OHIO AUDITOR OF STATE
KEITH FABER

Ohio Department of Higher Education

Facilities Inventory

Performance Audit

April 2022

Efficient • Effective • Transparent

OHIO AUDITOR OF STATE
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OHIO AUDITOR OF STATE
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To the Governor's Office, General Assembly, Director and Staff of the Ohio Department of Higher Education, Ohio Taxpayers, and Interested Citizens:

The Auditor of State's Office recently completed a performance audit of the facility inventory data maintained by the the Ohio Department of Higher Education (ODHE or the Department). The Department is responsible for collecting and maintaining current facility inventory data for Ohio's public colleges and universities. This service to ODHE and to the taxpayers of the state of Ohio is being provided pursuant to the Ohio Revised Code §117.46.

This performance audit report contains a detailed review of available data in order to provide insight and transparency into how facilities on public colleges and universities are utilized. It also provides recommendations to the Department that will improve the collection and use of data. This report has been provided to the Department and its contents have been discussed with the appropriate staff and leadership within ODHE. The Department is reminded of its responsibilities for public comment, implementation, and reporting related to this performance audit per the requirements outlined under §117.461 and §117.462. In future compliance audits, the Auditor of State will monitor implementation of the recommendations contained in this report, pursuant to the statutory requirements.

It is my hope that ODHE will use the results of the performance audit as a resource for improving operational transparency as well as strategic planning efforts. The analysis contained within are intended to provide management with information to consider while making decisions about their operations.

This performance audit report can be accessed online through the Auditor of State's website at http://www.ohioauditor.gov and choosing the "Search" option.

Sincerely,

Keith Faber
Auditor of State
Columbus, Ohio

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Ohio Department of Higher Education

Performance Audit Summary

WHAT WE LOOKED AT

The Ohio Department of Higher Education (ODHE or the Department) is responsible for overseeing Ohio institutions of higher education which encompasses all public colleges and universities in the state. The Department administers numerous programs which are designed to improve access to higher education. In order to effectively administer these programs, the Department collects a significant amount of data regarding the operations of colleges and universities including data on enrollment, program offerings, and facilities.

The Department has historically collected facilities data from all public colleges and universities for capital budget purposes. This information is still collected by ODHE, but is no longer used for budget allocations. However, this data provides valuable insight into the types of spaces owned and maintained by public institutions. With increased access to technology and changes to educational delivery models, this information is of critical importance as policy makers and institutional leadership seek to optimize the use of available resources, particularly as it relates to costly capital improvement projects.

Facilities related data from ODHE is not routinely published, and the audit was conducted in order to provide a transparent overview of the spaces owned and maintained by public colleges and universities. Both state officials and institutional leaders should have this information available to them so that data-driven decisions can be made regarding how existing spaces are used as institutions adapt to new challenges.

WHAT WE FOUND

In Ohio, there are 14 public universities, 24 regional campuses, 23 community or technical colleges, and one agricultural research center. Each year, these institutions are required to submit certain information to ODHE regarding the facilities they use for operational purposes. This includes facilities that are both owned and leased by an institution and reflects the status of areas based on the 15th day of the fall term. The data which is submitted contains detailed information regarding how space within the facilities is used, such as residential purposes, classroom purposes, or office space. Because the agricultural research center does not have students, it was excluded from our analysis and we instead focused on Ohio's public colleges and universities.

The Department provides instructions on how and when to submit this information. While data is supposed to be submitted annually, we found that there were gaps in submissions beginning in 2017, when seven institutions failed to submit the inventory data. For

purposes of this audit, which began in 2021, ODHE determined that the most recent year of data complete enough for analysis was from 2018, meaning that the best available data was three years old.

Because not all institutions submitted data in 2018, we had to use alternative years of data for some institutions. Further, once we began to conduct analysis, we found inaccuracies in the data that were easily identifiable, such as an institution reporting no classroom space in a given year. The inaccuracies indicate that ODHE does not conduct regular data verification of the information submitted by institutions. For those institutions with inaccurate data, we used the 2019 data, which had corrected the existing errors.

DATA TRANSPARENCY

Transparency is a necessary component of government and public institutions. Having access to data and information regarding the operations of public institutions is codified in law, and overseen, in part, by the Auditor of State. The data used for this audit is valuable information regarding the facilities used to operate Ohio's public colleges and universities located throughout the state. This audit provides detailed observations regarding the inventory of facilities reported by institutions based on data collected during the fall of 2018 academic term. Using facility and enrollment data, we also were able to make high-level observations regarding the utilization of space on a per student basis at each institution.

Key Observation 1: Ohio's public colleges and universities maintain a variety of spaces. The breakdown of area types is influenced by the type of institution and the institutional mission. This makes comparisons between institutions difficult without a nuanced understanding of how space is utilized at an institutional level. Due to scope and time limitations, OPT reviewed space utilization by institution at a high level.

Key Observation 2: Online enrollment at public colleges and universities in Ohio has steadily risen over the past decade. While total enrollment remained relatively flat, the number of online students rose significantly between 2012 and 2018. This shift to online learning was accelerated due to the COVID-19 pandemic and continued to remain high in 2021 based on preliminary data from ODHE. Because total enrollment remained relatively flat and online enrollment increased, the number of students on-campus has declined in the past decade, which impacts how an institution's space is utilized. The data used in our analysis is from the years prior to the pandemic. However, based on enrollment data collected by ODHE, it appears that the trend of increased online enrollment will continue.

Key Observation 3: Until recently, the Department did not collect detailed online enrollment data from public colleges and universities, which limits the Department's ability to understand institutional needs for facility space or to determine the efficiency in

how existing facilities are used in a timely manner. This type of data has been collected for several years by the United States Department of Education, however it is not made publically available in a timely manner. The continued collection of timely online enrollment data beyond the COVID-19 pandemic by ODHE, when paired with robust facilities data, can provide valuable insight to policy makers when determining how best to allocate limited resources.

