

State Council of Higher Education for Virginia



A Plan for Implementing a Statewide Survey of Institutional Expenditures by Program and Academic Discipline

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EXECUTIVE SUMMARY

The 2020 General Assembly directed the State Council of Higher Education for Virginia (SCHEV) to develop a plan for implementing a statewide survey of institutional expenditures by program and academic discipline at Virginia's public higher education institutions, and submit a report and recommendations to the Governor and the Chairs of the House Appropriations and Senate Finance and Appropriations Committees by November 1, 2020.

SCHEV staff reviewed comparable national and other state studies, surveyed Virginia public institutions that participated in a national study of instructional costs for their opinions, and assessed the availability of Virginia's data and SCHEV's capacity to conduct the study.

Based on these reviews SCHEV developed three options for implementing a statewide survey. They include:

- **Option 1:** Have all public four-year institutions participate periodically in the National Study of Instructional Costs and Productivity. This national study (commonly referred to as the Delaware Cost study (DCS)) has operated for 25 years. Many Virginia public institutions have participated at various times and report that the data allow for some benchmarking with peer institutions, helps with budget and faculty hiring decisions, and provides self-reported data on faculty productivity and costs. However, fewer than 200 institutions participate each year nationally. Community colleges are not included, and the study only provides data for instructional costs.
- **Option 2:** Have SCHEV administer, collect and analyze data from institutions. This approach would use a similar methodology as DCS, but SCHEV staff would be responsible for collecting and maintaining the data, which would provide greater flexibility in reporting and allow for survey adjustments to meet Virginia specific interests if needed, but would not be able to compare program costs to peer institutions nationally.
- **Option 3:** Develop a database at SCHEV to collect unit-level data to analyze and compile program costs. This option provides the greatest flexibility, but would require significant costs at the state level, and impose additional costs on institutions if data systems need modifications to meet the new reporting requirements.

This report discusses the study mandate, terminology used and summarizes reviews of similar studies. It concludes by offering three options that the Commonwealth could pursue.

STUDY MANDATE

The 2020 General Assembly tasked the State Council of Higher Education for Virginia (SCHEV) with developing an implementation plan for a statewide survey of institutional expenditures by program and academic discipline at Virginia public institutions. The specific language is listed below (Item 152.P in HB5005):

- P. 1. The State Council of Higher Education for Virginia shall develop a plan for implementing a statewide survey on institutional expenditures by program and academic discipline at Virginia's public institutions to determine the effectiveness of spending related to the attainment of state and institutional goals and inform strategic decision-making.*
- 2. The Council may review existing reporting capacities and other state examples of cost analysis by program and academic discipline in higher education to: (1) determine the Council's current capacity to conduct the survey; (2) determine any additional staff and financial support necessary for conducting such a survey; (3) determine the potential for long-range cost containments; and (4) detail a plan for survey implementation.*
- 3. By November 1, 2020, the Council shall submit a report and any related recommendations to the Governor and the Chairs of the House Appropriations and Senate Finance and Appropriations Committees.*

RATIONALE FOR CONDUCTING A SURVEY OF EXPENDITURES BY PROGRAM AND ACADEMIC DISCIPLINE

Higher education is a human resource-intensive operation. Based on analysis of FY 2019 educational and general (E&G) expenditures at Virginia public institutions, spending for personnel services accounted for 78% of the total expenditures. Salaries made up about three-fourths of the total personnel spending, of which faculty salaries took the largest share. In order to manage resources effectively and efficiently, understanding the costs and revenues of the various academic and non-academic units can provide additional insights to the financial health of an institution and a system.

A review of expenditures by program and academic discipline could: (1) provide benchmarks and comparisons to institutions with similar missions, enrollment size and programs; (2) present trends and changes in program costs over time; (3) identify faculty workloads and costs; (4) allow administrators to make resource adjustments where appropriate; and (5) identify the costs to an institution and system to implement new programs or when shifts in enrollment to higher- or lower-cost programs occur.

TERMINOLOGY FOR THE PURPOSE OF THIS REPORT

Because several terms used in the plan have no official or standardized definitions, SCHEV staff developed terms and definitions using prevailing national and state practices. The following definitions are based on internet research and an inventory of practices at Virginia public institutions.

