OPPAGA Research on Higher Education Space Utilization

Presentation to the House Higher Education Appropriations Subcommittee

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Overview

OPPAGA’s research on higher education space utilization included the following topics:

1. How Is Higher Education Facility Space Allocated?
2. What Are the Usage Patterns for Classrooms and Labs in Higher Education?
3. What Process Is Used to Prioritize State College and University Capital Projects?
4. What Is the Status of Higher Education Capital Projects That Received State Funding in the Past Five Years?
5. What Are the Costs to Operate and Maintain New Facilities?
6. What Alternative Approaches to Maximize Space Utilization Could Florida Consider?
How Is Higher Education Facility Space Allocated?
State University System Space Allocation, Spring 2018

- Residential: 17%
- Office/Computer: 18%
- Study: 4%
- Student Academic Support: 0.1%
- Teaching Lab: 5%
- Auditorium/Exhibition: 2%
- Instructional Media: 0.3%
- Gymnasium: 3%
- Classroom: 4%
- Other Assignable: 11%
- Research Lab: 9%
- Campus Support Services: 26%
Florida College System Space Allocation, Spring 2018

- Auditorium/Exhibition, 5%
- Support Services, 9%
- Classroom, 18%
- Physical Education, 5%
- Library/Study, 9%
- Vocational Lab, 14%
- Non-Vocational Lab, 10%
- Student Services, 5%
- Residential, 1%
- Other Assignable, 1%
- Office, 23%
- Audio-Visual, 1%
Comparison of Space in the Two Systems

Space allocation differences between the State University System and Florida College System reflect the differences in the two systems’ student populations and primary missions.

<table>
<thead>
<tr>
<th></th>
<th>FCS</th>
<th>SUS</th>
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<tbody>
<tr>
<td>Residential Space</td>
<td>1%</td>
<td>17%</td>
</tr>
<tr>
<td>Classroom Space</td>
<td>18%</td>
<td>4%</td>
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<tr>
<td>Lab Space</td>
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<tr>
<td>Vocational</td>
<td>14%</td>
<td>9%</td>
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<tr>
<td>Non-Vocational</td>
<td>10%</td>
<td>5%</td>
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Colleges rarely use space for residential purposes.

Colleges use more of their space for classrooms compared to universities.

Unlike universities, more than half of college labs are vocational.
What Are the Usage Patterns for Classrooms and Labs in Higher Education?
Statewide, 43% of SUS classrooms were in use between 8 AM and 8 PM Monday through Friday.
College Classroom Utilization, Spring 2018

Statewide, 35% of college classrooms were in use between 8 AM and 8 PM Monday through Friday.

Average Florida College Classroom Utilization

- Overall Utilization (M-F): 35.1%
  - From 9 AM to 1 PM (M-F): 48.8%
  - From 6 PM to 8 PM (M-F): 30.9%
  - Friday: 9.5%
  - Saturday: 5.2%
University Instructional Lab Utilization, Spring 2018

Statewide, 22% of SUS instructional labs were in use between 8 AM and 8 PM Monday through Friday.
Statewide, 27% of FCS lab spaces were in use between 8 AM and 8 PM Monday through Friday.
What Process is Used to Prioritize State College and University Capital Projects?
The SUS and FCS follow similar processes to identify and prioritize institution-level capital projects, but the processes differ considerably at the state level.
Capital Project Prioritization Process

Addresses projected needs for the next 10 to 20 years

- Identifies general land uses and addresses need for and plan for items such as roads, parking, drainage, sewer, and potable water
- Contains elements related to future land use, intergovernmental coordination, capital improvements, general infrastructure, and other items
- Capital improvements in the plan contain a yearly itemized breakout for three years and a general framework for the next seven years, updated annually and submitted to the board of trustees
Capital Project Prioritization Process