Online Data Dashboard

The data contained in this report focuses primarily on high-level, aggregate information. To view and interact with the data in more detail, two online dashboards were created and are available. The first dashboard allows the user to select an institution and view its facility and enrollment data, while the second dashboard provides high-level comparisons between institutions based on this data. These dashboards allow for a better understanding of what space exists and how it is allocated at each institution and. **Click Here**

SUMMARY OF RECOMMENDATIONS

Recommendation 1: Prior to FY 2013, capital allocations were distributed to colleges and universities based on a formula which took into consideration the age of an institution's facilities, enrollment numbers, and the amount of infrastructure the institution needed to maintain. In order to submit a budget request, ODHE collected facilities and enrollment data from institutions. While the formula is no longer used to allocate funds, data is still collected by the Department; however, the data is not collected in a timely manner and is not routinely verified by ODHE. This leads to stale and potentially inaccurate information being reported. The Department should work to ensure that all institutions report data by a specified date and it should develop and follow internal data verification methods. Accurate information relating to facilities is an important tool for both policy makers and institutions when making decisions relating to allocations and investments as well as future educational needs.

Recommendation 2: Collecting timely and accurate data is especially useful when it is used in a transparent manner. Once ODHE implements procedures to ensure the timely collection of data as discussed in **Recommendation 1**, it must also provide this information in a timely manner so that policy makers can make informed decisions relating to necessary changes in the state operating and capital budgets. This information could be provided to stakeholders and published in a dashboard similar to the one available on our website.

Recommendation 3: Beginning in 1966, there have been several strategic planning documents created with the goal of advancing higher education in Ohio. These plans provided goals and a roadmap for the future of public higher education in Ohio. The most recent document from ODHE was a ten-year plan published in 2008. The Department should develop a strategic plan for higher education, with a focus on facilities. Due to the aging nature of existing facilities and declining demographic and enrollment trends, institutional leadership and policy makers will need data-driven guidance as they determine how to best address future facility needs.

Issue for Further Study: Total enrollment at Ohio's public colleges and universities has remained stable for most of the past decade. However, during that timeframe there has been a steady shift in how individuals attend courses –students are increasingly opting to enroll online rather than attend courses on campus. Policy makers should be aware of how students are accessing education as increases in headcount do not always mean that there are more students attending class on-campus. This information is important for policy makers so that they can make informed decisions regarding future capital projects.

Understanding the operational choices being made at these institutions is an important step to knowing the impact of focusing on online enrollment. Providing online courses requires technology infrastructure in order to support students. This infrastructure can be costly and requires planning to be adequately prepared. Additionally with the increase of online enrollment come questions regarding the quality of education being offered and potentially issues around accreditation.

During our audit we identified several institutions that, over a short period of time, significantly increased online enrollment. While online enrollment is increasing across all public colleges and universities, Eastern Gateway Community College, had enrollment increases that warranted further review. Total enrollment at this institution grew from 4,527 in 2016 to 40,036 in 2020, an increase of nearly 785 percent during the time frame.

This increase occurred exclusively through distance learners and, during the course of the audit, the institution was placed on probation by its accrediting body, the Higher Learning Commission (HLC). While growth through online education can be done successfully, considering the rate of expansion associated with EGCC's online enrollment, monitoring is needed to ensure quality is not sacrificed when student quantity is pursued.

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Introduction

The Ohio Department of Higher Education (ODHE or the Department) is a Cabinet-level agency and is primarily responsible for coordinating and overseeing the public higher education system in Ohio, including authorizing and approving new degree programs, managing state-funded financial aid programs, and developing and advocating policies to maximize higher education's contributions to the state and its citizens. The Department is led by a Chancellor, who is appointed by the Governor, and advised by the Board of Regents, a nine-member board that is also appointed by the Governor with the advice and consent of the Ohio Senate.

Ohio's most recent operating budget, passed in 2021, allocated approximately $5.6 billion to ODHE for the biennial period.[1] Of the $2.8 billion annual appropriation, only $5.7 million is designated for the administrative expense of the Department. The majority of funding, approximately $1.6 billion or 73.5 percent, is appropriated to fund the State Share of Instruction (SSI), which is distributed to colleges and universities based on a formula that emphasizes student degree attainment and course completion.[2] Approximately $300 million is set aside each year to pay a portion of existing long-term debts.[3] The remaining $900 million is used for a number of programs, including scholarships that are designed to improve access to higher education.

In addition to an operating budget, the state also passes a capital budget on a biennial basis. The capital budget allocates money to state agencies, colleges, universities, and school districts for the building of new facilities and the repair or reconstruction of existing facilities. The two budgets are passed on a staggered schedule; the main operating bill is passed in odd-numbered years, while the capital budget bill is passed in even-numbered years.[4] In the most recent capital budget bill, higher education institutions were the highest recipient of capital funds. For FY 2021 and FY 2022, higher education in Ohio was allocated a total of approximately $486 million.[5] This capital allocation represents a portion of the total funds utilized by institutions to build and maintain facilities. Institutions may issue debt in order to raise funds and may also receive funds through other means including private donations, corporate partnerships, and institutional operating funds.

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[1] The state operating budget is passed on a biennial basis (every two years) with the fiscal year beginning on July 1 of odd numbered years.
[2] The SSI formula is different for four-year and two-year institutions. Additional detail on the formula can be found here: https://www.ohiohighered.org/node/933
[3] Funds are set aside in the operating budget for debt service, which are used to make payments on long-term debt that was issued to fund the capital budget.
[4] Importantly, the capital budget bill does not include capital projects for the Department of Transportation; funds for these projects are allocated in a separate bill.
[5] This amount includes all funds allocated to public colleges and universities as well as funds allocated to ODHE.