Terminology

A **department** is a collection of faculty organized into a unit for management and course-planning purposes such as the English department. A faculty member may contribute to one or more programs in his or her own department or to programs administered by other departments. In addition, a department chair often determines faculty salaries and workloads. Faculty members also may have split employment between two or more departments due to their research and academic specialty. Thus, to determine a department cost, faculty members' salaries should be calculated based on their workloads within each department.

A **program** is a collection of academic courses and requirements that lead to a particular degree or certificate. These courses may be taught by one or more departments. For example, a chemistry department may offer a degree program in biochemistry that is taught by its faculty as well as faculty from a medical school and a microbiology department. Another example is interdisciplinary studies programs that draw faculty from various departments. These types of programs often are administered independently by a specific faculty member and are not supervised by a particular department.

The **CIP** (Classification of Instructional Programs) code was developed by the National Center for Education Statistics (NCES). According to NCES, it "provides a taxonomic scheme that supports the accurate tracking and reporting of fields of study and program completions activity. The CIP taxonomy is organized on three levels: 1) the 2-digit series, 2) the 4-digit series and 3) the 6-digit series. The 2-digit series represents the most general groupings of related programs. The 4-digit series represents intermediate groupings of programs that have comparable content and objectives. The 6-digit series, also referred to as 6-digit CIP Codes, represents specific instructional programs." For example, CIP 27 (2-digit) represents a general grouping of programs in Mathematics and Statistics. CIP 27.03 (4-digit) indicates a subgroup called "Applied Mathematics" and CIP 27.0304 (6-digit) depicts a specific program called "Computational and Applied Mathematics."

There is no formal definition of an **academic discipline**. Based on external research and discussions with academic staff at SCHEV, an academic discipline may consist of a body of knowledge that may be fluid and changing. Some characteristics of a discipline may include: 1) a consistent set of faculty qualifications and backgrounds; 2) cohesive scholarly or creative output; 3) an established course of study; 4) recognition by an accrediting or professional body; 5) a Classification of Instruction Programs (CIP) code.

Faculty workload can include many responsibilities beyond teaching in classrooms and labs. Depending on the mission of an institution, faculty not only have different responsibilities but also have different focuses. For example, at a small liberal arts institution, in addition to teaching undergraduate students, faculty also may be responsible for course development, student advising and serving on campus committees. At a research institution, a faculty member generally has three main roles: teaching, research and public service in addition to course development, student advising and campus committee service. Each of these roles allows faculty members to generate and disseminate knowledge to peers, students and external audiences. The amount of time devoted to teaching, research and service varies by institution type and is based on the terms of a faculty member's appointment. Therefore, the costs attributed to a faculty member's instructional time may partially represent the total faculty cost.

Expenditures and Costs

These terms are often used interchangeably, but there are some differences between the two. An **expenditure** is the act of spending money such as a payment or disbursement. All institutions record their expenditures based on accounting standards. Virginia institutions use the Chart of Accounts that was jointly developed by the Department of Accounts and SCHEV to categorize expenditures. Nationally, the Integrated Postsecondary Education Data System (IPEDS) uses the rules of the Governmental Accounting Standards Board (GASB) when it collects institutions' expenditures.

Costs can be estimated based on an allocation (budget) or determined based on actual expenditures. In addition, there are two kinds of costs—direct and indirect. **Direct costs** are those that can be specifically identified and assigned with relative ease and with a high degree of accuracy to a program or activity, such as faculty salaries or supplies and materials for instruction. These costs can be tracked by a particular unit, such as a program, activity or department. **Indirect costs** are costs incurred for multiple programs or activities and cannot be easily identified with those programs or activities. In higher education,

indirect costs usually refer to the student support and administrative services on campus, such as student advising, academic computing, campus security services, fiscal administration, etc. The **total cost** is the sum of direct and indirect costs.

NATIONAL AND OTHER STATE STUDIES

SCHEV staff reviewed national and other state studies to identify promising practices that could be part of a survey design for the Commonwealth. The following are brief descriptions of these studies.

The National Study of Instructional Costs and Productivity

This study from the University of Delaware is commonly referred to as the Delaware Cost Study (DCS). It collects and analyzes instructional expenditures by department at public and private four-year institutions across the nation. The study also uses course enrollment data to estimate costs by 6-digit CIP code expenditures. Institutions self-report their data to DCS.

