty, administrators, and students – and have clear expectations.

- Measurement and focus of faculty productivity, to be meaningful, must be at the individual departmental level within each institution.

- Productivity improvement strategies should be linked directly to the role and mission of the institution as well as to the institutional incentive structure.

- Each university should be encouraged to select peer institutions against which to compare themselves for the establishment of productivity benchmarks.

- If the evaluation of faculty productivity continues to be an issue at the statewide level, faculty performance benchmarks (such as the Delaware Study) should be systematically applied by all institutions in relation to their distinctive peer groups.

FUTURE ISSUES IN FACULTY PRODUCTIVITY

A number of issues related to faculty productivity are raised in this report that bear further study. Additional topics recommended for analysis are as follows:

- A study of faculty productivity issues at Florida's public community colleges and private colleges and universities. As noted, higher education in the state is comprised of many more institutions than the ten included in this report; a study of the productivity of faculty at other institutions would provide a complete picture of the issue.

- An analysis of individual institutional productivity as it compares to relevant state and national peer institutions. Current measures of accountability are of value, but they fail to provide for benchmarks that would facilitate the interpretation of productivity measures. It is also recommended that an evaluation of issues relating to the adoption of a core set of *standardized* measures of faculty productivity across institutions be conducted.

- A continuing evaluation of the state's return on investment in research. A significant portion of faculty effort is devoted to research, which in turn generates tremendous revenues for the state universities. However, very little meaningful data is collected and published at the state level describing what these activities entail, how generated revenues are used, and how research endeavors benefit the state and the universities.

- A study of funding formulas used in other state systems of higher education. Although discussed briefly in this study, the issue of lump sum funding and the resultant practice of position conversion should be more thoroughly analyzed in order to determine what funding models provide the greatest degree of accountability for the expenditure of funds, and what advantages and/or drawbacks may be associated with them.

1.0 INTRODUCTION

The following report provides an analysis of the issue of faculty productivity from both a national perspective and from a detailed examination of ten public universities in Florida. Using detailed longitudinal data for the past ten academic years, as provided by these universities and by the Division of Colleges and Universities, this legislatively mandated report attempts to simplify, to the extent possible, the accounting of faculty workload within the context of the unique mission and goals of each university.

1.1 Project Background and Understanding

Throughout the years, the issue of faculty productivity has continued to resurface throughout American higher education. A number of factors contribute to the continuing interest in this topic:

- Faculty salaries comprise the largest item in the budget of most colleges and universities, making overall institutional costs sensitive to changes in faculty productivity.
- The nature of faculty work makes it difficult to monitor and is thus subject to misinterpretation.
- Higher education leaders have failed to communicate effectively with the public regarding faculty productivity.
- Relatively few states have developed and maintained an effective methodology for regularly assessing and reporting faculty workload data.
- Pressures created from population growth, faltering economies, rising educational costs, and competition for state funding from other public agencies and special interest groups continue to demand greater efficiencies in service delivery.

The convergence of rapid enrollment growth and much slower growth in state revenues has caused a need to examine issues related to the productivity of faculty in the state's

ten public universities.[1] To address this need, the following directive was included as proviso language in the General Appropriations Act passed by the 2001 Florida Legislature:

> The Postsecondary Education Planning Commission, in consultation with the State Board of Community Colleges, the Department of Education and the Board of Regents or their successors shall submit to the Governor, the Speaker of the House of Representatives, and the President of the Senate, the following reports: . . . By December 1, 2001, the results of an evaluation of issues related to the productivity of faculty and other instructional positions and the impact on resource allocation at each university. The analysis shall include, but not be limited to:
>
> *(a) The use of resources budgeted for faculty positions for regular faculty, part-time faculty, graduate assistants and other purposes.*
>
> *(b) An identification of the fiscal impact of the conversion of funds from the Salaries and Benefits expenditure category to the Other Personal Services expenditure category to support non-faculty instructional positions.*
>
> *(c) An identification of the average number of courses taught, the average and median class size of these courses, and the number of student credit hours produced by level per faculty member and other instructional teaching positions.*
>
> *(d) Purposes and outcomes of non-teaching assignments.*
>
> *(e) An identification of the percent of lower level and upper level courses taught by faculty, by rank, and for other instructional positions, by type.*
>
> *(f) Alternative approaches used in other states to address and to increase faculty productivity.*
>
> *(g) An analysis of longitudinal trends in the productivity of faculty and other instructional positions.*
>
> *(h) Additional information needed to support the zero-based budgeting process.*

[1] The 2001 Legislature established New College-USF as a freestanding institution effective July 1, 2001. Although New College has become the 11th public university in the state, no separate data on faculty productivity for it are available for the period covered in the study. Instead, New College data are included in USF numbers.

The Council for Education Policy Research and Improvement (CEPRI, formerly PEPC) contracted with MGT of America to provide assistance in conducting this assigned study of faculty productivity.

1.2 Objectives of Study

This study has five interrelated objectives:

1. to ensure a complete understanding of the current state of faculty workload/productivity measurement and research;

2. to determine university workload policies and/or measures in place in Florida public universities in support of effective management of faculty resources;

3. to identify those workload policies and/or measures in place in other states that would likely be helpful in establishing guidelines for best practices;

4. to identify longitudinal trends in the productivity of state university faculty and other instructional positions; and

5. to evaluate trends in assigning faculty teaching, research, and service responsibilities.

1.3 Methodology and Work Plan

MGT's methodology and work plan included the following key components:

- to meet with Legislative and CEPRI representatives to gain a more complete understanding of the background of the study, findings from prior analyses of related concerns, and specific expectations for this current study;

- to compile and review reports on faculty productivity that have been published over the past decade and to write a literature review focusing on terms and concepts of productivity;

- to conduct a telephone survey of selected State Higher Education Executive Officers (SHEEO) to identify faculty productivity issues in other states;

- to develop a longitudinal database of faculty workload, as provided in information contained in the E&G budget, by institution, including trends in:

  - the distribution of teaching and other academic assignments by rank, college, and department,
  - position conversions,
  - teaching load as measured by credit hours and course sections, and
  - research and other nonteaching assignments.

- to analyze the initial database and identify areas for further investigation;
- to conduct telephone and on-campus interviews with university provosts to clarify existing data, discuss approaches to managing faculty resources, and gain information on additional issues.
- to present periodic status reports to staff to coincide with the meeting schedule for the newly created Council for Education Policy Research and Improvement (CEPRI); and
- to prepare a draft final report, which specifically addresses each study topic and is in a format suitable for incorporation into Council's own report.

1.4 Overview of Florida's State Universities

Prior to July 2001, Florida's ten public universities comprised the State University System of Florida and were governed by a 13 member Board of Regents. The role of the Board was to serve as the statewide governing body for approving and implementing university programs, missions, and fiscal operations in the most responsible manner for Florida's residents. In this capacity, budgets were developed and distributed to the universities, and master and strategic plans and goals were established for the system and individual universities.

Effective July 1, 2001, the Board of Regents was abolished and the Governor appointed a separate Board of Trustees for each university. Although statutorily limited in their ability to fully operate until the 2002 Legislature delegates additional authority to them, Boards are responsible for overseeing the operations of their institution and for

establishing goals and objectives to which the institutions they oversee will aspire to achieve.

There is currently a State University System Strategic Plan in place effective for 1998–2003. This document was created by the former Board of Regents. There is also an overarching Master Plan for all of higher education prepared by the Postsecondary Education Planning Commission, now the Council for Education Policy Research and Improvement (CEPRI), effective for the same time period. Each of these five-year plans addresses the important issue of identifying the distinctive mission of each institution and focusing their resources on identified strengths and priorities. Both plans identify increasing access to students as a top state priority.

The 1998–2003 State University System *Strategic Plan* notes that while the missions of all universities encompass the three traditional roles of teaching, research, and service, varying degrees of emphasis on the mix of these activities among faculty members should be recognized. The Carnegie Commission on Policy Studies in Higher Education developed a system to classify institutions according to mission focus in the early 1970s that is used widely today. It is the framework in which institutional distinctions in U.S. higher education are commonly described.

Six of the ten public state universities in Florida fall into a Doctoral/Research category. University of Florida, Florida State University, University of South Florida, and Florida International University awarded 50 or more doctoral degrees per year across at least 15 disciplines, classifying them as Doctoral/Research – Extensive. Florida Atlantic University and University of Central Florida awarded 20 or more doctoral degrees per year, or at least ten doctoral degrees per year across three or more disciplines, classifying them as Doctoral/Research – Intensive. The remaining four institutions included in this study—Florida Agricultural and Mechanical University, Florida Gulf Coast

University, University of North Florida, and University of West Florida—are classified as Master's Colleges and Universities I, having awarded 40 or more master's degrees per year across three or more disciplines. A complete explanation of these categories is included in Appendix 1A, the *Carnegie Classification of Institutions of Higher Education.*

One of the most relevant aspects of these classifications for purposes of reviewing faculty productivity was noted by PEPC in its 1998 Master Plan *Challenges and Choices* referenced above. With six of the ten universities classified as Doctoral, and the remaining four as Master's Colleges and Universities I, Florida's university system "has grown in mission and scope to be somewhat similar to the University of California model." What is missing in Florida are public four-year "teaching" institutions.

> *The advantages of a "state college system" for providing access versus a "research university model" are lower operating costs, increased emphasis on faculty teaching, a primary focus on undergraduate education, and a limited institutional mission without doctoral programs or a heavy concentration on research." (p. 8)*

It is not being suggested that the ten public universities evaluated in this report are generating insignificant or insufficient amounts of instructional contact hours and student credit hours. However, for at least six of the institutions, research is both expected and required for successful tenure within the academic community. As such, we would expect to find lower teaching loads for tenure and tenure-earning faculty at universities with significant research requirements, most notably those six institutions with the Carnegie Classification of Doctoral, and somewhat higher instructional loads in Master's Colleges and Universities I. The highest teaching loads for tenure and tenure-earning faculty would be expected in the "Baccalaureate Colleges."

1.5 Overview of Remaining Chapters

This report comprises six chapters, including this Chapter. The remaining chapters are:

- **Chapter 2.0 The National Issue of Faculty Productivity in Higher Education**. This chapter provides a comprehensive literature review of faculty workload and productivity issues and provides a context for defining and measuring its various component parts.
- **Chapter 3.0 Approaches to Faculty Productivity Issues in Selected State Systems of Higher Education.** This chapter provides information on alternative approaches used in other states to address and increase faculty productivity, as described in interviews with selected SHEEO agencies.
- **Chapter 4.0 Florida's Public University Responses to Measuring Faculty Productivity.** This chapter provides information collected from Florida's public universities relating to the measurement of university productivity and standards of achievement.
- **Chapter 5.0 Analysis of Faculty Productivity.** This chapter presents detailed information on measures of faculty productivity identified in legislative proviso.
- **Chapter 6.0 Position Conversions.** This chapter provides information on the fiscal impact of the conversion of funds from their original allocation categories to other categories and components within the universities' operating budget.
- **Chapter 7.0 Conclusions and Recommendations.** This chapter summarizes the faculty productivity issue, provides general conclusions based on the study results, and presents policy recommendations for consideration.

1.6 Acknowledgements

The MGT project team would like to thank the staff in the Division of Colleges and Universities of the Florida Department of Education for the considerable time and effort they expended in providing the detailed budget and instructional data files used in this study. Special thanks to Ms. Anne Blankenship and Mr. George Perkins of the Budget Office and Ms. Shirley Roddenberry and Ms. Charlene Coles of the Information Resource Management Office.

2.0 THE NATIONAL ISSUE OF FACULTY PRODUCTIVITY IN HIGHER EDUCATION

2.1 Introduction and Context

One of the more highly charged and controversial topics pertaining to public higher education has been the issue of faculty workload and productivity. Powerful external constituencies—governors, legislators, governing board members, business people, and the general public—see the productivity of the academic enterprise as the key in evaluating higher education's claim on scarce resources. As a result, many state legislatures and policy makers in the early 1990s mandated reports on faculty workload as well as more substantive teaching load requirements for public college and university faculty. Hines and Higham (1996) found that by 1995, 24 states had enacted mandates on faculty workload. Seventeen of these mandates originated from state legislatures, and seven originated from state higher education agencies. Since that time, legislative interest in faculty workload and productivity has declined. A recent study showed that by 2000, other faculty issues (e.g., instructional technology and faculty as a human resource for the state) were among the highest priority faculty issues in the state, whereas workload and productivity was of moderate interest (Russell, 2000). In this more recent study, 34 states reported a mandate on faculty workload, yet the majority (24) of those mandates were from state higher education agencies rather than legislatures.

There are two primary reasons why faculty work and faculty productivity have been in the spotlight in recent years. First, increases in state funding for higher education—the major source of funding for public institution operating expenses—have waned in recent years due largely to increased demands from other state-funded services on already tight state budgets. Second, there is a continuing interest in "accountability" of higher education at state and national levels. The common theme

among these accountability issues is an increased emphasis on quality, outcomes, and product, primarily in the area of undergraduate instruction. Since faculty productivity is a complex issue, this literature review will cover four broad areas:

- issues in defining and measuring faculty workload and productivity;
- existing research and ongoing studies of faculty workload and productivity;
- challenges being addressed by recent research and ongoing studies of faculty workload and productivity; and
- summary and recommendations.

2.2 Issues in Defining and Measuring Faculty Productivity

Faculty workload is generally defined as "time spent on professionally appropriate activities" (Meyer, 1998, p. 30). Yet this simple definition belies the complexities of productivity in the academic setting. There are three interrelated issues that must be considered in approaching the topic of defining and measuring faculty productivity:

- the fundamental differences between academic and industrial settings;
- the content of faculty work; and
- conceptual measurement issues.

2.2.1 Differences Between Academic and Industrial Settings

At the broadest level, *productivity* refers to the way in which an organization transforms inputs (e.g., labor and capital) into outputs (Hopkins, 1990). In industrial settings, productivity is relatively easy to define and measure. One need only take a selected output for a firm and divide by the input of choice (e.g., per worker).

Colleges and universities, however, are not steel mills or auto plants. Although some inputs are quantifiable (e.g., number of students, faculty time), "outcomes are diffuse, and difficult to measure" in higher education (Mingle and Lenth, 1989, p. 13). It is

not unlike measuring the productivity of a surgeon, whose workload cannot be assessed simply by the number of hours spent in the operating room. A number of other inputs, including research, diagnosis, and preparation, require significant time prior to the surgery. Additionally, the results of the surgery (i.e., the outcome) is often difficult to quantify.

Middaugh (2001) argued that those performance measures already in place in a number of states measure neither performance nor productivity. He also highlighted the need for better communication with important constituencies regarding faculty productivity issues. "Unfortunately, colleges and universities have done a horrible job of communicating to external publics, particularly parents and legislators, what faculty are expected to do, what they actually do, and how well they do it." (Middaugh, 2001. p. xv)

Clearly, a critical need exists to develop a set of effective productivity measures that are agreed on by legislative and university representatives, to collect data regularly on these measures, and to report the findings periodically to legislators and the general public.

2.2.2 The Content of Faculty Work

The content of faculty work has come under increased scrutiny in recent years. Some constituencies have posed the question: What is it that faculty do? Historically, faculty work has been comprised of instruction, research, and public service activities.

- Instruction – While teaching usually occurs in the classroom setting, faculty spend considerable outside time in support of their instructional responsibilities, including preparing for lectures, evaluating student performance, advising students, and conducting related administrative tasks (e.g., supervising teaching assistants, preparing student progress reports, or writing reference letters for students). Furthermore, faculty may be asked to design new courses or curricula, adapt existing courses or curricula to new technology, and serve on a variety of ad hoc academic committees (e.g., internal program review for accreditation).

- Research – Many faculty, particularly those at research or doctoral universities, are also required to conduct a program of research related to their discipline or specialty area, to seek external funding to support the costs associated with that research, and to publish their findings.

- Public Service – In addition to disseminating knowledge to students, faculty members sometimes serve as experts or resource persons to benefit local communities, their state, or the nation. Additionally, they often serve their disciplines by taking leadership roles in professional organizations (e.g., president or journal editor), an honor that also reflects well on their institutions.

Beyond these responsibilities, some faculty also serve on university committees (e.g., strategic planning, tenure review) or fill administrative roles such as department chair, which may also require a significant or ongoing time commitment.

2.2.3 Conceptual Measurement Issues

Beyond these distinctive work issues, there are various measurement issues to be considered. The major consideration is related to the types of inputs and outputs present in higher education settings. Hopkins (1990) points out that for institutions of higher education there are both *tangible and intangible* inputs and outputs. Tangible inputs include such things as the number of new students, faculty time and effort, library holdings, and equipment. Intangible inputs include the quality of new students, the quality of the faculty, and so on. Tangible outputs include student enrollment in courses, the number of degrees awarded, and the number of scholarly works produced by the faculty. Intangible outputs include the quality of instruction provided in courses, the knowledge gained by students during their college career, and the quality of faculty scholarship.

Because of these intangible aspects of academic productivity, Hopkins notes that "all efforts to date at specifying and estimating the higher education production function have provided only partial results" (1990, p. 13). Thus, while we may be able to identify certain inputs and outputs in higher education (i.e., the tangible), at this time it is unlikely that productivity in its entirety can be captured and measured as some joint result of the

tangible and intangible. While it can be said that firms in the private sector also must deal with the qualitative aspects of production, it could be argued that it is much less of a measurement issue for the private firm given its primary focus on such quantifiable aspects as unit cost and profit maximization.

The problem of being able to measure only tangible activities is further complicated by the fact that faculty often jointly produce the primary activities of most institutions of higher education (instruction, research, and service). Therefore, evaluating one specific aspect of production (e.g., contact hours in undergraduate courses) without controlling for the other activities engaged in by the faculty provides an incomplete picture of faculty productivity. Further, increasing the production of one of these activities may come at the expense of the other. For example, assuming no increase in faculty resources, increasing faculty productivity in undergraduate education may result in decreased productivity in graduate education and research activities. In fact, one empirical study found that there was a significant tradeoff between teaching productivity and research productivity (Gilmore and To, 1992).[1]

2.3 Existing Research and Studies of Faculty Workload and Productivity

Concerns about the hazards and shortfalls of defining and measuring productivity notwithstanding, a number of approaches have been used to measure faculty workload and productivity. These approaches include faculty activity studies, instructional work-load studies, and noninstructional activity studies (Layzell, 1996).

[1]Some economists have hypothesized that if the production of one service supports another, then the joint production of each may be more efficient than producing each one separately - "economies of scope" (Halstead, 1991). Brinkman (1990) notes that there have been few studies of this issue, although there is some evidence that economies of scope do exist for instruction and research.

2.3.1 Faculty Activity Studies

Faculty activity studies have been done since 1919 and have shown fairly consistent patterns of total hours worked and distribution between the traditional tripartite model (instruction, research, and public service). Exhibit 2-1 provides data from the National Survey of Postsecondary Faculty, a longitudinal study that has been administered in 1988, 1993, and 1999. These data show that, over this 12-year period, the percentage of time devoted to instruction has remained relatively constant. However, variations occur predictably according to institutional type. For example, faculty at research universities spend more time than average in research activities, and faculty at comprehensive and two-year institutions spend more time than average in teaching activities.

EXHIBIT 2-1
DISTRIBUTION OF FACULTY ACTIVITY BY TYPE OF PUBLIC INSTITUTION

FACULTY[a] ACTIVITY	INSTITUTION TYPE											
	RESEARCH			DOCTORAL			COMPREHENSIVE			TWO-YEAR		
	1988	1993	1999	1988	1993	1999	1988	1993	1999	1988	1993	1999
TEACHING	43.6%	40.4%	45.9%	47.8%	46.8%	47.4%	63.5%	60.2%	63.1%	73.3%	68.7%	71.9%
RESEARCH	30.1%	31.5%	25.9%	22.8%	23.8%	19.4%	12.3%	14.0%	11.1%	4.2%	4.5%	3.8%
ADMINISTRATION[b]	13.9%	12.9%	13.1%	14.7%	13.2%	15.2%	12.8%	12.0%	12.8%	10.9%	12.0%	11.5%
PUBLIC SERVICE/OTHER[c]	12.3%	15.2%	15.1%	14.7%	16.1%	18.0%	11.4%	13.7%	13.0%	11.6%	14.6%	12.9%

Source: 1988, 1993, 1999 National Study of Postsecondary Faculty, National Center for Education Statistics

[a] Full-time instructional faculty and staff only.

[b] Includes department or institutionwide meetings or committee work.

[c] Includes public service, professional growth, outside consulting, and noncategorized.

In other studies that have addressed faculty activities, Byrd (1994) strongly advocated the academic department as the standard unit of analysis due to the collaborative nature of most faculty work. In addition, Colbeck (1998) reported that faculty workload studies that ask faculty to report mutually exclusive time spent on teaching, research, or service

result in an underestimation of time spent on all activities. Therefore, the study concluded that increases in faculty productivity, especially at comprehensive universities, may be more likely to occur when faculty are encouraged to integrate multiple activities.

2.3.2 Instructional Workload Studies

Another type of faculty productivity analysis focuses on the instructional workload of faculty. Typically, these studies examine such measures as average course loads, contact hours, and credit loads. Significant variance according to type of institution, academic discipline, and faculty rank is often observed. "Classroom contact hours" are the number of hours spent teaching group instruction courses, while "student contact hours" are the number of hours spent teaching group instruction courses multiplied by the numbers of students enrolled in those courses.

Middaugh (1996) described a method of measuring faculty workload whereby the credit value of a course is multiplied by the head count enrollment and then divided by the total student credit hours per department or program. These measures can then enable a university to examine the instructional productivity and cost ratios among the disciplines on campus. According to Middaugh, when this method was applied to the ongoing *Delaware Study of Instructional Costs and Productivity* consortium (established in 1992), it served to contradict the notion that faculty, particularly those who are tenured or tenure track, do very little teaching. As expected, the *Delaware Study* also showed that faculty instructional workloads were lightest at research universities.

2.3.3 Productivity in NonInstructional Activities

Much of what is known about faculty productivity in noninstructional activities is descriptive and is confined to research activities. However, given the tradeoff between

faculty instructional and noninstructional activities described earlier in this report, these measurements are useful (and necessary) in providing a fuller context for evaluating faculty instructional activities.

Presley and Engelbride (1998) analyzed reporting and assessment mechanisms that were developed within the University System of Maryland (USM) in response to a systemwide faculty workload policy. This policy outlines the expectations for standard workload and distribution of effort between instruction, research, and service by institutional type. The noninstructional measures included in the USM report are shown below:

- Dollars of externally funded grants and contracts
- Number of books published
- Number of refereed publications
- Number of nonreferred publications
- Number of creative activities
- Number of professional presentations
- Number of days spent in public service

2.3.4 Major Studies and Efforts to Measure Faculty Productivity

More than a dozen states, several systems, and three national studies have collected faculty workload and productivity data (Meyer, 1998). However, the collective findings are often obfuscated by problematic definitions and dramatic differences in scope and focus of the research. Despite this, several national and statewide studies are worthy of note as ongoing assessments of faculty productivity.

- *The Delaware Study (The National Study of Instructional Costs and Productivity)* was initially launched in 1992 and has developed into a national clearinghouse providing consistent and reliable inter-institutional comparisons at the academic discipline level. This method uses a broad range of data variables or benchmarks that describe teaching loads, instructional costs, externally sponsored research, and service productivity.

- *The National Study of Postsecondary Faculty* was administered to a national sample of faculty in 1988, 1993, and 1999. (See Exhibit 2-1.) This study provides a national profile of faculty along a

number of data elements (e.g., demographic variables, responsibilities, workload, compensation, benefits, career satisfaction). The goal of this ongoing series of studies is to provide longitudinal data for analysis of faculty and their work environment. Thus far, the data for public institutions show that instruction and research levels have remained relatively consistent over the years within institutional type (refer to Exhibit 2-1). This consistency over the years tempers the criticism that self-reporting is a major limitation of these data. However, these data concentrate exclusively on input measures (the number of hours worked in various activities) to the neglect of outcomes measures that result from faculty activities.

- *The Joint Commission on Accountability Reporting (JCAR)* is an accountability effort developed by representatives of three major higher education associations (the National Association of State Universities and Land Grant Colleges, the American Association of State Colleges and Universities, and the American Association of Community Colleges). It focuses on placement rates, graduation rates, student charges and costs, and faculty activity, which is quantified according to "service months" spent in teaching, research, and service activities. A major shortcoming of this approach is the absence of outcome measures to assess faculty productivity with research and service activities.

- *The South Carolina State Mandated Faculty Performance Standards* are a widely publicized set of performance standards centered on mission focus, quality of faculty, instructional quality, and achievements of graduates. Funding decisions in the state of South Carolina are based on these productivity measures. Although this approach makes an attempt to address outcomes or the product of faculty activities, the method lacks a comprehensive framework and generally uses descriptor variables that are nebulous and do not relate to what they purport to measure. This method does introduce the thought that achievement of graduates should be considered in assessing faculty productivity.

- *University System of Maryland* – The University System of Maryland (USM) developed an annual reporting and assessment mechanism in response to a systemwide faculty workload policy that outlines the expectations for standard workload and distribution of effort between instruction, research, and service by institutional type. It also stipulates the formula for converting traditional courses and other graded experiences into a standardized measure. These mechanisms are unique in that they are mission sensitive and involve data on noninstructional as well as instructional productivity—factors that account for the inherent differences between institutional types. Individual faculty members are the unit of analysis within the USM; therefore, statistics in the USM report account for the number and proportion of faculty teaching at the

standard load, exceeding the standard load, and teaching below the standard load. There are two categories of exceptions to the standard teaching load, including instructional related activities (e.g., course preparation or large classes) and externally funded research support. Those faculty who are granted appropriate exceptions are included in the category of faculty who are teaching at the standard load. Faculty on sabbatical in a given year are not included in the calculations.

- *University of North Carolina* – In 1995, the North Carolina General Assembly directed the Board of Governors for the University of North Carolina to "design and implement a system to monitor faculty teaching workloads on the campuses of the constituent institutions." The subsequent policy was designed to provide information to campus academic administrators for managing teaching workloads efficiently and equitably. It sets up an expectation for standard annual course loads by type of institution and requires an annual report from each department as well as a summary for each institution. The institution report must provide data showing the standard teaching load of each department, faculty credit hour production by type of faculty and level of course, and a count of faculty who taught more or less than the standard load for the department. For those teaching less than the standard load, the reasons must be identified. Courseload reductions can be granted for appropriate professional activities as justified on a case-by-case basis. In addition, faculty can receive credit hour equivalents for extra contact hours with students (e.g., independent study, thesis and dissertation, internships). Also required by the General Assembly, the Board of Governors developed a policy to reward faculty who teach more than a standard academic load.

- *Iowa Board of Regents Annual Report of Faculty Activity* is a comprehensive statewide report related to workload and productivity. Although criticized for relying on self-reported data, this annual reporting mechanism includes the following measures: faculty effort and activities (average hourly workload and percentage of effort by colleges and rank); faculty instructional workload; faculty productivity (number of majors each fall, number of degrees, and sponsored research); faculty portfolios; and peer institution studies.

2.3.5 Weaknesses of Current Workload and Productivity Analyses

Some of the more traditional ways of analyzing faculty workload and productivity examined here have a number of drawbacks. First, as noted previously, there is the problem of capturing the intangible inputs and outputs. Measuring the hours spent in a classroom or the number of journal articles produced tells us little about the quality of

instruction provided or the quality of the scholarship. Another weakness, related specifically to measures of instructional workload, is the fact that such measures as average classroom contact hours do not account for the time spent by faculty in preparing for that class, time spent with students outside of the classroom, or other instruction-related activities. A weakness relating to faculty activity studies is their reliance on self-reported data. Although some researchers argue that consistency in findings establishes validity of such data over time, critics outside the academy tend to give low weight to the validity of self-reported data.

2.3.6 National Patterns of Faculty Productivity

Research has not indicated that faculty are working any less now than before; however, there is some evidence that there is less time being spent overall in instructional activities, specifically at the undergraduate level (Jordan, 1994). Massy and Zemsky (1994) found that research university departments prefer smaller teaching loads more so than departments in liberal arts colleges. While not surprising, this finding reinforces the notion that research institutions seek to maximize time for noninstructional activities (e.g., research and scholarship) through decreased teaching loads. Massy (1990) developed an explanation for why faculty instructional productivity may be declining—termed simply "the ratchet." In short, "the ratchet" works as follows for any given academic department (assuming constant or declining enrollments):

- Increases in the number of faculty in a department or in the leveraging of faculty time with lower cost teaching assistants or part-time instructional staff lead to a broader and more specialized curricular array for the department. They also lead to smaller classes because existing enrollments are spread out over a larger number of course offerings.
- This leads to a lower average teaching load for the faculty.
- The lowered average faculty teaching load leads to increased time spent in other noninstructional activities.

Massy and Robert Zemsky (1994) tested this concept using data collected from four liberal arts colleges and two research universities. Among their findings was that "research university departments prefer smaller teaching loads more fervently than do departments in the liberal arts colleges" (p. 20). Although this is hardly surprising, it does reinforce the popular notion that faculty at research institutions seek to maximize their discretionary time available for noninstructional activities (e.g., research and scholarship) through lowered teaching loads.

2.4 Facing the Challenges of Faculty Productivity

As efforts to measure faculty productivity have become more refined over the years, researchers have confronted some of the challenges that have historically plagued such research. In particular, recent studies have addressed:

- definitions of faculty included in workload and productivity analyses;
- the transition from a focus on input measures to a focus on output measures; and
- development of measures related to quality in addition to those that are quantitative in nature.

2.4.1 Defining "Faculty" for the Purposes of Workload and Productivity Studies

Defining the term "faculty" is a critical part of a successful productivity study. The 1996 Joint Commission on Accountability Reporting (JACR) defined four categories of faculty that should be considered and distinguished in faculty assignment reporting:

- *Tenured and tenure track faculty* includes tenured faculty and those eligible for tenure after a probationary period at the reporting institution. Administrators who hold tenured positions and teach courses are also included.
- *Recurring nontenure track faculty* includes instructors, lecturers, multiple-year limited-term appointees, one-year appointees, or permanent part-time teaching personnel.

- *Temporary Faculty* includes individuals with nonrecurring, limited-term appointments, or nontenured individuals whose primary institutional responsibility is other than teaching, research, or scholarship and service. Part-time adjunct faculty, nontenured administrators who teach, and contributed service personnel are usually included in this definition.

- *Teaching Assistants* include students at the institution who are listed as the instructor of record for a course or courses.

These categories of faculty definitions are comprehensive, thus enabling analysis of the extent to which all types of faculty and instructional staff are utilized in classroom instruction.

2.4.2 Broadening the Focus from Input Measures to Output Measures

Recent research has been broadening the scope of data collection to include output measures as well as the more traditional input measures. Examples of both types of measures are outlined below.

2.4.2.1 Input Measures

- mean number of hours worked per week;

- percentage of time spent with teaching, research, administrative, and other activities;

- mean number of classroom hours per week and mean number of student contact hours per term; and

2.4.2.2 Output Measures

- per three-year time period, the mean number of

  - -refereed or juried publications
  - -reviews and nonreferred publications
  - -books and book chapters
  - -monographs and technical reports
  - -presentations and exhibits
  - -patents, copyrights, and software.

- student and peer evaluations;

- post-tenure reviews;

- achievement of graduates including
  - graduation rates
  - employment rates
  - employer feedback on graduates
  - performance of graduates on professional, graduate, or employment-related
  - examinations and certification tests
  - number of graduates pursuing postbaccalaureate education; and
  - credit hours earned by graduates.
- The number of degrees awarded by the institution.

2.4.3 Developing Both Quantitative and Qualitative Measures

One of the criticisms of faculty workload and productivity studies is that they focus on quantitative measures without taking into account quality of the inputs and outputs. *The Delaware Study*, the culmination of nearly ten years of research related to faculty productivity, includes both types of measures. According to Middaugh (2001), a number of quantitative and quality measures are used and recommended for benchmarking purposes, including those in Exhibit 2-2.

2.5 Summary and Recommendations

In summary, the literature indicates that there is no one "best" mechanism, but rather some standard ways that workload and productivity measurement may be employed by an institution or a system. The following recommendations have emerged from the literature.

- Productivity is a function of inputs, processes, and outcomes, and any attempts at measuring or assessing faculty productivity should include all three components, even if the focus is shifting to outcomes.

EXHIBIT 2-2
QUANTITATIVE AND QUALITATIVE MEASURES OF PRODUCTIVITY INCLUDED IN THE DELAWARE STUDY

QUANTITATIVE MEASURES
-- Proportion of lower-division student credit hours taught by tenured and tenure track faculty;
-- Proportion of lower-division organized class sections taught by tenured and tenure track faculty;
-- Proportion of undergraduate student credit hours taught by tenured and tenure track faculty;
-- Proportion of undergraduate class sections taught by tenured and tenure track faculty;
-- Undergraduate student credit hours per FTE tenured and tenure track faculty;
-- Undergraduate organized class sections per FTE tenured and tenure track faculty;
-- Total student credit hours per FTE tenured and tenure track faculty;
-- Total organized class section per FTE tenured and tenure track faculty;
-- Direct instructional expense per student credit hour taught; and
-- Direct separately budgeted research and service expenditures combined, per FTE tenured and tenure track faculty.
QUALITATIVE MEASURES
-- Number of refereed publications within past 36 months;
-- Number of textbooks, reference books, novels, or volumes of collected works within past 36 months;
-- Number of edited volumes within past 36 months;
-- Number of editorial positions held within past 36 months;
-- Number of externally funded contracts and grants received within past 36 months;
-- Number of professional conference papers and presentations within past 36 months;
-- Number of nonrefereed publications within past 36 months;
-- Number of active memberships in professional associations and/or honor societies within past 36 months;
-- Number of faculty engaged in faculty development or curriculum development activities as part of their assigned workload;
-- Five-year undergraduate persistence and graduation rates for most recent cohort;
-- Most recent average student satisfaction scores for -quality of academic advisement -out of class availability of faculty -overall quality of interaction with faculty;
-- Proportion of most recent graduating class finding curriculum-related employment within 12 months of commencement;
-- Proportion of students passing licensing, certification, or accreditation examinations related to academic major;
-- Proportion of most recent graduating class continuing to pursue further graduate or professional education;
-- Number of students engaged in undergraduate research with faculty mentor within past 12 months;
-- Number of students engaged in internship or practica under direct supervision of faculty over past 12 months;
-- Number of students who author or co-author with a faculty mentor an article or chapter over past 36 months; and
-- Number of students presenting or co-presenting with a faculty mentor a paper at a professional meeting.

- Productivity improvement strategies should be developed collaboratively among all institutional stakeholders—faculty, administrators, and students—and have clear expectations.

- Productivity improvement strategies should be linked directly to the role and mission of the institution as well as to the institutional incentive structure.

- Productivity improvement strategies are an iterative process that requires continuous measurement, assessment, and reassessment.

- The focus of faculty workload and productivity should be at the university departmental level, not the individual faculty member level.

- Productivity measurement should encompass both quantitative and qualitative aspects of faculty work, and should attempt to capture the joint production of faculty activities where possible.

- Faculty work and productivity issues need to be communicated to the external public in a manner that is clear, unambiguous, and nondefensive.

Finally, establishing successful models that assess faculty work productivity must be accomplished through appropriate comparisons among peer institutions. In light of the fact that faculty activities differ greatly across institutional types, it would be imprudent to compare all institutions, regardless of type, to a single standard. Therefore, peer institutions must be selected and agreed upon by legislative and institutional representatives in order to make appropriate and useful comparisons.

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3.0 APPROACHES TO FACULTY PRODUCTIVITY ISSUES IN SELECTED STATE SYSTEMS OF HIGHER EDUCATION

This chapter presents findings from a review of faculty productivity issues addressed by selected state systems of higher education. In order to identify relevant faculty workload policies and issues in other states, MGT, in consultation with officials from the Council for Educational Policy Research and Improvement (CEPRI), targeted a few key states for in-depth interviews. MGT then scheduled and conducted telephone interviews with State Higher Education Executive Officers (SHEEOs) from the following states:

- Arizona
- California
- North Carolina
- Texas
- Virginia

These states were selected based on their general reputation for higher education and by referral as being representative of national trends and approaches to measurement of faculty productivity.

Following a summary of telephone interview comments, this chapter presents a synthesis of how these states have generally addressed the following issues:

- measures commonly used to analyze faculty productivity;
- extent of peer institution comparisons of faculty productivity;
- use of national benchmarks or standards of faculty productivity;
- challenges typically faced in measuring faculty productivity; and
- measures of institutional effectiveness and learner-centered outcomes.