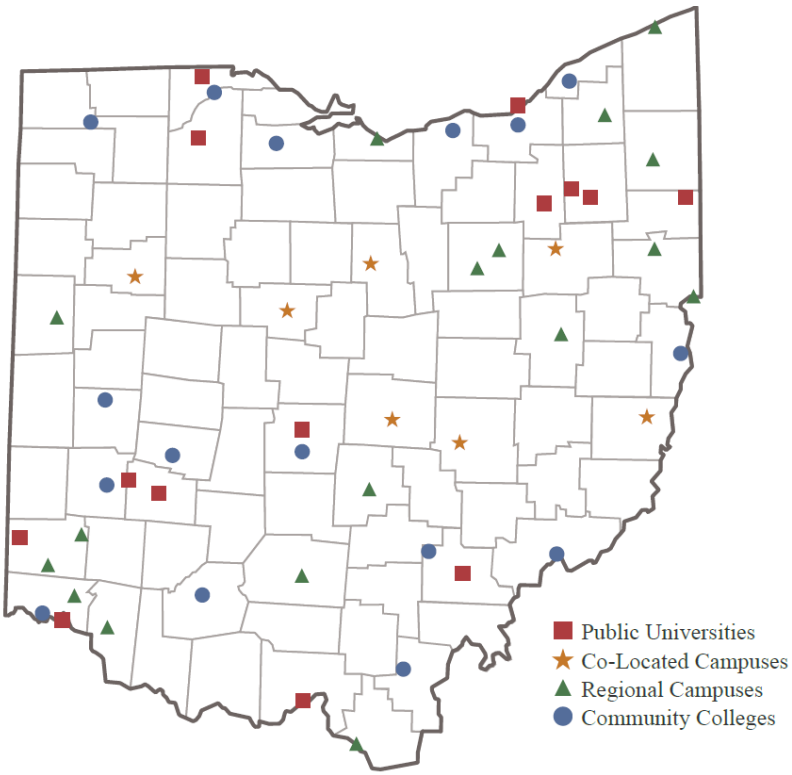
As the Department is responsible for broad oversight related to higher education in Ohio, it collects and maintains data regarding the operations at public colleges and universities. This data is used for a variety of purposes, generally associated with the distribution of targeted funding. Much of this information is shared with the General Assembly, key stakeholders, and interested individuals through the release and publication of annual reports. The Department publishes not only a report on the state of higher education in Ohio, but also numerous reports that are program specific. These reports help to inform policy makers regarding the efficiency and effectiveness of programs that are administered by the Department.

The Ohio Auditor of State, through its Ohio Performance Team (OPT), is required by Ohio Revised Code (ORC) § 117.46 to complete at least four performance audits of state agencies[6] or, at its discretion, institutions of higher education during each biennium. In 2021, OPT initiated a performance audit[7] of the facilities related data collected and maintained by the Department. Unlike the data that directly ties to programs administered by the Department, facility data is not routinely published or shared with policy makers or the general public. This audit was initiated in order to provide transparent insight into the current inventory of higher education facilities and to identify ways in which ODHE could advocate for the efficient use of that inventory.

[6] At least two of the audits shall be of state agencies selected from a list comprised of the administrative departments listed in section 121.02 of the Revised Code and the department of education and at least two of the audits shall be of other state agencies.
[7] Performance audits are conducted using Generally Accepted Government Auditing Standards guidelines, see **Appendix A** for more details.

University System of Ohio

The foundations for public universities in Ohio were laid years before the area became a state. The Northwest Ordinance of 1787 encouraged schools and education for all the future citizens of the state. The site for the first public university became Ohio University in Athens, Ohio, which was established less than one year after Ohio was declared a state.[8] Through a variety of federal and state expansion efforts, the number of public higher education institutions in Ohio has grown since that time to include 14 universities, 24 branch and regional campuses, and 23 community or technical colleges. Today, these institutions serve approximately 500,000 students and are collectively known as the University System of Ohio[9] and are overseen by the Department.



Note: A co-located campus has both a university regional branch and a community college on the same or contiguous plot of land, and the institutions share some resources.

Students who attend a public university or college have a wide variety of educational goals. From attending classes for enrichment purposes to pursuing a Doctorate program, there are many opportunities for Ohioans seeking advanced education. The 14 public universities are located on main campuses throughout the state. Some of these universities also have regional campuses in satellite locations. The 24 university regional campuses provide access to a traditional four-year degree to individuals who may be unable to travel to a main campus. The 23 community and technical colleges are located throughout the state and offer a variety of two and four-year degree and certificate programs.

[8] Ohio University was established in 1804 and opened for instruction in 1808.
[9] ORC 3345.011

Institutional Facility Data Reporting

Educating approximately 500,000 individuals requires space. Beyond space required for academic and administrative purposes, colleges and universities must manage other types of facilities that help support and further the mission of the institution. These spaces may include residential facilities for students, dining halls, library buildings necessary to maintain physical catalogues, and athletic facilities, amongst many others. While Ohio's public colleges and universities are all under the umbrella of the University System of Ohio, they each operate independently and have varying operational missions and facility needs.

Institutions are required to report all areas in each facility the institution owns, operates, or uses on an annual basis to ODHE.[10] This space is broken into two broad categories, non-assignable and assignable. Non-assignable space is used for mechanical purposes, such as HVAC, and spaces that are open areas to allow for movement, such as hallways or staircases. Assignable spaces are areas that can be classified within a specific functional designation, such as classrooms or offices. For purposes of this audit, only data relating to assignable spaces was analyzed.

Assignable space is measured in square feet and categorized using one of nine area type codes. These codes were adapted by ODHE from the Postsecondary Education Facilities Inventory and Classification Manual (FICM), which is an industry standard for facility inventory in postsecondary education. The use of codes and specific definitions allows for the data collected by ODHE to be standardized, which in turn, allows for the data to be compared across institutions. We used the Department's Area Type codes to conduct the analysis for this audit: Classroom, Laboratory, Office, Study, Special Use, General Use, Support, Health Care, and Residential. See **Appendix B** for full description of area types.