DCS has been in existence for 25 years and is fee-based. Virginia public four-year institutions have participated in this study voluntarily at different times over the years. SCHEV conducted a survey of institutions that participated in the DCS in June 2020 and spoke with a manager at the University of Delaware to identify the benefits and limitations of the study.

The major benefits of DCS are that it provides benchmarks such as instructional expenditures per student credit hour and faculty teaching load, and allows institutions to make comparisons with peer institutions. The limitations of the DCS are that (1) a small number of institutions participate (fewer than 200 institutions in most years)—which means it can be difficult to make meaningful comparisons to peer institutions; (2) it allocates the departmental cost to programs based on the courses offered by the department; (3) does not include community college data; and (d) does not study the total cost (indirect cost) associated with a program. Appendix A summarizes the institutions' responses to the SCHEV survey about the DCS.

Other State Cost Studies

SCHEV staff also contacted three states that conduct state-mandated cost studies: Florida, Illinois and Minnesota. Staff received responses from Illinois and Minnesota. SCHEV staff also interviewed a former vice president at the University System of North Carolina (UNC) because its board mandated UNC institutions participate in DCS. The following is a brief description of these states' practices.

The **Illinois cost study** was mandated by the state in 1965. The original purpose of the cost study was to assist the legislature with funding decisions for higher education. However, in 2004, the state began to provide additional funding at legislators'

discretion. As a result, the use of the study has diminished over time. The Illinois cost study uses total cost and includes both instructional cost and support service costs by 4-digit CIP code. The Illinois higher education board still produces an [annual report](#) and sends it to the General Assembly, but it is primarily used as part of an internal productivity review.

The **Minnesota cost study** was mandated by the state in 1995. The Minnesota cost study uses the total cost by 6-digit CIP code. In the past, the legislature provided funding for higher education based on the data produced, but legislators no longer use the study for funding decisions. However, the Minnesota system office still uses [this study](#) as part of its model to allocate state funding to institutions.

The **UNC cost study** was mandated by its board in 2003. The study required all UNC institutions participate in the DCS cost study annually and DCS produced a summary report for UNC. However, with board member changes, interest in this study waned. UNC asked DCS to aggregate the program cost data at the 2-digit CIP; however, they found that at the higher CIP level, the cost differentiation was less noticeable. In addition, UNC system office also used the study results to compare program costs across UNC institutions, which drew criticism due to differences in institution missions, student enrollment and faculty composition. Appendix B provides a summary of the Illinois, Minnesota and the University of North Carolina cost studies.

CURRENT DATA AND REPORTING AVAILABILITY

Two primary components affect SCHEV's capacity to conduct a survey of program costs. The first is the availability of data, the second is the amount of staff time and resources needed to collect, analyze and report the findings.

Current data collection and reporting availability

SCHEV currently has the following data sets available for analysis:

- **Expenditure data:** The state Cardinal financial system can generate expenditures by institution for instruction-related services (E&G). The National Association of College and University Business Officers (NACUBO) developed standardized definitions for higher education operating activities by program function such as instruction, student services and institutional support, etc. The Cardinal system also can generate expenditures by an object code that identifies the areas of spending and cost drivers, such as the total faculty salaries of an institution. However, the Cardinal financial system does not record expenses of a course, program or department, which is the basis of several program cost studies mentioned earlier.
- **Personnel data:** The Virginia Personnel Management Information System (PMIS) records faculty salaries and employment status (full-time or part-time), but it does not have information about a faculty member's workload or departmental affiliation.
- **Course enrollment data:** SCHEV collects data on course enrollment. This data can generate total credits by degree, but it cannot generate total credit hours by program because the data does not separate out credit hours for general education and elective courses. SCHEV does not have the data to calculate faculty workload.

While these systems collect some core data needed to conduct a review of costs by program, additional data collection and system modifications would be required for the Commonwealth to obtain the level of detail necessary to conduct the survey. This is the current practice of the Minnesota study (data are compiled using a centralized data system). An alternative option would be to have institutions self-report data to SCHEV using surveys developed by DCS or Illinois.