The chapter concludes with a summary listing of broad findings and suggestions that may be useful in the development of best practice guidelines to measure faculty productivity in Florida.

3.1 Summaries of Interviews with SHEEOs

This section provides responses to questions discussed with SHEEOs during teleconference interviews. SHEEO representatives were asked to generally address the following questions:

- Does your state/system have a model or framework to analyze faculty productivity among four-year institutions?
- How is "faculty productivity" defined? How is faculty productivity measured?
- How is "faculty member" defined for the purposes of faculty productivity measurement?
- What specific measures are in place for your state/system?
- How were these faculty productivity measures developed? How are they used?
- Are comparisons of the data from these measures made among institutions within the state? With peer institutions in other states? If so, how are these comparison institutions selected?
- What obstacles or challenges has your state/system faced in analyzing faculty productivity?

Responses to these questions are provided in a state-by-state summary.

Arizona

Framework/Model

In 1988, considerable interest in faculty productivity issues was apparent in Arizona. This resulted in formation of the Higher Education Research Advisory Board that initiated a faculty workload study involving all faculty at the three public universities. The Legislature instituted an incentive program whereby salary increases were to be

offered to faculty who increased their teaching loads. Measures of teaching loads were taken only during the fall terms, resulting in unbalanced teaching loads that were excessive in fall and then diminished in spring. This problem was later corrected by requiring reporting for both terms.

Among the three public universities in the state, this faculty teaching load incentive program resulted in increased teaching load at one institution, little change at another, and a slight decrease in average teaching load at the third institution, at which average load exceeded that of the other two institutions prior to implementation of the program. Implementation of the program resulted in an average faculty teaching load of 6 credit hours per term at all three universities. The salary increases awarded to those faculty who increased teaching load subsequently became embedded in base funding, and the annual reporting initially required by this incentive program is no longer done. The universities never embraced the program, and the legislators who developed it are no longer in office.

Since the early 1990s, the Board of Regents and the Legislature have been interested in assessing student access to faculty and outcome measures of institutional effectiveness rather than specific faculty workload or productivity. An *Undergraduate Consolidated Accountability Report* was developed in the late 1990s and has been refined in recent years. It is intended to measure outcomes related to "Learner Centered Education," a framework developed by the BOR to assess the objectives of increased student access to faculty and pursuit of outcome measures of institutional performance. These measures are listed in Appendix 3-A. The BOR's current version of the *Undergraduate Consolidated Accountability Report* includes four categories of outcome measures listed below.

- General Education and Lower Division: 10 outcome measures such as the percentage of lower-division students with two or more classes taught by ranked faculty;
- Academic Major and Graduation Progress: 10 outcome measures such as the percentage of students who began as freshmen and graduated within six years;
- Supporting the Learning Environment: nine outcome measures such as the percentage of graduating seniors who rate their overall university experience as excellent; and
- Information and Monitoring: six outcome measures such as the average cumulative hours at graduation for students who began as freshmen.

Measurement data are gathered through graduating senior, alumni, and employer surveys. However, this method does not include a direct measure of research or public service productivity.

Defining Faculty for Productivity Measurement

Faculty are defined as tenured or tenure-track (holding the rank of assistant, associate, or full professor), or nontenured faculty with administrative or emeritus professor status who teach courses.

Institutional Comparisons

Faculty productivity comparisons are not made between institutions, departments, or colleges. Some comparative analyses were made with other states using the Delaware Study; but shortly thereafter, the BOR moved toward a focus on outcome measures. As a result, these previous comparison practices have been discontinued.

Future Directions

In view of a shift in focus toward outcome measures and away from input measures, the State Legislature is currently uncertain about the future direction of faculty productivity measures. Efforts continue to refine outcome measures, which are intended

to provide general feedback in support of an emphasis on "Learner Based Education." This legislative interest in outcome measures appears to be motivated by concerns that students all too often cannot graduate within the traditionally expected period of time (four years) because of a shortage of available required classes. This concern is often fueled by impressions of individual legislators based on anecdotal data.

Obstacles and Challenges

Every department within each institution is required to develop mechanisms to assess learning outcomes and to incorporate the results of these assessments into departmental objectives. These assessments, though, are not uniform and do not fully gauge the extent of student learning in all areas. Also problematic, departmental level assessments may not relate directly to previously mentioned institutionwide outcome measures included in the systemwide *Undergraduate Accountability Report* (Appendix 3-A).

California

Framework/Model

The two four-year systems in California—University of California (UC) and California State University (CSU)—approach the issue of faculty productivity differently.

- UC has issued annual reports based on annual surveys of faculty instructional activities from 1990–1991 through 1999–2000.
- CSU does not report faculty workload or productivity data since the bulk of their faculty are unionized and faculty workload is established by contract (specifying the number of credit hours and courses required). Faculty unions define teaching loads for faculty according to requirements set forth in collective bargaining contracts.

For the past nine years (1990–1991 through 1999–2000), an annual survey of instructional activities has been conducted at the University of California in response to legislative inquiries regarding faculty teaching activity. Results are published as the *UC*

Undergraduate Instruction and Faculty Teaching Activities Report. This survey assesses the following regular-rank faculty (defined in following section) instructional workload measures:

- primary classes (regularly scheduled, unit-bearing offerings of classes, usually known as lectures or seminars) per faculty FTE;
- independent study enrollments per faculty FTE;
- total student credit hours per faculty FTE;
- class size (weighting factor is applied for larger classes);
- number of seminar classes offered;
- number of thesis/dissertation units supervised;
- student/faculty ratio;
- number of academic majors per regular-rank faculty member; and
- number of degrees conferred.

Defining Ranked Faculty for Productivity Measurement

Examinations of teaching activity are aimed at regular-rank faculty, which include general campus instructional and research appointments in professorial titles excluding those in visiting, emeritus, and recalled titles. Appendix 3-B provides a complete list of these faculty titles.

Institutional Comparisons

The *University of California Undergraduate Instruction and Faculty Teaching Activities Report* provides feedback to help ensure that teaching practices are consistent with policy in the context of a continuous quest for greater efficiency while maintaining educational integrity.

Expectations for faculty teaching loads were developed through comparison with universities that UC also uses for salary comparison purposes. UC has queried these universities about teaching load expectations for the past 15 years. They include:

- Harvard University
- Yale University
- Stanford University
- University of Illinois at Urbana-Champaign
- The University of Michigan-Ann Arbor
- University of Virginia
- SUNY-Buffalo
- Massachusetts Institute of Technology

University of California teaching load expectations for faculty by discipline are presented below in terms of quarter courses required per year:

- Biological Sciences—three quarter courses (i.e., one course per term)
- Engineering and Computer Science—three to four quarter courses;
- Physical Sciences—three to four quarter courses;
- Humanities—four to five quarter courses;
- Social Sciences—four to five quarter courses ;and
- Mathematics—four to five quarter courses.

In the case of UC-Berkeley, quarter courses are weighted by a factor of 1.5 to convert to semester courses. Engineering, Biological Sciences, and Physical Sciences policies generally require fewer courses than other disciplines, since these courses typically include laboratory sessions that meet for long hours and require extensive supervision of students and teaching assistants. Other conditions that may justify reduced teaching load include:

- administrative assignments;
- first-term assistant professors;
- engagement in new course development or program revision; and
- special service such as heading an association or major national commission.

Future Directions

Some state officials have expressed concern that degree production is lacking, pointing to California's low production of degrees relative to national averages (includes UC and CSU institutions.) This has generated a considerable amount of rhetoric, but little specific action.

The recent Governor's Compact with higher education was intended to require satisfactory demonstration of progress in relation to performance measures in return for financial incentives. Although not all institutions have shown such progress, incentives have still been distributed. These "awards" have been somewhat less than anticipated, due primarily to budget constraints rather than poor performance by institutions. Hence, no direct link between performance and funding has been established.

Obstacles and Challenges

A faculty productivity study was conducted at UC 30 years ago and was more extensive in nature than the current reports. However, it was never published due to concerns that the data might cause divisiveness and misunderstanding.

Other studies in the state have underscored the importance of clearly defining faculty productivity to include all relevant activities (e.g., office hours or advising and mentoring students).

North Carolina

Framework/Model

The Legislature directed the Board of Governors to study teaching workload in 1995. As a result, each institution was required to develop a teaching workload policy that included departmental-level participation in data collection.

A reporting format for faculty productivity was developed in 1995 for use in 1996 and beyond. Currently, the state system is transitioning toward national benchmarking

by university department and academic discipline through participation in the Delaware Study. State officials consider this the best model available. Also, the Delaware Study enables inclusion of distance learning enrollments in departmental faculty workload. Previous models to measure faculty productivity in the state did not capture these enrollments.

North Carolina officials are not concerned about class size as it relates to quality of instruction. Student surveys of sophomores are conducted biannually to gauge student attitudes about quality of the educational experience. According to student survey findings, some large classes exist, but do not appear to hinder the education process.

North Carolina's methods were modeled on the University System of Maryland. Maryland conducted faculty productivity analyses for four years, at which time these studies were discontinued due to convincing evidence that faculty were teaching an adequate number of courses that compared well nationally with other Research I Institutions.

Defining Faculty for Productivity Measurement

Faculty productivity is generally measured as "teaching productivity," although faculty clearly have other assignments that contribute to the overall mission and goals of the institution. Teaching productivity assessments and faculty definitions are focused on those types of faculty teaching undergraduate student credit hours: tenure-track, faculty administrators, nontenured teaching, graduate students, or other adjunct faculty. Faculty productivity is measured by student credit hours produced per FTE faculty, as defined in the categories mentioned above. Universities are required to define "teaching workload standard" by department, which is considered the most meaningful unit of measurement.

Institutional Comparisons

State level officials are pleased with the move toward department comparisons of faculty productivity against national peers through participation in the Delaware Study. Currently, universities select peers for salary comparison purposes using the National Center for Higher Education Management Systems (NCHEMS) process. Generally, each institution selects about 15 peers that are reviewed and approved by the UNC General Administration Office. Officials are hopeful that these peer institutions will participate in the Delaware Study, as comparisons would then be standardized.

Future Directions

North Carolina is implementing participation in the Delaware Study. Policy development implications of this method to compare performance measures on a more national scale are still in the formative stages.

Obstacles and Challenges

An evaluation of faculty productivity revealed that a high proportion of teaching is done by nontenure-track and part-time adjuncts. This led to a legislative request to study this issue.

The most significant obstacle encountered in measuring faculty productivity is defining the faculty population and determining which criteria to measure (such things vary greatly from institution to institution and between states and systems). Some progress has been made in measuring research productivity by creating a Sponsored Grant and Contract file of college information containing information on Principal investigator; dollar amount of grant; and Classification of Instructional Program (CIP) code and Standard Industry Code (SIC).

Texas

Framework/Model

Faculty workload is reported by all four-year state institutions according to institution-specific reporting procedures and quantifiers of instructional activity (Appendix 3-C). Self-reporting combined with lack of a consistent and uniform reporting methodology brings to question the accuracy of reported data and reliability of resulting analyses. Shortcomings of this reporting process include:

- Not all faculty activities are adequately accounted for (e.g. administrative duties, research, and service).
- No suitable method exists to assess faculty activities other than classroom instructional activities. As a result, teaching load receives the major focus in measuring faculty productivity (time spent in thesis and dissertation oversight is included).
- Current methods focus almost exclusively on input measures (to the neglect of outcome measures) of organized instructional activities (e.g., hours spent teaching, number of courses taught, SCH produced). These provide only a limited indication of what faculty accomplish, although this is the Legislature's metric of interest currently.

Measures of organized instruction are the principal focus largely because they are easiest to obtain and analyze. Such measures focus primarily on inputs as opposed to outcomes—again, due to the difficulty in measuring the latter. These measures, which are reported annually by public institutions, include (see Appendix3-C for additional detail):

Instructional Activities

- undergraduate minimum and normal teaching load per faculty member (e.g. SCHs per semester, workload credits per semester, work units per week, clock hours of instructional activities per week).
- graduate teaching load equivalent;
- large class adjustment;
- laboratory adjustment;
- special performance or activity adjustment;
- independent study instruction;
- thesis or dissertation hours; and
- practice/internship supervision.

Administrative Assignments (results in reduced teaching load assignment)

- chair or unit head;
- academic advisement; and
- other administrative duties.

Other Special Assignments (results in reduced teaching load assignment)

- research and creative work;
- university service; and
- other service.

Other Policies

- overloads; and
- accrual policy.

Faculty are categorized according to rank, tenure status, and salary level. Data for each faculty member (courses and sections taught, salary level, and number of students taught via individual study) are computed using enrollment data by course sections. Clarification of the specific "teacher of record" for each course is considered an important clarification that is addressed in this process. Some comparison of faculty productivity at the department/discipline level has been attempted, but not refined to any extent.

The Texas Legislature considers the proportion of tenured faculty teaching undergraduate courses a highly important metric to be reported and monitored.

Defining Ranked Faculty for Productivity Measurement

Three categories of faculty are defined as follows:

- tenure or tenure track professors, associate professors, assistant professors, and instructors;
- other nontenure track faculty, including but not limited to adjunct, special visiting, emeritus, or lecturer; and
- teaching assistants who assist a faculty member in teaching a class or lab.

Separate productivity indicators are reported for each faculty category.

Institutional Comparisons

Formal comparisons of data are not made among state institutions; however, at least one institution recently attempted to compare with other Texas institutions in support of an objective to increase faculty productivity. (The additional revenues garnered from an increase in productivity were promised to fund faculty salary increases.) Larger institutions in the state tend to prefer national benchmarking comparisons rather than comparisons with other Texas institutions.

Future Directions

Legislators are interested in categorizing faculty workload according to the Carnegie higher education institution taxonomy, although this has not yet occurred.

Faculty productivity measures were developed over the past 10 to 15 years in response to legislative interest in faculty teaching load. These measures are relatively basic. The Legislature did not initiate or request any revision or improvement of this process during the most recent session. However, a state task force has begun work to refine this reporting methodology to include faculty activities such as research and service.

Faculty activity data are reported by institutions in fall and spring semesters only, although there has been some discussion of eliminating spring reporting due to the added burden (a time and resource intensive procedure).

At this time, faculty productivity issues do not appear to be a primary focus of higher education policy. Interest in this topic has diminished to some extent in the Texas over the past five or six years.

Obstacles and Challenges

Data regarding faculty productivity—other than aggregate faculty/student ratio—are rarely published, due to the unreliability of data at the institutional level. State officials are confident that aggregate faculty productivity measures—at least of organized instructional activities—are reasonably accurate. A state task force is developing strategies intended to improve accuracy of information reported by institutions.

In general, acquiring accurate data from institutions has been a constant challenge. Additionally, a faculty productivity reporting mechanism for Texas institutions specializing in health/medicine programs does not exist.

Interviewees expressed concern that a faculty productivity system that is too detailed and complex (i.e., faculty feel as though they are punching a time clock) will demoralize faculty and impede ability to compete for quality faculty on a national scale. Other challenges have included:

- achieving an appropriate balance between a reporting methodology that is overly simplistic versus one that is overly complex and detailed; and
- a lack of statewide uniformity in the manner in which individual institutions currently report faculty productivity data.

Virginia

Framework/Model

A statewide system for measuring faculty workload is not in place at the present time. However, some institutions measure workload on an individual basis as part of program reviews. The state uses some proxy measurements, although interest in faculty productivity at the state system level has diminished in the past four or five years.

Current interest is focused on institutional effectiveness measures, and systemwide measures have been developed to assess this outcome objective. A complete list of these measures is provided on pages 3-16 and 3-17.

Overall institutional effectiveness measurements consist of the following components:

- a mission statement detailing the purpose and scope of the institution;
- institutional profiles including: student demographics, tuition and fees, grade point averages and SAT scores of incoming freshmen, acceptance rates, graduation rates, faculty credentials, numbers and types of degrees awarded, programs offered by degree level, admissions and enrollment rates, revenues and expenditures, and the number of students awarded financial aid;
- a total of 14 systemwide outcome measures listed on pages 3-16; and 3-17
- institution-specific measures, which vary according to institution and are intended to provide elaboration on the intent of the 14 systemwide measures (e.g., service learning opportunities or study abroad opportunities).

This reporting system resulted from the Governor's Blue Ribbon Commission on Higher Education directing the State Council of Higher Education to adopt and implement performance measures intended to measure academic quality and institutional efficiency.

The State Council of Higher Education for Virginia surveyed public institution faculty in 1990 and 1996 concerning time spent in teaching, research, and service activity. The following productivity measures were used in this survey:

<u>Teaching</u>

- formal contact hours;
- other contact hours;
- course preparation and evaluation;
- pedagogical development; and
- advising and counseling.

Research

- scholarship; and
- professional development.

Service

- formal administrative activities;
- professional service; and
- unpaid public service.

The Council discontinued this faculty productivity survey after the 1996 effort. This is indicative of diminished interest in faculty productivity measures that has occurred in this state within the last five years. Focus has shifted and is now centered on assessing outcome measures of overall institutional effectiveness.

Defining Ranked Faculty for Productivity Measurement

Virginia distinguishes between traditional categories of faculty (e.g., tenure/nontenure track and traditional ranks). For purposes of the Integrated Postsecondary Educational Data System (IPEDS) reporting, these traditional categories are used and are listed in Appendix C.

Future Direction

Interest in faculty productivity measures has diminished at the state system level over the past five years. As noted earlier, current interest is focused on institutional effectiveness. In response to the Governor's Blue Ribbon Commission on Higher Education, the State Council on Higher Education developed the following measures of academic quality and institutional efficiency:

- freshmen to sophomore retention rate;
- number of transfer students enrolled from two-year colleges;
- class size (below 20 and over 50);
- percentage of lower division courses taught by full-time faculty;

- six-year graduation rate;
- average time to degree;
- percentage of living alumni who donate annually;
- classroom and laboratory space utilization;
- percentage of state education and general funding spent on instruction and academic support;
- percentage of state management standards met;
- percentage of professionally accredited programs;
- debt service to expenditure ratio;
- research and public service expenditures per full-time faculty; and
- total SCHs taught per FTE faculty.

Reports on institutional effectiveness will be published annually as of this year to provide institution-specific feedback to legislators, employers, and higher education consumers. Though not directly related to funding by design, these reports are intended to guide policymakers with information to support effectively crafted policies that promote continuous improvement and accountability.

Institutional Comparisons

Peer comparisons are not done at the state level. Some institutions do this individually, but there is no formal systemwide procedure or policy for developing peer group comparisons.

Obstacles/Challenges

Institutions have not embraced institutional effectiveness reporting due to concerns that unfair comparisons may occur resulting in penalization of institutions for less than optimum performance. Additional revisions are still being considered to establish clear definitions of institutional effectiveness and productivity, as this has been

an ongoing challenge. Continuous refinements have been pursued in an effort to compare institutions with similar missions and goals so that comparisons are fair.

3.2 Summary of Faculty Workload Policies/Measures Used in Other Key States

Several general themes emerged from in-depth interviews with SHEEOs in other key states.

- Interest in outcome measures relative to institutional effectiveness and learner-centered education is emerging.
- Interest in faculty productivity is generally centered on instructional activities at the expense of research and service activities.
- Some states are currently exploring the use of peer institutional or national benchmarking data, a valuable but time and resource intensive endeavor.

Specifics of these and other general themes are discussed in the following sections.

3.2.1 Weighting/Factoring the Three Main Functions: Teaching, Research, and Service

Other states that we reviewed do not use a model to weight or factor teaching, research, and service. Of those that are still specifically focused on assessing faculty productivity, the metric of interest is instructional activity with little attempt to encompass research or service activities. In general, legislative interest and understanding in other states appears to be focused on models that monitor faculty time spent in classroom teaching activities or, more recently, on institutional effectiveness.

3.2.2 Specific Measures Used to Analyze Faculty Productivity

As noted above, among the states we interviewed, attempts to measure faculty productivity are limited largely to teaching activities. Of the five states reviewed, the more comprehensive models for assessing faculty instruction activities are used in

California and Texas. The California model is based on an annual survey of instructional activities (*University of California Instruction and Faculty Teaching Activities Report*) and includes specific measures listed on page 3-6.

The model used in Texas focuses on measures of organized instruction. This model includes categories for research and service, but lacks a uniform manner by which to measure these activities. Specific components of this model (instructional activities, administrative assignments, other special assignments, and other policies) are listed in detail on page 3-11 and 3-12.

3.2.3 Use and Dissemination of Faculty Productivity Data

In general, interest in faculty productivity has diminished somewhat in the past five years among states that we interviewed. The extent of interest that remains is focused on monitoring teaching activities. Some interviewees mentioned reluctance on the part of their state systems to publish or widely disseminate faculty productivity data for fear that this would lead to misunderstanding and divisiveness, thereby causing more harm than good. An exception is *the University of California Undergraduate Instruction and Faculty Teaching Activities Report* (page 3-6) which provides feedback to help ensure that teaching practices are consistent with policy in the context of a continuous quest for greater efficiency while maintaining educational integrity. Also, the emerging interest in outcome measures of institutional effectiveness appears to be linked more directly to policy development.

As noted earlier, some states (e.g., Arizona and Virginia) have shifted focus from faculty productivity measures to assessment of institutional effectiveness and outcome measures of "Learner Based Education." These measures tend to be published widely to provide feedback to legislatures, employers, and consumers. In Virginia, these reports are not tied directly to funding, but are intended to guide decision makers with

information to support effectively crafted policies that promote continuous improvement and accountability.

3.2.3 Extent of Peer Institution Comparisons and Use of National Benchmarks of Faculty Productivity

Some states are currently exploring the use of peer institution or national benchmarking data for comparison of faculty productivity. One example is the University of California, which conducts annual peer comparisons of faculty teaching load expectations developed through comparisons with eight selected out-of-state institutions over the past 15 years. These same comparison institutions are also used for annual faculty salary comparisons.

State Higher Education Executive Officers described the Delaware Study as the premier model or initiative for the use of national benchmarks of faculty productivity. North Carolina is implementing systemwide participation in the Delaware Study database, which is widely recognized as a source of national benchmarking data by department and discipline according to Carnegie classification. Some officials mentioned that individual institutions in their states seek national benchmark comparisons of faculty productivity in the absence of a state-based, systemwide approach to monitoring this issue.

3.2.4 Challenges Typically Faced in Measuring Faculty Productivity

Challenges mentioned by State Higher Education Executive Officers in measuring faculty productivity included the following:

- Teaching activities are more easily quantified and measured than research and service activities. This path of least resistance is often chosen in assessing faculty productivity.
- Some interviewees commented on the challenge of achieving an appropriate reporting methodology that is not overly simplistic or overly detailed.

- Obtaining accurate self-reported data is a widely reported challenge.
- Achieving a consistent statewide uniform reporting methodology is a frequently mentioned challenge.
- Accommodating departmental objectives, institutional objectives, and systemwide objectives is mentioned as a frequent challenge.
- Although the current focus is on measuring institutional effectiveness, it may be difficult to sell institutions on this concept due to concerns about inappropriate comparisons or being penalized for less than optimum performance.

3.2.5 Measures of Institutional Effectiveness and Learner-Centered Outcomes

As previously noted, SHEEO interviews generally indicated an emerging interest in measures of institutional effectiveness and learner-centered outcomes. Arizona has developed categories of outcome measures centered on assessment of "Learner Based Education." A complete listing of these outcome measures is included in Appendix 3-A. Fourteen measures of institutional effectiveness and academic quality comprise the Virginia model. These are listed on pages 3-16 and 3-17.

3.2.6 Implications for Establishing Guidelines or "Best Practices" for Florida

Considerable information can be derived from the SHEEO interviews to develop best practice guidelines for measuring faculty productivity in the State of Florida. In view of trends and practices in other states, the following issues should be considered in refining a faculty productivity model for Florida.

- National faculty performance benchmarks (such as the Delaware Study) should be systematically applied by all institutions. Otherwise, statewide performance data are limited in usefulness.
- National benchmarking should involve peer institution comparisons by academic discipline and department level, as recommended in the Delaware Study.
- Analysis of instructional activities alone provides an incomplete picture of faculty activities. Research and service activities, with a

focus on outcomes, should be included in analyses of faculty productivity.

- Outcome assessments involving input from current students, graduating students, alumni, and employers have provided useful feedback in other states concerning outcomes resulting from faculty activities.

- The most innovative approaches to faculty productivity that we observed involved embedding faculty productivity within outcome measures of institutional effectiveness. The focus on overall institutional effectiveness outcome measures is intended to promote accountability and effectively communicate objectives and accomplishments of higher education to all key constituents (students, legislators, parents, employers, and others).

- Published reports on institutional effectiveness can serve to guide policymakers with information to support effective crafting or revising of policies to promote continuous improvement and accountability.

4.0 FLORIDA'S PUBLIC UNIVERSITY RESPONSES TO MEASURING FACULTY PRODUCTIVITY

4.0 FLORIDA'S PUBLIC UNIVERSITY RESPONSES TO MEASURING FACULTY PRODUCTIVITY

4.1 Introduction

This chapter provides summary information relating to the measurement of faculty productivity and standards of achievement within each university included in this study. Information about procedures at each institution for collecting faculty activity data and the reporting and use thereof was gathered through on-campus interviews with university provosts and/or staff at each respective institution. The outline of this chapter is as follows:

- ***Overview of current statutes and guidelines governing the reporting of faculty activity***—a description of Florida's "12-Hour" law, which defines the standard for classroom teaching at Florida's public universities, as well as an overview of the current interpretation of that law.
- ***Outline of State University Accountability Reporting Efforts***—*a* description of the current accountability reporting procedure as it relates to the issue of faculty productivity.
- ***University Measures of Faculty Productivity***—an outline of the procedures in place at each institution for collecting, reporting, and utilizing data relating to faculty productivity.
- ***Summary of Institutional Approaches to Measuring Faculty Productivity***—a discussion of the procedures used by Florida's public universities in the context of establishing an effective system for measuring faculty productivity.

4.2 The 12-Hour Law

Chapter 240.243(2), F.S., delineates Florida's standard for classroom teaching. It states:

> *"Each full-time equivalent teaching faculty member at a University who is paid wholly from state funds shall teach a minimum of twelve classroom contact hours per week at such university."*

According to additional language included in 240.243(2), F.S., the minimum 12-hour classroom teaching load may be reduced when faculty members are assigned other professional responsibilities by appropriate university administrators. In such instances, faculty members are to teach "a minimum number of classroom contact hours in proportion to 12 classroom hours per week as such especially assigned aforementioned duties bear to 12 classroom contact hours per week."

Chancellor's Memorandum (CM) 87-17.2 was developed by the former Board of Regents in 1987 to provide guidance to the universities in implementing the 12-Hour law. Information posted on the Web site of the Division of Colleges and Universities states that this CM is currently under revision. However, according to Division staff, the guidelines in effect at this time are provided in CM-C-12.06/99, pursuant to a June 22, 1999, transmittal memo from Adam Herbert, then Chancellor of the State University System. These guidelines provide an "Academic Activity Reporting Guide," and include instructions, definitions, and formats for reporting academic activities. Definitions are provided to the universities for the following terms:

- ***Contact Hours:*** a standard one-hour (minimum 50 minutes) classroom period.
- ***Contact Hour Equivalencies:*** to allow for assignment of time for "other than classroom instruction" hours.
- ***Academic Position:*** all persons who perform credit generating activities for the university.
- ***Designated Effort:*** percentage of time available spent on activities.
- ***Maximum Calculated Effort:*** the largest percentage of time that can be assigned for a position designated effort.
- ***Total Effort:*** the sum of the academic position's efforts for all activities.

For purposes of reporting actual activities, academic assignments are designated either as "credit generating" or "noncredit generating." Credit generating activities include the following:

- Classroom Instruction
- Thesis/Dissertation Supervision
- Directed Individual Study
- Supervision of Student Interns
- Supervision of Teaching/Research
- Instructional contact hour modifiers/credit generating
- Graduate laboratory assistants.

Of these, only the first, "Classroom Instruction," is assigned contact hours, which are broadly defined as the number of hours the section meets each week. The term "classroom instruction" is narrowly defined as regularly scheduled classroom meetings or laboratories that result in the production of student credit hours. Although many activities in which faculty members routinely engage fall under the rubric of "direct instructional activity," i.e., activity in which they are directly instructing students, these additional activities are not considered classroom instruction for purposes of recording contact hours. These other credit generating activities are assigned contact hour equivalencies in accordance with the guidelines specified in CM 87-17.2.

Noncredit generating activities that are reported in compliance of the 12-Hour law are listed below:

- Graduate assistant course graders
- Secondary instructional site travel
- Other instructional effort—e.g., developing new curricula or evaluating existing programs
- Supervision of cooperative education
- Clinical instruction
- Research
- Public service

- Academic administration
- University governance
- Leave of absences with pay
- Release time under the United Faculty of Florida (UFF) collective bargaining agreement.

All noncredit generating instructional activities are assigned contact hour equivalencies.

4.3 State University Accountability Reporting

There have been a number of accountability measures and reports required by the Legislature since the early 1990s. Between 1991 and 2001, numerous goals and objectives were put forward to provide the Legislature and general pubic with a better understanding of what the higher education delivery systems produce for the resources that are expended. With the focus on performance-based budgeting in the mid-1990s, specific, measurable goals were required as a condition of performance funding. The current emphasis on zero-based budgeting also requires accountability for the programs and services being produced to ensure appropriate resource allocation.

As noted above, various accountability measures have been articulated within statute over the past decade, and reports have been submitted that provided data in fulfillment of these requirements. The most recent set of measures directing Florida public university reporting is contained in the 2001 General Appropriations Act and Implementing Bill. The Florida Board of Education is soon to release the State University System Accountability Report, which includes 24 measures drawn from performance measures outlined in the General Appropriations Act and Implementing Bill.

These measures focus on output and outcome measures relating to the instruction, research, and public service functions of the state universities. The

Accountability report provides performance-related data on a broad range of issues relating to university performance, of which faculty productivity is but one small part. Four of the outcome measures detailed in the Board of Education Accountability Report are similar to those presented in Chapter 5.0 of this productivity analysis. They are as follows:

- of the total lower level instructional effort by level, the percentage of effort provided by faculty;
- of the total upper level instructional effort by level, the percentage of effort provided by faculty;
- of the total graduate level instructional effort by level, the percentage of effort provided by faculty; and
- externally generated research and training grant funds per state-funded faculty member.

The corresponding measures used in this analysis are presented in Exhibits 5-4 and 5-20 in Chapter 5.0.[1]

4.4 Institutional Approaches to the Issue of Faculty Productivity

In order to obtain information about how individual institutions deal with the issue of faculty productivity, a *Survey on Faculty Productivity Policies and Practices* was conducted. University provosts or their staff were asked to respond generally to the following questions:

1. How do you measure faculty productivity at your institution?
   - What specific factors do you include in your analysis?
   - How are the three main functions (teaching, research, and service) weighted and factored into faculty workload calculations and how was the decision made about how to do this?

[1] Please note that while these measures are similar to those presented in the Board of Education report, they are not identical. For instance, whereas the Board of Education Accountability Report provides the percentage of total instructional effort provided by all regular faculty members, the corresponding measure in Chapter 5.0 of this report defines the population of faculty in a more restrictive manner. Differences between the two reports with respect to these measures are due to differences in the definition of faculty.

- Where do the data come from? How is measurement done?
- How often is the analysis done?
- How are the results used?
- Who routinely sees the results?
- What are the best measures for determining faculty productivity?
- Do you use any national benchmarks or standards for comparison of faculty productivity? If yes, what are these?

2. Do you compare yourself with other institutions on measures of productivity? If so, with whom and for what reason?

3. Is there a standard teaching load at your institution? How is the 12-Hour law implemented? At what level is teaching load determined: Department? College? Other?

4. What is the best way to quantify faculty work activities? What is the role of the faculty (individual, department, and/or university) in this process? Do faculty have input or review authority at any level or is it a "top-down" process?

5. If starting anew, how would you design an annual study of faculty productivity, and with whom would you compare your institution?

Salient details of the Universities' responses to these questions, as well as information drawn from additional materials supplied by the institutions, are presented below.

4.4.1 The University of Florida

Measures of Faculty Productivity. Measures of faculty productivity at the University of Florida (UF) include a host of indicators relating to the core faculty functions of teaching, research, and service. The following specific measures are employed for purposes of assessing faculty productivity:

- semester and annual fundable student credit hours produced by level;
- course sections taught by level and type of course section;
- head count enrollment by level;

- FTE effort by type of faculty and type of activity;
- quality of instruction as measured by peer and student evaluations;
- contracts and grants generated;
- private and other funds raised; and
- election of faculty to major academies and leadership positions in professional societies.

Individual faculty members are assigned duties in accordance with the 12-Hour law, and all UF faculty members are in compliance of that statute. Assignments are made via Semester Faculty Assignment Reports, which capture data regarding the percentage of instructional assignment devoted to the various levels and types of instruction, as well as the assignment of faculty FTE effort to other activities (e.g., research, public service). A copy of the UF Semester Faculty Assignment Form and accompanying instructions is provided in Appendix 4-B.

Benchmarking and Comparison with Other Institutions. UF has in place a benchmarking procedure that requires colleges and departments within the institution to compare themselves on resources, teaching, and research with equivalent units at the Ohio State University, the University of Minnesota, and the University of Illinois. These three institutions have been selected as most appropriate for these comparisons; they are of similar size and academic scope. Also, UF feels they are models of excellent quality and productivity that provide more than adequate standards of comparison.

In addition to these three core comparators, each academic unit has added others from among those American Association of Universities (AAU) institutions that have excellent programs. Hence, benchmarks are provided for all units across the institution as well as for specific disciplines at UF. These benchmarking procedures are conducted on a three-year rotation for each college and academic unit at the university. This

procedure began in 1994–95, with approximately one-third of the colleges collecting benchmarking data; an additional one-third followed suit each subsequent year.

Purposes and Use of Productivity Data. The provost conducts annual program reviews with the dean of each college for purposes of reviewing not only the college benchmarking data, but also data collected on the productivity of ranked faculty in such areas as the production of student credit hours, head count enrollment, degrees awarded, and sponsored research. In addition, the program reviews provide an assessment of the progress of the individual colleges over the course of several years.

UF also uses faculty productivity data for purposes of resource allocation. Known as the "Bank," the model employed for this purpose is designed to reconcile university costs, resources, and productivity by determining which departments or academic units are net "contributors" and which consume more resources than they generate. These surpluses and deficits are then translated into decisions about resource allocation for individual departments.

The procedures in place at the University of Florida for measuring and reporting faculty activity and productivity were developed with faculty involvement. The university is satisfied with the process currently in place and feels that it has served the institution well in assessing the productivity and performance of their programs.

4.4.2 Florida State University

Measures of Faculty Productivity. As with the University of Florida, Florida State University (FSU) measures faculty productivity in the areas of teaching, research, and service, as well as faculty assignments. Teaching productivity data are collected each semester, while research and service data are collected annually. Among those measures employed to assess productivity are the following:

- ***Direct Instructional Activities***
  - Total student credit hours
  - Total students taught, by level
  - Formal courses taught, by type of course section
  - Student evaluations
- ***Graduate Education/Research***
  - M.S. students directed
  - Ph.D. students directed
  - Graduate committees
- ***Direct Research***
  - Publications
  - Performances
  - Citations
  - Reviews
  - Proposals submitted
  - Grants awarded
- ***Service Activities***
  - Departmental and university committees
  - State service
  - National service

These data are derived from the Instruction and Research Data Files maintained by the Florida Division of Colleges and Universities (DCU), as well as from federal and state agencies. Other organizations, such as the National Center for Education Statistics' Integrated Postsecondary Education Data System (IPEDS) and the Institute for Scientific Information, also provide information.

In addition to the many commonly used quantitative measures of productivity, FSU devotes significant attention to the issue of teaching quality. The *State University System Student Assessment of Instruction* (SUSSAI) is administered in every course each semester in order to capture student evaluations of the quality of the instruction received.

Faculty assignments are made according to the dictates of the 12-Hour law. Nevertheless, assignments are made in recognition of the fact that differences across

disciplines, career status of the faculty member in question, and the needs of the university are important considerations. Hence, the weights assigned to teaching, research, and service activities vary according to individual faculty members.

Benchmarks and Comparison with Other Institutions. At the university level, FSU sets performance benchmarks based on comparisons among 50 National Public Research I institutions that have been carefully selected according to size, mission, budget, and other relevant distinctions.[2] The university compares itself to these institutions on the measures previously described.