It is important to note that these codes refer to areas within a facility, and not the facility in total. Within any single facility, many area types may exist. For example:

- **Residence Halls** likely include Residential Areas, Office Areas, Support Areas, and Study Areas.
- **Academic Buildings** likely include Classroom Areas, Laboratory Areas, Study Areas, and Office Areas.
- **Administrative Buildings** likely have primarily Office Areas.
- **Libraries** likely have primarily Study Areas, which include library circulation and storage areas, and Office Areas.

[10] ORC§ 3333.04(H) states that the Chancellor of Higher Education shall conduct studies for the state colleges, universities, and other state-assisted institutions of higher education to assist them in making the best and most efficient use of their existing facilities and personnel. *See also* OAC 3333-1-03, OAC 3333-1-24, and OAC 3333-1-28 (reporting for capital improvement review purposes).

Historically, this facility data was used for the allocation of capital funding. The state capital budget is authorized on a two-year basis and allocates money to state agencies, colleges, universities, and school districts for the building of new facilities and the repair or reconstruction of existing facilities. In the most recent capital budget, which covers FY 2021 and FY 2022, higher education in Ohio was allocated approximately $486 million for capital projects during the budget period. It is important to note that once these capital projects are completed, maintaining the buildings may contribute to the ongoing operating expenditures of an institution.

Prior to FY 2013, capital allocations were distributed to institutions based on a formula that utilized facilities data. This ensured that each institution received some funding, but did not consider the strategic allocation of funds. Beginning with the FY 2013 and FY 2014 the Department began to allocate funds based on the guidance of the Higher Education Capital Funding Commission. The commission has established a set of guiding principles to help ensure that the use of state resources by higher education institutions is strategic and focused, and institutions requested funds along these principles. The current focus for capital funds is on projects that contributed to public-private partnerships, workforce development, interdisciplinary approaches, and long-term maintenance. While facility data is still collected and maintained by ODHE, it is used by the Department sparingly. For example, it is currently used to confirm other data submissions from institutions such as information regarding course section offerings.

Higher Education Facility and Enrollment Data

The majority of facility data used for this audit was gathered by institutions during the fall 2018 academic term and reported to the Department.[11] This facility data represents the inventory of buildings owned or used by colleges and universities at that point in time. It does not include historic information regarding buildings that were demolished or sold prior to the fall of 2018, nor does it include any buildings that were completed after that date. The observations within this report are based on this point in time and are primarily for informational purposes, as well as to illustrate the type of information that could be made available for the higher education system as a whole.

While the Department does collect enrollment data, they did not collect online enrollment data prior to 2020. Therefore, for the purposes of this audit, information from the Integrated Postsecondary Education Data System (IPEDS), a federal database, was used. We chose to use IPEDS data because it contained detailed information regarding method of learning and differentiated between students enrolled in online courses and on-campus courses over time. The enrollment data contained in IPEDS was compared to that maintained by ODHE and was found to be reasonably reliable for the purposes of this audit.

[11] Due to submission issues outlined in **Recommendation 1**, alternative years of facility data were used for this audit for some institutions.

Historic Information

When the first universities opened in Ohio two centuries ago with a handful of students and one or two buildings on each campus it would have been impossible to imagine today's educational landscape. Today, across Ohio's public colleges and universities, there is approximately 119 million total interior square feet of space. Of this, nearly 86.5 million is considered assignable.

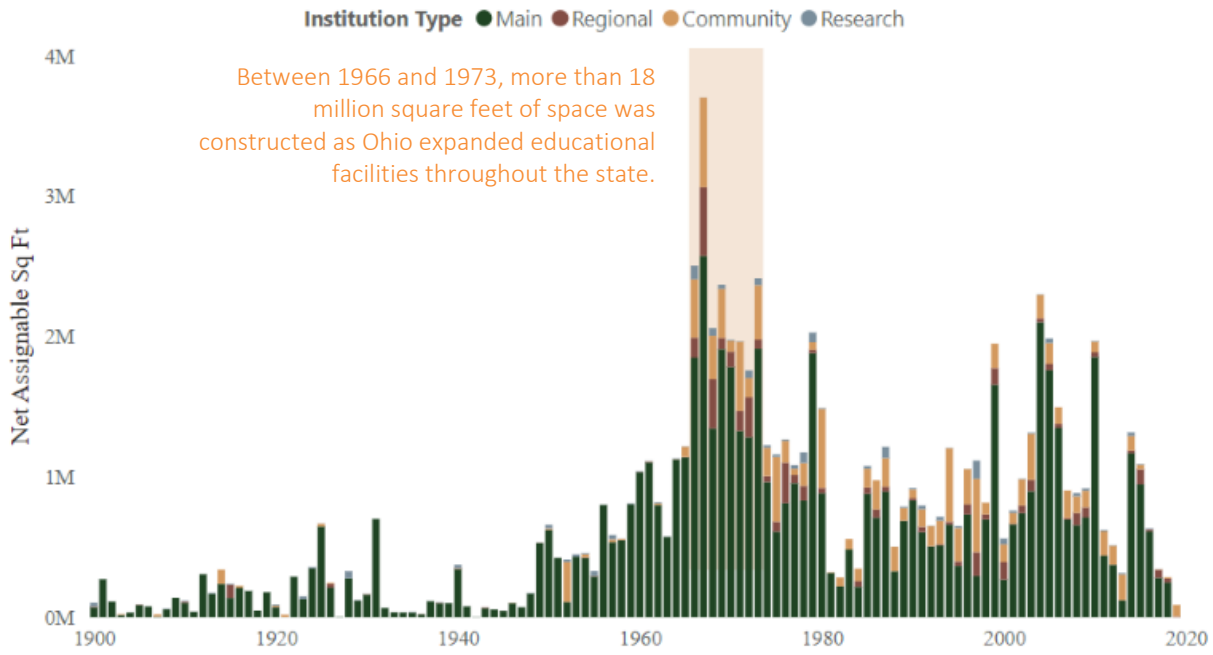
During the first century of statehood, the growth of higher education facilities construction centered on the establishment of new institutions. At the turn of the 20th century, construction of facilities accelerated, particularly in the post-World War II era. In 1944, the Servicemen's Readjustment Act was signed by President Roosevelt. This law, better known as the G.I. Bill, provided numerous benefits to war veterans including funding for educational expenses. In the years that followed, approximately 2.3 million individuals attended college nationwide with funding from this program. Ohio's public institutions required additional space to accommodate this new influx of students, and there is a corresponding spike in facility construction in the late 1940s and early 1950s.