In addition, SCHEV annually calculates estimated base costs for institutions through *Virginia Higher Education Funding Guidelines for Educational and General Programs (E&G)*. These calculations are based on a formula that uses current student enrollments and current costs at an institution using a mix of costs and assumptions. The total estimated cost is based on a formula composed of the following items:

Direct Costs (instruction-related costs)

- Instructional faculty cost: Average faculty salaries (including full-time and part-time faculty and graduate assistants) at an institution.
- Non-faculty instructional cost: In the guidelines, this cost is assumed to be 40% of the total faculty cost and is assumed to cover support staff salaries, equipment, materials and supplies for instruction.
- Fringe benefits: This includes faculty and support staff.
- Budgets for community education, research, public service, and dentistry and vet-med: This is because these items have no funding guidelines.

Indirect Costs (support services provided on campus) include academic support, student services, institutional support, and operation and maintenance of the physical plant. Each support service is given a ratio to the instruction cost by institution type.

The funding guidelines rely on a combination of data and ratios to calculate costs, but it does not have sufficient data to calculate or estimate costs at a program level.

APPROACHES FOR CONDUCTING A SURVEY OF EXPENDITURES BY PROGRAM

Based on the existing data in Virginia and a review of other models for measuring program expenditures, several survey approaches could be implemented, with varying costs. They include:

- **Frequency:** Conducting the survey annually or periodically
- **Data Collection Methods:** Using unit-level or aggregate data
- **Cost Types:** studying instructional costs or total costs
- **Grouping Detail:** Collecting data at the aggregated level (2-digit CIP) or detailed level (6-digit CIP)

Frequency

The frequency of collection can impact costs. The DCS survey is collected annually. It appears that institutions in Virginia (with the exception of UVA-Wise) have participated at different times over the last 20 years. Some institutions participate in DCS almost annually while other institutions have participated periodically. Collecting data annually can allow for more real-time data on actual costs. Conversely, periodic collection may provide sufficient data to allow for benchmarking and to inform policymaking. The frequency could be based on how the cost study may be used.

Data Collection Methods

There are two primary approaches to collecting the data. The first is to amend the existing data collection systems described above to provide unit-level data for analysis, and the second is to have institutions self-report aggregate data. Amending the existing data systems would be more costly and would require SCHEV, and possibly the institutions, to adjust their data systems. It offers a greater level of accuracy since SCHEV would be able to consistently analyze the data provided, but would require developing and building new database related to faculty (to determine salaries, total compensation and percent of salary dedicated to instruction versus research or other duties), updating the course enrollment collection system to include faculty identifiers (to determine instructional time to link to a program), and a new collection of program data to determine the courses students take to complete a program. This type of collection is similar to Minnesota's reporting method.

Collecting self-reported data by institution at an aggregate level would be less onerous, but would require additional training to ensure that there is consistency in the data submission. DCS provides training and staff support to each institution to improve the quality of data provided.

Cost Types

Instructional cost is a part of the total cost. Studying instructional cost would require less time for data collection, submission and analysis than the time required for a total cost study. It would cost less to conduct a study of instructional costs versus a total cost study. However, the instructional cost study does not yield the full cost of a program.

Grouping Detail

SCHEV uses the term “academic program” for all degrees offered at Virginia institutions, and relies on CIP codes to provide additional program details. Program approvals and productivity reviews are based on enrollments and degrees, using 6-digit CIP codes.

While there is no formal definition of academic discipline, a review of studies by other states and DCS indicate that while an academic program can correlate to a 6-digit CIP level, a discipline could represent a grouping structure at the 2- or 4-digit CIP level. A cost study could be conducted at a broad 2-digit level or at a detailed 6-digit level.

Staffers with the Minnesota study said that the cost for some programs, such as English, does not vary much between 2-digit and 6-digit levels, but large cost variations between 2-digit and 6-digit levels are seen in programs such as nursing.

Table 1 provides a summary of the approaches and includes the challenges and opportunities for each.