In addition to this diverse set of national research institutions, FSU uses the *National Study of Instructional Costs and Productivity*, commonly referred to as the "Delaware" study, for purposes of comparison on a variety of indicators specific to the issue of faculty productivity. This study allows for comparison to national data on such measures as student credit hour production, courses taught, and class size, among others.

Purposes and Use of Productivity Data. Productivity data are available to and reviewed by the university president, provost, college deans, and department chairpersons. The data are used primarily for purposes of resource allocation or reduction, and review of individual faculty members for purposes of granting tenure. FSU has taken care to tailor its process of measuring productivity to its unique needs and mission and feels that the system in place is sufficient.

4.4.3 The University of South Florida

Measures of Faculty Productivity. The University of South Florida (USF) has a highly developed system both for tracking faculty activity and for utilizing these data for

[2] Appendix 4-A contains lists of peer institutions for those institutions that provided such lists.

purposes of resource allocation and tenure review. Faculty productivity is measured at the aggregate level and for individual faculty members. Specific aggregate level factors involved in the analysis of productivity at USF include student/faculty ratios at the university and college levels, retention and graduation rates, private fundraising, and student credit hour production. At the individual level, USF provided the following list of specific factors included in their analysis:

- **Quality and quantity of teaching** as measured by student evaluations, syllabi, peer evaluation, advising, and supervision of student activities, as well as standard measures of student credit hours produced, course sections taught, students taught, and classroom contact hours;
- **Research productivity and creative activity** as measured by number of publications, presentations, number and amount of grant awards, professional honors and awards, and other activities that serve to "advance the body of knowledge or creative expression" in individual faculty members' fields; and
- **Service** to the profession in advancement of the discipline, service to the community, and other indicators of national and/or international recognition.

USF believes that the best indicators of faculty productivity are tenure and promotion to the rank of professor, as these indicators provide a measure of accomplishment in all areas of faculty activity that reflect achievement over the course of several years.

Productivity at USF is measured annually and throughout faculty members' careers. Each year, department chairpersons and faculty evaluation committees review faculty; tenure-earning faculty are reviewed annually in terms of progress toward tenure. Once having acquired tenure, faculty members undergo post-tenure review every seven years.

At the aggregate level, data are obtained from a variety of sources, including the DCU Instruction and Research Data File (this serves as the source of data for USF's

InfoMart system, which provides on-line access to faculty productivity and other institutional performance data), the Sponsored Research Annual Report, Performance Incentive Reports, strategic plan goals, departmental profiles, and departmental enhancement goals. External data sources such as IPEDS and the National Science Foundation (NSF) also provide aggregate level data.

Individual level data are obtained from self-reporting instruments such as activity reports and annual reports of accomplishments. The Sponsored Research Annual Report, InfoMart, and Performance Incentive Reports include data for individual faculty members, as well.

Faculty assignments are made in consideration of a number of factors. Included in the determination of individual faculty weightings of teaching, research, and service duties are the terms of the United Faculty of Florida (UFF) Collective Bargaining Agreement that governs faculty contracts; departmental practices with respect to such factors as tenure status, external funding record, and noninstructional productivity; and program mix and curriculum (e.g., the existence of undergraduate, master's and doctoral programs as well as departmental staffing needs).

While individual faculty members may be assigned variable loads, the university has minimum levels of teaching, research, and service that are expected from all faculty members. These standards are governed by internal workload policies established at the institutional level.

Benchmarking and Comparison with Other Institutions. USF uses a number of benchmarks to measure its performance in the area of faculty productivity and institutional effectiveness. Among these are IPEDS, NSF, the American Association of University Professors, and the Metropolitan University Group Data Exchange. USF also uses a peer comparison group consisting of ten institutions deemed similar in size,

scope, mission, and demographics. It complements this group of institutions with a set of three aspirational peers. Departments and colleges also select peers that closely match the profile of the college or department in question.

Purposes and Use of Productivity Data. Faculty productivity data are used for purposes of planning program expansions/contractions, identification of programmatic priorities, progress on departmental plans, and in program reviews for budgetary purposes with respect to resource allocation. In addition, evaluative productivity data are made available to faculty members' supervisors; e.g., department chairpersons and deans, who may use them to make faculty personnel decisions regarding merit salary increases, tenure and promotion, retention, and termination. Results from individual level productivity analyses may also be used for faculty assignment decisions.

4.4.4 The University of Central Florida

Measures of Faculty Productivity. The measurement of faculty productivity at the University of Central Florida (UCF) focuses primarily on the production of student credit hours and faculty assignments. Data are derived from several internal sources, including faculty annual assignment forms, faculty activity reports, student credit hour production reports, enrollments reports, and annual reports completed by department chairpersons, deans, and other administrators.

All faculty assignments are made in accordance with the 12-Hour law and the (UFF) Collective Bargaining Agreement, with input from college deans and academic affairs. The average workload for instructional faculty is expected to be approximately 75 to 80 percent teaching; 15 to 20 percent research; and 3 to 5 percent service. Faculty teaching loads varied across colleges and departments based on the type and level of programs offered as well as the department's mission and priorities.

For instance, departments with a heavy emphasis on research may assign lower teaching loads to instructional faculty. Faculty annual assignment forms include complete documentation of the requirements of the 12-Hour law, and periodic assessments of compliance with that statute are conducted through the UCF Office of Institutional Research.

Duties are assigned to individual faculty members via faculty annual assignment forms, a copy of which is included in Appendix 4-B. Faculty assignments and annual reports are completed each year, while faculty activity reports, which detail noninstructional faculty activities (i.e., research and service), are completed each term.

UCF feels that the best measures for measuring the productivity of faculty include the following:

- student credit hour production;
- external dollars generated per faculty member;
- total external funding received;
- number of faculty who received teaching, research, and service awards;
- number of peer-reviewed publications per faculty member; and
- number of academic presentations per faculty member.

Benchmarking and Comparison with Other Institutions. Comparisons with peer institutions at UCF are not specific to the topic of faculty productivity. The institution compares itself to a number of different peer groups on a multitude of variables. UCF also compares itself on some variables to certain other Florida public institutions. In addition to the public DCU institutions, UCF has selected a host of institutions, divided into different peer groups, for purposes of comparison on specific institutional characteristics.

Purposes and Use of Productivity Data. Faculty productivity data are used for purposes of faculty assignment, estimating faculty work load, enrollment management, student advising needs, development of new programs, and a variety of other university, college, and departmental needs. In addition to these uses, however, UCF has developed a sophisticated system of resource allocation called the "Pegasus" Funding Model.

Pegasus allocates resources to each of the university's principal funding units based on that unit's production of student credit hours in the previous year. These credit hours are translated into annualized (12-month) full-time equivalent faculty positions via the use of *productivity factors* for each unit and instructional level (lower, upper, graduate classroom, and thesis/dissertation). These productivity factors were derived from the average credit hour productivity of faculty in the ten universities of the Florida State University System. Faculty lines may then be allocated to each department in a systematic manner according to its productivity with respect to student credit hours.

4.4.5 Florida International University

Measures of Faculty Productivity. Florida International University (FIU) employs a variety of factors weighted against the 12-Hour law to measure faculty productivity. The typical course load for instructional faculty at FIU varies according to faculty type and the type of assignments they have. Instructors are expected to carry a 4/4 course load (i.e., they teach four courses per term); the average ranked faculty member is expected to carry a 3/3 course load; tenured faculty members heavily involved with research, as well as administrative faculty, often carry a load of only two courses per term.

The Office of Institutional Planning and Effectiveness has implemented a Departmental Planning Indicator model for each academic unit at FIU. This model includes the following specific factors for each department:

- fall head count enrollment;
- degrees awarded;
- FTE student enrollment by level and per FTE faculty member;
- actual and planned student credit hour production (fundable SCH only);
- direct discipline instructional cost by instructional level;
- graduate satisfaction survey results;
- accreditation status;
- instructional effort by faculty category;
- educational and General (E&G) research expenditures; and
- contracts and grants awards.

Administrator and faculty access to these data is provided on the FIU Web site. Analyses are completed annually using a three-year running average for university, department, college, and per-faulty measures of productivity. FIU believes that utilizing a three-year average compensates for anomalies or nonroutine factors that may occur in specific academic years.

Faculty work assignments are based on guidelines issued by the university administration as well as college deans, who have leeway to alter individual faculty assignments according to the circumstances of the department and the faculty member in question.

Teaching assignments are weighted based on such considerations as class size, preparation time, campus location of course sections, number of in-class contact hours

per week, repetition of the assigned course over several academic terms, teaching assistants assigned to the class, and other similar factors.

Benchmarking and Comparison with Other Institutions. Although FIU is aware of other studies and factors commonly utilized for measuring faculty productivity, they have constructed their model to reflect the particular goals and situation facing their institution. FIU currently does not use peer institutions for purposes of comparison on faculty productivity measures, although such peers are used for other types of comparisons related to institutional performance (for instance, enrollment levels and staffing,).

Purposes and Use of Productivity Data. Productivity data are used for purposes of budgeting and allocation of faculty lines and resources. Patterns of productivity are monitored for several years, after which decisions about budget allocation are made.

FIU has an Enrollment Management Plan derived from specific student credit hour goals and objectives set for the university, each campus, and each academic unit. Their budget allocation model, known informally as the "Panther" model, is based on these goals and objectives, using productivity data to track SCH production down to the academic department level. Like the UCF "Pegasus" model, from which the Panther model was partially derived, average SCH productivity factors for the state university system are used to provide a standard for decision makers to allocate budget resources.

4.4.6 Florida Atlantic University

Measures of Faculty Productivity. Measurement of faculty productivity at Florida Atlantic University is similar in most respects to the procedures in place at FIU. For instance, FAU tracks student credit hour production and FTE faculty assignment at the university, college, department, and program levels. The model, which has evolved

over time, presently accounts for such factors as class size, location, preparation time, and course repetition.

The 12-Hour law and the UFF Collective Bargaining Agreement govern the assignment of faculty duties. The typical instructional teaching load at FAU is expected to be 4/4 (four 3-hour courses per term) for those faculty with only teaching assignments, 3/3 for those with other assignments in research or service, and lower for administrative faculty.

Data are derived from faculty productivity reports, class assignments, and enrollment and student credit hour reports. These reports are produced each semester, with a review of the data being conducted annually using a three-year time period for comparison (FIU employs the same technique). FAU believes that their model is well suited to meeting their needs.

Benchmarking and Comparison with Other Institutions. Although FAU is aware of the prominent models currently employed to measure faculty productivity nationally (e.g., The Delaware Study), they do not currently utilize them for purposes of comparison or benchmarking. FAU compares progress internally in order to identify overachieving and underachieving programs. The institution has developed lists of peer institutions for other purposes, although the comparator institutions vary according to the type of comparison being made.

Purposes and Use of Productivity Data. Deans and department chairs use the data for purposes of meeting productivity goals consistent with the university strategic plan and enrollment management objectives. They have the leeway to allocate resources in their academic units in order to meet or exceed these goals. The data are also used to make decisions relative to individual faculty productivity and evaluation.

Productivity data are made available on-line to deans and department chairpersons as well as faculty members.

4.4.7 Florida Agricultural and Mechanical University

Measures of Faculty Productivity. Faculty productivity at Florida Agricultural and Mechanical University (FAMU) is measured primarily by adherence to the 12-Hour law. Specifically, the university uses an Assignment of Responsibility Form, which is divided into two broad categories of activity: those that generate credit hours and those that do not. To ensure that faculty members meet the statutory requirements of the 12-Hour law, an average of 80 percent FTE effort must be devoted to credit-generating activities. The remaining 20 percent is devoted to noncredit-generating activities, such as research, service, administration, and any other duties that may be assigned. Department chairpersons, in consultation with individual faculty members, make written assignments based on the needs of the program and the university. Such assignments reflect the expected performance of all instructional and research duties.

Faculty assignment data are compiled into an instruction and research database, allowing for analysis of student credit hours and contact hours per FTE faculty member. Teaching load data are derived from class schedule data files. Such analyses are made each academic term, with a complete review of productivity measures for the full year compiled annually.

Benchmarking and Comparison with Other Institutions. FAMU does not compare itself with peer institutions, either within Florida or out-of-state, on measures of faculty productivity. As a comprehensive multipurpose land-grant institution, FAMU feels that it is essentially different in mission and goals from other public institutions in Florida.

Purposes and Use of Productivity Data. FAMU identified three central tasks addressed by the collection and reporting of productivity data. Specifically, such information is collected for purposes of:

- making institutional decisions relative to meeting established university accountability measures;
- verifying the productivity of individual faculty members, thus enabling supervisors to better counsel them on matters relating to promotion, tenure, research, and other factors that contribute to faculty welfare; and
- determining faculty members' eligibility for teaching incentive awards that may be established by the state or university.

Results of faculty productivity analyses are most often distributed to, and used by, department chairpersons, college deans, other university administrators, and more recently by the university Board of Trustees.

4.4.8 The University of North Florida

Measures of Faculty Productivity. The 12-Hour law is the basis of assessing faculty productivity at the University of North Florida (UNF). Approximately 95 percent of faculty are expected to follow a 3/3 course load (three courses per term); the remainder are those faculty members who are heavily involved in research or grant solicitation. Teaching activity is intended to account for about 75 percent of faculty workload. The other 25 percent is to be devoted to either research or service.

Department chairpersons work closely with individual faculty members to assign research and service activities in satisfaction of the 25 percent requirement for such duties. Accomplishment of these objectives is evaluated during faculty annual reviews; the most telling measure of accomplishment and productivity at UNF is promotion and tenure.

UNF also closely monitors teaching quality as measured by student evaluations such as the SUSSAI or SIRS (Student Instructional Rating System). Productivity data are compiled and published annually. Separate published reports are produced for faculty service and research activities.

Benchmarking and Comparison with Other Institutions. UNF does not currently make use of any external benchmarks or peer institutions to evaluate faculty productivity, although they are interested in doing so. UNF expressed interest in comparisons with a set of aspirational institutions, although the institution notes that comparisons with other public DCU institutions should be made in cognizance of the inherent difference in the challenges and situation of each institution.

Purposes and Use of Productivity Data. Deans and executive administrators use productivity data to monitor overall departmental and institutional quality and progress toward goals. Results of productivity analyses may also be used to justify awarding funds in support of faculty presentations at conferences.

4.4.9 The University of West Florida

Measures of Faculty Productivity. The system in place at The University of West Florida (UWF) is essentially the same as that at UNF. The 12-Hour law is the primary standard by which productivity is assessed and faculty assignments are made. Individual faculty members are assigned a 3/3 course load, with the remaining portion of their effort assigned to research, public service, curriculum development, administration, and other instruction-related activities.

Data are collected via Faculty Assignment Forms at the beginning of the term and via Faculty Activity Reports at the end of the term. An automated Faculty Activity Reporting System (FARS) retrieves information from Student Data Course Files, Instructional Activity Files, and Payroll Files, and compares actual contact hours to

assigned contact hours. The accomplishments of other assigned activities are reported by individual faculty and certified by the chairs, the deans, and the provost. All of this information is fed into the Instruction and Research Data File for reporting and analysis purposes and is eventually fed into the annual Expenditure Analysis, which demonstrates universitywide workload information. If faculty members do not demonstrate satisfactory progress in fulfillment of assigned duties, course load modifications may be made based on a 4/4 teaching load maximum (this is equivalent to 100 percent FTE effort).

Benchmarking and Comparison with Other Institutions. UWF has developed a relationship with peer institutions and aspirational institutions for purposes of comparing a number of measures, including faculty productivity. UWF routinely participates in the Delaware Study (See Chapter 2), and is developing a formal procedure for benchmarking and comparison of faculty productivity data.

Purposes and Use of Productivity Data. Productivity data are used for purposes of faculty evaluation with respect to promotion and tenure decisions and for monitoring and assessing overall departmental and institutional performance and quality. Also, longitudinal productivity models are used by the provost for allocations of faculty positions, allocations of operating budgets, and allocations of other resources.

4.4.10 Florida Gulf Coast University

Measures of Faculty Productivity. In order to receive additional funding under the current university funding formulas, Florida Gulf Coast University (FGCU) is heavily focused on expanding enrollments to reach target levels. Hence, its attention to the issue of faculty productivity is restricted primarily to the generation of student credit hours. As a comprehensive institution, instruction is the main function of faculty at FGCU. Hence, teaching makes up 75 percent of ranked faculty assignment and 100

percent of instructors' and lecturers' duties. The remaining time is assigned at the discretion of the faculty member in consultation with his/her supervisor. Faculty interest and the needs of the academic unit dictate service assignments.

Faculty productivity data are obtained both from instructional assignments recorded by the Office of the Registrar and noninstructional assignments outlined in Faculty Activity Reports and submitted to the Office of the Provost. These data are input and made available to the provost and college deans each semester.

Benchmarking and Comparison with Other Institutions. FGCU is concerned about comparisons with other institutions within Florida, both public and private. The university is still trying to reach a fixed level of enrollment for budgetary purposes, and many of their programs are not yet fully developed. Hence, the overwhelming majority of faculty effort has been directed toward teaching, with an emphasis on developing both classroom-based courses and distance education offerings.

Due to these factors, FGCU has neither developed a list of peer institutions nor attempted to benchmark its performance with respect to faculty productivity. The provost is currently in the process of identifying a new set of appropriate "peer" institutions for management, operational, and academic comparisons.

Purposes and Use of Productivity Data. FGCU uses student credit hour data to make decisions relative to the assignment of faculty for upcoming semesters and to ensure that performance goals are being met. These data also allow the institution to evaluate whether faculty workload is distributed in an equitable manner and to assess and make adjustments to course enrollment caps. Deans are evaluated on their ability to manage faculty productivity.

4.5 Summary of Institutional Approaches to Measuring Faculty Productivity

The most immediately apparent conclusion to be drawn from the information presented in this chapter is that all of the public DCU institutions have in place a system by which faculty productivity and effectiveness are monitored and evaluated. Although the methods employed may vary to some degree across universities, a few notable points about these procedures are evident:

- **The measurement of faculty productivity at all of the institutions devolves from the application of the 12-Hour law.** Faculty assignments at each of the universities begin with the premise that faculty are to carry a 4/4 course load (assuming 3-credit hour courses), to be reduced according to the research and/or service expectations inherent in each institution or academic unit.

- **Measures of productivity are specifically tailored to each institution.** Most of the institutions expressed the concern that all of the public DCU institutions face different challenges and have different goals. Given that, each institution has developed a system of faculty evaluation that addresses its unique needs. Many institutions have selected peer and aspirational institutions for the purpose of benchmarking performance at both the institution and academic unit levels.

- **Measures of faculty productivity focus on all aspects of faculty activity.** Because of the primacy of the 12-Hour law in the development and implementation of institutional policies regarding faculty productivity, most, though not all, of the universities evaluate productivity in all three areas of faculty activity (teaching, research, and service). The 12-Hour law specifically provides for the assignment of such duties; many of the universities have made performance in these areas a part of their evaluation of faculty productivity.

- **Faculty Productivity is a crucial element of the review process for individual faculty.** Deans and department chairpersons at each institution are provided with evaluative data on a regular basis for purpose of review and adjustment to individual faculty members' assignments. Progress and satisfactory completion of assignments and productivity goals are in many cases the linchpin in decisions regarding tenure and/or promotion as well as in the post-tenure review process.

- **Measures of productivity are used to rationally allocate institutional resources.** In addition to assessing individual faculty

> for purposes of tenure review and promotion, the majority of the institutions indicated that these data are used to inform the process by which budgeting decisions are made. Some of the institutions (most notably UF, USF, UCF, UWF, and FIU) have developed formal models intended to standardize the allocation of faculty lines and budgetary resources to the various academic units within the university.

Most of the institutions are satisfied with the procedures that they currently use to assess faculty productivity. The universities all indicated that productivity data are crucial in decisions about assignments, promotion, and/or tenure. As models for internally allocating resources among academic units and for reviewing faculty members at the individual level, the procedures in place appear to be quite effective.

Each institution has developed a unique model for evaluating faculty productivity by employing different types of specific quantitative and qualitative measures, many of which are not published or reported outside of the institutions. As noted in Chapter 3.0, the development of best practice guidelines for monitoring faculty productivity should involve national peer performance benchmarks. Currently, several public DCU institutions have their own unique systems of peer benchmarking, and some conduct no peer benchmarking of any kind.

The emphasis at some of the institutions is placed heavily on quantitative metrics of instructional productivity, typically as measured by student credit hours produced. An effective system of monitoring overall faculty productivity should include not only these, but also adequate measures of research and service activities, as well as outcome measures that capture information about the quality of faculty activities. Examples of some of these types of measures are provided in Chapter 2.0 of this report.

The Florida Board of Education's Accountability Report (discussed in Section 4.3) provides an effective framework for reporting productivity data. That report provides an evaluation of overall systemwide effectiveness, including measures of faculty

productivity, that can be utilized effectively to communicate to external publics, such as the State Legislature, data regarding the performance of the institutions. As noted in Chapter 2.0 of this report, several other states have shifted emphasis to this type of framework. If employed by the individual public DCU institutions, such a system of reporting could serve to facilitate institutional accountability while providing the universities latitude in developing a system of measuring productivity that best suits their needs.

5.0 ANALYSIS OF FACULTY PRODUCTIVITY

5.0 ANALYSIS OF FACULTY PRODUCTIVITY

5.1 Introduction

This chapter presents detailed information on specific measures of faculty productivity as required by the Florida Legislature. It should be noted, however, that comprehensive measurements of faculty productivity include many more measures than are identified here (See discussion in Chapter 2.0). The time line and legislative proviso for this project directed an evaluation of the topic that was narrowly tailored in scope and subject. However, several of the universities included in this study have spent considerable time developing comprehensive measures of productivity within their own institutions in order to respond to, and participate in, this national conversation. These data are then used not only to develop a more comprehensive picture of "what faculty do," but also "how well they do it" and "how much of it they do" compared with their peers nationally.

As noted in earlier chapters, higher education organizations, university consortiums, identified peer groups, and aspirational peer groups all contribute data to various collection points and in different amounts of detail. An evaluation of these data can then be used to provide institutions with information by which they can compare their productivity and outputs to meaningful national benchmarks. A number of the more established and well-known productivity study groups are identified in Chapter 2.0.

For purposes of this study, legislative proviso directed a review of:

- average number of courses taught, average class size, and number of student credit hours produced by level per faculty member and other instructional teaching positions;
- lower and upper level courses taught by faculty, by rank, and for other instructional positions, by course type;

- analysis of longitudinal trends in the productivity of faculty and other instructional positions; and
- purposes and outcomes of nonteaching assignments.

The proviso also required a review of resources budgeted for faculty positions for regular faculty, part-time faculty, graduate assistants, and other positions, and an identification of the fiscal impact of the conversion of funds from the "salaries and benefits" expenditure category to support nonfaculty instructional positions. Because these data are not relevant to a national evaluation of "faculty productivity" but deal primarily with a unique budgeting formula and methodology for allocating funds to universities in Florida, this analysis will be provided in a separate chapter.

Data addressing the issues described above are provided for each of the ten state universities included in the study.[1] We have made no attempt to compare institutions within the state and we encourage readers to do likewise. As explained in Chapter 2.0, comparisons of faculty workload data across institutional types are not particularly relevant. In order to account for differences in mission, many institutions and state systems use peer analyses to assess faculty productivity. A number of the universities surveyed have spent considerable time researching and developing lists of national peer institutions to which they can be appropriately compared. In some cases, to evaluate productivity more accurately, national peer department lists are also used.[2] It is not clear if these lists have, or need, official approval. In some cases, the Board of Regents approved comparison peer institutional lists for certain purposes, usually involving comparisons of salaries. Universities that have not yet developed appropriate peer lists (FGCU, for example, due to its newness and growth patterns) should be encouraged to

[1] As noted in Chapter 1.0, data for New College are included in USF data. Data for the Fort Myers campus of USF are included in history data for the university, but not in current data.
[2] These lists were discussed in Chapter 4.0 of this report. They are included in Appendix 4-A.

do so. Without external benchmarks and standards for comparison, it is difficult to measure progress towards goals.

5.2 An Analysis of Faculty Teaching Productivity

The analysis of faculty teaching productivity that follows attempts to separately address each of the issues outlined in proviso for the ten public institutions included in this study. Although the endnotes to this chapter[3] should clarify the population included in this analysis, a few points are critical to understanding the data.

5.2.1 Defining Faculty and Other Academic Staff

Faculty and other academic staff are grouped into four categories for the purposes of these analyses:

- *Tenured and Tenure Earning.* This category includes permanent tenured or tenure earning faculty. These are professors, associate professors, and assistant professors including those faculty members with formal administrative functions. Additionally, faculty members who were classified as Graduate Research Professors, Distinguished Professors, Regents Professors, or Eminent Scholars were categorized as professors. Please see endnote (c) in Appendix 5-A for a discussion of the term "tenured and tenure earning."

- *Nontenure Earning.* This category includes instructors, lecturers, and OPS faculty.

- *Graduate Student Instructors.* All student faculty and nonfaculty with any instructional or research duties appear in this group.

- *Others*. If an individual did not fall into any of the above categories, he/she was placed into this group. The overwhelming majority of individuals in this category were nonranked regular faculty; e.g., faculty classified as "Assistant In."

[3] Endnotes are provided in Appendix 5-A.

These groupings are consistent with prominent national studies dealing with faculty productivity. See Chapter 2.0 (page 2-13) for a more comprehensive discussion of this topic.

5.2.2 Types of Analyses

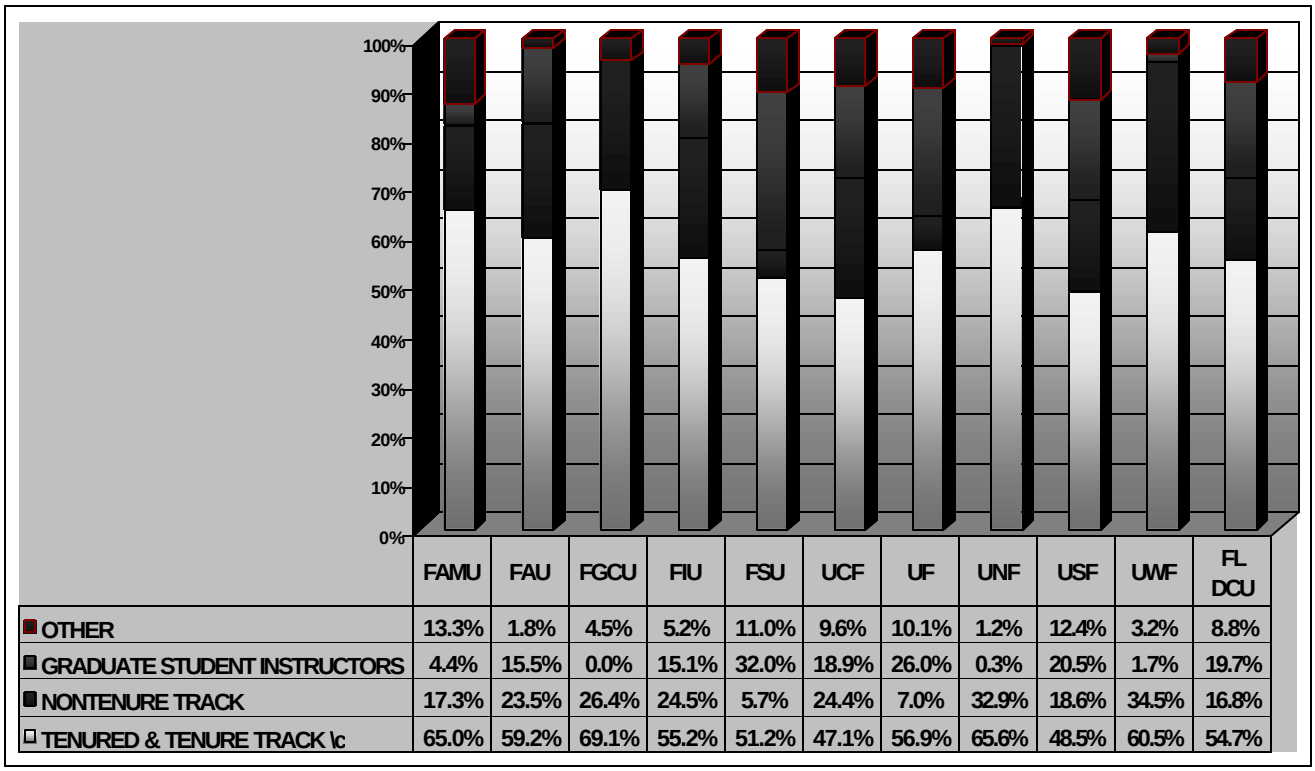
Pursuant to legislative proviso, trends in faculty productivity were analyzed; the data spanned nine academic years from 1991–92 through 1999–00. The volume of data generated, however, precludes the presentation of the full nine years of data in most of the exhibits that follow. Hence, data are typically displayed only for 1991–92 and 1999–00 or as an average for the nine-year period. Additionally, for the sake of brevity and clarity, the following discussion does not consider each institution individually. Instead, an effort has been made to identify and discuss the broad issues involved in teaching productivity among all of the institutions. For those readers requiring access to detailed data by university for each separate year, the full data set is provided in Appendix 5-B.

The analyses that follow include data only for the fall and spring semesters of each academic year. Although large numbers of faculty may teach during the summer and generate a significant number of student credit hours, the contract period for the majority of faculty in the Florida Division of Colleges and Universities (DCU) is nine months. There is no guarantee of summer employment, and a full-time faculty member is considered to have a .75 annual FTE assignment. Hence, no summer data are included; unless otherwise noted, data from both the fall and spring terms in each academic year have been combined.

5.2.3 Distribution of FTE Academic Staff by Type

As discussed, academic staff are grouped into four categories for purposes of analysis. Exhibit 5-1 depicts the portion of FTE academic staff comprised of each of these groups in 1999–00 at the ten institutions under examination. Across all of the institutions, tenured and tenure track faculty comprised only slightly more than half of academic staff (54.7%); nontenure track faculty and Graduate Student Instructors made up 16.8 percent and 19.7 percent, respectively, of all instructional FTE. The remaining 9 percent were composed of various other types of academic staff categorized as "other."

EXHIBIT 5-1
DISTRIBUTION OF FTE E&G ACADEMIC STAFF[a] AT PUBLIC DCU INSTITUTIONS BY TYPE OF STAFF: 1999-00[b]



	FAMU	FAU	FGCU	FIU	FSU	UCF	UF	UNF	USF	UWF	FL DCU
OTHER	13.3%	1.8%	4.5%	5.2%	11.0%	9.6%	10.1%	1.2%	12.4%	3.2%	8.8%
GRADUATE STUDENT INSTRUCTORS	4.4%	15.5%	0.0%	15.1%	32.0%	18.9%	26.0%	0.3%	20.5%	1.7%	19.7%
NONTENURE TRACK	17.3%	23.5%	26.4%	24.5%	5.7%	24.4%	7.0%	32.9%	18.6%	34.5%	16.8%
TENURED & TENURE TRACK \c	65.0%	59.2%	69.1%	55.2%	51.2%	47.1%	56.9%	65.6%	48.5%	60.5%	54.7%

Source: Instruction and Research Data File (IRDF)

The distribution of academic staff varied to some extent between institutions. While tenured and tenure-earning faculty comprised the majority of academic staff at

eight of the ten institutions, utilization of other academic staff differed significantly according to institutional type. Because the mission of doctoral/research institutions includes training graduate students to become faculty members at colleges and universities, Graduate Student Instructors comprised a greater proportion of academic staff at these universities. As such, both FSU and UF utilized OPS faculty, instructors, and lecturers (nontenure track faculty) to a much lesser extent than did the other institutions.

5.2.4 Number of Course Sections Taught and Student Credit Hours Produced by Course Section Type

During the 1999–00 fall and spring terms, the ten public Florida Division of Colleges and Universities' (DCU) Institutions together taught more than 80,000 course sections and produced 4.6 million student credit hours. Almost half of the student credit hours produced were at the upper level (48.6%); lower level courses accounted for about two-fifths (41.1%), and graduate courses about 10 percent. Approximately the same distribution is found when each institution is examined individually (See Appendix 5-C).

Exhibit 5-2 demonstrates that organized class lectures were the predominant method of instruction at all levels, accounting for 66 percent of both lower and upper level course sections and almost half of graduate courses (47.3%).

Although formal classroom instruction (class lectures, discussions, and laboratories) accounted for the majority of courses taught at public DCU institutions, individualized instruction also played a significant role. Directed study sections accounted for 8.8 percent of all course sections taught in 1999–00, and theses and dissertations together accounted for more than 15 percent of all course sections offered at the graduate level.

EXHIBIT 5-2
NUMBER AND PERCENTAGE OF COURSE SECTIONS TAUGHT AT PUBLIC DCU INSTITUTIONS (1999 - 00[b]) BY COURSE SECTION TYPE

	LOWER				UPPER				GRADUATE				TOTAL		
SECTION TYPE	NUMBER OF SECTIONS	% OF TOTAL SECTIONS	# OF STUDENT CREDIT HOURS	% OF TOTAL STUDENT CREDIT HOURS	NUMBER OF SECTIONS	% OF TOTAL SECTIONS	# OF STUDENT CREDIT HOURS	% OF TOTAL STUDENT CREDIT HOURS	NUMBER OF SECTIONS	% OF TOTAL SECTIONS	# OF STUDENT CREDIT HOURS	% OF TOTAL STUDENT CREDIT HOURS	NUMBER OF SECTIONS	% OF TOTAL SECTIONS	# OF STUDENT CREDIT HOURS
CLASS LECTURE	13,346.1	66.4%	1,653,285.0	92.3%	22,561.9	66.1%	1,953,601.8	86.9%	12,343.4	47.3%	412,804.4	67.8%	48,251.4	60.0%	4,019,691.2
DISCUSSION	1,491.5	7.4%	18,760.0	1.0%	1,319.2	3.9%	34,437.1	1.5%	885.5	3.4%	21,146.6	3.5%	3,696.2	4.6%	74,343.7
DISSERTATION	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	2,032.9	7.8%	32,002.0	5.3%	2,032.9	2.5%	32,002.0
INTERNSHIP	17.0	0.1%	96.8	0.0%	1,753.5	5.1%	81,511.8	3.6%	1,108.6	4.2%	25,966.2	4.3%	2,879.1	3.6%	107,574.8
LABORATORY	3,386.3	16.8%	76,866.2	4.3%	2,647.6	7.8%	63,844.8	2.8%	453.5	1.7%	7,792.2	1.3%	6,487.4	8.1%	148,503.2
MEDICAL CLINICAL PROFESSIONAL	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	1.6	0.0%	67.5	0.0%	1.6	0.0%	67.5
OTHER	324.5	1.6%	20,710.0	1.2%	1,263.7	3.7%	57,399.9	2.6%	1,625.0	6.2%	44,389.2	7.3%	3,213.3	4.0%	122,499.1
PERFORMANCE	1,524.0	7.6%	15,122.4	0.8%	1,262.3	3.7%	11,636.2	0.5%	571.1	2.2%	3,945.5	0.6%	3,357.4	4.2%	30,704.1
SUPERVISED RESEARCH	0.0	0.0%	0.0	0.0%	158.2	0.5%	2,123.8	0.1%	780.3	3.0%	5,721.6	0.9%	938.5	1.2%	7,845.4
SUPERVISOR TEACHING	0.0	0.0%	0.0	0.0%	58.0	0.2%	1,368.0	0.1%	337.5	1.3%	2,260.0	0.4%	395.5	0.5%	3,628.0
THESIS	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	2,010.6	7.7%	19,750.2	3.2%	2,010.6	2.5%	19,750.2
CORRESPONDENCE STUDY COURSE	0.5	0.0%	482.1	0.0%	0.6	0.0%	393.0	0.0%	0.0	0.0%	0.0	0.0%	1.1	0.0%	875.1
DIRECTED STUDY	21.9	0.1%	5,355.3	0.3%	3,129.1	9.2%	41,008.9	1.8%	3,942.5	15.1%	33,002.3	5.4%	7,093.5	8.8%	79,366.5
TOTAL	***20,111.8***	***100.0%***	***1,790,677.8***	***100.0%***	***34,154.2***	***100.0%***	***2,247,325.3***	***100.0%***	***26,092.5***	***100.0%***	***608,847.7***	***100.0%***	***80,358.4***	***100.0%***	***4,646,850.8***

Source: IRDF

Despite the fact that class lectures constituted only 60 percent of all course sections taught in 1999–00, the overwhelming majority of student credit hours were produced in class lectures (86.5%). Although many of the other course section types accounted for a significant share of course sections taught, they typically produced a proportionately smaller percentage of the total student credit hours generated. For instance, laboratories, directed study sections, and discussion sections together accounted for 21.5 percent of course sections, yet they contributed only 6.5 percent of the student credit hours generated in 1999–00.