In the 1960s, under the guidance of Governor Rhodes, Ohio began to expand public education in order to meet an expected increase in demand from Ohioans. In 1965, enrollment at all Ohio colleges and universities was 266,000 students. The 1966 Master Plan published by the Board of Regents indicated an expected enrollment of 650,000 students by 1980 at both public and private institutions in Ohio. This expected increase in enrollment required a similar increase in facilities, which is seen by the large spike in construction during that time period. Specifically, beginning in 1966, more than 18 million assignable square feet were constructed over an eight-year period.[12] The majority of this growth, nearly 14 million square feet, was on university main campuses, including Wright State University which opened in 1967. Several university regional campuses were opened during this time frame, and approximately 1.6 million square feet of space were constructed at university regional campuses. This represents more than half of the existing university regional campus facility space reported in 2018. Approximately 2.8 million square feet of space were constructed for community and technical colleges throughout the state during this timeframe as well. In 2018, total higher education enrollment in Ohio totaled around 650,000 students with approximately 500,000 attending public colleges and universities. Public institutions owned and rented 119 million square feet of space, including academic areas, as well as hospitals and stadiums.

ODHE collects annual inventory data from institutions. This information provides detail on the existing facilities in a given year and how spaces within those facilities are classified by the institution. Because it is inventory data, the information that is reported does not include any facility that was demolished or sold prior to the data collection date. The following chart shows the timeline of construction for the facility inventory data collected in 2018.

[12] The 18 million square feet reported for this time period reflects building data that was collected in Fall, 2018. As such, the total building during this timeframe may have been higher.

2018 Institution Current Space Inventory by Construction Year



Source: ODHE

Note: This chart includes facilities at Ohio Agricultural Research and Development Center, a research institution in Northeast Ohio. However, the remaining tables and charts do not include this institution as it does not have enrolled students.

Note: This chart does not include buildings that were demolished prior to 2018.

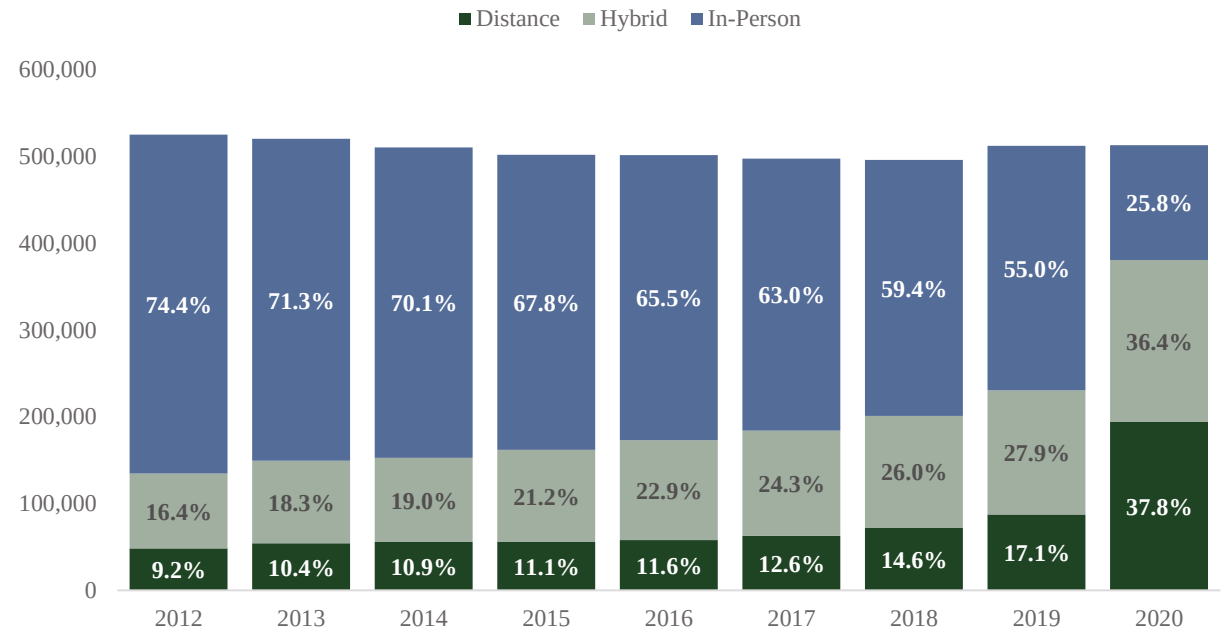
The chart provides an overview of new construction beginning in 1900. While there are some buildings in the inventory that predate 1900, the construction of such buildings was infrequent. This chart provides detail on the square footage of completed construction projects in each year, broken down by type of institution. Outside of the highlighted timeframe where there was a significant effort to expand education, the economy at large has played a role in construction activity at Ohio's public colleges and universities. During times of recession, construction has generally declined, as seen in the 1980s and then again in the early 2000s.

Enrollment Data

Enrollment is a key factor when observing facility usage and projecting future needs. In the 1960s, new institutions were established and facilities were built to accommodate the projected increase in enrollment throughout the state as a result of the baby boomer generation. Today Ohio, and much of the region, face the opposite reality – declining enrollment. According to ODHE, the number of high school graduates is expected to decrease by nine percent this decade. As the population shifts, colleges and universities will need to strategically position themselves to serve the future needs of students.