Table 1: Summary of study approaches

Approach	Challenges	Opportunities
Frequency		
Annually	Requires additional staff time for data collection and analysis at the state and institutional level.	Provides opportunities to identify changes in program costs in a timely manner and adjusts allocations accordingly. Can support policy decisions.
Periodically (biannually or 3-5 years)	Requires periodic training if personnel are not assigned to the task or leave the organization.	Less costly than an annual collection. Provides opportunities to benchmark data periodically and inform policy decisions.
Data Collection Methods		
Amend existing data collection sources and use record-level data	Requires significant additional cost to amend state and institution reporting systems.	Could improve the accuracy of the data, as analysis is conducted at the state level consistently. Provides greater flexibility. Similar to the MN model.
Use self-reported, aggregate data	Reduces the level of accuracy and may require additional training at the institutional level for consistency in reporting. Reduces flexibility for specialized reporting.	Less costly than collecting record-level data. Similar to DCS and IL models.
Cost Types		
Instructional cost	Does not capture full costs of the program.	Requires less data collection. Similar to DCS.
Total cost	More expensive to include indirect costs in the study. It is unclear if the level of variations of indirect costs are required among programs.	Provides a more detailed look at the full cost of a program. Similar to IL and MN cost studies.
Grouping Detail (CIP level of Academic Programs)		
Programs (assume 2-digit CIP)	May reduce the level of differentiation of costs.	Provides quick results and may have more opportunities for national comparisons.
Programs (assume 6-digit CIP)	Requires additional time and resources for data collection and analysis.	Provides detailed costs of a particular program.

OPTIONS AND ESTIMATES OF COSTS OF A SURVEY OF EXPENDITURES BY PROGRAM AND DISCIPLINE

Based on a review of national and state data and discussions with institutions, this study offers several options for conducting a statewide survey of expenditures by program and academic discipline. These options were developed using a combination of approaches listed above and include estimated costs in current dollars. Depending on when an option is implemented, adjustments may need to be made to costs estimates. Details of the cost estimates are available upon request.

Option 1: Have all eligible institutions participate in the National Study of Instructional Costs and Productivity

This option would require all four-year institutions to participate in DCS either once or on an ongoing basis (depending on how frequently the state would like data updated) and would commission DCS to provide a summary report, including national peer comparisons. Current data and benchmarking based on institutions of similar size and mission could be provided, but peer data may be limited for some institutions based on the number of national institutions participating in a given year. Also, this option would not include community colleges as DCS does not collect data for these institutions.

DCS charges institutions based on their Carnegie classification. The total estimated cost for Virginia to participate in DCS is \$25,000 per year for all public four-year institutions. In addition, SCHEV estimates that the cost to commission DCS to provide state level reports and presentations could be \$30,000 depending on the level of detail requested. For institution costs, based on the SCHEV survey of institutions participating in DCS, it takes approximately .4 FTE to compile and submit data to DCS. (These times vary based on the data systems used and size of various institutions.) In addition, five institutions have not participated in the study in the last four years and initially will need additional staff time to train and compile the data. As a result, total costs for all 15 institutions to compile and submit data are approximately \$475,000 for the first one to three years (includes higher costs for some institutions that have not participated recently) and approximately \$350,000 thereafter (Note: These estimates do not include inflationary increases).

Option 2: Have SCHEV administer, collect and analyze data from institutions

This option would leverage existing data collection tools from either DCS or the Illinois study, but the data would be submitted to SCHEV. The advantages of this option are that the study could include all Virginia four- and-two-year public institutions and could include the total costs, if the state desires. A drawback to this approach is that SCHEV would not have access to national data from peer institutions to provide benchmarks or comparisons.

Depending on the level and amount of reporting required by various stakeholders, SCHEV estimates that approximately one full-time-equivalent (FTE) is needed for survey design, training for institutions, data collection, analysis, report development and presentation of data to various stakeholder groups, plus costs for additional meetings and technology. Total estimated costs are \$160,000 annually for the first three years. After this time, SCHEV assumes that less staff time will be needed for training and automated analysis and could be \$90,000 annually.

For institution costs, all institutions would need training and additional staff time to devote to the new data collection if it differs significantly from DCS or it expands to include total costs by program. Estimated total annual institution costs are \$740,000 for the initial years (one to three) and approximately \$400,000 thereafter (Note: These estimates do not include inflationary increases).

Option 3: Develop a database at SCHEV to collect unit-level data to analyze and compile program cost

This option requires establishing a new database at SCHEV and additional database support, SCHEV estimates that it will need approximately 18 months to build the database and 1.0 FTE for database maintenance and collection and 0.5 FTE annually to analyze the data, distribute survey results to institutions and prepare reports for the General Assembly. Initial staff time and database costs are approximately \$620,000 annually for the first one to three years of implementation with ongoing costs of \$280,000 annually after the initial startup. (Note: These estimates do not include inflationary increases).