5.2.5 Average Size of Class Sections by Level

The average size of class meetings at all but one of the ten Florida institutions has declined since 1991–92. Only the University of Central Florida has seen an increase in class size since the beginning of the decade. This reduction in class size is at least partially the result of significant legislative interest in the topic beginning in the 1984–85 academic year. During that year, increased funding was directed toward reducing class sizes in English, math, and foreign languages to a ratio of approximately 1 to 22 at the undergraduate level.

Exhibit 5-3 shows that across institutions and instructional levels, there were on average about 33 students per class meeting in 1999–00, this number having decreased from 34.5 in 1991–92 (-3.8%). At all institutions and instructional levels, the median class size of 24 students in 1999–00 was lower than the mean, indicating that the latter figure was pushed upwards by a small number of much larger than average class meetings. About 70 percent of class meetings were at or below the mean class size.

EXHIBIT 5-3
ESTIMATED AVERAGE CLASS MEETING TIME SIZE* AT PUBLIC DCU INSTITUTIONS: 1991-92 AND 1999-00[b], WITH PERCENT CHANGE

	LEVEL	91-92		99-00		CHANGE	
		MEAN	MEDIAN	MEAN	MEDIAN	MEAN	MEDIAN
FAMU	UG	33.2	30.0	34.2	28.0	3.1%	-6.7%
	G	11.0	8.0	13.3	7.0	21.3%	-12.5%
	ALL	32.1	29.0	31.9	27.0	-0.5%	-6.9%
FAU	UG	36.1	28.0	29.5	22.0	-18.3%	-21.4%
	G	12.9	11.0	10.4	8.0	-19.8%	-27.3%
	ALL	32.2	25.0	26.6	21.0	-17.4%	-16.0%
FGCU	UG	-	-	18.7	18.0	-	-
	G	-	-	11.3	11.0	-	-
	ALL	-	-	17.9	17.0	-	-
FIU	UG	33.7	28.0	33.0	26.0	-2.2%	-7.1%
	G	13.3	10.0	13.1	9.0	-1.4%	-10.0%
	ALL	30.0	25.0	29.6	24.0	-1.1%	-4.0%
FSU	UG	41.6	28.0	39.0	25.0	-6.3%	-10.7%
	G	15.0	9.0	13.7	8.0	-8.3%	-11.1%
	ALL	35.5	24.0	33.5	23.0	-5.4%	-4.2%
UCF	UG	39.6	31.0	42.6	29.0	7.6%	-6.5%
	G	15.5	14.0	15.3	13.0	-1.2%	-7.1%
	ALL	37.0	30.0	39.6	28.0	7.3%	-6.7%
UF	UG	45.0	30.0	43.2	26.0	-4.0%	-13.3%
	G	22.2	13.0	22.9	13.0	3.1%	0.0%
	ALL	40.4	27.0	39.6	25.0	-2.0%	-7.4%
UNF	UG	34.0	28.0	31.6	26.0	-7.0%	-7.1%
	G	18.9	17.0	14.5	12.0	-23.3%	-29.4%
	ALL	32.0	27.0	29.9	25.0	-6.5%	-7.4%
USF	UG	35.9	27.0	35.1	26.0	-2.4%	-3.7%
	G	15.0	13.0	13.6	11.0	-9.1%	-15.4%
	ALL	32.1	25.0	31.4	24.0	-2.1%	-4.0%
UWF	UG	27.3	25.0	25.8	23.0	-5.6%	-8.0%
	G	14.2	12.0	11.4	9.0	-19.6%	-25.0%
	ALL	25.9	24.0	24.2	22.0	-6.9%	-8.3%
FL DCU	UG	38.3	29.0	36.6	26.0	-4.3%	-10.3%
	G	16.6	11.0	15.4	10.0	-6.9%	-9.1%
	ALL	34.5	26.0	33.2	24.0	-3.8%	-7.7%

Source: IRDF

** Class meeting time size refers to the number of head count students receiving instruction in a given classroom at a given time. Class meeting times may consist of multiple class sections in some cases. Only Lectures, Discussions, and Laboratories were included in this calculation.*

As would be expected, undergraduate classes were, on average, larger than graduate level classes. The mean undergraduate class meeting size in 1999–00 was 36.6, whereas graduate level courses averaged about 15 students per class meeting. Despite the larger size of undergraduate courses, graduate level courses saw a greater decline in average size between 1991–92 and 1999–00 (-6.9%).

5.2.6 Percentage of Instructional Effort Provided by E&G Academic Staff

Almost without exception, the majority of instructional effort at public DCU institutions was provided by tenured and tenure-earning faculty. Although the figures varied by institution, on average faculty were responsible for approximately 60 percent of instructional effort.

However, Exhibit 5-4 shows that tenured and tenure-earning faculty effort has focused primarily on the upper and graduate levels of instruction. Faculty provided about 31 percent of lower level instructional effort in 1999–00, although this number tended to be higher at the four comprehensive institutions than at the doctoral/research universities. Nontenure track faculty and Graduate Student Instructors each provided about a third of lower level instructional effort in 1999–00.

In contrast, tenured and tenure-earning faculty provided the majority of upper and graduate level instructional effort in 1999–00, and were responsible for approximately 60 and 84 percent of instructional effort at these levels, respectively. Nontenure track faculty contributed about 30 percent of upper level effort and 12.7 percent of graduate level effort. On average, Graduate Student Instructors provided very little instructional effort at the upper level and, as would be expected, almost none at the graduate level.

Exhibit 5-4 also shows that of the total instructional effort provided by any academic staff, the portion provided by tenured and tenure-earning faculty declined about 10 percent between 1991–92 and 1999–00 at all instructional levels. Most of this

EXHIBIT 5-4
PERCENTAGE OF TOTAL INSTRUCTIONAL EFFORT CONTRIBUTED BY E&G ACADEMIC STAFF[a] AT PUBLIC DCU INSTITUTIONS: 1991-92 & 1999-00[b]

		91-92				99-00				CHANGE SINCE 91-92			
		LOWER	UPPER	GRAD	ALL LEVELS	LOWER	UPPER	GRAD	ALL LEVELS	LOWER	UPPER	GRAD	ALL LEVELS
FAMU	TENURED AND TENURE TRACK	64.0%	74.3%	81.4%	**71.1%**	61.1%	70.8%	91.3%	**71.7%**	-2.9%	-3.5%	10.0%	**0.5%**
	NONTENURE TRACK	32.3%	18.8%	10.5%	**23.1%**	30.7%	21.5%	5.0%	**21.3%**	-1.6%	2.8%	-5.5%	**-1.7%**
	GRADUATE STUDENT INSTRUCTORS	0.0%	0.0%	0.0%	**0.0%**	2.6%	0.0%	0.0%	**0.9%**	2.6%	0.0%	0.0%	**0.9%**
	OTHER	3.7%	6.9%	8.2%	**5.8%**	5.5%	7.6%	3.7%	**6.1%**	1.9%	0.7%	-4.5%	**0.3%**
	TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***				
FAU	TENURED AND TENURE TRACK	52.3%	75.3%	92.2%	**77.6%**	30.1%	54.8%	82.7%	**54.1%**	-22.1%	-20.4%	-9.6%	**-23.5%**
	NONTENURE TRACK	40.5%	18.7%	6.7%	**17.7%**	38.5%	39.0%	16.1%	**34.4%**	-2.0%	20.3%	9.4%	**16.6%**
	GRADUATE STUDENT INSTRUCTORS	6.3%	5.5%	0.3%	**4.0%**	31.4%	5.8%	0.6%	**11.2%**	25.1%	0.2%	0.3%	**7.1%**
	OTHER	1.0%	0.5%	0.7%	**0.6%**	0.0%	0.4%	0.6%	**0.3%**	-1.0%	-0.1%	-0.2%	**-0.3%**
	TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***				
FGCU[c]	TENURED AND TENURE TRACK	0.0%	0.0%	0.0%	**0.0%**	38.7%	67.7%	75.6%	**61.6%**	38.7%	67.7%	75.6%	**61.6%**
	NONTENURE TRACK	0.0%	0.0%	0.0%	**0.0%**	58.6%	30.7%	21.9%	**36.4%**	58.6%	30.7%	21.9%	**36.4%**
	GRADUATE STUDENT INSTRUCTORS	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	**0.0%**
	OTHER	0.0%	0.0%	0.0%	**0.0%**	2.7%	1.6%	2.5%	**2.1%**	2.7%	1.6%	2.5%	**2.1%**
	TOTAL	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***				
FIU	TENURED AND TENURE TRACK	36.2%	69.0%	87.5%	**68.4%**	26.0%	56.2%	78.0%	**53.0%**	-10.2%	-12.8%	-9.5%	**-15.3%**
	NONTENURE TRACK	44.1%	24.6%	11.3%	**24.4%**	50.7%	35.2%	18.9%	**35.6%**	6.6%	10.6%	7.6%	**11.2%**
	GRADUATE STUDENT INSTRUCTORS	18.3%	5.5%	0.7%	**6.3%**	20.2%	6.3%	1.3%	**9.0%**	1.9%	0.9%	0.6%	**2.7%**
	OTHER	1.3%	0.9%	0.5%	**0.9%**	3.1%	2.3%	1.8%	**2.4%**	1.8%	1.4%	1.3%	**1.5%**
	TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***				
FSU	TENURED AND TENURE TRACK	26.5%	65.3%	93.0%	**64.7%**	26.7%	59.4%	88.7%	**59.4%**	0.2%	-5.9%	-4.3%	**-5.3%**
	NONTENURE TRACK	8.6%	11.2%	4.8%	**8.6%**	8.3%	15.4%	5.3%	**10.1%**	-0.3%	4.2%	0.5%	**1.5%**
	GRADUATE STUDENT INSTRUCTORS	63.0%	19.8%	0.1%	**23.9%**	59.4%	17.1%	0.6%	**23.9%**	-3.6%	-2.7%	0.5%	**0.0%**
	OTHER	1.9%	3.6%	2.1%	**2.8%**	5.7%	8.1%	5.4%	**6.5%**	3.7%	4.5%	3.3%	**3.8%**
	TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***				
UCF	TENURED AND TENURE TRACK	37.4%	69.0%	91.9%	**67.4%**	27.9%	52.0%	74.5%	**49.7%**	-9.5%	-16.9%	-17.4%	**-17.7%**
	NONTENURE TRACK	43.5%	23.6%	7.1%	**24.2%**	54.1%	43.1%	22.0%	**42.0%**	10.6%	19.5%	14.9%	**17.8%**
	GRADUATE STUDENT INSTRUCTORS	18.9%	4.8%	0.4%	**6.5%**	17.8%	3.5%	0.7%	**7.0%**	-1.0%	-1.3%	0.3%	**0.5%**
	OTHER	0.2%	2.6%	0.6%	**1.8%**	0.2%	1.3%	2.8%	**1.3%**	-0.1%	-1.3%	2.2%	**-0.5%**
	TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***				
UF	TENURED AND TENURE TRACK	34.6%	70.1%	92.2%	**68.2%**	25.2%	70.7%	89.3%	**65.4%**	-9.4%	0.6%	-2.9%	**-2.8%**
	NONTENURE TRACK	8.9%	6.7%	4.8%	**6.7%**	12.2%	10.2%	7.1%	**9.6%**	3.3%	3.5%	2.3%	**3.0%**
	GRADUATE STUDENT INSTRUCTORS	54.9%	20.6%	0.9%	**22.9%**	60.4%	16.1%	1.4%	**22.5%**	5.5%	-4.5%	0.4%	**-0.5%**
	OTHER	1.5%	2.6%	2.1%	**2.2%**	2.1%	3.0%	2.2%	**2.5%**	0.6%	0.4%	0.1%	**0.3%**
	TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***				
UNF	TENURED AND TENURE TRACK	40.1%	73.3%	87.0%	**69.0%**	41.7%	63.7%	85.5%	**59.5%**	1.6%	-9.6%	-1.5%	**-9.6%**
	NONTENURE TRACK	22.2%	8.2%	2.6%	**10.0%**	56.4%	35.5%	14.4%	**39.5%**	34.2%	27.3%	11.8%	**29.5%**
	GRADUATE STUDENT INSTRUCTORS	4.7%	0.5%	0.1%	**1.3%**	1.3%	0.0%	0.0%	**0.4%**	-3.4%	-0.5%	-0.1%	**-0.9%**
	OTHER	33.0%	18.0%	10.3%	**19.6%**	0.6%	0.8%	0.0%	**0.6%**	-32.4%	-17.2%	-10.2%	**-19.0%**
	TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***				
USF	TENURED AND TENURE TRACK	31.8%	66.1%	85.9%	**65.6%**	29.3%	54.7%	77.5%	**54.3%**	-2.5%	-11.4%	-8.4%	**-11.2%**
	NONTENURE TRACK	24.0%	20.5%	11.9%	**18.8%**	30.7%	31.9%	18.7%	**28.1%**	6.7%	11.4%	6.8%	**9.3%**
	GRADUATE STUDENT INSTRUCTORS	42.5%	11.6%	0.4%	**13.9%**	37.1%	11.6%	1.8%	**15.4%**	-5.4%	-0.1%	1.4%	**1.6%**
	OTHER	1.8%	1.7%	1.8%	**1.7%**	2.9%	1.8%	2.0%	**2.2%**	1.2%	0.1%	0.3%	**0.4%**
	TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***				
UWF	TENURED AND TENURE TRACK	36.1%	65.3%	76.4%	**62.9%**	30.3%	58.4%	73.3%	**54.6%**	-5.8%	-6.9%	-3.1%	**-8.2%**
	NONTENURE TRACK	47.5%	30.7%	19.8%	**31.2%**	62.3%	39.0%	22.5%	**41.3%**	14.7%	8.3%	2.8%	**10.1%**
	GRADUATE STUDENT INSTRUCTORS	10.5%	1.5%	1.0%	**2.8%**	6.9%	0.8%	0.2%	**2.2%**	-3.6%	-0.6%	-0.7%	**-0.6%**
	OTHER	5.9%	2.6%	2.8%	**3.2%**	0.5%	1.8%	3.9%	**1.9%**	-5.3%	-0.8%	1.1%	**-1.3%**
	TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***				
FL DCU	TENURED AND TENURE TRACK	37.9%	69.0%	89.5%	**67.8%**	31.2%	59.7%	83.6%	**58.0%**	-6.6%	-9.3%	-6.0%	**-9.8%**
	NONTENURE TRACK	23.6%	17.6%	7.9%	**16.3%**	33.2%	29.1%	12.7%	**26.0%**	9.6%	11.5%	4.8%	**9.6%**
	GRADUATE STUDENT INSTRUCTORS	35.2%	10.1%	0.5%	**12.8%**	32.9%	8.3%	1.0%	**13.2%**	-2.2%	-1.8%	0.5%	**0.4%**
	OTHER	3.3%	3.3%	2.1%	**3.0%**	2.6%	2.9%	2.7%	**2.8%**	-0.7%	-0.4%	0.6%	**-0.2%**
	TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***				

Source: IRDF

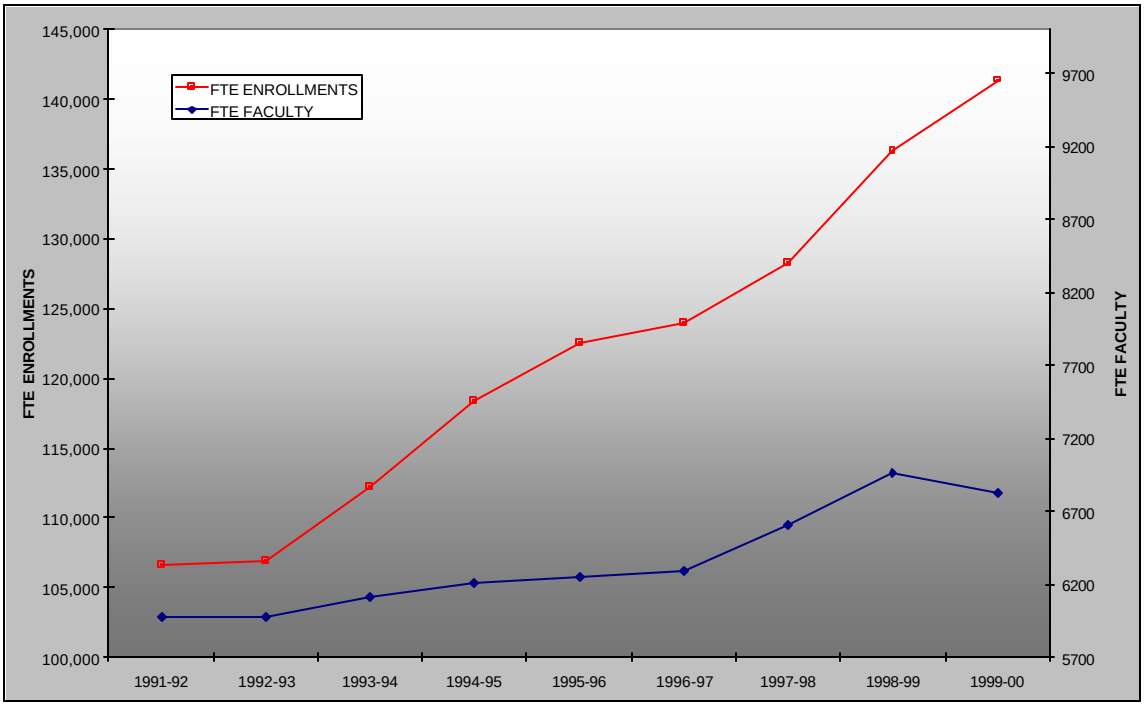
portion of effort was absorbed by nontenure track faculty, who saw a 9.6 percent increase in the portion of instructional effort contributed.

It is not necessarily the case, however, that because faculty contributed a smaller share of the total instructional effort at the end of the decade than at the beginning, they were less productive in 1999–00 than nine years earlier. These measures do not speak directly to the issue of faculty productivity at an individual level. They merely highlight who is doing the teaching, and it is clear that faculty are doing the bulk of it. The decline may be best explained not by a reduction in the teaching workload of faculty members or a shift away from instruction (i.e., they are teaching less because they are doing more of other things), but by slower growth in the number of faculty relative to enrollments.

Exhibit 5-5 shows that since 1991–92, annual FTE enrollments at public DCU institutions have grown by 32.7 percent, whereas the number of FTE faculty has increased only 19.9 percent. Although the disparity may seem small at the systemwide level, enrollment growth at some institutions has far outpaced growth in the ranks of faculty. Those institutions with the greatest decline in faculty share of instructional effort typically had the greatest disparity between growth of FTE students and FTE faculty. The only institution at which faculty share of instructional effort grew between 1991–92 and 1999–00 was FAMU, whose faculty ranks grew faster than enrollments.

Rather than increasing the numbers of tenured and tenure track faculty to accommodate expanding enrollments, most institutions have increased their use of nontenure track faculty and Graduate Student Instructors. Both in absolute numbers and as a percentage of all academic staff, instructors, lecturers, and OPS faculty have increased dramatically since the beginning of the decade. Together, they provided 26.0 percent of total instructional effort at public DCU institutions in 1999–00, this number having increased from only 16.3 percent in 1991–92.

EXHIBIT 5-5
PERCENT GROWTH IN ANNUAL FTE ENROLLMENTS vs. FTE E&G TENURED AND TENURE-TRACK FACULTY[a]: PUBLIC DCU INSTITUTIONS



	1991-92 FTE			1999-00 FTE			% CHANGE
	#	%	Student / Staff Ratio	#	%	Student / Staff Ratio	
TENURED & TENURE EARNING[c]	5691.3	65.2%	18.5	6821.5	54.7%	20.7	19.9%
NONTENURE-EARNING	943.4	10.8%	111.9	2096.6	16.8%	67.4	122.2%
GRADUATE STUDENT INSTRUCTORS	1360.4	15.6%	77.6	2458.8	19.7%	57.5	80.7%
OTHER	736.8	8.4%	143.3	1103.5	8.8%	128.2	49.8%
ALL INSTRUCTIONAL STAFF	***8732.0***	***100.0%***	***12.1***	***12480.4***	***100.0%***	***11.3***	***42.9%***
FTE ENROLLMENTS	105,569	-	-	141,412	-	-	32.7%

Source: IRDF and DCU 1999-00 Fact Book

It is clear that when additional academic staff have been required throughout the decade, institutions typically met this demand with nontenure-track faculty. In addition to allowing institutions to acquire more instructors without bearing the burden of tenured and tenure track faculty salaries, such academic staff may offer the universities more flexibility to accommodate potential budgetary fluctuations.

5.2.7 Percentage of Total Student Credit Hours Produced by E&G Faculty and Other Instructional Positions

Exhibit 5-6 depicts the percentage of total student credit hours generated by all types of academic staff for both 1991-92 and 1999-00. The distribution of student credit hours across staff categories essentially mirrors the distribution of instructional effort as depicted in Exhibit 5-4. Tenured and tenure earning faculty produced the majority of student credit hours in both years displayed (64.5% in 1991-92 and 55% in 1999-00); non-tenure track faculty produced approximately 20 percent of the total credit hours in 1991-92 and about 30 percent in 1999-00. The portion of total student credit hours generated by Graduate Student Assistants and other academic staff remained essentially constant throughout the decade.

5.2.8 Average Number of Courses Taught and Student Credit Hours Produced by E&G Faculty and Other Instructional Positions

Although the data discussed in the previous section served to identify who was teaching students at the various instructional levels, it did not directly address faculty instructional productivity at the individual level. For that, the average workload of faculty and other academic staff as measured by courses taught and student credit hours produced per FTE academic staff member were examined.

Courses per FTE Academic Staff. As discussed in Section 5.2.2, formal group instruction comprised only a portion of all courses taught at public DCU institutions. Moreover, since 1991-92, individualized and other nonclassroom course sections increased sharply as a percentage of total course sections. Consequently, it is vital that measures of faculty course load capture the full range of activities that qualify as instruction.

EXHIBIT 5-6
PERCENTAGE OF TOTAL STUDENT CREDIT HOURS GENERATED BY E&G ACADEMIC STAFF[a, c] AT PUBLIC DCU INSTITUTIONS: 1991-92 AND 1999-00 [b]

	FACULTY TYPE	91-92				99-00				CHANGE SINCE 1991-92			
		LOWER	UPPER	GRAD	TOTAL	LOWER	UPPER	GRAD	TOTAL	LOWER	UPPER	GRAD	TOTAL
FAMU	TENURED AND TENURE TRACK	57.6%	74.1%	82.9%	66.3%	55.5%	72.5%	89.9%	65.0%	-2.1%	-1.6%	7.0%	-1.2%
	NONTENURE-TRACK	40.8%	20.7%	14.7%	30.5%	39.3%	21.5%	7.5%	29.6%	-1.5%	0.7%	-7.3%	-0.8%
	GRADUATE STUDENT INSTRUCTORS	0.0%	0.0%	0.0%	0.0%	1.7%	0.0%	0.0%	0.9%	1.7%	0.0%	0.0%	0.9%
	OTHER	1.6%	5.1%	2.3%	3.3%	3.4%	6.0%	2.6%	4.4%	1.9%	0.9%	0.3%	1.2%
	TOTAL	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
FAU	TENURED AND TENURE TRACK	65.2%	71.0%	87.2%	71.8%	39.4%	52.1%	79.9%	50.8%	-25.8%	-18.8%	-7.3%	-21.0%
	NONTENURE-TRACK	29.3%	23.4%	11.5%	23.1%	46.9%	43.8%	18.9%	42.2%	17.6%	20.4%	7.4%	19.1%
	GRADUATE STUDENT INSTRUCTORS	5.0%	4.9%	0.2%	4.3%	13.7%	3.8%	0.7%	6.8%	8.7%	-1.1%	0.5%	2.5%
	OTHER	0.5%	0.7%	1.1%	0.7%	0.0%	0.3%	0.6%	0.2%	-0.5%	-0.4%	-0.6%	-0.5%
	TOTAL	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
FGCU [c]	TENURED AND TENURE TRACK	0.0%	0.0%	0.0%	0.0%	40.2%	65.4%	79.6%	58.7%	40.2%	65.4%	79.6%	58.7%
	NONTENURE-TRACK	0.0%	0.0%	0.0%	0.0%	57.4%	33.0%	18.1%	39.3%	57.4%	33.0%	18.1%	39.3%
	GRADUATE STUDENT INSTRUCTORS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	OTHER	0.0%	0.0%	0.0%	0.0%	2.4%	1.6%	2.3%	1.9%	2.4%	1.6%	2.3%	1.9%
	TOTAL	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*
FIU	TENURED AND TENURE TRACK	35.5%	65.1%	79.4%	60.8%	30.1%	51.7%	67.9%	45.6%	-5.4%	-13.4%	-11.6%	-15.2%
	NONTENURE-TRACK	50.7%	28.6%	19.1%	31.9%	60.1%	43.6%	29.1%	48.0%	9.4%	15.0%	10.0%	16.1%
	GRADUATE STUDENT INSTRUCTORS	12.8%	4.5%	0.8%	5.7%	8.1%	3.1%	1.8%	4.8%	-4.7%	-1.4%	0.9%	-0.9%
	OTHER	1.0%	1.9%	0.7%	1.5%	1.7%	1.6%	1.2%	1.6%	0.7%	-0.3%	0.6%	0.0%
	TOTAL	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
FSU	TENURED AND TENURE TRACK	43.6%	65.3%	88.5%	62.2%	32.3%	55.0%	85.1%	50.1%	-11.3%	-10.3%	-3.5%	-12.1%
	NONTENURE-TRACK	11.2%	11.7%	7.8%	10.9%	12.7%	17.1%	9.1%	14.1%	1.5%	5.3%	1.3%	3.1%
	GRADUATE STUDENT INSTRUCTORS	43.2%	19.8%	0.0%	23.9%	45.6%	19.3%	0.4%	27.3%	2.4%	-0.5%	0.4%	3.4%
	OTHER	2.0%	3.2%	3.7%	2.9%	9.4%	8.7%	5.5%	8.5%	7.4%	5.5%	1.8%	5.6%
	TOTAL	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
UCF	TENURED AND TENURE TRACK	45.1%	64.7%	87.8%	61.5%	35.8%	57.4%	72.6%	50.5%	-9.3%	-7.4%	-15.2%	-11.1%
	NONTENURE-TRACK	43.5%	30.7%	11.6%	32.4%	57.1%	40.5%	25.3%	45.5%	13.6%	9.8%	13.8%	13.1%
	GRADUATE STUDENT INSTRUCTORS	11.4%	3.2%	0.3%	5.1%	7.0%	1.6%	0.6%	3.6%	-4.4%	-1.5%	0.3%	-1.5%
	OTHER	0.1%	1.4%	0.3%	1.0%	0.1%	0.6%	1.4%	0.5%	0.0%	-0.9%	1.1%	-0.5%
	TOTAL	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
UF	TENURED AND TENURE TRACK	53.6%	71.7%	92.6%	68.3%	51.1%	73.8%	87.1%	67.8%	-2.4%	2.1%	-5.5%	-0.6%
	NONTENURE-TRACK	5.2%	9.2%	5.3%	7.1%	14.3%	12.6%	9.4%	12.7%	9.2%	3.4%	4.1%	5.5%
	GRADUATE STUDENT INSTRUCTORS	40.1%	16.4%	0.4%	22.6%	32.6%	10.1%	1.4%	16.9%	-7.5%	-6.3%	1.0%	-5.6%
	OTHER	1.2%	2.7%	1.7%	2.0%	2.0%	3.4%	2.1%	2.6%	0.8%	0.8%	0.4%	0.7%
	TOTAL	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
UNF	TENURED AND TENURE TRACK	52.5%	76.2%	84.9%	71.6%	50.9%	68.5%	86.9%	62.8%	-1.6%	-7.7%	2.0%	-8.8%
	NONTENURE-TRACK	17.6%	8.3%	3.4%	9.9%	45.4%	31.1%	13.0%	35.5%	27.8%	22.8%	9.7%	25.6%
	GRADUATE STUDENT INSTRUCTORS	4.0%	0.5%	0.1%	1.3%	3.2%	0.0%	0.0%	1.3%	-0.8%	-0.5%	-0.1%	0.0%
	OTHER	25.9%	15.0%	11.5%	17.2%	0.5%	0.3%	0.0%	0.4%	-25.4%	-14.7%	-11.5%	-16.8%
	TOTAL	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
USF	TENURED AND TENURE TRACK	42.0%	65.9%	82.6%	63.1%	34.4%	54.8%	73.4%	50.2%	-7.6%	-11.1%	-9.2%	-12.9%
	NONTENURE-TRACK	29.6%	23.1%	16.2%	23.5%	39.6%	34.0%	24.0%	34.7%	10.0%	11.0%	7.7%	11.1%
	GRADUATE STUDENT INSTRUCTORS	27.0%	9.3%	0.4%	11.9%	22.9%	9.0%	0.9%	12.8%	-4.1%	-0.3%	0.5%	0.9%
	OTHER	1.3%	1.7%	0.8%	1.5%	3.0%	2.2%	1.8%	2.4%	1.7%	0.4%	1.0%	0.9%
	TOTAL	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
UWF	TENURED AND TENURE TRACK	37.8%	61.8%	73.9%	58.3%	36.7%	57.9%	75.2%	52.4%	-1.1%	-4.0%	1.4%	-6.0%
	NONTENURE-TRACK	46.1%	35.1%	24.0%	36.0%	57.5%	40.6%	21.4%	44.4%	11.4%	5.5%	-2.6%	8.4%
	GRADUATE STUDENT INSTRUCTORS	10.8%	1.0%	0.9%	3.0%	5.4%	0.8%	0.9%	2.4%	-5.4%	-0.2%	0.1%	-0.6%
	OTHER	5.3%	2.1%	1.3%	2.7%	0.4%	0.8%	2.5%	0.8%	-4.9%	-1.3%	1.2%	-1.8%
	TOTAL	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
FL DCU	**TENURED AND TENURE TRACK**	**48.4%**	**67.6%**	**86.6%**	**64.5%**	**40.2%**	**60.0%**	**80.4%**	**55.0%**	**-8.2%**	**-7.6%**	**-6.1%**	**-9.5%**
	NONTENURE-TRACK	**24.1%**	**20.4%**	**11.0%**	**20.3%**	**36.3%**	**30.1%**	**16.2%**	**30.6%**	**12.2%**	**9.6%**	**5.2%**	**10.4%**
	GRADUATE STUDENT INSTRUCTORS	**25.3%**	**9.1%**	**0.3%**	**12.7%**	**20.6%**	**7.0%**	**0.9%**	**11.4%**	**-4.8%**	**-2.1%**	**0.6%**	**-1.2%**
	OTHER	**2.2%**	**2.8%**	**2.1%**	**2.6%**	**3.0%**	**2.9%**	**2.4%**	**2.9%**	**0.8%**	**0.1%**	**0.3%**	**0.3%**
	TOTAL	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*

Source: IRDF

Alternatively, there is value in reporting the average *formal* course load among faculty and other academic staff; i.e., the average number of organized class sections in

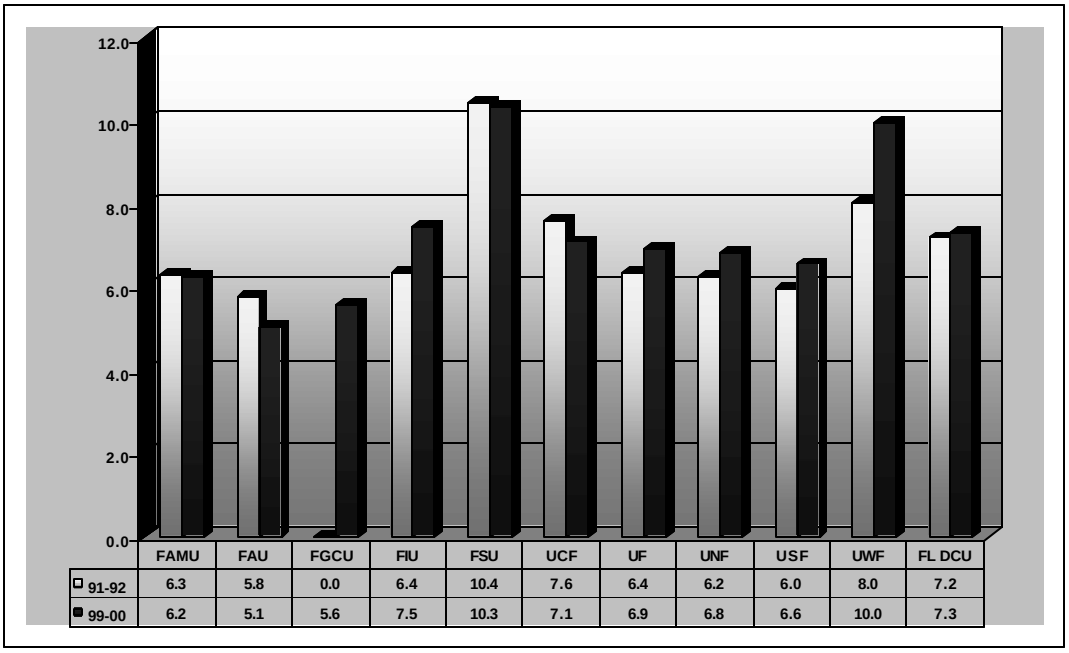
which group instruction occurs at a specified time and place. These course sections reflect the traditional notion of a "class." Hence, both measures are reported here.

Exhibit 5-7 depicts the number of course sections per FTE tenured and tenure track faculty member, including all classroom and other course sections. These include all forms of group instruction (e.g., lectures, laboratories, and discussions) *as well as* all types of individual instruction (e.g., directed study, performance, theses, or dissertations).[4] Exhibit 5-8 shows similar statistics for nontenure track faculty. Tenured and tenure track faculty at all public DCU institutions taught on average a total of 7.3 courses during the 1999–00 fall and spring terms. At the majority of the institutions, this measure of workload has either remained about the same or increased since 1991–92. Because the data reflect courses taught in both fall and spring terms in any given year, the number of courses taught per semester is roughly half of the depicted number.

Nontenure track faculty typically had heavier course loads than did tenured and tenure earning faculty, although this was not the case at every institution. In 1999–00, nontenure track faculty across all public DCU institutions taught on average about 1.2 course sections for every course section taught by tenured and tenure earning faculty. This, however, is not unexpected, since nontenure track faculty are hired primarily for instructional purposes only, while tenured and tenure-track faculty have a multitude of other duties, including research and public service, which are essential functions of their positions. It would be unreasonable to assume that faculty with such additional duties would be expected to teach as much as instructors without them. In fact, in 1999–00,

[4] Exhibit 5-2 provides a complete listing of all course section types offered in 1999–00.