Between 2012 and 2020, the total number of students enrolled at Ohio's public colleges and universities remained fairly stable, around 500,000 total students.[13] However, there has been a steady shift in how individuals access higher education courses.

Higher Educational Enrollment by Attendance Type



Source: IPEDS

As seen in the chart above, the percent of students attending courses in-person has slowly declined. The percent of students attending courses exclusively online nearly doubled between 2012 and 2018, and those opting to attend a hybrid of online and in-person courses rose by 9.6 percent during the same time period. In total, the number of students attending courses

NOTE TO REPORT USERS

Ohio offers a dual enrollment program to eligible students in grades 7 through 12 called College Credit Plus (CCP). This program allows individuals to take college courses at an institution, at their high school, or online. The IPEDS data used for this report does not differentiate high school students from other non-degree seeking students enrolled at an institution. Because of this, these students are included in our enrollment counts. Because of the variation in how individuals attend CCP courses, there could be minor variations in the space per student calculations contained in this report.

[13] While total enrollment across all universities remained stable, the majority of institutions saw declining enrollment over this time, as seen in **Recommendation 2**.

exclusively on campus decreased by 15 percent during this timeframe. How a student is accessing courses can greatly impact facility needs for an institution. If an individual is fully remote there is a reduced likelihood for needed study space or residential space for that student. Additionally, while classrooms may be necessary for some online courses, it is likely that such space could be consolidated if there are no students physically present.

Data Observations

After an initial review of data, we chose to exclude stadiums, arenas, hospitals, and parking garages from our analysis. Because of the wide variation in institution location and operations, we concluded that these areas could potentially skew the data in a way that would impact comparisons. For example, the University of Cincinnati (Cincinnati) is located in an urban area where parking lots are not sufficiently available to meet parking demands, so it maintains parking garages; conversely, Shawnee State University (Shawnee State), located in Portsmouth, has ample space for surface level parking and offers free parking. Similarly, for some institutions, such as The Ohio State University (OSU), the hospital and stadiums are revenue generating areas and may be treated differently from other facilities on the campus.

For comparison purposes, we chose to display data based on the type of institution: University Main Campus, University Regional Campus, or Community and Technical College. The reason for dividing institutions into these three groups is because within each category the institutions have similar goals and missions. Displaying information at this level is helpful as it allows the public, policy makers, and leaders of both colleges and universities to understand broad trends in how space is utilized at different types of institutions.

University Main Campus Data Observations

When Ohio University began instruction in 1808, there was one building and three students enrolled in classes. As more universities opened throughout the 19th and into the 20th century, both the number of buildings and students enrolled grew. Today there are 14 public universities in Ohio, each which offer a variety of undergraduate and graduate programs:

- **Bowling Green State University (BGSU):** Founded in 1910 as Bowling Green State Normal School, with an initial focus on teacher education, in Bowling Green. The institution gained university status in 1935.
- **Central State University (Central State):** Originally established as the Combined Normal and Industrial Department at Wilberforce University[14] in 1887, it became a separate public institution in 1947 and gained university status in 1965.

[14] Wilberforce University is a private university that was founded to serve the African American community.

- **Cleveland State University (Cleveland State):** Established in 1964 in Cleveland, the University purchased and absorbed Fenn College, a private institution which had been in operation since 1923.
- **Kent State University (Kent State):** Established in 1910 in Kent, with an initial focus on teacher education.
- **Miami University (Miami):** Established in 1809 in Oxford, by legislative act with instruction beginning in 1824.
- **Northeast Ohio Medical University (NEOMED):** Established in 1973 in Rootstown, NEOMED has a focus on training physicians, pharmacists, and health researchers.
- **Ohio University (OU):** Established in 1804 in Athens as the first university in Ohio, with instruction beginning in 1808.
- **The Ohio State University (OSU):** Established in 1870 in Columbus as a public land-grant research university, with instruction beginning in 1873.
- **Shawnee State University (Shawnee State):** Initially founded in Portsmouth as Shawnee State General and Technical College through a merger of OU – Portsmouth and Scioto Technical College in 1975, the institution gained university status in 1986.
- **The University of Akron (Akron):** Established in 1870 as Buchtel College in Akron before becoming the University of Akron in 1913.
- **University of Cincinnati (Cincinnati):** Established in 1819 in Cincinnati and formally became a public state institution in 1977.
- **The University of Toledo (Toledo):** Established in 1872 in Toledo and became a state-funded institution in 1967 and officially changed its name to the University of Toledo.
- **Wright State University (Wright State):** Established in 1964 in Dayton as a branch campus of Miami University and the Ohio State University before becoming an independent institution in 1967
- **Youngstown State University (YSU):** Established in 1908 in Youngstown, the institution became a public state university in 1967.