Institution costs could vary depending on the level of data collected, the required changes to their database systems and the level of detail requested for the reporting. Initial estimates are that it will require two to three months of staff time from three units (institutional research, finance and human resources) to work on this initiative. Estimated total costs are approximately \$1.5 million in the first one to three years and \$600,000 thereafter.

Table 2 provides a summary of options for implementation of a survey of expenditures by program.

Table 2: Summary of Options for Implementation of a Survey of Expenditures by Program

Options	Advantages	Disadvantages	Cost
<p>Option 1 Have all institutions participate in the National Study of Instructional Costs and Productivity (DCS).</p>	Data collection is readily available; DCS knows how to aggregate institutions' data and provide summaries correctly and quickly; provides benchmarks and information on variations in program costs.	No community college data; not all Virginia 4-year institutions participated in DCS; data primarily are at the department level.	<p>State costs: \$55,000 for DCS annually.</p> <p>Institution costs: \$475,000 annually for the first one to three years and \$350,000 thereafter.</p>
<p>Option 2 Have SCHEV administer, collect and analyze aggregate data from institutions using other state cost surveys.</p>	Forms are readily available; provides information on variations in program costs; includes community college data.	Requires training for SCHEV staff and Virginia institutions; will not provide national benchmarks, although could compare with IL and MN program costs.	<p>State costs: \$160,000 for staff time to administer annually. \$90,000 after initial three years.</p> <p>Institution costs: \$740,000 annually for initial administration (first one to three years) and \$400,000 thereafter.</p>
<p>Option 3 Develop a database at SCHEV to collect unit-level data to analyze and compile program cost data.</p>	All Virginia institutions are included in the study; the study is more inclusive and reflects the reality of the institutional expenditures; provides trend reports over time.	<p>It requires multiple workgroup discussions between SCHEV staff and institutional representatives from different areas to standardize the data.</p> <p>It takes time to build a database that will include the types of data required for this study.</p> <p>There is no national study for benchmark comparisons.</p>	<p>State costs: \$620,000 for state time and initial database costs (first one to three years) and \$280,000 thereafter.</p> <p>Institution cost (preliminary estimate): \$1.5 million in initial costs (first one to three years) and \$600,000 thereafter.</p>

CONCLUSION

Depending on the amount of detailed information the state wishes to obtain from a survey of institutional expenditures by program and academic discipline, the quickest and the lowest-cost option is to commission DCS to prepare a one-time summary of program costs at Virginia four-year institutions. This will allow for benchmarking and help the Commonwealth decide whether to pursue additional data collections. However, it will only provide information on instructional costs and does not include community colleges. The longest

time and the highest-cost option is to build a database. This will allow the greatest flexibility in reporting and analyzing data and will include all public higher education institutions in the Commonwealth.

APPENDIX A

Results of SCHEV Survey of Virginia Four-Year Institutions Participating in the National Study of Instructional Costs and Productivity (DCS)

Survey Questions	Survey Response Results
Number of Virginia Institutions Participating	All 4-year Virginia public institutions except UVA-Wise have participated in the study at some point.
Longest participation	VT has participated since the study began in 1996. As of 2018, VT has participated 20 times. JMU has the second-longest participation, 18 times.
Shortest participation	VMI participated for one year, in 2016.
Newest participation	NSU and VSU participated in 2019.
Stopped participation	ODU stopped participating in 2004. UVA stopped participation in 2017. VCU stopped participating in 2012.
Maximum Virginia participation	10 institutions in 2019 9 institutions in 2016 8 institutions in 2018
Minimum Virginia participation	3 institutions in several different years.
Office responsible for data submission	The office of institutional research under the provost is responsible for data collection and submission, though the exact office name varies by institution.
Time needed and FTE involved for data collection	On average, 2-3 months and 2-3 FTE needed to collect the data. More years of participation and increasing familiarity with the data requirements will result in less time and fewer FTEs needed to submit the data.
Major benefits from the study	Used as benchmark for peer comparison (8 institutions) Trend analysis (1 institution)
Uses of results	Analyze faculty productivity, cost and FTE positions (2 institutions). Budget and faculty hiring decisions (1 institution). Compare instructional cost (1 institution). Compare research expenditures (1 institution).
Areas of improvements in the study	Many institutions reported no actions taken, informational purposes only for provost and dean's offices. Help in budget and faculty hiring decisions (2 institutions).
Problems with this study	Too few peer institutions to make meaningful comparisons and help with decision-making. Data results shown as ratios that are incomparable with and difficult to match to institutions' actual situations. Study was by department, difficult to disaggregate to programs.
Institutional Internal Program Review	Half of the institutions reported to have performed internal reviews for performance, budget or cost analysis, etc. ODU conducts an annual internal review of academic programming cost by utilizing the Education Advisory Board (EAB) Academic Performance Solutions (APS) platform, including a cost analysis, and aligns programs with resource allocations. UVA has planned an internal cost study. Due to personnel changes and now COVID-19, the study was postponed. UVA-Wise uses a zero-based budget and monitors expenditures on a monthly basis.