Educational Plant Survey

Universities and Colleges

Identifies the capacity of existing facilities and future facility needs

- Each SUS and FCS institution completes an educational plant survey every five years to aid in plans to accommodate educational programs, student population, faculty, administrators, staff, and auxiliary and ancillary services
  - Identifies capacity of existing facilities and provides projections of facility needs consistent with space requirement standards
  - Validates existing inventory and assesses current needs using a formula approach
  - Includes only projects needed based on either the formula or a written justification; SUS projects also must be included in their campus master plans
Capital Project Prioritization Process

Identifies each institution’s priority funding requests over the next five years

- Universities and colleges draw from the projects included in the educational plant survey to create prioritized funding requests, or Five-Year Capital Improvement Plans (CIPs)
- In between five-year educational plant surveys, institutions submit annual CIP updates to reflect funding changes or needs
- Project funding requests for the next year must be in the educational plant survey
- If a project recommendation is not in the educational plant survey, the institutions must work with BOG or DOE staff to conduct a supplemental educational plant survey
Capital Project Prioritization Process

Scoring of each institution’s top two priority projects for consideration in the system-wide LBR

- The Division of Florida Colleges establishes system-wide priority by determining available funding and scoring each college’s top two survey-recommended projects.
- The division estimates available revenues based on the PECO estimating conference and the percentage of funds that will be allocated by the Commissioner of Education.
- The division reviews each college’s top two projects in their CIPs as well as any projects previously appropriated state funds that need additional funds to complete.
- The division scores each project on five metrics, each with a maximum of 10 points:
  - Return on Investment, Program, College Priority Order, Age, and Funding Available.

Colleges Only
Capital Project Prioritization Process

Presentation of the institution’s top priority project for consideration in the system-wide LBR

- Universities send their list of capital projects to the BOG in July/August
- University officials present their top priority project to the BOG Facilities Committee in a workshop; BOG uses the information in creating system-wide priority for the LBR
- BOG considers how each project request fits into the board’s overall system-wide strategic goals as well as other relevant information
- BOG staff develop a list of capital projects they recommend to be included in the LBR
- Once finalized, the list is submitted to the Facilities Committee and then the BOG for approval before incorporation into the annual LBR
Alternative Prioritization Processes

Utilization Considered

We identified four states that consider space utilization during the project prioritization process:

University System of Georgia

The Board of Regents instructed university CFOs to consider data collected from a system-wide space utilization study in prioritizing capital construction needs.

Texas Higher Education Coordinating Board

The Texas Higher Education Coordinating Board uses a Space Usage Efficiency formula to determine an overall utilization score for classrooms and class laboratories at each postsecondary institution; this score is considered when reviewing possible construction projects that include education and general space square footage.

Virginia State Council for Higher Education

The State Council for Higher Education requires an institution to meet Space Productivity Guidelines for utilization before recommending a project for funding at the highest priority levels.

Washington Office of Financial Management

The Office of Financial Management’s guidelines for 2019-21 capital projects includes an evaluation system for four-year higher education institutions; state officials consider space utilization and assign point values to institutions. Institutions must describe plans for increasing low utilization.
What Is the Status of Higher Education Capital Projects That Received State Funding in the Past Five Years?
Overview

Total cost all sources: $455 million

State funding: $410 million (90%)

Most ($254 million, 62%) state funding was for new construction or acquisition of new facilities.

On average, the 21 projects received four years of state appropriations over their lifetime.

21 University Capital Projects Completed From FY 2013-14 Through FY 2017-18

Total Project Costs (Millions)

New Construction & Acquisition (9 Projects) $266
Remodeling, Renovation, & Expansion (8 Projects) $165
Utilities & Infrastructure (4 Projects) $25

Years to Funding Completion

State Funding

Other Funding

$254
$131
$25
FCS Capital Projects Completed With State Funding Over the Past Five Years

Overview

- Total cost all sources $362 million
- State funding $340 million (94%)
- Most ($235 million, 69%) state funding was for new construction or acquisition of new facilities
- On average, the 26 projects received five years of state appropriations over their lifetime