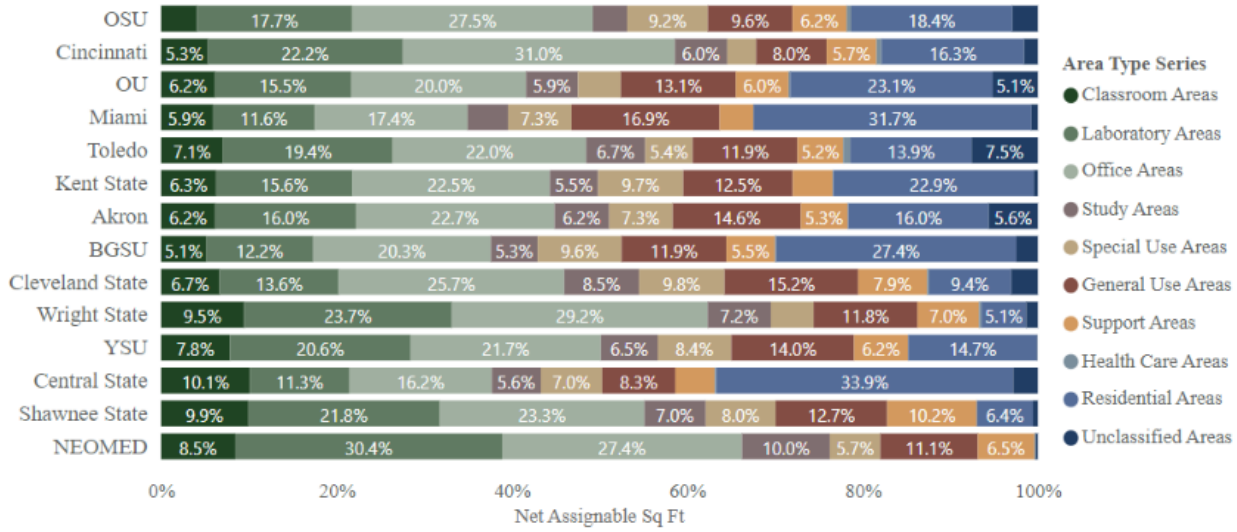
Ohio's public university main campuses have an enormous amount of variation in total size. OSU has more than 13 million assignable square feet after removing hospitals, parking garages, stadiums, and arenas, making it the Ohio's largest university in size. Shawnee State, by comparison, has approximately 500,000 square feet and is the smallest traditional public university main campus by size.[15]

[15] Northeast Ohio Medical University has approximately 300,000 assignable square feet, but does not offer undergraduate programs.

University Main Campus Facilities Data

Despite the differences in size, institutional spaces are generally used in similar ways, as seen in the chart below. This chart, which is repeated in the University Regional Campuses and Community and Technical College sections, shows the percentage of total space dedicated to different area types. It is important to keep in mind that the total amount of space in any given area may fluctuate significantly between institutions due to their relative size. For example, the total square footage of any area at OSU is likely to be higher than other institutions due to the overall size of the institution. Because of the large variability in campus size, percentages are a good way to make comparisons across the institutions.

Percent Institutional Space by Area Type | Main Campuses



Source: ODHE
Note: Excludes Stadiums, Arena, Hospitals, and Parking Garages.

Identifying and understanding these ranges is important for ODHE, institutional leadership, and policy makers. The information, in the aggregate, can be used for the creation of data-driven strategic plans. Within the data, there are a variety of ranges of reported space. For example, the percent of residential areas reported by institutions ranges from zero percent to more than 33 percent of total space. Conversely, institutions report that at most, 0.8 percent of space is designated as health care areas, a difference of less than one percentage point between all institutions. Further, health care areas represent such a small portion of reported space, it is not distinguishable for the majority of institutions on the chart above.

It is important to remember that our audit excluded hospitals from our data set, so health care areas are likely limited to student health clinic spaces. Ranges are easily seen and understood by viewing the chart on the previous page—the larger the range, the more variability among the institutions.

- **Classroom Areas:** Classroom areas are a fairly small portion of reported space at university main campuses, ranging from 4.1 percent of total space at OSU to 10.1 percent of total space at Central State.
- **Office Areas:** Office areas are consistently one of the largest portions of total space at university main campuses, ranging from 16.2 percent of total space at Central State to 31.0 percent of total space at Cincinnati.
- **Residential Areas:** Residential areas have a significant amount of variation in the reported data, ranging from zero reported space at NEOMED to 33.9 percent of total space at Central State.
- **Laboratory Areas:** Laboratory areas also have a wide range between universities from 11.3 percent of total space at Miami to 30.4 percent of total space at NEOMED.

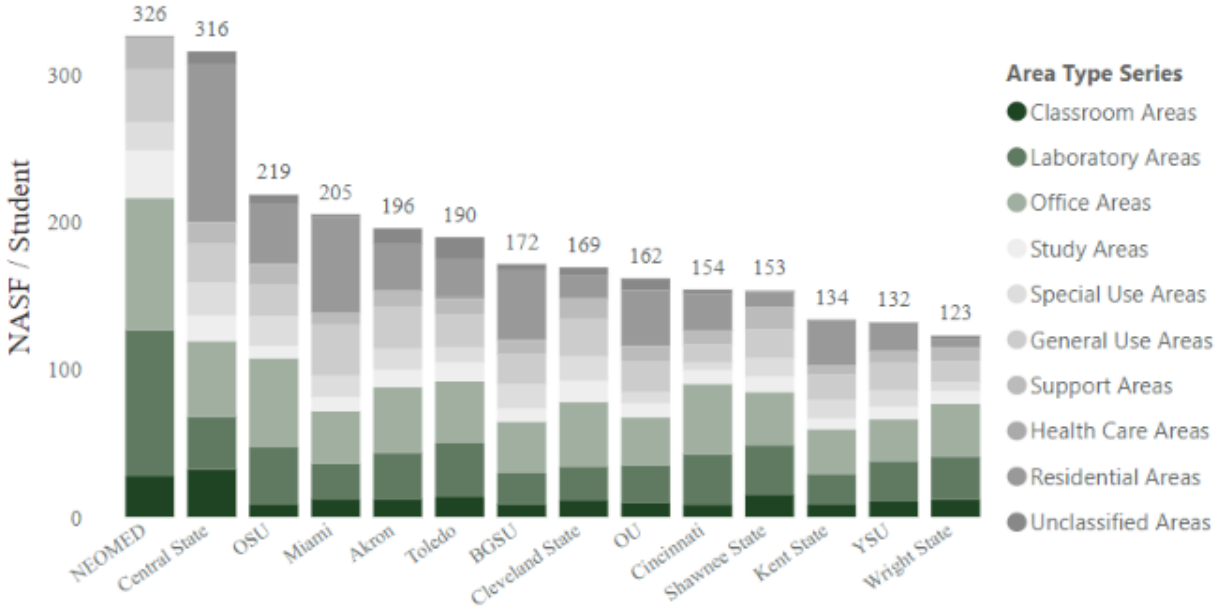
University Main Campus Enrollment Data

Total enrollment across the public university main campuses in Ohio has remained relatively steady since 2012.[16] However, during this time, enrollment has slowly shifted towards online delivery. While the shift to online learning at university main campuses is slower than that of all public universities and colleges in Ohio, online learning has grown from 6.8 percent in 2012 to 9.9 percent in 2018. During the 2020 term, online enrollment spiked to 27.1 percent as a result of the shift in operations in response to the COVID-19 pandemic.