APPENDIX B

Summary of Cost Studies in Minnesota, Illinois and the University System of North Carolina

Item/State	Minnesota	Illinois	UNC
Legislative mandate	Yes	Yes	No UNC Board decision
Starting Year	1995	1965	2003
Board Governance	Governing	Coordinating	Governing
Level of cost study	Total Cost	Total Cost	Instructional Cost
Study areas	<ul style="list-style-type: none"> Course enrollment data used to analyze instruction cost. Use IPEDS category and other data sets to analyze indirect costs such as academic support, student service, and institutional support. 	<ul style="list-style-type: none"> Instruction, organized research, public service activities, and all institutional support services. The cost of support services are ratios that were negotiated many years ago for each institution. 	Mandated all UNC institutions to participate in the Delaware Cost Study.
Institution time and participation	MN has state- level data systems for HR, finance and student information. Thus, MN higher education office does not need institutions to submit that data. The office runs the state data systems to generate required data. Instead of data collection from institutions, after the cost study is compiled, the result is sent to institutions for review.	All public institutions (IL state office said it did not know how long it took on average for institutions to prepare and submit the data to its office. Most people in the central office are new and do not know the history of this study.)	All public institutions in the system DCS generated a summary report for UNC.
Purpose of study	<ul style="list-style-type: none"> To assist legislators in funding decisions for higher education. Currently this study is no longer used for funding decisions. It is just a piece of information on higher education. Study results are used to allocate state funding to institutions. 	<ul style="list-style-type: none"> Originally used by legislators to provide funding to higher education, but it is no longer used. Identify the activities that contribute to differences in overall costs among the institutions. Help assure that the allocation of state resources reflects the most important institutional priorities. 	<ul style="list-style-type: none"> Benchmark Learn faculty workloads and productivity Standardize reporting and problems Help with funding decisions
CIP used in the cost analysis	2,4,6 digit CIPs, depending on the program	4-digit CIP	6-digit CIPS, but the summary report was aggregated at 2-digit CIP.
Data collection format	Access and Excel	Txt file submission via email	N/A
Time from data collection to publish	Data analysis varies depending on when the	<ul style="list-style-type: none"> Data collects in December. 	N/A

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	data is available throughout the year.	<ul style="list-style-type: none"> Published the following summer. 	
FTE involved to study	One person, but not solely on this project	0.5 FTE	N/A
State funding for study	<ul style="list-style-type: none"> State no longer mandates this report. No state funding is provided for this study. A report is sent to the General Assembly annually. 	<ul style="list-style-type: none"> Not sure, the study was created 50 years ago. The value of this study has diminished, as the IL General Assembly no longer uses this report for funding decisions. IL higher education board still uses the study for productivity analysis. A report is sent to the General Assembly annually. 	Due to the change of board members, interest in this study waned and the mandate was discontinued
Users of the study	Legislators, institutions	Policymakers, budgeters, institutions, administrators, researchers	UNC system office, board members and institutions
Issues with the study	Data coding is very important. Errors in data coding affect the data analysis.	txt file submission contains errors, would like to change to Excel.	<p>Because the program cost was aggregated at the 2-digit level, it was not useful. It was difficult to compare because institutions vary in mission, student enrollment and faculty composition.</p> <p>UNC advice: Delaware study is good for comparisons among similar institutions nationally but not proper to compare institutions with different missions and student sizes.</p>