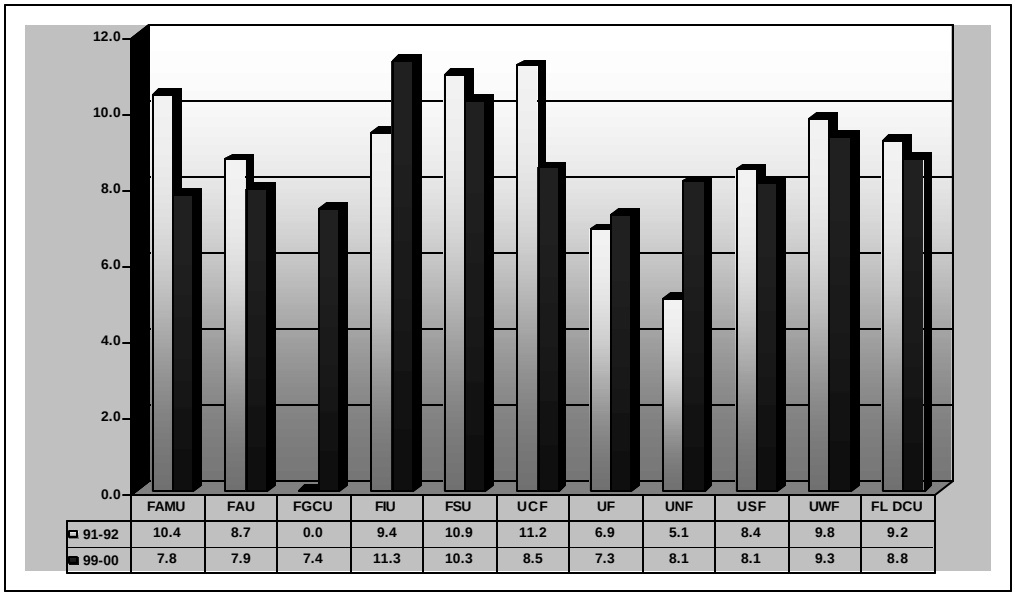
EXHIBIT 5-7
NUMBER OF COURSES (ALL TYPES) PER FTE E&G TENURED AND TENURE TRACK FACULTY MEMBER[a,c] AT PUBLIC DCU INSTITUTIONS: 1991-92 AND 1999-00[b]



	FAMU	FAU	FGCU	FIU	FSU	UCF	UF	UNF	USF	UWF	FL DCU
91-92	6.3	5.8	0.0	6.4	10.4	7.6	6.4	6.2	6.0	8.0	7.2
99-00	6.2	5.1	5.6	7.5	10.3	7.1	6.9	6.8	6.6	10.0	7.3

Source: IRDF

EXHIBIT 5-8
NUMBER OF COURSES (ALL TYPES) PER FTE E&G NONTENURE-TRACK FACULTY MEMBER[a, c] AT PUBLIC DCU INSTITUTIONS: 1991-92 AND 1999-00[b]



	FAMU	FAU	FGCU	FIU	FSU	UCF	UF	UNF	USF	UWF	FL DCU
91-92	10.4	8.7	0.0	9.4	10.9	11.2	6.9	5.1	8.4	9.8	9.2
99-00	7.8	7.9	7.4	11.3	10.3	8.5	7.3	8.1	8.1	9.3	8.8

Source: IRDF

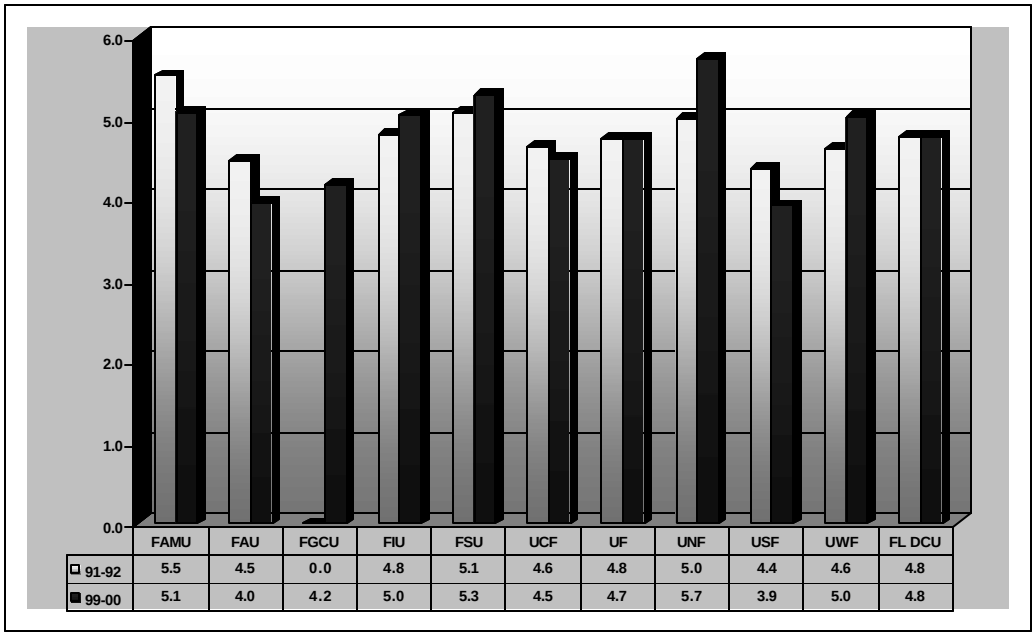
nontenure track faculty reported that about 80 percent of their effort was devoted to credit-generating instruction, whereas tenured and tenure track faculty reported an average of 55 percent.

Moreover, many tenured and tenure track faculty carry formal administrative functions that occupy a portion of their time. Included among the faculty ranks in most colleges and departments are Deans, Department Chairs, and Program Directors. Often, university presidents and provosts continue to carry some instructional duties in addition to their administrative function. Adjunct and other nontenure track faculty rarely occupy such administrative positions.

Unlike the trend among tenured and tenure track faculty, however, average course load among nontenure track faculty has declined somewhat since the beginning of the decade. Those institutions at which this figure declined have expanded the ranks of nontenure track faculty at a much higher rate than enrollment. Hence student-staff ratios for these instructors have declined sharply, leading to smaller classes and fewer course sections per FTE staff.

Exhibits 5-9 and 5-10 depict the number of formal classroom course sections per FTE tenured and tenure earning faculty member (Exhibit 5-9) and nontenure track faculty member (Exhibit 5-10). For purposes of this measure, formal classroom courses include only class lectures, seminars (discussions), and laboratories. The trend for this subset of course sections was generally the same as that seen in Exhibits 5-7 and 5-8, which included all course section types. On average, tenured and tenure track faculty across all institutions taught the same number of formal course sections (4.8) in 1999–00 as in 1991–92.

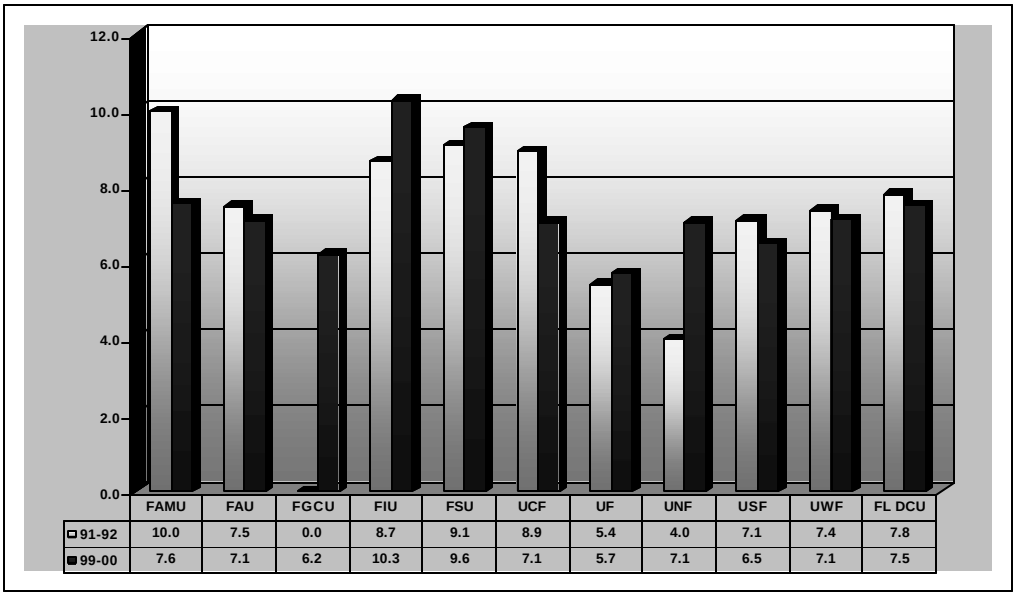
EXHIBIT 5-9
FORMAL CLASSROOM COURSE SECTIONS PER FTE E&G TENURED AND TENURE TRACK FACULTY MEMBER[a, c] AT PUBLIC DCU INSTITUTIONS: 1991-92 AND 1999-00[b]



	FAMU	FAU	FGCU	FIU	FSU	UCF	UF	UNF	USF	UWF	FL DCU
91-92	5.5	4.5	0.0	4.8	5.1	4.6	4.8	5.0	4.4	4.6	4.8
99-00	5.1	4.0	4.2	5.0	5.3	4.5	4.7	5.7	3.9	5.0	4.8

Source: IRDF

EXHIBIT 5-10
FORMAL CLASSROOM COURSE SECTIONS PER FTE E&G NONTENURE TRACK FACULTY MEMBER[a, c] AT PUBLIC DCU INSTITUTIONS: 1991-92 AND 1999-00[b]



	FAMU	FAU	FGCU	FIU	FSU	UCF	UF	UNF	USF	UWF	FL DCU
91-92	10.0	7.5	0.0	8.7	9.1	8.9	5.4	4.0	7.1	7.4	7.8
99-00	7.6	7.1	6.2	10.3	9.6	7.1	5.7	7.1	6.5	7.1	7.5

Source: IRDF

Because class lectures, seminars, and laboratories comprised the majority of courses taught by nontenure track faculty in both 1991–92 and 1999–00, the average formal course load (Exhibit 5-10) among this group of faculty was only slightly less than the average total course load (Exhibit 5-8).

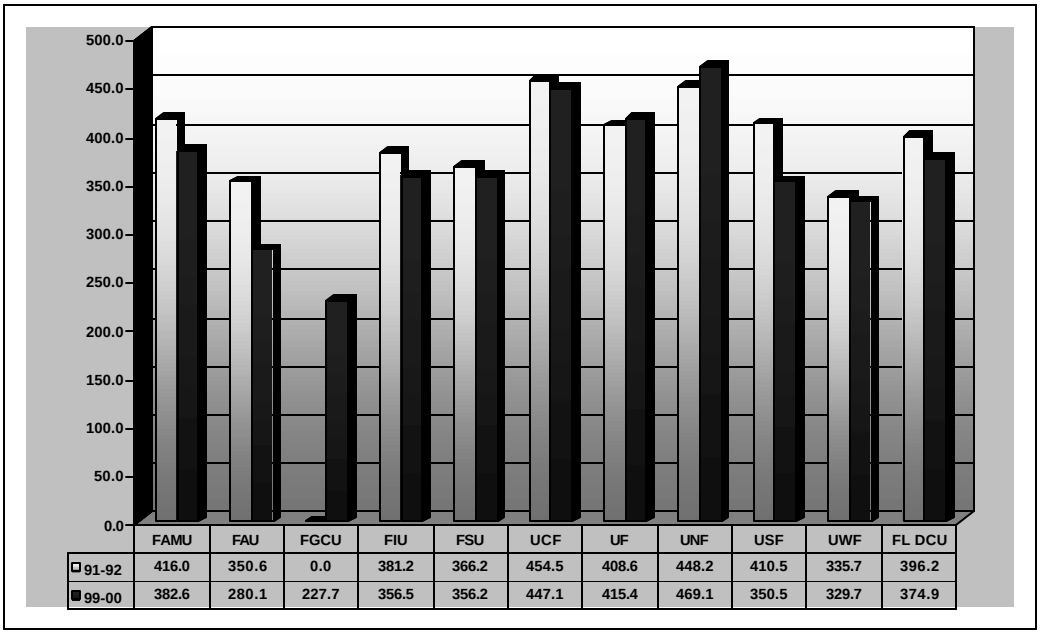
Student Credit Hours per FTE Academic Staff. Exhibit 5-11 shows that the number of student credit hours per FTE tenured and tenure track faculty has declined—in some cases sharply—since 1991–92. In Exhibit 5-8 we saw, however, that the number of course sections per FTE faculty member at the majority of institutions remained fairly constant or increased between 1991–92 and 1999–00. This seeming inconsistency is at least partially explained by a reduction in average class size throughout the decade. As discussed in Section 5.2.4, most institutions saw declines in the average size of class meetings. Consequently, faculty saw a decrease in the number of student credit hours per FTE without a concomitant reduction in average course sections taught.

5.2.9 Contact Hours and Equivalencies per FTE Tenured and Tenure Earning Faculty Member

As discussed in Chapter 4.0, Florida's 12-Hour law mandates that all full-time equivalent faculty members who are paid wholly from state (E&G) funds must teach a minimum of 12 classroom contact hours per week.

The law further stipulates that when a faculty member is assigned professional duties in furtherance of the academic mission of the university for which he/she works, the minimum number of contact hours may be reduced in proportion to the 12 classroom contact hours per week as such especially assigned duties and responsibilities bear to 12 classroom contact hours per week. These "other" assignments and duties include

EXHIBIT 5-11
NUMBER OF STUDENT CREDIT HOURS PER FTE E&G TENURED AND TENURE-TRACK FACULTY MEMBER[a, c] AT PUBLIC DCU INSTITUTIONS: 1991-92 AND 1999-00[b]



	FAMU	FAU	FGCU	FIU	FSU	UCF	UF	UNF	USF	UWF	FL DCU
91-92	416.0	350.6	0.0	381.2	366.2	454.5	408.6	448.2	410.5	335.7	396.2
99-00	382.6	280.1	227.7	356.5	356.2	447.1	415.4	469.1	350.5	329.7	374.9

Source: IRDF

the myriad research, service, and administrative duties that are an indispensable part of the typical faculty member's workload. Whereas scheduled credit generating instructional activities[5] are reported as classroom contact hours, all nonclassroom credit generating instruction as well as all noncredit-generating activities are reported as contact hour equivalencies.[6]

Although applied to different types of faculty activity, contact hours and contact hour equivalencies represent the same unit of measurement. As implemented by the institutions themselves, one contact hour or equivalency corresponds to 3.3 clock hours per week. Twelve contact hours, therefore, are equivalent to 40 clock hours per week.

[5] These would include class lectures, discussion sections, and laboratories.
[6] Credit generating nonclassroom instructional activities (e.g., directed study, performance sections) and noncredit-generating activities (e.g., research, public service, advising, university governance) are assigned contact hour equivalencies according to the criteria stipulated in CM-87-17.2.

Exhibit 5-12 depicts the number of classroom contact hours and contact hour equivalencies per FTE E&G tenured and tenure earning faculty member at each of the public DCU institutions. The figures shown represent the total number of contact hour and equivalencies for both the fall and spring terms in each academic year (divide by two to obtain the number of contact hours per semester). Activities that did not generate any contact hours are not included in this exhibit.

On average, tenured and tenure earning faculty members at the ten public DCU institutions generated contact hours and equivalencies in excess of the 12 hour-per-term minimum (Exhibit 5-12). The same is true when each institution is examined individually. The total number of contact hours per FTE declined in the early part of the decade, from 30.3 in 1991–92 to about 29 in 1995–96 and 1999–00.

In each of the three years displayed, credit generating instructional activities comprised approximately two-thirds of the total number of contact hours and equivalencies generated by tenured and tenure earning faculty members at all public DCU institutions. These credit-generating activities include both classroom and other direct instructional activities; i.e., activities in which faculty members are engaged in direct instruction of students. Many types of nonclassroom instruction, including the direction of theses and dissertations, and the supervision of direct individual study sections, are included in this grouping. This figure varied somewhat between institutions; instructional activities comprised a substantially greater portion of total contact hours and equivalencies at UNF (75% in 1999–00) than at the other institutions.

EXHIBIT 5-12
CLASSROOM CONTACT HOURS/EQUIVALENCIES PER FTE E&G TENURED AND TENURE EARNING FACULTY MEMBER[a, c] AT PUBLIC DCU INSTITUTIONS: 1991-92, 1995-96, AND 1999-00[b]

		CREDIT GENERATING					NONCREDIT GENERATING																
		LOWER	UPPER	GRAD	GRAD III	TOTAL, CREDIT GENERATING	SUPERVISION OF COOP. EDUCATION	CLINICAL INSTRUCTION	INSTRUCTION EFFORT/SECONDARY SITE TRAVEL	RESEARCH	ORGANIZED RESEARCH	OTHER INSTRUCTIONAL EFFORT	PUBLIC SERVICE	AGRICULTURAL EXTENSION SERVICE	CLINICAL SERVICE	STATE MANDATED SERVICE	ACADEMIC ADVISING	ACADEMIC ADMINISTRATION	UNIVERSITY GOVERNANCE	LEAVE OF ABSENCE WITH PAY	RELEASE TIME	TOTAL, NON-CREIDT GENERATING	TOTAL, ALL ACTIVITIES
91-92	FAMU	6.1	9.9	1.9	-	**17.9**	-	-	-	2.4	-	1.5	0.7	-	-	-	2.4	4.1	0.7	0.6	0.0	**12.4**	**30.3**
	FAU	1.6	9.3	6.9	-	**17.7**	-	-	-	6.1	-	0.8	0.5	-	-	-	1.8	2.4	0.7	0.4	-	**12.7**	**30.4**
	FGCU	-	-	-	-	**-**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	**-**
	FIU	1.4	10.3	5.5	-	**17.2**	0.0	-	0.0	5.9	-	0.3	1.1	-	-	-	1.1	1.9	0.6	0.7	0.0	**11.6**	**28.8**
	FSU	1.7	7.9	8.5	-	**18.0**	-	-	-	7.6	-	0.7	0.8	-	-	-	0.7	2.8	0.5	-	0.0	**13.1**	**31.1**
	UCF	1.7	11.3	4.8	-	**17.8**	-	-	0.0	5.1	-	0.5	0.7	-	-	-	1.2	3.1	1.4	0.6	0.0	**12.7**	**30.5**
	UF	1.9	7.0	7.6	0.0	**16.5**	-	0.0	-	6.9	-	0.9	0.9	0.0	-	-	0.7	2.0	1.1	-	-	**12.7**	**29.2**
	UNF	2.3	11.9	3.8	-	**18.0**	-	-	-	3.3	-	0.2	1.0	-	-	-	0.4	2.7	1.1	0.5	0.1	**9.3**	**27.3**
	USF	1.7	11.1	7.1	-	**19.9**	0.0	-	0.0	5.9	-	0.9	0.9	-	-	-	1.0	2.8	0.5	0.6	0.1	**12.8**	**32.7**
	UWF	1.7	12.4	4.5	-	**18.5**	0.1	-	-	4.4	-	1.3	0.6	-	-	-	1.8	3.2	0.4	-	-	**11.7**	**30.2**
	FL DCU	*2.0*	*9.4*	*6.5*	*0.0*	**17.9**	*0.0*	*0.0*	*0.0*	*6.0*	*-*	*0.8*	*0.8*	*0.0*	*-*	*-*	*1.1*	*2.6*	*0.8*	*0.3*	*0.0*	**12.5**	**30.3**
95-96	FAMU	5.4	11.5	3.6	-	**20.5**	-	-	-	2.1	-	1.8	0.1	-	-	-	3.1	3.2	0.3	0.8	0.1	**11.5**	**32.0**
	FAU	1.2	9.6	4.3	-	**15.2**	-	-	-	3.1	-	0.7	0.3	-	-	-	1.3	2.1	1.0	0.3	0.1	**8.9**	**24.0**
	FGCU	-	-	-	-	**-**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	**-**
	FIU	1.5	10.5	6.5	-	**18.5**	-	-	0.0	5.9	-	0.5	0.7	-	-	-	1.3	1.9	0.5	0.7	0.1	**11.5**	**30.0**
	FSU	1.8	8.3	9.1	-	**19.1**	-	-	-	5.0	-	1.7	0.4	-	-	-	1.9	1.4	0.3	0.1	0.1	**10.8**	**30.0**
	UCF	1.6	11.7	6.2	-	**19.4**	-	-	0.1	4.2	0.2	1.1	0.4	-	-	-	1.5	2.8	0.7	0.6	0.0	**11.6**	**31.0**
	UF	2.1	7.6	8.0	0.0	**17.6**	-	0.0	0.1	3.1	1.2	2.1	0.6	0.0	-	-	1.2	1.4	0.8	0.5	0.0	**11.1**	**28.7**
	UNF	3.5	12.0	4.0	-	**19.5**	-	-	-	2.8	-	0.7	0.5	-	-	-	0.6	2.1	0.9	0.9	0.1	**8.6**	**28.1**
	USF	1.6	9.7	7.1	0.0	**18.4**	-	-	0.0	3.9	0.9	1.4	0.8	-	-	-	0.8	1.8	0.5	0.9	0.1	**11.1**	**29.5**
	UWF	2.0	12.5	4.9	-	**19.4**	0.0	-	-	1.2	-	1.4	0.2	-	-	-	2.2	2.1	0.1	0.6	-	**7.9**	**27.3**
	FL DCU	*2.0*	*9.6*	*6.8*	*0.0*	**18.4**	*0.0*	*0.0*	*0.0*	*3.8*	*0.4*	*1.4*	*0.5*	*0.0*	*-*	*-*	*1.5*	*1.9*	*0.6*	*0.6*	*0.1*	**10.7**	**29.2**
99-00	FAMU	5.4	8.5	4.6	-	**18.5**	-	-	-	0.8	-	3.7	0.4	-	-	0.2	3.3	3.4	0.2	0.4	0.0	**12.3**	**30.8**
	FAU	1.8	7.3	3.9	-	**13.0**	-	-	-	3.7	0.3	0.9	0.2	-	-	0.1	1.1	2.5	1.5	0.8	0.0	**11.2**	**24.2**
	FGCU	2.4	9.0	3.5	-	**15.0**	0.0	-	-	2.1	-	1.5	1.4	-	-	0.3	0.7	3.3	1.1	0.1	0.1	**10.5**	**25.5**
	FIU	2.4	9.2	7.3	-	**18.9**	-	-	-	5.1	-	1.4	0.4	-	-	0.0	1.0	2.0	0.5	0.6	0.1	**11.1**	**30.0**
	FSU	2.8	7.4	9.6	-	**19.8**	-	-	-	4.7	1.2	1.4	0.5	-	-	-	1.1	1.5	0.2	0.2	0.0	**10.9**	**30.8**
	UCF	2.5	9.0	5.8	-	**17.3**	-	-	0.0	2.8	0.0	4.0	0.3	-	-	-	1.4	2.4	0.5	0.5	0.0	**12.0**	**29.4**
	UF	1.7	7.2	9.0	0.1	**18.0**	-	0.1	0.0	3.3	1.1	2.6	0.4	0.0	0.1	0.0	1.0	1.7	0.9	0.4	0.0	**11.4**	**29.4**
	UNF	5.3	12.5	4.7	-	**22.6**	-	-	-	2.5	0.1	1.2	0.5	-	0.0	0.1	0.4	1.3	0.9	0.3	0.1	**7.4**	**30.0**
	USF	2.1	7.3	5.8	0.0	**15.2**	0.0	-	0.0	4.9	1.0	0.8	0.7	-	0.0	0.1	0.6	1.8	0.8	0.8	0.0	**11.5**	**26.8**
	UWF	2.8	11.7	5.8	-	**20.3**	0.0	-	-	2.7	-	0.6	0.4	-	-	0.2	2.0	3.0	0.5	1.7	-	**11.2**	**31.5**
	FL DCU	*2.6*	*8.2*	*6.9*	*0.0*	**17.7**	*0.0*	*0.0*	*0.0*	*3.6*	*0.6*	*2.0*	*0.5*	*0.0*	*0.0*	*0.1*	*1.2*	*2.1*	*0.7*	*0.5*	*0.0*	**11.2**	**29.0**

Source: IRDF

5.3 Teaching Productivity in Selected Disciplines

To this point, we have discussed teaching productivity at the institutional and division levels only. Although such treatment of the subject is useful in order to ascertain the overall level of faculty productivity at Florida's public universities, it masks the differences in roles, methods, and type of instruction in individual disciplines.

This section will provide a broad overview of faculty productivity in several key disciplines, assessed according to the same quantitative measures as presented in the preceding section. This section is not intended as an exhaustive reference on each of the presented measures of faculty productivity. The discussion that follows does not treat each institution separately, nor does it attempt to provide data for every discipline in which instruction was given. Instead, several of those disciplines demonstrating distinct differences in the distribution of faculty effort, teaching load, research, and method of course delivery, have been selected in order to highlight the principle that the character of faculty activity and student instruction varies according to discipline. For those readers wishing to examine productivity measures for all disciplines and institutions, the full set of data are presented in Appendix 5-B.

5.3.1 Distribution of Courses Taught and Student Credit Hours Produced in Selected Disciplines, by Course Section Type and Level

The disciplines selected for discussion, together with the percentage of courses taught and student credit hours produced in each, are presented in Exhibit 5-13. It is immediately evident that distinct differences in the predominant method of course delivery exist across these disciplines. Instruction in Business Management and Computer & Information Sciences was delivered almost exclusively via class lectures (93.2% and 95.5% of course sections, respectively). This is in marked contrast to the distribution of Engineering, Physical Science, and Visual/Performing Arts course

EXHIBIT 5-13
PERCENTAGE DISTRIBUTION OF COURSE SECTIONS TAUGHT AND STUDENT CREDITS HOURS PRODUCED IN SELECTED DISCIPLINES AT PUBLIC DCU INSTITUTIONS, BY COURSE SECTION TYPE: 1999 - 00[b]

	BUSINESS MANAGEMENT		COMPUTER AND INFORMATION SCIENCES		ENGINEERING		PHYSICAL SCIENCES		VISUAL AND PERFORMING ARTS	
COURSE SECTION TYPE	% COURSE SECTIONS	% STUDENT CREDIT HOURS	% COURSE SECTIONS	% STUDENT CREDIT HOURS	% COURSE SECTIONS	% STUDENT CREDIT HOURS	% COURSE SECTIONS	% STUDENT CREDIT HOURS	% COURSE SECTIONS	% STUDENT CREDIT HOURS
CLASS LECTURE	93.2%	79.7%	95.5%	69.1%	84.8%	60.8%	80.7%	33.8%	69.7%	37.1%
DISCUSSION	2.4%	5.7%	0.1%	3.0%	0.2%	3.6%	0.6%	8.4%	1.9%	2.6%
DISSERTATION	0.1%	1.6%	0.2%	1.5%	2.1%	3.2%	1.5%	4.7%	0.3%	0.9%
INTERNSHIP	0.4%	2.6%	0.1%	0.5%	0.1%	0.6%	0.1%	0.3%	0.7%	1.1%
LABORATORY	0.3%	0.4%	0.7%	8.4%	4.1%	10.3%	13.7%	32.9%	8.8%	7.0%
OTHER	3.1%	3.9%	1.8%	3.0%	3.5%	5.7%	1.1%	1.4%	3.7%	3.6%
PERFORMANCE	0.0%	0.1%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	12.5%	38.2%
SUPERVISED RESEARCH	0.0%	0.3%	0.1%	1.4%	0.2%	0.9%	0.3%	2.4%	0.1%	0.7%
SUPERVISED TEACHING	0.0%	0.0%	0.0%	0.2%	0.0%	0.1%	0.1%	1.1%	0.1%	0.3%
THESIS	0.0%	0.0%	0.7%	4.2%	2.4%	5.2%	0.6%	3.6%	0.3%	0.9%
DIRECTED STUDY	0.5%	5.8%	0.8%	8.6%	2.6%	9.6%	1.3%	11.4%	1.9%	7.4%
TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***
% OF COURSES BY LEVEL (ALL SECTION TYPES)										
LOWER	9.4%	14.7%	24.4%	35.2%	3.5%	8.3%	52.8%	81.7%	35.2%	48.9%
UPPER	65.4%	73.6%	43.7%	55.3%	47.1%	66.9%	16.1%	10.8%	43.3%	43.6%
GRAD	25.2%	11.7%	31.9%	9.5%	49.4%	24.9%	31.1%	7.5%	21.5%	7.6%
TOTAL	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***

Source: IRDF

sections. The physical sciences utilized laboratory instruction to a much greater extent than the other disciplines. Because a large proportion of lab sections are taught by Graduate Student Instructors, this affects some measures of faculty productivity (for instance, the percentage of total instructional effort contributed by tenured and tenure earning faculty).

Naturally, performance sections comprised a substantial percentage of course sections in the Visual and Performing Arts (12.5%). Again, this impacts on specific measures of faculty productivity in this discipline. For instance, because these sections are typically individualized instruction, one would expect faculty members in the Visual and Performing Arts to carry a relatively higher than average course load and an average or lower than average output of student credit hours.

The differences in methods of course delivery across these disciplines is even more apparent when one examines the distribution of student credit hours by course section type. Whereas almost 80 percent of the student credit hours in Business Management were generated in class lectures, only 34 percent of student credit hours in the Physical Sciences and 37 percent in Visual/Performing Arts were produced in class lectures.

Exhibit 5-13 also depicts the distribution of course sections and student credit hours by level. Once again, distinct differences appear that bear directly on the issue of faculty productivity in these disciplines. More than half of all course sections in the physical sciences were at the lower level in 1999–00, as were approximately one-third of course sections in the Visual and Performing Arts. Engineering and Business Management had substantially fewer lower level courses (3.5% and 9.4%, respectively). Consequently, one would expect a much greater share of tenured and tenure earning

faculty effort to be devoted to lower level instruction in the former disciplines than in the latter.

5.3.2 Average Size of Class Meeting Times in Selected Disciplines

In Exhibit 5-3, we saw that the mean class meeting-time size at public DCU institutions was approximately 33 students in 1999–00. Class size was not uniform across disciplines, however. Exhibit 5-14 makes evident the degree to which class size varied between disciplines.

EXHIBIT 5-14
AVERAGE CLASS MEETING TIME SIZE IN SELECTED DISCIPLINES AT PUBLIC DCU INSTITUTIONS: 1999–00[b]

	UNDERGRAD		GRAD		TOTAL	
DISCIPLINE	Mean	Median	Mean	Median	Mean	Median
Computer and Information Sciences	42.9	32.0	14.1	9.0	38.2	30.0
Engineering	27.3	20.0	11.6	8.0	22.9	16.0
Physical Sciences	45.6	24.0	9.4	7.0	40.7	21.0
Visual and Performing Arts	26.6	18.0	6.8	4.0	23.3	16.0
Business Management	48.9	39.0	27.6	24.0	45.2	36.0

Source: IRDF

Among those disciplines depicted, the largest classes were taught in Business Management: the mean class size in 1999–00 was more than 45 students per class meeting. Median class size in this discipline was 36 students. Of the depicted disciplines, Engineering and the Visual and Performing Arts had the smallest mean class sizes (22.9 and 23.3 students per class meeting, respectively).

5.3.3 *Percentage of Instructional Effort Provided by E&G Academic Staff in Selected Disciplines*

The percentage of instructional effort provided by tenured and tenure earning faculty across all disciplines and instructional levels was 58 percent in 1999–00. In the five disciplines displayed in Exhibit 5-15, this figure varied considerably, from a minimum

of 46 percent (Computer and Information Sciences) to a maximum of 76 percent (Engineering).

EXHIBIT 5-15
PERCENTAGE OF INSTRUCTIONAL EFFORT PROVIDED BY E&G ACADEMIC STAFF[a, c] IN SELECTED DISCIPLINES (ALL PUBLIC DCU INSTITUTIONS): 1999 - 00[b]

DISCIPLINE	FACULTY TYPE	PERCENTAGE OF INSTRUCTIONAL EFFORT			
		LOWER	UPPER	GRAD	TOTAL
Business Management	TENURED AND TENURE TRACK	30%	58%	83%	61%
	NONTENURE-TRACK	46%	35%	14%	31%
	GRADUATE STUDENT INSTRUCTORS	16%	5%	1%	5%
	OTHER	8%	2%	3%	3%
	TOTAL	*100%*	*100%*	*100%*	*100%*
Computer and Information Sciences	TENURED AND TENURE TRACK	20%	40%	88%	46%
	NONTENURE-TRACK	60%	48%	9%	42%
	GRADUATE STUDENT INSTRUCTORS	19%	7%	0%	8%
	OTHER	1%	5%	3%	3%
	TOTAL	*100%*	*100%*	*100%*	*100%*
Engineering	TENURED AND TENURE TRACK	62%	68%	91%	76%
	NONTENURE-TRACK	21%	15%	5%	11%
	GRADUATE STUDENT INSTRUCTORS	10%	13%	1%	8%
	OTHER	7%	5%	3%	4%
	TOTAL	*100%*	*100%*	*100%*	*100%*
Physical Sciences	TENURED AND TENURE TRACK	33%	73%	95%	54%
	NONTENURE-TRACK	13%	10%	2%	10%
	GRADUATE STUDENT INSTRUCTORS	52%	17%	1%	34%
	OTHER	2%	1%	2%	2%
	TOTAL	*100%*	*100%*	*100%*	*100%*
Visual and Performing Arts	TENURED AND TENURE TRACK	49%	67%	85%	63%
	NONTENURE-TRACK	30%	22%	9%	23%
	GRADUATE STUDENT INSTRUCTORS	20%	8%	2%	12%
	OTHER	1%	3%	4%	3%
	TOTAL	*100%*	*100%*	*100%*	*100%*

Source: IRDF

A similar variation between disciplines is observed in the percentage of instructional effort provided by tenured and tenure earning faculty at the lower and upper levels of instruction. Whereas faculty provided only 20 percent of lower level instructional effort in Computer and Information Sciences, they were responsible for almost half of the lower level instructional effort in the Visual and Performing Arts and almost two-thirds in Engineering. The average across all disciplines was 31.2 percent.

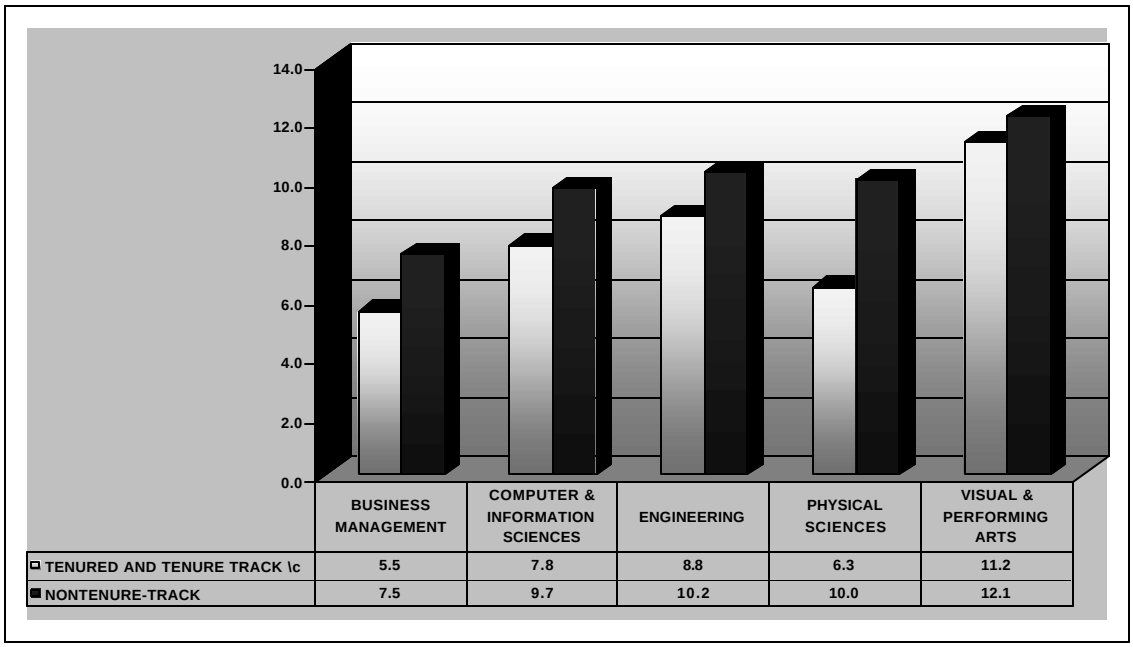
Faculty in each of the five disciplines shown in Exhibit 5-15 contributed a greater share of instructional effort at the upper level than at the lower level, although the same variation across disciplines is evident at both levels.

5.3.4 Average Number of Courses Taught and Student Credit Hours Produced by E&G Faculty and Other Instructional Positions in Selected Disciplines

Differences across disciplines with respect to measures of faculty productivity on an individual level are especially evident. The following measures of average faculty workload highlight the impact of discipline-specific factors, such as the importance or prevalence of research activity to faculty in a specific discipline, or the role of individualized instruction.

Courses per FTE Academic Staff in Selected Disciplines. Exhibits 5-16 and 5-17 show the number of course sections per FTE for both tenured and tenure-earning faculty and for nontenure track faculty. The former displays this statistic, including all course section types, whereas the latter includes only formal classroom course sections. The reasoning for showing faculty workload in both ways (See Section 5.2.8) is manifest in these exhibits. Although many perceive "formal" classroom instruction to be of greater value or ubiquity than other methods of course delivery, measurements of faculty workload that fail to capture the great variety of other instructional methods used in some disciplines arbitrarily penalize these disciplines.