26 College Capital Projects Completed From FY 2013-14 Through FY 2017-18

- New Construction & Acquisition (11 Projects): $235 million
- Remodel, Renovation, & Expansion (8 Projects): $65 million
- Utilities & Infrastructure (7 Projects): $40 million

Overview:
- Total cost all sources $362 million
- State funding $340 million (94%)
- Most ($235 million, 69%) state funding was for new construction or acquisition of new facilities
- On average, the 26 projects received five years of state appropriations over their lifetime
Uncompleted SUS and FCS Capital Projects, January 2019

As of January 2019, a total of 33 SUS and FCS capital projects that previously received state funding were not yet completed.

Total = $700 million

**Universities**
- 12 capital projects
- Estimated balance to complete $406 million

**Colleges**
- 21 capital projects
- Estimated balance to complete $294 million
What Are the Costs to Operate and Maintain New Facilities?
Plant Operations and Maintenance Costs

Summary

Day-to-day expenses to operate facilities and keep the grounds, buildings, and equipment at an acceptable level of efficiency through repairs or preventive maintenance. The State University System and Florida College System use different approaches for estimating these costs.

SUS Estimates

- Uses a funding formula with base cost factors, building classification codes, total gross square feet, and facility substantial completion date
- FY 2019-20 estimates ranged from $7.42 to $21.78 per square foot but varied by university and building classification type

FCS Estimates

- Estimates the operating cost of new facilities using each college’s average operations and maintenance expenditures reported in an annual cost report
- FY 2019-20 estimates ranged from $4.13 to $9.79 per square foot but varied by college
Fixed Capital Outlay Costs

Summary
Long term, non-recurring costs to remodel, renovate, maintain, repair, or improve existing facilities

Estimates

- BOG and department staff reported that they estimate a building’s annual fixed capital outlay costs at 1% to 4% of the building’s value
- This is relatively consistent with an estimate of 2% to 4% from the Association for Physical Plant Administrators
- These costs increase over the course of a building’s lifecycle and can be difficult to predict with accuracy
- After about 40 years, future use of the facility is the main driver of cost
What Alternative Approaches to Maximize Space Utilization Could Florida Consider?
Alternative Approaches to Maximize Space Utilization

We identified several approaches that institutions of higher education have used to maximize classroom and office space utilization with the goal of repurposing existing space as an alternative to new construction.

**Approaches to Maximize Classroom Space**
- Centralize classroom scheduling
- Standardize course meeting times
- Schedule classes during underutilized times and days
- Evaluate the inventory of classrooms by number of student stations compared to the demand for classrooms by class size

**Approaches to Maximize Office Space**
- Assign office space based on usage
- Repurpose large offices into shared offices
- Provide a stipend to individuals who give up office space
- Implement open-office space planning
## Summary

### Space Allocation
- The SUS and FCS differ in how they allocate space based on their student populations and missions, with FCS allocating more space to classrooms and SUS allocating more to residential purposes.

### Space Utilization
- Classroom and lab space is underutilized at both universities and colleges, particularly on Fridays.

### Capital Project Prioritization
- The SUS and FCS follow similar processes at the institution level to identify and prioritize their capital funding requests, but processes differ at the state level.
- Florida could place greater emphasis on requiring institutions to demonstrate the need for additional space based on space utilization criteria, similar to some other states.

### Capital Project Costs
- From FY 2013-14 through 2017-18, construction was completed on 21 SUS projects and 26 FCS projects that were primarily funded with state resources.
- As of January 2019, an additional 33 SUS and FCS projects that previously received state funding were not yet completed; these will need approximately $700M to complete.
- The SUS and FCS use different approaches to estimate operations and maintenance costs but the same approach to estimate costs for fixed capital outlay.

### Alternative Approaches
- Several approaches used in other states to maximize space utilization with the goal of repurposing existing space may provide an opportunity for Florida to reduce its needs for new construction.
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