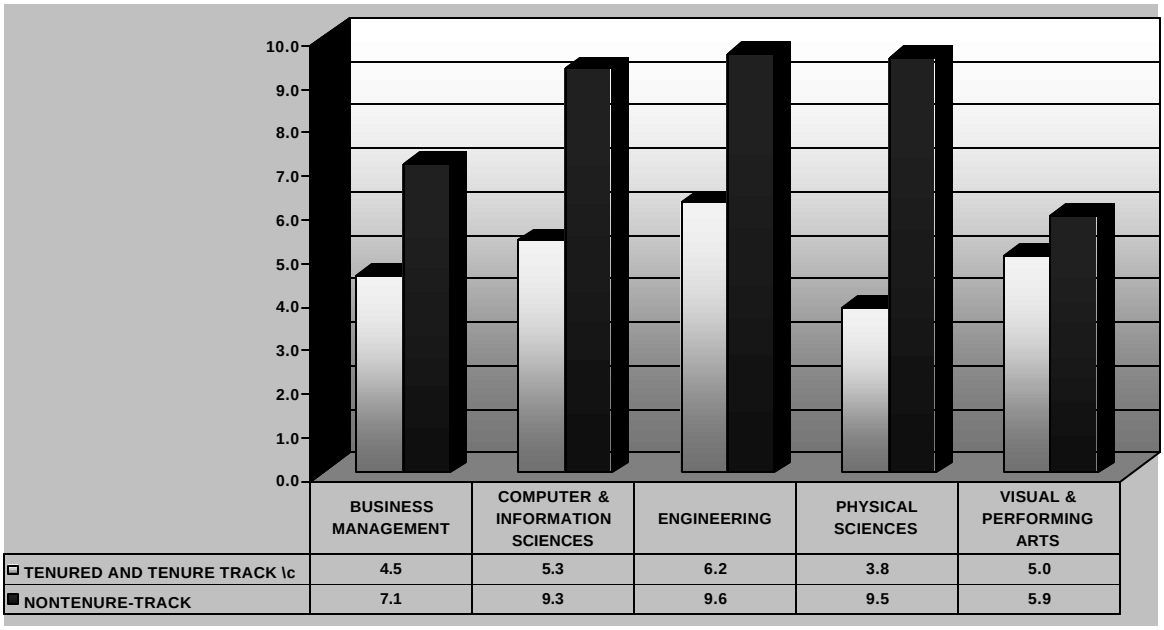
EXHIBIT 5-16
NUMBER OF COURSES (ALL COURSE SECTION TYPES) PER FTE E&G FACULTY MEMBER[a] AT PUBLIC DCU INSTITUTIONS: SELECTED DISCIPLINES IN 1999-00[b]



	BUSINESS MANAGEMENT	COMPUTER & INFORMATION SCIENCES	ENGINEERING	PHYSICAL SCIENCES	VISUAL & PERFORMING ARTS
TENURED AND TENURE TRACK \c	5.5	7.8	8.8	6.3	11.2
NONTENURE-TRACK	7.5	9.7	10.2	10.0	12.1

Source: IRDF

EXHIBIT 5-17
FORMAL CLASSROOM COURSE SECTIONS PER FTE E&G FACULTY MEMBER[a] AT PUBLIC DCU INSTITUTIONS: SELECTED DISCIPLINES IN 1999-00[b]



	BUSINESS MANAGEMENT	COMPUTER & INFORMATION SCIENCES	ENGINEERING	PHYSICAL SCIENCES	VISUAL & PERFORMING ARTS
TENURED AND TENURE TRACK \c	4.5	5.3	6.2	3.8	5.0
NONTENURE-TRACK	7.1	9.3	9.6	9.5	5.9

Source: IRDF

For instance, a significant portion of instruction in the Visual Arts and Sciences occurs in the form of individualized performance instruction. This is due simply to the nature of artistic instruction. Hence, while the average "formal" classroom course load of tenured and tenure-track faculty members in this discipline is only 5.0 per FTE, the total course load is more than 11 sections per FTE.[7] A similar difference between these two measures is seen in the other depicted disciplines, although to a lesser extent.

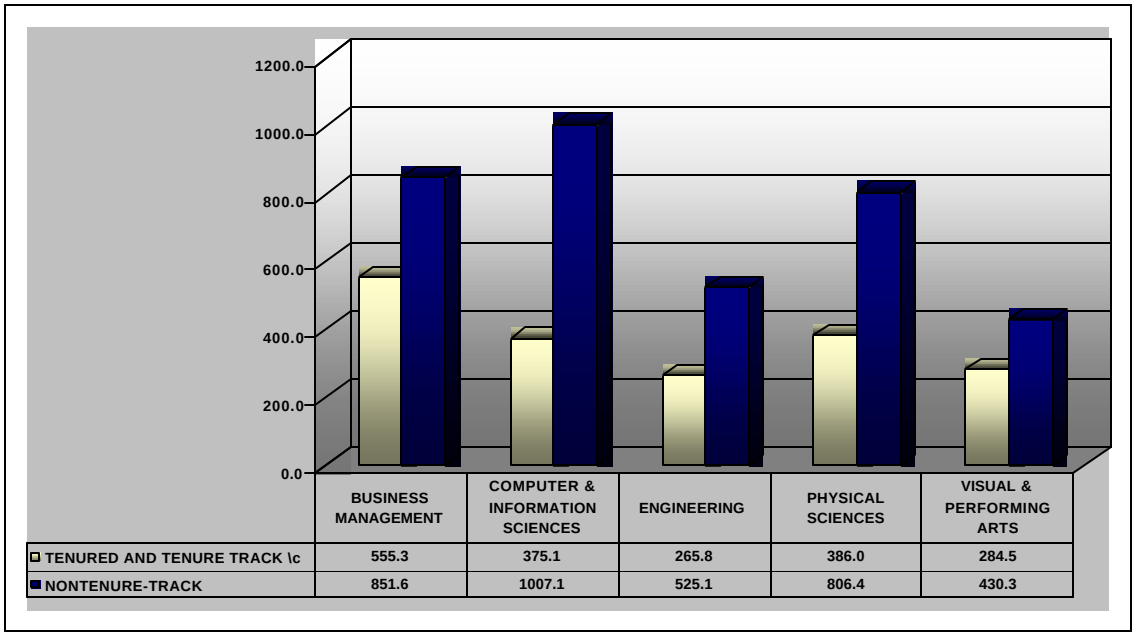
Student Credit Hours per FTE Academic Staff. In three of the five depicted disciplines (Exhibit 5-18), student credit hour production per FTE tenured and tenure track faculty member was at or above the average for all disciplines in 1999–00 (374.9). Average student credit hour production in the visual and performing arts (294.5 per FTE) was lower than average because of the high proportion of individual performance sections taught by faculty. Because of the high student/faculty ratio and small average class sizes in Engineering, faculty in this discipline tended to produce fewer student credit hours per FTE than the average for all disciplines.

5.4 Purposes and Outcomes of Nonteaching Assignments

Faculty responsibilities at Florida's public universities extend well beyond teaching. Although undergraduate instruction is a vitally important component of the institutional mission at each of these universities, it is but one of the central functions of higher education. Faculty members are expected to devote a significant portion of their effort to the myriad research and service activities that inform and enhance the instructional process and enrich the communities of which they are a part.

[7] Please note the distinction between "formal" course load, which includes only scheduled group instruction sections (class lectures, discussions, and laboratories only) and "total" course load, which includes all course sections irrespective of type. A more detailed discussion of this topic is found in section 5.2.7.

EXHIBIT 5-18
NUMBER OF STUDENT CREDIT HOURS PER FTE E&G FACULTY MEMBER[a] AT PUBLIC DCU INSTITUTIONS: SELECTED DISCIPLINES IN 1999-00[b]



	BUSINESS MANAGEMENT	COMPUTER & INFORMATION SCIENCES	ENGINEERING	PHYSICAL SCIENCES	VISUAL & PERFORMING ARTS
TENURED AND TENURE TRACK \c	555.3	375.1	265.8	386.0	284.5
NONTENURE-TRACK	851.6	1007.1	525.1	806.4	430.3

Source: IRDF

Educational and legislative leaders in Florida have long acknowledged the importance of research and service in the state universities. According to the State University System 1998–2003 Strategic Plan, "the mission of all universities encompasses the three traditional roles of teaching, research, and public service." And as previously mentioned, Florida's 12-Hour law, which mandates that full-time equivalent faculty teach a minimum of 12 classroom contact hours each term, allows for a reduction in this number when faculty members are assigned research and/or service duties. Moreover, as discussed in Chapter 4.0, many of the ten public DCU institutions have procedures for reporting and measuring these types of activities, and use them as part of the procedure by which eligibility for faculty tenure is determined.

Despite their importance, however, there is little uniformity or consistency in reporting procedures for faculty research and service activities. It is difficult to capture

meaningful data about what faculty members do and what the purposes and outcomes of these types of activities are. The simplest measures of productivity are expressed quantitatively; however, most research and service activities provide benefits and result in outcomes that are difficult to directly quantify.

Hence, this section offers some data indicating the importance and scope of research and service activities at Florida's public universities, but readers should note that these measures fail to capture the outcomes of most such activities. As was the case with many of the previously discussed quantitative measures of teaching productivity, the quality or usefulness of faculty research activities cannot be simply expressed as a function of the number of contract dollars generated or the volume of publications produced by faculty. Nonetheless, such measures do offer at least a proxy measure of the importance of these activities to the university system.

5.4.1 Faculty Research Activities

As one of the core functions of Florida's public universities, research plays an invaluable role in the vitality of both the institutions themselves and society at large. Faculty members engaged in active research contribute to the extension of the frontiers of knowledge and innovation in our state. Perhaps more important to the process of education at the undergraduate level, universities that actively support vital research attract top faculty members whose expertise and talents are then available to the entire body of students who attend those institutions.

Moreover, although the term "instruction" is often a reference to undergraduate education leading to the production of baccalaureate degrees, it must also be noted that all of the ten public DCU institutions offer degree programs at the graduate level. At the postbaccalaureate level, research is not necessarily an activity separate from instruction: it often is a vital part of the instructional process itself. In fact, as noted in Chapter 2.0 of

this report, the *Delaware Study of Instructional Costs and Productivity* recognizes the central role that research plays in graduate education. It recommends several qualitative measures of faculty productivity that relate directly to this issue. Among these are the following:

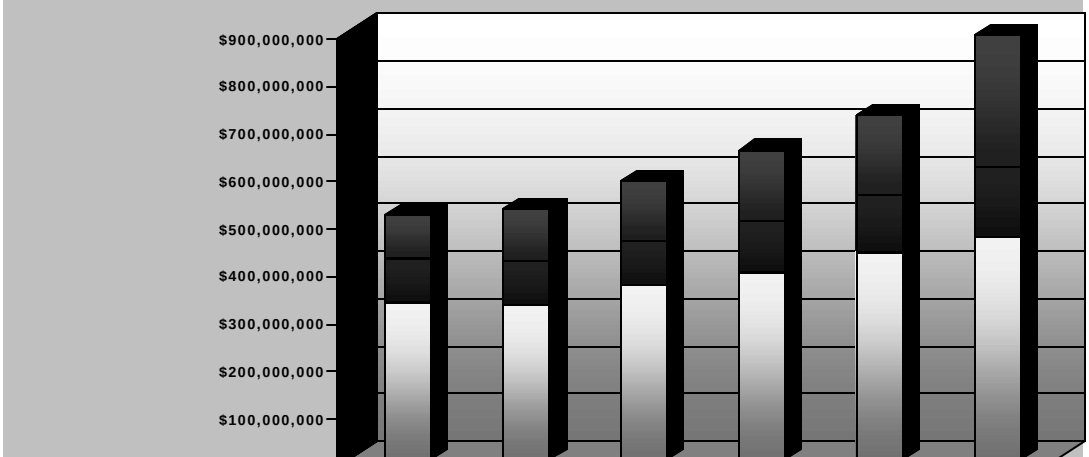
- number of students who author or coauthor with a faculty mentor an article or chapter over past 36 months; and
- number of students presenting or copresenting with a faculty mentor a paper at a professional meeting.

The complete listing of quantitative and qualitative measures recommended by the Delaware Study is given in Chapter 2.0, Exhibit 2-2.

Research not only supports the instructional function of the institutions, it also generates tremendous revenues for Florida's public universities: Contract and Grant expenditures for the ten universities totaled almost $900 million in 1999–00 (Exhibit 5-19). This was about one-quarter of all funding received by public DCU institutions from any source during that year, and equals approximately $125,000 per FTE tenured and tenure earning E&G faculty member in the state university system.

Exhibit 5-20 shows that research productivity (as measured by contract dollars generated) has trended upward at more than half of the public DCU institutions. Across all institutions, constant dollars per FTE E&G tenured and tenure earning faculty member increased approximately one-third between 1994–95 and 1999–00. As would be expected, faculty at the three research institutions (UF, FSU, and USF) generated significantly more research dollars, on average, than faculty at the other public DCU universities.

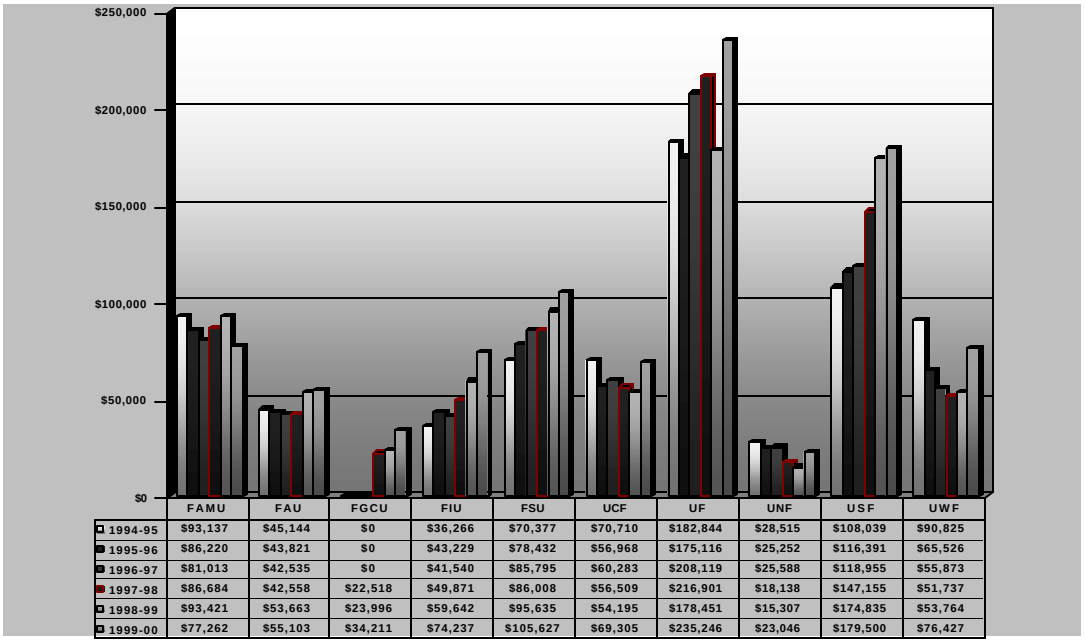
EXHIBIT 5-19
TOTAL CONTRACT AND GRANTS AWARDS TO PUBLIC DCU INSTITUTIONS BY MAJOR SOURCE OF FUNDING: FISCAL YEARS 1994-95 TO 1999-00



	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00
ALL PRIVATE AND OTHER SOURCES	$92,009,396	$109,941,394	$125,913,737	$149,466,156	$165,856,054	$279,870,662
STATE AND LOCAL GOVERNMENT	$93,110,399	$93,517,459	$94,334,666	$107,809,461	$120,933,741	$146,449,428
FEDERAL GOVERNMENT	$330,143,286	$324,202,461	$365,235,834	$393,330,905	$435,695,108	$466,932,552

Source: DCU 1994-95 to 1999-00 Fact Books

EXHIBIT 5-20
CONTRACT AND GRANT AWARDS PER FTE E&G TENURED AND TENURE EARNING FACULTY MEMBER[a] IN CONSTANT 2000 DOLLARS (1994-95 - 1999-00)



	FAMU	FAU	FGCU	FIU	FSU	UCF	UF	UNF	USF	UWF
1994-95	$93,137	$45,144	$0	$36,266	$70,377	$70,710	$182,844	$28,515	$108,039	$90,825
1995-96	$86,220	$43,821	$0	$43,229	$78,432	$56,968	$175,116	$25,252	$116,391	$65,526
1996-97	$81,013	$42,535	$0	$41,540	$85,795	$60,283	$208,119	$25,588	$118,955	$55,873
1997-98	$86,684	$42,558	$22,518	$49,871	$86,008	$56,509	$216,901	$18,138	$147,155	$51,737
1998-99	$93,421	$53,663	$23,996	$59,642	$95,635	$54,195	$178,451	$15,307	$174,835	$53,764
1999-00	$77,262	$55,103	$34,211	$74,237	$105,627	$69,305	$235,246	$23,046	$179,500	$76,427

Source: DCU 1994-95 to 1999-00 Fact Books & IRDF

The increase in total contract and grant awards to public DCU institutions is reflective of the rapid expansion of faculty research activity between 1994-95 and 1999-00. Exhibit 5-21 shows that the number of active research projects has increased by almost one-third during that period; the number of proposals submitted to prospective funding agencies has increased by about 25 percent; and the number of contract or grant awards received has grown approximately 17 percent. Increased faculty research activity has, in turn, led to an increase in innovation: the number of U.S. patents granted to public DCU institutions more than doubled between 1994-95 and 1999-00.

EXHIBIT 5-21
SPONSORED RESEARCH ACTIVITIES AT PUBLIC DCU INSTITUTIONS: 1994-95 TO 1999-00

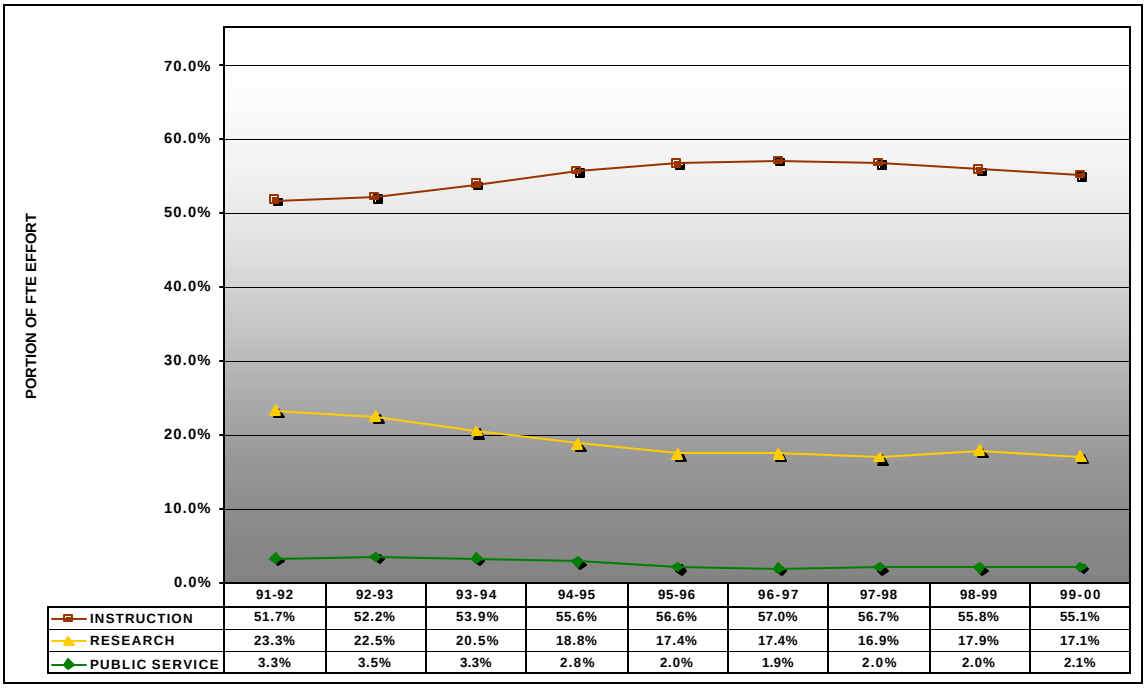
	PROPOSALS SUBMITTED TO PROSPECTIVE FUNDING AGENCIES	NEW CONTRACTS OR GRANT AWARDS RECEIVED	EXTENSIONS, RENEWALS, COTINUATIONS, OR SUPPLEMENTS OF EXISTING PROJECTS	TOTAL PROJECTS ACTIVE DURING FISCAL YEAR	U.S. PATENTS GRANTED
FY 1994-95	7,832	4,017	3,910	9,496	44
FY 1995-96	7,494	3,889	4,949	9,897	61
FY 1996-97	8,355	3,591	5,913	10,830	77
FY 1997-98	8,549	3,862	6,332	11,226	100
FY 1998-99	9,036	4,471	5,624	11,697	103
FY 1999-00	9,821	4,703	5,483	12,624	92
% CHANGE	25.4%	17.1%	40.2%	32.9%	109.1%

Source: DCU 1994-95 to 1999-00 Fact Books

5.4.2 Faculty Service Activities

Although Florida's public universities typically identify public service as one of their central functions, such activities are a distant third compared to the emphasis placed on instruction and research. Of the total funds spent on educational operations in the state university system in 1999-00, only 4 percent was allocated for public service. This compares to 31 percent for instruction and 16 percent for research. Consequently, the portion of FTE effort devoted to public service by tenured and tenure-earning faculty is significantly less than that devoted to instruction or research activities (Exhibit 5-22).

EXHIBIT 5-22
PORTION OF FTE EFFORT DEVOTED TO INSTRUCTION, RESEARCH, AND PUBLIC SERVICE BY FTE E&G TENURED AND TENURE EARNING E&G FACULTY[a]: 1991-92 TO 1999-00[b]



	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00
INSTRUCTION	51.7%	52.2%	53.9%	55.6%	56.6%	57.0%	56.7%	55.8%	55.1%
RESEARCH	23.3%	22.5%	20.5%	18.8%	17.4%	17.4%	16.9%	17.9%	17.1%
PUBLIC SERVICE	3.3%	3.5%	3.3%	2.8%	2.0%	1.9%	2.0%	2.0%	2.1%

Source: IRDF

As noted in the introduction to this section, many aspects of faculty productivity are difficult to quantify. This is especially true of faculty service activities. Public service can include such activities as university and community leadership, membership in

professional and civic organizations, and service provided to community agencies. Some institutions define public service explicitly as they relate to the mission of the institution. Faculty at UNF, for instance, are assigned service duties in accordance with four broad priorities:

- strengthening K-12 Education;
- strengthening Government Agencies;
- enhancing Community/Economic Development; and
- strengthening Professional Disciplines/Organizations.

Such activities do not typically result in the production of any tangible product; consequently, the outcome of faculty public service activities are not easily documented or reported.

This is not to say, however, that the institutions do not track such activities. In the above example of UNF faculty service duties, the institution produces a report of such activities for each academic year. As with teaching and research duties, public service activities are assigned to individual faculty members as a portion of their total FTE effort. Also, pursuant to CM-87-17.2, assigned service activities are covered under the 12-Hour law and generate contact hour equivalencies. All of the institutions track and report on such things as the portion of faculty effort devoted to service, primarily for purposes of budgeting and tenure review.

However, these measures do not speak to the issue of what outcomes or benefits accrue to the institution or to the community as a result of faculty service activities. Some of the public DCU institutions attempt to quantify faculty service activities by measuring such things as the number of active memberships in professional or service organizations, the number of days spent in service, or the number of leadership positions occupied by faculty members (See Chapter 4.0). These measures are not standard across all of the institutions, however, and there is no requirement that they be regularly reported in a uniform or consistent manner.

5.5 Conclusions

Perhaps the most striking feature of the data presented in this chapter is the breadth and variety of measures that can be used to evaluate the productivity of faculty and other academic staff. And, as pointed out in the introduction to the chapter, the measures presented herein are not comprehensive; many prominent studies of this issue have recommended and implemented additional measures in an effort to assess more accurately what faculty do and how well they are dong it.

Before presenting the conclusions that can be drawn from the data presented in this chapter, the discussed measures of productivity must be put into context. First, most of the employed measures focus on inputs. Even those few that address outputs are limited in their ability to describe the quality of instruction, research, or service activities being performed. For instance, although one may be able to assess how many student credit hours the average faculty member produces, such a figure does not necessarily indicate whether faculty members are effective teachers. Such criticism is common of many attempts to analyze faculty productivity.

Second, these data are essentially meaningless without some benchmark against which to compare them. Although identifying how much and what faculty members are doing is of some value in providing baseline information and trend analyses within institutions, the useful application of such data requires some comparison with appropriate peers in order to determine whether they can or should be producing more.

As noted in several areas of this report, comparison across institutions within the Florida university system is generally neither appropriate nor productive, since each institution faces its own unique challenges, has unique goals, and acts to further its own unique mission. In Chapter 4.0, it was made clear that most institutions have developed

lists of peer institutions against which they can be usefully compared on a host of indicators, including faculty productivity.

Finally, there is a dearth of useful and consistent data regarding faculty activities in research and public service. A great deal of information is gathered and periodically reported regarding teaching productivity, but many measures of these other faculty activities are not properly addressed.

Despite these factors, this chapter provides a great deal of information, not only about what faculty are doing, but more broadly about the character of instruction being delivered by Florida's public universities. Most notably, the data make clear the following:

- **Tenured and tenure earning faculty provided the majority of instructional effort and generated the bulk of the student credit hours at public DCU institutions in all years examined.** Contrary to the perception held by some external publics, adjunct faculty, nonranked faculty, graduate student instructors, and other types of academic staff together provide less than half of the total instructional effort at Florida's public universities.

- **Average class size has declined since the early 1990s.** The mean class meeting-time size was about 4 percent smaller in 1999–00 than in 1991–92. Moreover, about 70 percent of all class meetings in 1999–00 were less than or equal to the mean class size of 33 students.

- **Tenured and tenure earning faculty taught an average of 7.3 course sections per FTE during the 1999–00 academic year.**[8] This equals roughly 3.6 course sections per term, which is in excess of the 3/3 course load typically expected of faculty members at public DCU institutions. Of this number, 4.8 courses (2.4 per term) were "formal course sections"; i.e., organized group instruction sections.

- **Tenured and tenure earning faculty spent approximately nine classroom contact hours per week in credit generating instruction.** This is equivalent to about 29 clock hours per week, or almost 74 percent of FTE effort.

[8] Excluding the summer terms.

- **In 1999–00, faculty at public DCU institutions generated almost $900 million in Contracts and Grants expenditures.** This equals about $125,000 per FTE tenured and tenure earning faculty member.[9]

Although these points are encouraging, they tell only half the story. Also presented in this chapter were data detailing the trend in each of the discussed measures of productivity. Between 1991–92 and 1999–00, the trend was generally downward on some key measures.

For instance, of the total instructional effort provided by all academic staff, the percentage provided by tenured and tenure earning faculty declined about 10 percent. Also, the number of student credit hours per FTE faculty member declined significantly. In contrast, the number of course sections per FTE marginally increased during the same period, and Contracts and Grants (C&G) awards per FTE rose dramatically during the years for which data were presented.

Determining whether faculty productivity had declined or improved over the course of the decade would seem to depend, then, on the measure examined. If one were to point to the decline in the percentage of total instructional effort provided by tenured and tenure earning faculty, it would seem as though productivity had declined. However, this measure does not directly address faculty productivity at the individual level. As such, the aforementioned decline is more reflective of changes in staffing than in the productivity of ranked faculty.

As noted in Section 5.2.6, the demand created by expanding enrollments throughout the decade was accommodated by hiring additional nontenure track faculty, presumably to avoid the high salary burden of new tenured and tenure earning faculty and to provide some flexibility for potential budgetary fluctuations.

[9] Tenured and tenure earning faculty members were not necessarily responsible for generating all contract dollars received by the institutions. This average is provided merely to provide some indication of the average research productivity of DCU faculty members.

Therefore, this decline is unrelated to faculty productivity per se. In fact, the portion of total instructional effort provided by tenured and tenure earning faculty declined in approximately the same proportion as did the percentage of total academic staff they represented. In other words, in 1991–92, tenured and tenure earning faculty provided about 68 percent of total instructional effort and also comprised about 65 percent of all academic staff. In 1999–00, these figures had declined to 58 and 55 percent, respectively.

Turning to those measures that do indeed bear on individual faculty productivity, if one were to define productivity only in terms of student credit hour production, then once again, tenured and tenure track faculty members appear to have been less productive in 1999–00 than at the beginning of the decade. However, such a facile conclusion masks the fact that none of these measures exist in a vacuum.

For instance, although credit hour production declined, course sections per FTE remained essentially constant, indicating that the decline in the former measure was due to smaller class sizes rather than less faculty effort devoted toward instruction. Because class size reduction was a topic of great legislative and public interest in the early part of the decade, and *itself* ostensibly represents an improvement in the quality of instruction at Florida's public institutions, one should not generally conclude that faculty productivity has declined based solely on the single measure of student credit hour production.

In truth, when considered together, the data in this chapter suggest that faculty members were more productive in 1999–00 than in 1991–92. As noted, the average course load remained the same or increased at most institutions; research productivity increased sharply (as measured by C&G dollars generated); and classroom contact hours per FTE remained essentially constant over the nine-year period.[10]

[10] Notably, this figure was higher than the 12 hour minimum prescribed by the 12-Hour law.

6.0 POSITION CONVERSIONS

6.0 POSITION CONVERSIONS

This section identifies the fiscal impact of the conversion of funds by Florida's public universities from their original allocations by appropriation category and program component to other categories and components. Utilizing the 2001 operating budget data files for these institutions, MGT conducted an analysis of the patterns and dispersions of estimated and actual expenditures. The university operating budget data were provided to MGT by the Office of Information Resource Management within the Florida Board of Education, Division of Colleges and Universities (DCU). A synopsis of the analyses that are included in this chapter follows:

- ***Overview of Funding System and Position Conversions:*** Explanation of the process by which funds are allocated to and subsequently distributed by the universities.
- ***Expenditures by Program Component:*** Comparisons of estimated and actual expenditures demonstrate the total dollar-magnitude of conversions of funds across program components.
- ***Expenditures by Appropriation Category:*** An examination of estimated and actual expenditures by appropriation category allows for the isolation of the specific destinations of converted funds.
- ***Conclusions:*** Assessment of the fiscal impact of position conversions and suggestions for possible alternatives to the current funding system.

6.1 Overview of Funding System and Position Conversions

Under Florida's current system of budgeting for its public universities, each university prepares and submits a budget to the Florida Board of Education, Governor, and Legislature for review and approval. Educational and General (E & G) funding rates are guided by a process that generally allocates dollars according to the number of students, but also provides funds for nonenrollment-related activities. Current procedures do not provide adjustments in funding rates to compensate for cost

increases resulting from inflationary pressures for any appropriation category besides Salaries and Benefits. Thus, universities unavoidably face increasing costs in the other categories (e.g., Operating Expenses, Other Capital Outlay) without any explicit means of additional funding. The loophole remedy to this problem that has naturally developed within the funding system is known as "position conversions."

Essentially, the universities receive a lump sum of funds based on the budget requests submitted to the Legislature. Once received, the lump sum funds can be distributed as necessary by the individual universities across appropriation categories and program components. Since the Salaries and Wages category is the only appropriation category that can receive an increase pursuant to salary and benefits increase policies developed each year by the Legislature, it is in the universities' best interests to budget overestimations of expenditures for this category. This allows for cost-of-living increases, and the subsequent distribution of these funds (formerly classified within the Salaries and Benefits category) across nonsalary categories, as needed. Thus, funds budgeted to *positions* via the Salary and Benefits category are *converted* to other expenditure functions; hence the term "position conversions."

As it is understood that the universities operate under a lump sum funding model, the issues that arise as a result of position conversions are related to the maximization of appropriations under the current funding model. Because increases in expenses *other than salaries* are unavoidable, the position conversion issue cannot be addressed without dealing with the entire scope of the funding process for universities.

6.2 Expenditures by Program Component

The reallocations resulting from position conversions become apparent when comparing estimated expenditures (as submitted to the Legislature the prior year and

published in the current year's operating budget) and actual expenditures (as published in the following year's operating budget as prior year expenditures). In terms of shifts of funds across program components, overestimations of universities' Instruction and Research (I & R) components are common, as faculty salaries are the major expense in this function. Specifically examining the Salaries and Benefits appropriation category, we observe in Exhibit 6-1 that large portions of funds are also redistributed within I & R between salary and nonsalary functions at most of the universities. However, since it is a lump sum funding system, there is no way to track the specific dollars converted from one program component to another. As dollars are not tied to specific functions, we simply must observe the budgets prior to and after conversions of funds and make assumptions based on any differences.

In addition to the realization of the conversion issue, we see in this exhibit that public DCU E & G funding estimates exceed actual expenditures by less than $50 million. As a proportion of the total budget of nearly $2 billion, this figure amounts to 2.5 percent of total E & G funds. Universities typically carry any surplus funds forward, as a reserve, in order to compensate for any funding shortfalls in current or successive years. It is important to note that estimated expenditures do not necessarily equate to total revenues realized. For example, the fluctuation of tuition and fees revenues (resulting from shifts in enrollments), can greatly alter the actual funds available to the universities. As such, the $50 million figure is not an explicit representation of the total surplus at the universities, as shortfalls or excesses of other revenues could either bolster or detract from total available funds.

EXHIBIT 6-1
FLORIDA DCU* SALARY AND NONSALARY E & G EXPENDITURES**
ESTIMATED AND ACTUAL DOLLARS BY PROGRAM COMPONENT
FY 2000-2001

PROGRAM COMPONENT		EXPENDITURES		DIFFERENCE	
		ESTIMATED[1]	ACTUAL[2]	NUMERIC	PERCENT
		SALARY EXPENDITURES			
010000	Instruction and Research	$1,043,905,345	$898,517,883	($145,387,462)	-13.9%
020000	Institutes and Research Centers	$9,092,961	$8,379,174	($713,787)	-7.8%
030000	Radio/TV	$3,149,492	$3,173,999	$24,507	0.8%
040000	Library/AV	$46,417,910	$40,625,476	($5,792,434)	-12.5%
050000	Museums and Galleries	$9,658,886	$8,161,033	($1,497,853)	-15.5%
070000	Administrative Direct. and Support Services	$153,031,280	$141,308,602	($11,722,678)	-7.7%
080000	Physical Plant Management	$81,169,121	$72,165,614	($9,003,507)	-11.1%
090000	Student Services	$61,491,045	$57,662,457	($3,828,588)	-6.2%
	TOTAL, ALL COMPONENTS	***$1,407,916,040***	***$1,229,994,239***	***($177,921,801)***	***-12.6%***
		NON-SALARY EXPENDITURES			
010000	Instruction and Research	$269,047,607	$359,163,440	$90,115,833	33.5%
020000	Institutes and Research Centers	$17,673,932	$11,738,026	($5,935,906)	-33.6%
030000	Radio/TV	$1,067,836	$2,371,297	$1,303,461	122.1%
040000	Library/AV	$53,722,735	$59,223,690	$5,500,955	10.2%
050000	Museums and Galleries	$2,156,974	$4,306,307	$2,149,333	99.6%
070000	Administrative Direct and Support Services	$50,340,451	$62,462,056	$12,121,604	24.1%
080000	Physical Plant Management	$96,781,159	$109,705,390	$12,924,231	13.4%
090000	Student Services	$78,423,105	$89,064,053	$10,640,948	13.6%
	TOTAL, ALL COMPONENTS	***$569,213,799***	***$698,034,259***	***$128,820,460***	***22.6%***
		TOTAL EXPENDITURES			
010000	Instruction and Research	$1,312,952,952	$1,257,681,323	($55,271,629)	-4.2%
020000	Institutes and Research Centers	$26,766,893	$20,117,201	($6,649,692)	-24.8%
030000	Radio/TV	$4,217,328	$5,545,296	$1,327,968	31.5%
040000	Library/AV	$100,140,645	$99,849,166	($291,479)	-0.3%
050000	Museums and Galleries	$11,815,860	$12,467,339	$651,479	5.5%
070000	Administrative Direct and Support Services	$203,371,731	$203,770,658	$398,926	0.2%
080000	Physical Plant Management	$177,950,280	$181,871,005	$3,920,725	2.2%
090000	Student Services	$139,914,150	$146,726,510	$6,812,360	4.9%
	TOTAL, ALL COMPONENTS	***$1,977,129,839***	***$1,928,028,497***	***($49,101,342)***	***-2.5%***

Source: Florida Board of Education, Division of Colleges and Universities, FY 2000-01 and 2001-02 Operating Budget data files.

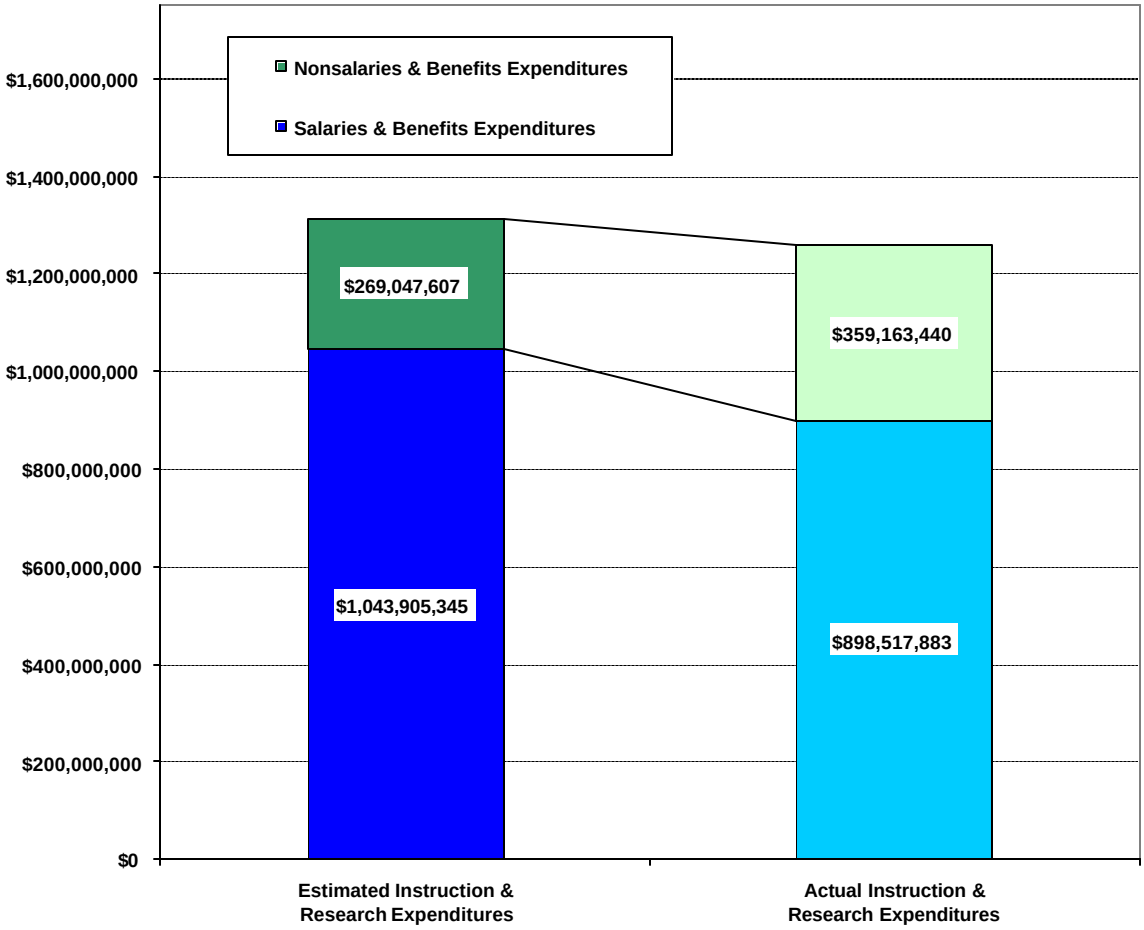
*Excludes the UF Health Sciences Center, IFAS, and the USF Health Sciences Center, as well as system-wide administrative budgets.
**Salary expenditures defined as those falling under Appropriation Category "010000 Salaries and Benefits."

[1]FY 2000-01 Estimated (Current Year) Expenditures per the 2000-01 Operating Budget
[2]FY 2000-01 Actual (Prior Year) Expenditures per the 2001-02 Operating Budget

Exhibits 6-2 and 6-3 graphically illustrate the discrepancies between estimated and actual salary and nonsalary expenditures across Florida's public universities in FY 2000-01. Exhibit 6-2 examines I & R expenditures, specifically, while Exhibit 6-3 examines the remaining program components within the university operating budgets.

Data for individual institutions (equivalent to Exhibits 6-1 through 6-3) are provided at the end of this report in Appendix 6-A.

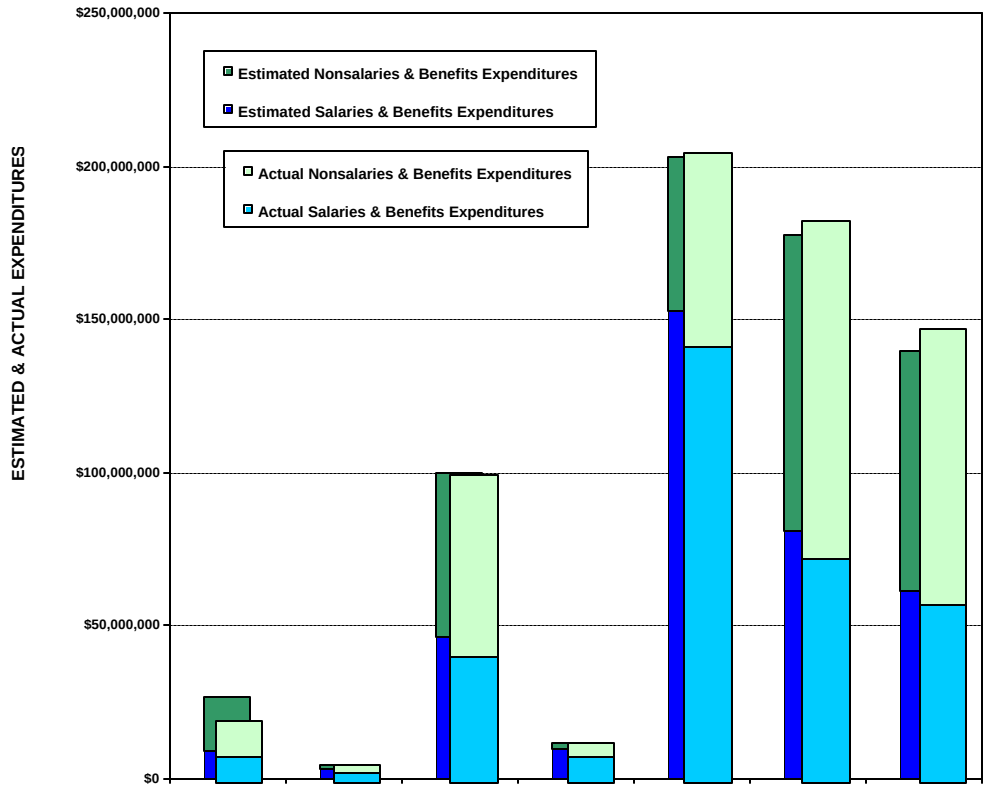
EXHIBIT 6-2
FLORIDA DCU* SALARY AND NONSALARY E & G EXPENDITURES
ESTIMATED AND ACTUAL I & R EXPENDITURES
FY 2000 - 2001



Source: Florida Board of Education, Division of Colleges and Universities, FY 2000-01 and 2001-02 Operating Budget data files.

*Excludes the UF Health Sciences Center, IFAS, and the USF Health Sciences Center, as well as system-wide administrative budgets.
**Salary expenditures defined as those falling under Appropriation Category "010000 Salaries and Benefits."

EXHIBIT 6-3
FLORIDA DCU* SALARY AND NONSALARY E & G EXPENDITURES**
ESTIMATED AND ACTUAL EXPENDITURES BY PROGRAM COMPONENT
EXCLUDING INSTRUCTION & RESEARCH, FY 2000-2001



SERIES	Institutes and Research Centers	Radio / TV	Library / AV	Museums and Galleries	Administrative Direct and Support Services	Physical Plant Management	Student Services
Est. Nonsalaries & Benefits Expenditures	$17,673,932	$1,067,836	$53,722,735	$2,156,974	$50,340,451	$96,781,159	$78,423,105
Est. Salaries & Benefits Expenditures	$9,092,961	$3,149,492	$46,417,910	$9,658,886	$153,031,280	$81,169,121	$61,491,045
Act. Nonsalaries & Benefits Expenditures	$11,738,026	$2,371,297	$59,223,690	$4,306,307	$62,462,056	$109,705,390	$89,064,053
Act. Salaries & Benefits Expenditures	$8,379,174	$3,173,999	$40,625,476	$8,161,033	$141,308,602	$72,165,614	$57,662,457

Source: Florida Board of Education, Division of Colleges and Universities, FY 2000-01 and 2001-02 Operating Budget data files.

*Excludes the UF Health Sciences Center, IFAS, and the USF Health Sciences Center, as well as system-wide administrative budgets.
**Salary expenditures defined as those falling under Appropriation Category "010000 Salaries and Benefits."

Within these exhibits, we observe that estimations of Salary and Benefits expenditures exceed actual expenditures by about $177.9 million, or 12.6 percent, due primarily to the overestimation within the I & R program component ($145.4 million). In

fact, across the DCU, Salary and Benefits expenditures are overestimated in each of the program components except for Radio/TV.

Alternately, in accord with the position conversion issue previously outlined, we see that non-Salary and Benefits expenditures fall well short of estimations ($128.8 million, or a 22.6% underestimation). Within these nonsalary expenditures, we see that all program components besides Institutes and Research Centers (IRC) are underestimated. This is clear evidence that funds originally allocated to Salary and Benefits expenditures are actually being utilized to cover other costs by the universities. As a majority of salaries and benefits expenditures occur within the I & R component (where faculty salaries are reported), the resulting effect is that the I & R component is typically overestimated by universities, and the excess funds are used to cover shortfalls in other program components and appropriation categories. It is interesting to note that a large portion of the excess I & R salary funds appear to be converted within I & R to nonsalary funds. This is due primarily to conversions of funds towards the Other Personal Services (OPS) expenditure category, an issue that is discussed in further detail in Section 6.3.

Exhibits 6-4 through 6-6 display the differences between estimated/actual and salary/nonsalary expenditures, by program component, at the individual public universities within the DCU. In these exhibits, we see a general trend of overestimation of salaries and benefits expenditures at the institutions (particularly within I & R) and a corresponding underestimation of Nonsalary and Benefits expenditures. We see that, in addition to the conversion to nonsalary funds within I & R, significant portions of the converted funds appear to cover costs within the Library/AV, Administrative Direction and Support Services (ADSS), Physical Plant Management, and Student Services program components.

EXHIBIT 6-4
ESTIMATED AND ACTUAL SALARY AND BENEFITS E & G EXPENDITURES**
BY INSTITUTION AND PROGRAM COMPONENT
FL DCU UNIVERSITIES*, FY 2000 - 2001

	PROGRAM COMPONENT	DATA TYPE	EXPENDITURES BY INSTITUTION (IN THOUSANDS)										DCU TOTAL*
			UF*	FSU	FAMU	UCF	USF*	FAU	UWF	FIU	UNF	FGCU	
Salaries & Benefits**	Instruction and Research	Estimated	$247,075	$183,876	$67,248	$112,998	$139,631	$78,029	$31,833	$126,965	$38,937	$17,313	$1,043,905
		Actual	$207,391	$145,282	$61,195	$103,932	$125,744	$75,033	$29,690	$97,631	$35,573	$17,047	$898,518
		Difference	*$39,684*	*$38,594*	*$6,054*	*$9,066*	*$13,887*	*$2,996*	*$2,143*	*$29,334*	*$3,363*	*$266*	*$145,387*
	Institutes and Research Centers	Estimated	$3,077	$0	$129	$2,541	$932	$384	$504	$1,008	$389	$128	$9,093
		Actual	$2,292	$0	$250	$2,571	$894	$358	$504	$967	$415	$128	$8,379
		Difference	*$785*	*$0*	*($121)*	*($29)*	*$38*	*$26*	*($0)*	*$41*	*($26)*	*($0)*	*$714*
	Radio / TV	Estimated	$1,006	$835	$0	$0	$886	$0	$259	$0	$0	$164	$3,149
		Actual	$1,034	$841	$0	$0	$887	$0	$270	$0	$0	$143	$3,174
		Difference	*($27)*	*($6)*	*$0*	*$0*	*($0)*	*$0*	*($11)*	*$0*	*$0*	*$20*	*($25)*
	Library / AV	Estimated	$11,012	$6,024	$2,735	$4,549	$6,103	$4,993	$1,840	$5,858	$2,077	$1,226	$46,418
		Actual	$10,067	$4,639	$2,541	$4,323	$5,086	$4,523	$1,697	$4,651	$2,086	$1,013	$40,625
		Difference	*$946*	*$1,385*	*$194*	*$227*	*$1,018*	*$470*	*$143*	*$1,207*	*($9)*	*$213*	*$5,792*
	Museums and Galleries	Estimated	$5,042	$2,987	$87	$0	$0	$0	$0	$1,543	$0	$0	$9,659
		Actual	$4,520	$2,770	$85	$0	$0	$0	$0	$786	$0	$0	$8,161
		Difference	*$522*	*$217*	*$2*	*$0*	*$0*	*$0*	*$0*	*$757*	*$0*	*$0*	*$1,498*
	Administrative Direction and Support Services	Estimated	$22,920	$23,525	$10,971	$15,928	$24,018	$13,558	$9,259	$18,571	$10,033	$4,249	$153,031
		Actual	$22,556	$23,287	$9,840	$14,441	$21,345	$12,562	$6,084	$17,579	$9,138	$4,477	$141,309
		Difference	*$364*	*$237*	*$1,131*	*$1,488*	*$2,673*	*$996*	*$3,175*	*$992*	*$895*	*($228)*	*$11,723*
	Physical Plant Management	Estimated	$16,803	$12,233	$7,429	$7,307	$14,635	$3,928	$4,913	$8,913	$4,004	$1,005	$81,169
		Actual	$14,514	$12,724	$6,503	$6,399	$13,086	$3,430	$3,943	$6,959	$3,597	$1,011	$72,166
		Difference	*$2,289*	*($491)*	*$926*	*$908*	*$1,549*	*$498*	*$970*	*$1,954*	*$407*	*($6)*	*$9,004*
	Student Services	Estimated	$9,990	$9,394	$3,831	$6,135	$8,628	$7,144	$3,513	$7,509	$3,333	$2,015	$61,491
		Actual	$9,465	$9,608	$3,711	$6,315	$7,508	$6,376	$3,222	$6,562	$2,992	$1,903	$57,662
		Difference	*$526*	*($214)*	*$120*	*($180)*	*$1,120*	*$768*	*$290*	*$947*	*$340*	*$112*	*$3,829*
	Total, All Components	**Estimated**	**$316,927**	**$238,873**	**$92,430**	**$149,459**	**$194,833**	**$108,037**	**$52,120**	**$170,366**	**$58,771**	**$26,100**	**$1,407,916**
		Actual	**$271,838**	**$199,151**	**$84,125**	**$137,980**	**$174,549**	**$102,283**	**$45,410**	**$135,134**	**$53,802**	**$25,723**	**$1,229,994**
		Difference	***$45,089***	***$39,722***	***$8,305***	***$11,479***	***$20,284***	***$5,754***	***$6,710***	***$35,232***	***$4,969***	***$377***	***$177,922***

Source: Florida Board of Education, Division of Colleges and Universities, FY 2000-01 and 2001-02 Operating Budget data files.

*The UF Health Sciences Center, IFAS, the USF Health Sciences Center, and system-wide administrative budgets are excluded from these calculations.
**Salary expenditures defined as those falling under Appropriation Category "010000 Salaries and Benefits."

EXHIBIT 6-5
ESTIMATED AND ACTUAL NONSALARY AND BENEFITS E & G EXPENDITURES**
BY INSTITUTION AND PROGRAM COMPONENT
FL DCU UNIVERSITIES*, FY 2000 - 2001

	PROGRAM COMPONENT	DATA TYPE	EXPENDITURES BY INSTITUTION (IN THOUSANDS)										DCU TOTAL*
			UF*	FSU	FAMU	UCF	USF*	FAU	UWF	FIU	UNF	FGCU	
Nonsalaries & Benefits**	Instruction and Research	Estimated	$56,174	$58,857	$12,301	$43,606	$44,736	$19,604	$3,112	$17,342	$10,008	$3,307	$269,048
		Actual	$71,286	$76,993	$15,405	$58,331	$58,284	$21,925	$6,569	$35,637	$11,197	$3,536	$359,163
		Difference	*($15,112)*	*($18,135)*	*($3,104)*	*($14,725)*	*($13,548)*	*($2,321)*	*($3,457)*	*($18,295)*	*($1,189)*	*($229)*	*($90,116)*
	Institutes and Research Centers	Estimated	$13,341	$1,507	$1	$899	$1,192	$168	$52	$231	$131	$153	$17,674
		Actual	$7,722	$1,536	$48	$680	$920	$230	$56	$284	$200	$63	$11,738
		Difference	*$5,619*	*($29)*	*($47)*	*$219*	*$271*	*($62)*	*($3)*	*($53)*	*($69)*	*$90*	*$5,936*
	Radio / TV	Estimated	$150	$768	$0	$0	$82	$0	$68	$0	$0	$0	$1,068
		Actual	$861	$1,354	$0	$0	$72	$0	$85	$0	$0	$0	$2,371
		Difference	*($711)*	*($586)*	*$0*	*$0*	*$10*	*$0*	*($17)*	*$0*	*$0*	*$0*	*($1,303)*
	Library / AV	Estimated	$11,592	$8,832	$2,526	$7,053	$6,293	$6,184	$1,611	$5,914	$2,136	$1,581	$53,723
		Actual	$12,930	$10,666	$3,699	$6,608	$6,140	$5,935	$1,751	$7,745	$2,196	$1,553	$59,224
		Difference	*($1,338)*	*($1,833)*	*($1,173)*	*$445*	*$153*	*$249*	*($140)*	*($1,831)*	*($60)*	*$27*	*($5,501)*
	Museums and Galleries	Estimated	$1,203	$571	$16	$0	$0	$0	$0	$366	$0	$0	$2,157
		Actual	$2,608	$596	$75	$0	$0	$0	$0	$1,027	$0	$0	$4,306
		Difference	*($1,405)*	*($25)*	*($59)*	*$0*	*$0*	*$0*	*$0*	*($660)*	*$0*	*$0*	*($2,149)*
	Administrative Direction and Support Services	Estimated	$4,613	$10,689	$3,672	$7,205	$4,825	$4,397	$3,239	$6,315	$3,704	$1,683	$50,340
		Actual	$5,661	$9,489	$4,888	$9,587	$4,761	$5,662	$3,796	$13,282	$4,094	$1,241	$62,462
		Difference	*($1,048)*	*$1,199*	*($1,216)*	*($2,382)*	*$63*	*($1,266)*	*($557)*	*($6,967)*	*($390)*	*$442*	*($12,122)*
	Physical Plant Management	Estimated	$19,736	$17,783	$6,946	$6,518	$17,941	$8,239	$3,490	$10,519	$3,372	$2,237	$96,781
		Actual	$21,683	$24,360	$8,359	$6,639	$17,566	$8,421	$3,746	$12,688	$4,041	$2,202	$109,705
		Difference	*($1,947)*	*($6,576)*	*($1,413)*	*($121)*	*$375*	*($182)*	*($257)*	*($2,169)*	*($670)*	*$36*	*($12,924)*
	Student Services	Estimated	$12,522	$13,875	$8,965	$7,642	$14,638	$6,797	$1,309	$8,915	$2,423	$1,337	$78,423
		Actual	$12,846	$19,662	$9,927	$7,276	$15,489	$7,485	$1,516	$10,208	$3,048	$1,606	$89,064
		Difference	*($325)*	*($5,787)*	*($962)*	*$366*	*($851)*	*($688)*	*($207)*	*($1,293)*	*($624)*	*($269)*	*($10,641)*
	Total, All Components	**Estimated**	**$119,331**	**$112,883**	**$34,427**	**$72,922**	**$89,706**	**$45,388**	**$12,882**	**$49,601**	**$21,775**	**$10,298**	**$569,214**
		Actual	**$135,598**	**$144,656**	**$42,401**	**$89,120**	**$103,233**	**$49,658**	**$17,520**	**$80,870**	**$24,776**	**$10,201**	**$698,034**
		Difference	***($16,267)***	***($31,773)***	***($7,974)***	***($16,198)***	***($13,527)***	***($4,270)***	***($4,639)***	***($31,269)***	***($3,001)***	***$96***	***($128,820)***

Source: Florida Board of Education, Division of Colleges and Universities, FY 2000-01 and 2001-02 Operating Budget data files.

*The UF Health Sciences Center, IFAS, the USF Health Sciences Center, and system-wide administrative budgets are excluded from these calculations.
**Salary expenditures defined as those falling under Appropriation Category "010000 Salaries and Benefits."

EXHIBIT 6-6
ESTIMATED AND ACTUAL TOTAL E & G EXPENDITURES
BY INSTITUTION AND PROGRAM COMPONENT
FL DCU UNIVERSITIES*, FY 2000 - 2001

	PROGRAM COMPONENT	DATA TYPE	EXPENDITURES BY INSTITUTION (IN THOUSANDS)										DCU TOTAL*
			UF*	FSU	FAMU	UCF	USF*	FAU	UWF	FIU	UNF	FGCU	
Total Funds	Instruction and Research	Estimated	$303,249	$242,734	$79,549	$156,604	$184,367	$97,633	$34,945	$144,307	$48,945	$20,620	$1,312,953
		Actual	$278,678	$222,274	$76,600	$162,263	$184,028	$96,959	$36,259	$133,267	$46,771	$20,583	$1,257,681
		Difference	*$24,572*	*$20,459*	*$2,949*	*($5,659)*	*$339*	*$674*	*($1,314)*	*$11,039*	*$2,175*	*$37*	*$55,272*
	Institutes and Research Centers	Estimated	$16,418	$1,507	$130	$3,440	$2,124	$552	$556	$1,239	$519	$281	$26,767
		Actual	$10,014	$1,536	$298	$3,250	$1,815	$588	$560	$1,251	$615	$191	$20,117
		Difference	*$6,404*	*($29)*	*($168)*	*$190*	*$309*	*($36)*	*($4)*	*($12)*	*($95)*	*$90*	*$6,650*
	Radio / TV	Estimated	$1,156	$1,602	$0	$0	$968	$0	$327	$0	$0	$164	$4,217
		Actual	$1,894	$2,194	$0	$0	$958	$0	$355	$0	$0	$143	$5,545
		Difference	*($738)*	*($592)*	*$0*	*$0*	*$10*	*$0*	*($28)*	*$0*	*$0*	*$20*	*($1,328)*
	Library / AV	Estimated	$22,604	$14,857	$5,261	$11,602	$12,396	$11,177	$3,451	$11,771	$4,213	$2,807	$100,141
		Actual	$22,997	$15,305	$6,240	$10,931	$11,226	$10,458	$3,449	$12,396	$4,282	$2,567	$99,849
		Difference	*($392)*	*($449)*	*($979)*	*$672*	*$1,170*	*$719*	*$3*	*($624)*	*($69)*	*$240*	*$291*
	Museums and Galleries	Estimated	$6,246	$3,558	$103	$0	$0	$0	$0	$1,909	$0	$0	$11,816
		Actual	$7,128	$3,366	$161	$0	$0	$0	$0	$1,812	$0	$0	$12,467
		Difference	*($882)*	*$192*	*($58)*	*$0*	*$0*	*$0*	*$0*	*$97*	*$0*	*$0*	*($651)*
	Administrative Direction and Support Services	Estimated	$27,533	$34,213	$14,643	$23,133	$28,842	$17,955	$12,498	$24,886	$13,737	$5,932	$203,372
		Actual	$28,217	$32,776	$14,728	$24,027	$26,106	$18,224	$9,880	$30,861	$13,232	$5,719	$203,771
		Difference	*($684)*	*$1,437*	*($85)*	*($894)*	*$2,736*	*($269)*	*$2,618*	*($5,976)*	*$505*	*$214*	*($399)*
	Physical Plant Management	Estimated	$36,539	$30,016	$14,375	$13,825	$32,576	$12,167	$8,402	$19,432	$7,375	$3,242	$177,950
		Actual	$36,196	$37,084	$14,862	$13,038	$30,652	$11,852	$7,689	$19,647	$7,638	$3,212	$181,871
		Difference	*$343*	*($7,068)*	*($487)*	*$787*	*$1,924*	*$316*	*$713*	*($215)*	*($263)*	*$30*	*($3,921)*
	Student Services	Estimated	$22,512	$23,269	$12,797	$13,777	$23,266	$13,941	$4,822	$16,424	$5,756	$3,352	$139,914
		Actual	$22,311	$29,270	$13,638	$13,592	$22,997	$13,861	$4,739	$16,770	$6,040	$3,509	$146,727
		Difference	*$201*	*($6,001)*	*($842)*	*$185*	*$269*	*$80*	*$83*	*($346)*	*($284)*	*($157)*	*($6,812)*
	Total, All Components	**Estimated**	**$436,258**	**$351,756**	**$126,857**	**$222,381**	**$284,539**	**$153,425**	**$65,002**	**$219,968**	**$80,546**	**$36,398**	**$1,977,130**
		Actual	**$407,435**	**$343,807**	**$126,527**	**$227,100**	**$277,782**	**$151,941**	**$62,930**	**$216,004**	**$78,578**	**$35,924**	**$1,928,028**
		Difference	***$28,823***	***$7,950***	***$331***	***($4,719)***	***$6,757***	***$1,484***	***$2,071***	***$3,963***	***$1,968***	***$473***	***$49,101***

Source: Florida Board of Education, Division of Colleges and Universities, FY 2000-01 and 2001-02 Operating Budget data files.

*The UF Health Sciences Center, IFAS, the USF Health Sciences Center, and systemwide administrative budgets are excluded from these calculations.

It is apparent from these analyses that no significant patterns exist between the universities when we examine total estimated and actual expenditures by program component (Exhibit 6-6). The more significant discrepancies between estimated and actual expenditures become apparent when we make the delineation between Salary and Benefits and non-Salary and Benefits expenditures, according to appropriation category (Exhibits 6-4 and 6-5). Specifically, we observe that:

- Eight of ten institutions overestimated total I & R expenditures, but no more than six institutions over- or underestimated any other particular program component, with respect to total expenditures.
- At least eight of ten institutions overestimated Salary and Benefits expenditures within I & R, Library/AV, ADSS, Physical Plant Management, and Student Services.
- Seven or more institutions underestimated non-Salary and Benefits expenditures within I & R, ADSS, Physical Plant Management, and Student Services.
- Each of the ten institutions overestimated total Salary and Benefits expenditures, while nine of ten institutions underestimated non-Salary and Benefits expenditures.

Regarding expenditures by program component, these trends illustrate that the largest share of fund conversions occur within the I & R component, where faculty salaries (the largest salary component at universities) are reported. Otherwise, conversions are observed across many of the other program components, varying somewhat by institution. The conversions are made evident through analysis by appropriation category, dividing between Salary and Benefits and non-Salary and Benefits expenditures. Analyses by appropriation category are explored further in the section that follows.

6.3 Expenditures by Appropriation Category

The operating budgets are set up according to a matrix of many variables, including program component and expenditure category. In the previous section we examined expenditures across each of the program components, but simply controlled for the expenditure category variable according to Salary and Benefits and non-Salary and Benefits expenditures. In this section, we analyze the nonsalary expenditure categories in further detail to reveal the specific estimated and actual destinations of these funds. Exhibit 6-7 displays total E & G expenditures by program component and expenditure category for all public universities in the DCU system.

In the majority of program components, we observe that Salaries and Benefits represent the largest destination of funds across the expenditure categories. Among other categories, Expenses and OPS represent the second and third largest components of actual total E & G expenditures, respectively. As previously observed, we see that Salary and Benefits expenditures are overestimated, while these other major categories are substantially underestimated.

Within the DCU totals depicted in Exhibit 6-7, we see the following discrepancies between estimated and actual non-Salary and Benefits expenditures:

- Expenses are underestimated by $18.6 million (6.6%);
- Other Capital Outlay (OCO) expenditures are underestimated by $40.1 million (141.8%), the largest proportionate underestimate among major expenditure categories;
- OPS expenditures were underestimated by $54.4 million (44.8%); and,
- Student Financial Aid expenditures were underestimated by $7.6 million (18.5%).

EXHIBIT 6-7
FLORIDA DCU** EXPENDITURES BY APPROPRIATION CATEGORY AND PROGRAM COMPONENT
FY 2000 - 2001

	APPROPRIATION CATEGORY	010000 I & R	020000 IRC	030000 Radio/TV	040000 Library/AV	050000 Msms & Gall	070000 ADSS	080000 Plant Mgt	090000 Stu Svc	TOTAL
ESTIMATED	Expenses	$123,779,328	$10,844,838	$235,567	$4,671,386	$1,561,848	$31,414,897	$90,652,170	$18,888,891	$282,048,925
	Fee Waivers	$8,829,110	$0	$0	$0	$0	$0	$0	$472,550	$9,301,660
	Library Resources	$841,277	$1,063,528	$0	$44,234,931	$0	$0	$0	$0	$46,139,736
	Operating Capital Outlay	$20,369,520	$1,648,613	$729,530	$2,073,101	$81,000	$1,862,812	$976,299	$538,306	$28,279,181
	Other Personal Services	$102,043,987	$610,056	$102,739	$2,692,312	$514,126	$6,061,255	$2,804,764	$6,595,284	$121,424,523
	Plant Maintenance	$0	$0	$0	$0	$0	$0	$2,273,581	$0	$2,273,581
	Regional Data Centers-DCU	$5,206,440	$2,000,000	$0	$51,005	$0	$3,312,372	$1,000	$1,744,415	$12,315,232
	Risk Management Insurance	$603,221	$0	$0	$0	$0	$7,230,168	$73,345	$89,455	$7,996,189
	Salaries And Benefits	$1,043,905,345	$9,092,961	$3,149,492	$46,417,910	$9,658,886	$153,031,280	$81,169,121	$61,491,045	$1,407,916,040
	Scholarships	$85,000	$0	$0	$0	$0	$0	$0	$8,062,806	$8,147,806
	Student Financial Aid	$0	$0	$0	$0	$0	$0	$0	$40,813,305	$40,813,305
	Other**	$7,289,725	$1,506,897	$0	$0	$0	$458,947	$0	$1,218,093	$10,473,662
	Total, All Categories	**$1,312,952,952**	**$26,766,893**	**$4,217,328**	**$100,140,645**	**$11,815,860**	**$203,371,731**	**$177,950,280**	**$139,914,150**	**$1,977,129,839**
ACTUAL	Expenses	$131,998,442	$4,279,238	$381,338	$5,646,743	$2,310,756	$35,573,547	$99,643,971	$20,906,870	$300,740,905
	Fee Waivers	$10,878,594	$0	$0	$0	$0	$0	$0	$472,550	$11,351,144
	Library Resources	$0	$938,897	$0	$47,918,078	$0	$376	$0	$0	$48,857,351
	Operating Capital Outlay	$53,246,750	$1,735,210	$1,910,366	$1,898,134	$166,219	$5,743,602	$2,659,951	$1,025,683	$68,385,914
	Other Personal Services	$148,661,666	$694,073	$79,593	$3,760,744	$1,829,332	$7,958,446	$4,572,644	$8,300,906	$175,857,404
	Plant Maintenance	$73	$0	$0	$0	$0	$0	$2,769,362	$0	$2,769,435
	Regional Data Centers-DCU	$4,488,106	$2,540,000	$0	$0	$0	$3,959,202	$278	$1,868,790	$12,856,376
	Risk Management Insurance	$469,043	$0	$0	$0	$0	$8,728,232	$59,184	$69,514	$9,325,973
	Salaries And Benefits	$898,517,883	$8,379,174	$3,173,999	$40,625,476	$8,161,033	$141,308,602	$72,165,614	$57,662,457	$1,229,994,239
	Scholarships	$160,167	$0	$0	$0	$0	$80,000	$0	$8,375,138	$8,615,305
	Student Financial Aid	$1,674,280	$0	$0	$0	$0	$5,000	$0	$46,690,670	$48,369,950
	Other**	$7,586,320	$1,550,609	$0	($8)	$0	$413,650	$0	$1,353,931	$10,904,502
	Total, All Categories	**$1,257,681,323**	**$20,117,201**	**$5,545,296**	**$99,849,166**	**$12,467,339**	**$203,770,658**	**$181,871,005**	**$146,726,510**	**$1,928,028,497**
DIFFERENCE	Expenses	($8,219,115)	$6,565,600	($145,771)	($975,357)	($748,908)	($4,158,649)	($8,991,801)	($2,017,980)	($18,691,980)
	Fee Waivers	($2,049,484)	$0	$0	$0	$0	$0	$0	$0	($2,049,484)
	Library Resources	$841,277	$124,631	$0	($3,683,147)	$0	($376)	$0	$0	($2,717,615)
	Operating Capital Outlay	($32,877,230)	($86,597)	($1,180,836)	$174,967	($85,219)	($3,880,790)	($1,683,652)	($487,377)	($40,106,733)
	Other Personal Services	($46,617,679)	($84,017)	$23,146	($1,068,432)	($1,315,206)	($1,897,191)	($1,767,880)	($1,705,622)	($54,432,881)
	Plant Maintenance	($73)	$0	$0	$0	$0	$0	($495,781)	$0	($495,854)
	Regional Data Centers-DCU	$718,334	($540,000)	$0	$51,005	$0	($646,830)	$722	($124,375)	($541,144)
	Risk Management Insurance	$134,178	$0	$0	$0	$0	($1,498,064)	$14,161	$19,941	($1,329,784)
	Salaries And Benefits	$145,387,462	$713,787	($24,507)	$5,792,434	$1,497,853	$11,722,678	$9,003,507	$3,828,588	$177,921,801
	Scholarships	($75,167)	$0	$0	$0	$0	($80,000)	$0	($312,332)	($467,499)
	Student Financial Aid	($1,674,280)	$0	$0	$0	$0	($5,000)	$0	($5,877,365)	($7,556,645)
	Other**	($296,595)	($43,712)	$0	$8	$0	$45,297	$0	($135,838)	($430,840)
	Total, All Categories	**$55,271,629**	**$6,649,692**	**($1,327,968)**	**$291,479**	**($651,479)**	**($398,926)**	**($3,920,725)**	**($6,812,360)**	**$49,101,342**

Source: Florida Board of Education, Division of Colleges and Universities, FY 2000-01 and 2001-02 Operating Budget data files.

*The UF Health Sciences Center, IFAS, the USF Health Sciences Center, and systemwide administrative budgets are excluded from these calculations.
**This category includes a total of 25 expenditure categories primarily comprised of special centers, institutes, and grant programs.

The majority of the funding reallocations occur within the I & R component (which represents about two-thirds of the total E & G budget), particularly in the Salaries and Benefits category, as we have noted. Besides the differences observed within the Salaries and Benefits category, estimations of several other expenditure categories were different by at least $2 million across the public DCU universities, including:

- Expenses were underestimated within I & R by $8.2 million (6.6%), ADSS by $4.2 million (13.2%), Plant Management by $9.0 million (9.9%), and Student Services by $2.0 million (10.7%);
- Expenses were overestimated within the IRC component ($6.6 million, 60.5%);
- Fee Waivers were underestimated within I & R ($2.0 million, 23.2%);
- OCO expenditures were underestimated within I & R ($32.9 million, 161.4%) and ADSS ($3.9 million, 208.3%);
- OPS expenditures were underestimated within I & R ($46.6 million, 45.7%); and
- Student Financial Aid was underestimated within the Student Services component ($5.9 million, 14.4%).

Exhibit 6-8 displays E & G expenditures by appropriation category at the individual DCU universities. Each of the institutions overestimated Salaries and Benefits, by an average magnitude of 12.6 percent, as observed previously.

Several general patterns occur among the institutions, across these appropriation categories. In addition to the consistent overestimation of Salaries and Benefits, we also see that:

- seven of the ten institutions underestimated Expenses;
- all of the institutions underestimated OCO expenditures;
- nine of ten institutions underestimated OPS expenditures;
- all of the institutions underestimated Risk Management Insurance; and
- nine of ten institutions underestimated Scholarships expenditures, though by a relatively small amount (an average of $467,000).

EXHIBIT 6-8
FLORIDA DCU* EXPENDITURES BY APPROPRIATION CATEGORY
ALL PROGRAM COMPONENTS, FY 2000 - 2001

	APPROPRIATION CATEGORY	EXPENDITURES BY INSTITUTION AND APPROPRIATION CATEGORY										
		UF* TOTAL	FSU TOTAL	FAMU TOTAL	UCF TOTAL	USF* TOTAL	FAU TOTAL	UWF TOTAL	FIU TOTAL	UNF TOTAL	FGCU TOTAL	FL DCU* TOTAL
ESTIMATED	Expenses	$55,011,581	$62,439,077	$15,153,281	$36,002,807	$43,126,024	$22,029,728	$8,370,682	$23,145,525	$11,270,851	$5,499,369	$282,048,925
	Fee Waivers	$1,415,510	$7,612,339	$0	$0	$0	$0	$0	$0	$273,811	$0	$9,301,660
	Library Resources	$11,137,659	$7,115,507	$2,996,273	$5,174,674	$5,627,109	$4,124,202	$1,527,555	$5,284,890	$1,901,327	$1,250,540	$46,139,736
	Operating Capital Outlay	$5,272,111	$2,815,686	$2,089,719	$9,156,932	$1,900,136	$1,701,272	$54,387	$3,704,572	$1,375,275	$209,091	$28,279,181
	Other Personal Services	$30,369,701	$19,194,083	$6,834,953	$16,450,638	$20,979,654	$11,251,202	$2,062,930	$7,182,429	$4,415,438	$2,683,495	$121,424,523
	Plant Maintenance	$0	$0	$0	$185,491	$400,125	$0	$0	$1,347,965	$340,000	$0	$2,273,581
	Regional Data Centers-DCU	$5,769,269	$1,113,673	$307,030	$165,810	$2,457,258	$598,625	$0	$1,550,488	$325,579	$27,500	$12,315,232
	Risk Management Insurance	$893,129	$1,179,987	$962,350	$861,763	$1,132,754	$1,037,792	$296,458	$1,198,133	$359,287	$74,536	$7,996,189
	Salaries And Benefits	$316,927,004	$238,873,064	$92,430,351	$149,458,708	$194,833,139	$108,037,019	$52,120,044	$170,366,200	$58,770,802	$26,099,709	$1,407,916,040
	Scholarships	$2,635,751	$0	$0	$0	$5,317,055	$37,500	$47,500	$0	$110,000	$0	$8,147,806
	Student Financial Aid	$5,270,621	$9,165,072	$5,622,248	$4,874,765	$2,699,769	$4,593,335	$499,989	$6,161,544	$1,378,333	$547,629	$40,813,305
	Other**	$1,555,836	$2,247,617	$461,247	$49,382	$6,066,165	$14,646	$22,194	$25,913	$25,000	$5,662	$10,473,662
	Total, All Categories	**$436,258,172**	**$351,756,105**	**$126,857,452**	**$222,380,970**	**$284,539,188**	**$153,425,321**	**$65,001,738**	**$219,967,659**	**$80,545,703**	**$36,397,531**	**$1,977,129,839**
ACTUAL	Expenses	$56,287,419	$60,401,305	$18,513,001	$40,022,494	$44,557,686	$22,495,887	$9,044,141	$33,516,316	$10,537,667	$5,364,989	$300,740,905
	Fee Waivers	$1,415,459	$8,590,721	$0	$0	$0	$0	$0	$1,071,153	$273,811	$0	$11,351,144
	Library Resources	$11,111,511	$9,392,807	$3,246,280	$5,174,668	$5,627,109	$4,003,271	$1,436,284	$5,734,793	$1,832,612	$1,298,016	$48,857,351
	Operating Capital Outlay	$13,346,837	$15,161,857	$3,492,876	$15,432,690	$10,074,156	$1,735,851	$1,698,783	$4,708,486	$2,221,528	$512,850	$68,385,914
	Other Personal Services	$36,747,998	$31,543,646	$9,146,473	$20,487,511	$24,498,509	$14,659,882	$4,427,481	$25,420,970	$6,591,765	$2,333,168	$175,857,404
	Plant Maintenance	$0	$0	$0	$185,125	$237,919	$0	$0	$1,347,695	$998,696	$0	$2,769,435
	Regional Data Centers-DCU	$6,086,800	$1,295,770	$275,000	$104,063	$2,453,703	$954,232	$0	$1,350,848	$324,105	$11,856	$12,856,376
	Risk Management Insurance	$1,040,097	$1,374,161	$1,120,709	$1,003,570	$1,318,939	$1,206,186	$345,241	$1,395,291	$418,409	$103,370	$9,325,973
	Salaries And Benefits	$271,837,567	$199,150,848	$84,125,421	$137,980,160	$174,548,848	$102,282,984	$45,409,895	$135,134,037	$53,801,711	$25,722,768	$1,229,994,239
	Scholarships	$2,710,751	$90,000	$40,000	$35,000	$5,382,055	$40,167	$45,000	$85,000	$167,332	$20,000	$8,615,305
	Student Financial Aid	$5,270,621	$14,515,072	$6,090,927	$6,629,848	$2,699,769	$4,536,885	$499,989	$6,200,877	$1,378,333	$547,629	$48,369,950
	Other**	$1,580,214	$2,290,381	$475,882	$45,159	$6,383,023	$26,078	$23,545	$38,766	$32,000	$9,455	$10,904,502
	Total, All Categories	**$407,435,273**	**$343,806,567**	**$126,526,568**	**$227,100,287**	**$277,781,716**	**$151,941,422**	**$62,930,360**	**$216,004,232**	**$78,577,970**	**$35,924,102**	**$1,928,028,497**
DIFFERENCE	Expenses	($1,275,838)	$2,037,772	($3,359,720)	($4,019,687)	($1,431,662)	($466,159)	($673,460)	($10,370,791)	$733,184	$134,380	($18,691,980)
	Fee Waivers	$51	($978,382)	$0	$0	$0	$0	$0	($1,071,153)	$0	$0	($2,049,484)
	Library Resources	$26,148	($2,277,300)	($250,007)	$6	$0	$120,931	$91,271	($449,903)	$68,715	($47,476)	($2,717,615)
	Operating Capital Outlay	($8,074,726)	($12,346,171)	($1,403,157)	($6,275,758)	($8,174,020)	($34,579)	($1,644,397)	($1,003,914)	($846,253)	($303,759)	($40,106,733)
	Other Personal Services	($6,378,297)	($12,349,563)	($2,311,520)	($4,036,873)	($3,518,855)	($3,408,680)	($2,364,551)	($18,238,541)	($2,176,327)	$350,327	($54,432,881)
	Plant Maintenance	$0	$0	$0	$366	$162,206	$0	$0	$270	($658,696)	$0	($495,854)
	Regional Data Centers-DCU	($317,531)	($182,097)	$32,030	$61,747	$3,555	($355,607)	$0	$199,640	$1,474	$15,644	($541,144)
	Risk Management Insurance	($146,968)	($194,174)	($158,359)	($141,807)	($186,185)	($168,394)	($48,783)	($197,158)	($59,122)	($28,834)	($1,329,784)
	Salaries And Benefits	$45,089,437	$39,722,216	$8,304,930	$11,478,548	$20,284,291	$5,754,035	$6,710,149	$35,232,163	$4,969,091	$376,941	$177,921,801
	Scholarships	($75,000)	($90,000)	($40,000)	($35,000)	($65,000)	($2,667)	$2,500	($85,000)	($57,332)	($20,000)	($467,499)
	Student Financial Aid	$0	($5,350,000)	($468,679)	($1,755,083)	$0	$56,450	$0	($39,333)	$0	$0	($7,556,645)
	Other**	($24,378)	($42,764)	($14,635)	$4,223	($316,858)	($11,432)	($1,351)	($12,853)	($7,000)	($3,793)	($430,840)
	Total, All Categories	**$28,822,899**	**$7,949,538**	**$330,884**	**($4,719,317)**	**$6,757,472**	**$1,483,899**	**$2,071,378**	**$3,963,427**	**$1,967,733**	**$473,429**	**$49,101,342**

Source: Florida Board of Education, Division of Colleges and Universities, FY 2000-01 and 2001-02 Operating Budget data files.

*The UF Health Sciences Center, IFAS, the USF Health Sciences Center, and systemwide administrative budgets are excluded from these calculations.
**This category includes a total of 25 expenditure categories primarily comprised of special centers, institutes, and grant programs.

The Expenses, OCO, and OPS appropriation categories appear to be the primary destinations of the overestimated Salary and Benefits funds. Descriptions of these appropriation categories, as provided within the 2001 Florida Statutes, and possible explanations for increasing costs within them, appear below.

Expenses: Florida Statutes defines the Expenses appropriation category as those expenditures that are:

> *used to fund the usual, ordinary, and incidental expenditures by an agency... including such items as contractual services, commodities, and supplies of a consumable nature, current obligations, and fixed charges, and excluding expenditures classified as operating capital outlay. Payments to other funds or local, state, or federal agencies may be included in this category.*

As such a broad category, it is not surprising that certain costs among these expenditures have increased significantly, necessitating the need for extended funding within this category. For instance, during the "energy crisis" experienced in 2000–01, the cost of utilities increased significantly. Furthermore, as this particular event spurred more broad-based inflationary pressures throughout the economy, it is likely that costs within many other aspects of this category experienced significant increases, as well. As the public university funding process has no automated mechanism for adjusting the funding rates within this category accordingly, universities are able to use funds converted from the salaries and benefits category to cover these burdens. If excess funds had not been included within the salary and benefits category (that received a compensatory annual increase), no funding increases would have been received, and the universities could have faced significant budget shortfalls.

Operating Capital Outlay (OCO): Items included within this appropriation category are limited to those:

> *used to fund equipment, fixtures, and other tangible personal property of a non-consumable and non-expendable nature... the value or cost of which is $1,000 or more and the normal expected life of which is 1 year or*

> *more, and hardback-covered bound books that are circulated to students or the general public, the value or cost of which is $25 or more, and hardback-covered bound books, the value or cost of which is $250 or more.*

Similar to the expenses category, commodities included within OCO could be subject to cost changes on a broad-based level. As capital and commodity markets are subject to national as well as international market forces, costs within this category (especially library subscriptions) could change significantly on an annual basis. With no internal means of adjustment within this category, universities rely on funding increases provided within the Salaries and Benefits category to compensate for any shortfalls.

Other Personal Services (OPS): This category encompasses all expenditures that are:

> *used to fund the compensation for services rendered by a person who is not filling an established position. This definition includes, but is not limited to, services of temporary employees, student or graduate assistants, persons on fellowships, part-time academic employees, board members, and consultants and other services specifically budgeted by each agency, or by the judicial branch, in this category. In distinguishing between payments to be made from salaries and benefits appropriations and other-personal-services appropriations:*
>
> 1. *Those persons filling established positions shall be paid from salaries and benefits appropriations and those persons performing services for a state agency or for the judicial branch, but who are not filling established positions, shall be paid from other-personal-services appropriations.*
>
> 2. *Those persons paid from salaries and benefits appropriations shall be state officers or employees and shall be eligible for membership in a state retirement system and those paid from other-personal-services appropriations shall not be eligible for such membership.*

Thus, though OPS expenditures are subject to labor market pressures that are quite similar to those of Salaries and Benefits expenditures, no mechanism exists that compensates for tighter labor markets. As universities must compete with other institutions and organizations within their vicinity for scarce labor resources, they must compensate employees at competitive rates. The legislative increases to Salaries and

Benefits funds provide necessary adjustments for regular positions, but no such provision exists for OPS positions. Of significance also is the need to address unforeseen circumstances that are likely to occur during the year. For example, faculty may receive research grants that essentially "buy out" their state funded time. In such cases, the university would transfer the salary dollars to the OPS category to be able to temporarily hire a qualified individual to pick up the teaching obligation. Normal attrition (e.g., deaths, retirements, resignations) over the course of the year would also necessitate this action. The universities therefore must also rely on legislatively mandated Salaries and Benefits increases to keep pace with economic markets in this respect, and convert funds between these categories as necessary.

6.4 Conclusions

The existence of overestimations within the Salaries and Benefits appropriation category and underestimations within other appropriation categories is the systemic result of a funding system that does not account for changes in price levels or standard practices that occur within many facets of higher education beyond Salaries and Benefits. The system of lump sum funding that currently exists allows the universities discretion as to the allocation of funds across program components.

The issue that arises from this practice is an inconsistency between the estimated expenditures submitted to and approved by the Legislature and the actual allocations of expenditures by the universities. Thus, the approved operating budget is never entirely representative of the intended or actual budget. Within the instruction and research program component, salary dollars are overestimated, while nonsalary dollars are underestimated, resulting in an overall overestimation of budgeted funds within this component.

These excess funds are distributed across several other program components in which salary dollars are not as prominent; as with the I & R component, the same overestimation and underestimation in salary and nonsalary dollars, respectively, is evident in these program components. Overall, the net effect of the conversions is minimal, with the difference between estimated and actual total expenditures amounting to approximately 2.5 percent across all E&G funds and public DCU institutions.

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.0 CONCLUSIONS AND RECOMMENDATIONS

The topic of faculty productivity is vast and complex. This study has produced data and information regarding not only the specifics of faculty activity and workload at Florida's public universities, but also the efforts to measure and address faculty productivity both nationally and in selected other states and the various approaches and challenges to these efforts.

This chapter presents conclusions and policy recommendations for consideration by CEPRI regarding study findings. Specifically, this chapter includes a discussion of the following:

- a summary of the key issues involved in measuring faculty productivity;
- an overview of the data detailing faculty productivity at Florida's public universities;
- discussion of the position conversions issue in Florida's public universities;
- recommendations; and
- future issues in faculty productivity.

7.1 Summary of Key Issues Relating to Faculty Productivity

A review of the pertinent literature on the topic, in tandem with interviews of several state systems of higher education, revealed a number of key characteristics of past and present efforts to assess faculty productivity:

- Efforts have varied considerably in their methods and scope. They have ranged from faculty activity studies, which attempt to assess the distribution of faculty activities across different functions (i.e. instruction, research, and service), to evaluations of faculty instructional workload or measures of noninstructional activities.

- The national debate has shifted away from the measurement of inputs to the measurement of outcomes. In many cases, states have shifted focus toward accountability systems in which measures of overall "institutional effectiveness" play the central role; measures of faculty productivity are typically subsumed within this larger framework.

- Less emphasis is given to individual faculty members' productivity than to departmental or universitywide measures of productivity. This is perhaps reflective of the shift toward the broader framework noted in the preceding bullet point.

- Faculty productivity often focuses on measures of instructional activities at the expense of measuring research or service productivity. This is likely due to the fact that data about such activities are easier to collect and quantify than those for research or service activities.

- State and national efforts to measure faculty productivity continue to move toward the use of peer institutions and national benchmarking data in order to provide meaningful comparative data.

In recent years, several prominent studies have attempted to provide standards for measuring productivity. Among these are the *National Study of Instructional Costs and Productivity* (the "Delaware" study) and the *National Study of Postsecondary Faculty* (NSOPF). These efforts have attempted to address some of the challenges and shortcomings inherent in many prior faculty productivity studies. Specifically, they treat the topic at the national level, providing standard methods of comparison for purposes of benchmarking performance.

The Delaware study in particular was often identified by State Higher Education Executive Officers as the premiere study of its kind. That effort collects productivity data at the program discipline level from a host of participating institutions across the country. In addition to providing a valuable benchmarking resource for individual state systems and institutions, it specifically includes a host of measures of both inputs *and* outcomes of all three major faculty work functions (See Exhibit 2-2), thus addressing one of the frequent oversights of many evaluations of faculty productivity.

Finally, as noted several times throughout this report, significant differences exist across institutional types with regard to mission and goals; consequently, faculty activity is distributed differently across institutional types as well. Exhibit 2-1 showed that the aggregate distribution of faculty activity across the teaching, research, and service continuum varied considerably between research, doctoral, and comprehensive institutions. Faculty activity at research and doctoral institutions was distributed more evenly between the teaching and research functions than at comprehensive and two-year institutions, at which only a minimal amount of effort was directed toward noninstructional activities.

7.2 Overview of Faculty Productivity at Florida's Public Universities

This section outlines the major findings relating to faculty productivity as discussed in Chapter 5.0 of this report, specifically addressing those topics identified in the legislative proviso authorizing this study. It must be noted here that each of the ten public universities included in this study appear to have adequate procedures in place for monitoring and evaluating faculty productivity. These procedures vary considerably across institutions in their complexity and comprehensiveness. Nevertheless, they serve to address the specific goals and needs of each institution. All institutions appear to be fully compliant with the 12-Hour law and, in many cases, have structured their evaluations of faculty productivity around the framework established by that law.

Major findings relative to the productivity of faculty at Florida's public universities are as follows:

- **Across all of the institutions, tenured and tenure track faculty comprised slightly more than half of all university instructional staff (54.7%) in 1999-00, having declined about 10 percent since 1991-92.** Nontenure track faculty accounted for 16.8 percent of FTE instructional staff, and Graduate Student Instructors accounted for 19.7 percent of FTE instructional staff. The distribution of Graduate

Student Instructors was primarily across UF, FSU, and USF, the three major research institutions within the public state system during the nine-year time frame covered by this study (FIU was awarded comparable research status during the last year). The distribution of nontenure track faculty (e.g., instructors, lecturers, adjuncts) was among the remaining seven institutions (Exhibit 5-1).

- **Class Lectures comprised 60 percent of total class sections offered in 1999-00.** Nevertheless, this form of instruction accounted for 86.5 percent of student credit hours generated. Individualized instruction accounted for a significant portion of total course sections offered, but generated relatively few credit hours (Exhibit 5-2). The data show an average teaching assignment of 7.3 course sections per academic year. Of this number, 4.8 courses were "formal course sections," i.e., organized group instruction sections. These figures remained essentially unchanged over the nine-year period examined (Exhibits 5-7 through 5-10).

- **Tenured and tenure-earning faculty provided the majority of instructional effort and generated more than half of the student credit hours over the last nine years.** Contrary to the perception held by some, adjunct faculty, nonranked faculty, graduate student instructors, and other types of instructional staff together provide less than half of the total instructional effort at Florida's public universities (Exhibits 5-4 and 5-6).

- **Average class size declined slightly between 1991-92 and 1999-00.** Although during that same period enrollments increased dramatically (32% between 1991-92 and 1999-00), class size was closely controlled. At certain points beginning in the mid 1980s, legislative focus was directed toward the issue of reducing class size and some funding was provided to encourage this outcome. About 70 percent of class meetings was at or below the mean class size of 33, indicating a small minority of large classes (Exhibit 5-3).

- **Lower-level instructional effort was provided primarily by staff other than tenured or tenure-earning faculty.** Depending on the institutions, lower-level instruction was typically provided by either nontenure-earning faculty or Graduate Student Instructors. Tenured and tenure-earning faculty taught about 30 percent of such courses across all of the institutions. However, upper and graduate level courses were taught predominantly by tenured and tenure-earning faculty (Exhibit 5-4).

- **Tenured and tenure-earning faculty produced in 1999-00 almost 375 student credit hours per FTE across all of the institutions.** This average, however, was down from more than 396 student credit hours per FTE in 1991-92 (-5.4%). The reduction in average student credit hour production without a concomitant reduction in average number of course sections taught is reflective of the reduction in

mean class size and a shift toward more individualized instruction that occurred between 1991-92 and 1999-00 (Exhibit 5-11).

- **In 1999-00, tenured and tenure-earning faculty spent almost two-thirds (61%) of classroom contact hours and equivalencies in credit generating instruction.** All institutions were in compliance with the 12-Hour law. The average number of classroom contact hours spent in credit generating instruction across all institutions was almost nine per term. This translates into approximately a 3/3 course load (three courses per term) assuming three credit hour course sections. The institutions varied by type in the proportion of contact hours or equivalencies devoted to instruction and research. Research and doctoral institutions typically had a smaller share of contact hours in instruction and a larger share of hours in research than the comprehensive institutions. This distribution and course load remained essentially constant across the nine-year period under examination.[1]

- **Contract and Grant expenditures for the ten universities totaled almost $900 million in 1999-00.** This was equivalent to about $125,000 per FTE tenured and tenure-earning faculty member in the state university system. Controlling for inflation, the average contract and grant award increased almost 30 percent between 1994-95 and 1999-00. The number of active research projects at Florida public DCU institutions likewise increased about 30 percent during the same period. Along with this increase, the number of contact hours of credit generating instruction and course sections taught per tenured and tenure track faculty member remained essentially constant, indicating a relative increase in overall productivity among this group of faculty.

7.3 Overview of the Position Conversion Issue in Florida's Public Universities

Under the current funding model, Salary and Benefits expenditures are the only appropriation category that routinely receives annual funding increases. As a result, the universities tend to overestimate these Salaries and Benefits expenditures in the budgets they submit to the State for approval, allowing for the coverage of funding shortfalls in other (nonsalary) categories that do not receive increases to compensate for

[1] See discussion in section 7.5, "Future Issues in Faculty Productivity," for a discussion of the issue as it pertains to Florida Gulf Coast University.

inflationary pressures. This issue is known as "position conversions," and results in discrepancies between estimated and actual expenditures in salary versus nonsalary appropriation categories, as salary dollars are typically overestimated, while nonsalary dollars are typically underestimated. The net effect of these under- and overestimations is insignificant, as the excess funds drawn from the Salary and Benefits category are transferred into other categories to cover funding shortfalls resulting from increasing costs in nonsalary expenses.

- In Exhibit 6-2, the position conversions issue is illustrated within the Instruction and Research (I & R) program component, as salary dollars are overestimated, while nonsalary dollars are underestimated. The result is an overall overestimation of funds budgeted within this program component.

- Exhibit 6-3 illustrates the excess funds within I & R distributed across several other program components where salary dollars are not quite as prominent. Across all components, we generally see the respective underestimations and overestimations between nonsalary and salary expenditures.

- The net effect of position conversions is relatively insignificant, as *estimated* total and *actual* total expenditures differ by about 2.5 percent across all Educational and General (E & G) funds among Florida's public universities.

7.4 Recommendations

- **Productivity measurement should encompass both qualitative and quantitative aspects of faculty work, and should include the three major faculty assignments¾ teaching, research, and service.** The national debate has shifted from the measure of inputs to the measure of outcomes. Measures of productivity, to be meaningful, must recognize the quality of the service provider (Exhibit 2-2).

- **Productivity improvement strategies should be developed collaboratively among all institutional stakeholders¾ faculty, administrators, and students¾ and have clear expectations**.

- **Measurement and focus of faculty productivity, to be meaningful, must be at the individual departmental level within each institution**.

- **Productivity improvement strategies should be linked directly to the role and mission of the institution as well as to the institutional incentive structure.** One would expect a rewards structure tied to more direct involvement in research activities at the Research and Doctoral institutions and less so at the comprehensive institutions.

- **Each university should be encouraged to select peer institutions against which to compare themselves for the establishment of productivity benchmarks**. Establishing successful models that assess faculty work productivity, accomplished through appropriate comparisons among peer institutions, recognizes that faculty activities and outputs differ greatly across institutional types.

- **If the evaluation of faculty productivity continues to be an issue at the statewide level, faculty performance benchmarks (such as the Delaware Study) should be applied systematically by all institutions in relation to their distinctive peer groups**. Otherwise, a review at the statewide level will be inconsistent and less meaningful.

7.5 Future Issues in Faculty Productivity

The discussion in this study of Florida's public universities has made frequent reference to the inherent differences between those institutions, noting that the characteristics of faculty work and institutional mission vary considerably across the research, doctoral, and comprehensive institutions. Thus, categorizing the universities according to their Carnegie classifications provides a simple mechanism for distinguishing them according to salient characteristics.

However, it also potentially masks the fact that many additional factors must be considered when assessing a particular institution's performance with regard to faculty productivity. A notable example of this is seen in Florida Gulf Coast University (FGCU). That institution, which offered its first classes in fall 1997, is so new that it faces many challenges that distinguish it even from the other comprehensive universities in the state. Moreover, FGCU is unique in that it is the only state university in Florida that has no faculty tenure system. Instead, faculty members are employed on the basis of multiyear contracts. This, in tandem with its status as a comprehensive university emphasizing

the production of baccalaureate degrees, tends to suggest that faculty would be heavily focused on teaching as opposed to research activity. Presumably, measures of faculty workload and productivity would indicate heavier course loads, higher than average student credit hour production, and so forth.

However, as shown on a number of indicators depicted in Chapter 5.0 of this report, FGCU does not fit this pattern. Average class size at FGCU is about half that of the public DCU systemwide average. Consequently, average course load, average student credit hour production, and other metrics of faculty productivity are significantly lower than one might expect.

As noted, FGCU is quite new. In order to prepare for expected enrollment growth, the university has acquired resources, including faculty resources, that exceed current needs. This is typical of new institutions and new programs within existing institutions. As a result, however, measures of faculty productivity are heavily impacted. The high ratio of students to faculty leads to lower than expected average workload and teaching productivity for faculty members

Hence, the data provided for FGCU in this study may not necessarily reflect the future nature of faculty instructional productivity as the university matures and satisfies other priorities, including the attainment of enrollment targets. Consequently, it will be of significant value to monitor the institution's progress with respect to this issue in the coming years in order to properly evaluate faculty productivity at FGCU.

Another issue to be considered concerns the inclusion of institutions not addressed by this study. Due to limited time and budget, it was determined in consultation with CEPRI staff that only Florida's public universities were to be included in this analysis of faculty productivity issues. However, these institutions comprise only a portion of the total population of postsecondary institutions in the state. Also crucial to

the delivery of high-quality education at the postsecondary level are Florida's community colleges and independent colleges and universities.

These institutions play a vital role in higher education in Florida. A majority of the independent colleges and universities in Florida are united through the Independent Colleges and Universities of Florida, Inc. (ICUF). ICUF has grown to 27 member institutions, which together enroll 28 percent of the students attending four-year institutions in Florida and produce 31 percent of the baccalaureate, master's, doctoral, and professional degrees awarded in the state each year.

Florida's 28 locally governed public community colleges were established to serve the citizens of the State by offering the first two years of a baccalaureate degree, vocational education, and adult continuing education. The community colleges operate over 90 campuses and centers and over 2,000 other off-campus, educational sites. The system enrolls over 900,000 students annually in all postsecondary, vocational, and adult programs. While governed by local boards of trustees, the colleges are now coordinated under the jurisdiction of the Florida Board of Education.

A robust treatment of the issue of faculty productivity in Florida should include discussion of the topic as it relates to all of Florida's postsecondary institutions. Future efforts to assess and discuss productivity at the statewide level would benefit from the inclusion of relevant data from both the ICUF institutions and the public community college system.

Because some CEPRI council members have recently expressed interest in this topic, summary data detailing the average number of full-time faculty class hours and student semester hours, provided by the Florida's Community College System, are presented in Exhibit 7-1. Exhibits 7-2 and 7-3, respectively, provide data detailing undergraduate teaching loads and percentage of undergraduate courses taught by

faculty at ICUF institutions. However, it must be noted that this topic falls outside of the scope of the current study and data are provided only in response to specific interest by CEPRI council members. These data have not been analyzed or verified. They were provided to CEPRI by both the Florida Community Colleges and ICUF, and are provided here as they were submitted.

EXHIBIT 7-1
CLASS HOURS AND STUDENT SEMESTER HOURS PER FULL-TIME REGULAR FACULTY MEMBER AT FLORIDA'S PUBLIC COMMUNITY COLLEGES (SYSTEMWIDE): FALL TERM, 2000-2001

TYPE OF INSTRUCTION	HEAD COUNT FACULTY (TOTAL)	STUDENT SEMESTER HOURS (TOTAL)	CLASS HOURS PER HEAD COUNT (AVERAGE)
ADVANCED AND PROFESSIONAL EDUCATION	2,855	916,128.5	14.0
POSTSECONDARY VOCATIONAL EDUCATION	1,520	298,042.0	12.3
POSTSECONDAY ADULT VOCATIONAL	303	50,263.2	17.4
SUPPLEMENTARY VOCATIONAL	99	2,390.3	1.8
COLLEGE PREPARATORY	623	138,323.6	10.1
VOCATIONAL PREPARATORY	6	494.3	21.0
ADULT BASIC	39	10,681.5	17.9
ADULT SECONDARY AND GED PREPARATORY	53	10,874.0	18.4
TOTAL	***4,477***	***1,427,197.4***	***16.1***

Source: Florida Community Colleges 2000-01 Student and Personnel Databases

Note: Total head count faculty is not a sum of the individual instructional programs listed under "type of instruction." Head count may be duplicated across instructional types.

EXHIBIT 7-2
FULL-TIME FACULTY UNDERGRADUATE TEACHING LOADS AT ICUF INSTITUTIONS IN FALL 2000

INSTITUTION/DEGREE OFFERINGS	LESS THAN 3 CREDIT HOURS		3-5 CREDIT HOURS		6-8 CREDIT HOURS		9-11 CREDIT HOURS		12 CREDIT HOURS OR MORE	
	#	%	#	%	#	%	#	%	#	%
ASSOCIATE'S AND BACHELOR'S DEGREES										
FLORIDA HOSPITAL COLLEGE OF HEALTH SCIENCES	0	0%	0	0%	0	0%	0	0%	29	100%
FLORIDA COLLEGE	0	0%	1	3%	1	3%	9	31%	18	62%
BACHELOR'S DEGREES										
BETHUNE-COOKMAN COLLEGE	0	0%	4	3%	11	8%	6	5%	111	84%
CLEARWATER CHRISTIAN COLLEGE	0	0%	0	0%	3	10%	0	0%	27	90%
ECKERD COLLEGE	0	0%	7	8%	23	25%	43	47%	18	20%
EDWARD WATERS COLLEGE	0	0%	1	4%	0	0%	0	0%	26	96%
FLAGLER COLLEGE	0	0%	0	0%	1	2%	4	7%	55	92%
FLORIDA MEMORIAL COLLEGE	1	2%	0	0%	0	0%	16	24%	49	74%
RINGLING SCHOOL OF ART & DESIGN	0	0%	0	0%	10	21%	38	79%	0	0%
SOUTHEASTERN COLLEGE	0	0%	0	0%	3	8%	0	0%	36	92%
WARNER SOUTHERN COLLEGE	1	3%	4	12%	5	15%	3	9%	21	62%
BACHELOR'S AND MASTER'S DEGREES										
EMBRY-RIDDLE AERNAUTICAL UNIVERSITY	7	4%	13	7%	38	21%	56	31%	67	37%
FLORIDA SOUTHERN COLLEGE	2	2%	5	5%	13	13%	14	14%	69	67%
INTERNATIONAL COLLEGE	1	3%	3	8%	3	8%	0	0%	29	81%
JACKSONVILLE UNIVERSITY	1	1%	6	6%	21	22%	24	25%	45	46%
LYNN UNIVERSITY	2	4%	7	12%	7	12%	2	4%	39	68%
PALM BEACH ATLANTIC COLLEGE	0	0%	2	3%	6	8%	11	15%	52	73%
ROLLINS COLLEGE	1	1%	3	2%	10	8%	7	6%	105	83%
SAINT LEO UNIVERSITY	0	0%	1	2%	1	2%	1	2%	62	95%
UNIVERSITY OF TAMPA	1	1%	12	9%	31	24%	18	14%	68	52%
WEBBER COLLEGE	0	0%	1	7%	1	7%	1	7%	12	80%
BACHELOR'S, MASTER'S, AND DOCTORAL DEGREES										
BARRY UNIVERSITY	5	3%	15	8%	63	35%	55	31%	42	23%
FLORIDA INSTITUTE OF TECHNOLOGY	5	3%	19	11%	52	29%	46	26%	58	32%
NOVA SOUTHEASTERN UNIVERSITY	10	10%	7	7%	15	15%	11	11%	60	58%
SAINT THOMAS UNIVERSITY	0	0%	4	10%	5	12%	10	24%	23	55%
STETSON UNIVERSITY	0	0%	24	13%	58	32%	80	44%	20	11%
UNIVERSITY OF MIAMI	34	5%	121	19%	245	39%	115	18%	118	19%
ICUF TOTALS	***71***	***3%***	***260***	***9%***	***626***	***22%***	***570***	***20%***	***1259***	***45%***

Source: ICUF 2000 Accountability Report

EXHIBIT 7-3
PERCENTAGE OF UNDERGRADUATE COURSE SECTIONS TAUGHT BY FACULTY AT ICUF INSTITUTIONS IN FALL 2000

INSTITUTION/DEGREE OFFERINGS	FULL-TIME FACULTY					PART-TIME AND OTHER FACULTY	
	FULL PROFESSOR	ASSOCIATE PROFESSOR	ASSISTANT PROFESSOR	INSTRUCTOR/LECTURE	TOTAL	OTHER REGULAR	SUPPLEMENTAL FACULTY
ASSOCIATE'S AND BACHELOR'S DEGREES							
FLORIDA HOSPITAL COLLEGE OF HEALTH SCIENCES	21%	33%	8%	8%	70%	30%	0%
FLORIDA COLLEGE	FACULTY ARE NOT RANKED				85%	NA	15%
BACHELOR'S DEGREES							
BETHUNE-COOKMAN COLLEGE	11%	8%	38%	20%	76%	0%	24%
CLEARWATER CHRISTIAN COLLEGE	30%	42%	11%	0%	83%	0%	17%
ECKERD COLLEGE	25%	23%	30%	0%	78%	2%	19%
EDWARD WATERS COLLEGE	9%	11%	27%	5%	52%	12%	36%
FLAGLER COLLEGE	15%	15%	29%	6%	65%	6%	28%
FLORIDA MEMORIAL COLLEGE	4%	17%	39%	4%	64%	4%	32%
RINGLING SCHOOL OF ART & DESIGN	FACULTY ARE NOT RANKED				59%	NA	41%
SOUTHEASTERN COLLEGE	32%	19%	27%	0%	79%	0%	21%
WARNER SOUTHERN COLLEGE	23%	13%	13%	12%	61%	0%	39%
BACHELOR'S AND MASTER'S DEGREES							
EMBRY-RIDDLE AERNAUTICAL UNIVERSITY	20%	25%	21%	8%	74%	0%	26%
FLORIDA SOUTHERN COLLEGE	18%	13%	24%	2%	57%	10%	33%
INTERNATIONAL COLLEGE	36%	24%	11%	2%	74%	26%	0%
JACKSONVILLE UNIVERSITY	22%	12%	22%	0%	56%	0%	44%
LYNN UNIVERSITY	17%	16%	12%	4%	49%	13%	38%
PALM BEACH ATLANTIC COLLEGE	9%	18%	23%	5%	55%	1%	43%
ROLLINS COLLEGE	26%	16%	13%	0%	54%	7%	39%
SAINT LEO UNIVERSITY	4%	9%	6%	1%	21%	0%	79%
UNIVERSITY OF TAMPA	20%	25%	15%	6%	65%	<1%	35%
WEBBER COLLEGE	9%	20%	48%	0%	77%	0%	23%
BACHELOR'S, MASTER'S, AND DOCTORAL DEGREES							
BARRY UNIVERSITY	8%	15%	22%	4%	49%	1%	50%
FLORIDA INSTITUTE OF TECHNOLOGY	16%	27%	26%	15%	84%	0%	16%
NOVA SOUTHEASTERN UNIVERSITY	5%	15%	14%	7%	40%	4%	57%
SAINT THOMAS UNIVERSITY	16%	17%	25%	7%	65%	0%	35%
STETSON UNIVERSITY	24%	26%	17%	11%	79%	7%	14%
UNIVERSITY OF MIAMI	20%	17%	8%	30%	76%	10%	14%
ICUF TOTALS	***15%***	***16%***	***18%***	***9%***	***60%***	***4%***	***35%***

Source: ICUF 2000 Accountability Report

The issues discussed above, in addition to several key points made in earlier chapters, warrant additional study. Most notably, a more comprehensive analysis of the following issues is recommended:

- ***A study of faculty productivity issues at Florida's public community colleges and private colleges and universities***. As noted, higher education in the state is comprised of many more institutions than the ten included in this report; a study of the productivity of faculty at other institutions would provide a complete picture of the issue.

- ***An analysis of individual institutional productivity as it compares to relevant state and national peer institutions***. Current measures of accountability are of value, but they fail to provide for benchmarks that would facilitate the interpretation of productivity measures. It is also recommended that an evaluation of issues relating to the adoption of a core set of *standardized* measures of faculty productivity across institutions be conducted.

- ***A continuing evaluation of the state's return on investment in research***. A significant portion of faculty effort is devoted to research, which in turn generates tremendous revenues for the state universities. However, very little meaningful data are collected and published at the state level describing what these activities entail, how generated revenues are used, and how research endeavors benefit the state and the universities.

- ***A study of funding formulas used in other state systems of higher education***. Although discussed briefly in this study, the issue of lump sum funding and the resultant practice of position conversion should be analyzed more thoroughly in order to determine what funding models provide the greatest degree of accountability for the expenditure of funds, and what advantages and/or drawbacks may be associated with them.