Using 2018 facility and enrollment data, we identified the amount of space per student at each institution. This is broken down by area type. In the chart on the following page, the colored portions of the bar represent classrooms, laboratories, and offices. These spaces are those which have been reported to ODHE by institutions using the Department's definitions as general purpose and educational spaces necessary for the education of students. The chart below shows this breakout using total headcount which includes both online and on-campus learners.

[16] While total enrollment has remained at similar levels, many institutions have seen declining enrollment over this timeframe.

2018 Space per Student | All Students | Main Campuses

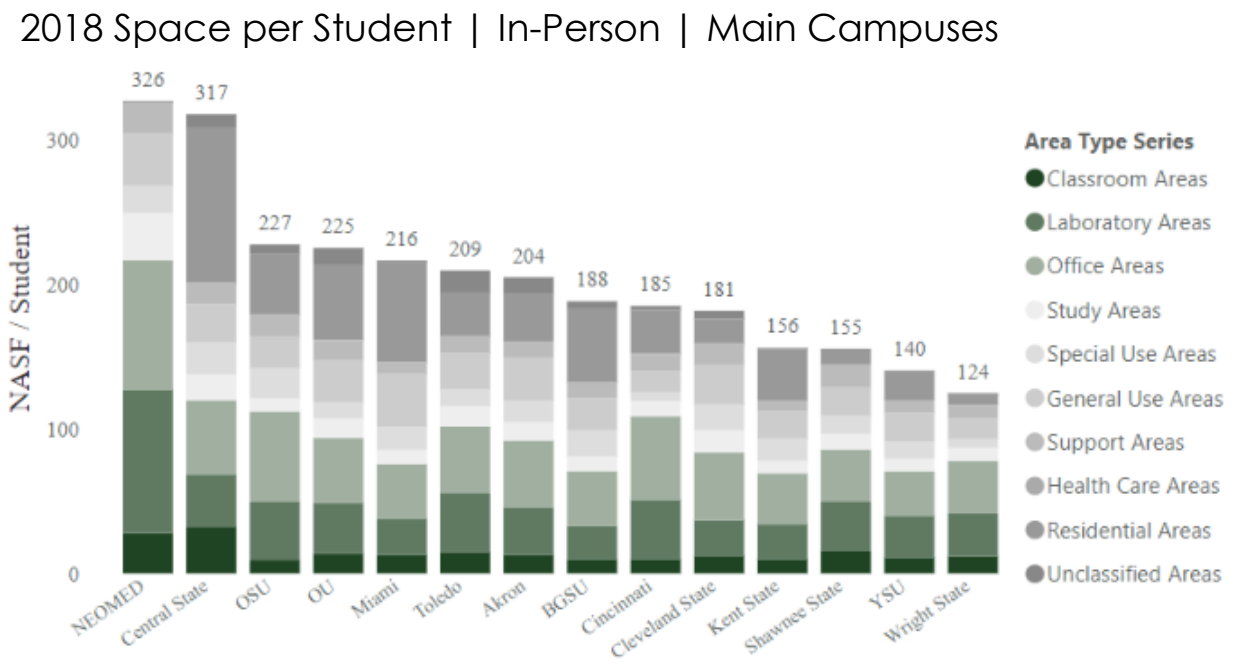


Source: ODHE and IPEDS

Reviewing space on a square foot per student basis provides another way to compare spaces at institutions and is an industry standard for determining estimated facility utilization at a high level. However, using total headcount is not the most accurate view of this data. Because students attending courses online do not utilize campus spaces in the same way that on-campus students would, removing those students from this analysis provides a more nuanced view of how existing space is allocated based on enrollment at the campus.

The chart on the following page reflects only students attending courses in-person. It should be noted that IPEDS reports students that attended courses online, in person, and a combination of both (hybrid learners). For purposes of this report, hybrid learners are treated as in-person as they may attend courses on campus.

Between the two charts, there is minimal movement in where institutions rank on a space per student basis. For the most part institutions saw a small increase between total headcount and in-person only. However, OU's space per student increased by 63 square feet, or 38.9 percent, when online only enrollment was removed from the headcount data. This analysis illustrates the type of data review that can help inform ODHE and policy makers when understanding future facility needs at institutions. See **Appendix B** for additional detail on the variation in space per student.



Source: ODHE and IPEDS

Note: CCP students attending courses in a high school environment may be included in the in-person according to IPEDS data. The removal of these students could result in increases to the total square footage per student listed on this chart, depending on the popularity of that instructional method at individual institutions.

In three key area types; classroom areas, laboratory areas, and office areas, we reviewed the existing space on a per student basis for those enrolled on-campus or through hybrid methods.

- **Office Areas:** The median square feet of office area per student at university main campuses was 47 square feet. This means that for every student, there are 47 square feet of office areas maintained by the institution. NEOMED had the most office areas per student at 89 square feet and YSU had the least amount of office areas per student at 32 square feet.
- **Classroom Areas:** The median square feet of classroom area per student at university main campuses was 12 square feet. This means that for every student, there are 12 square feet of classroom areas maintained by the institution. Central State had the most classroom areas per student at 32 square feet and OSU had the least amount of classroom areas per student at 9 square feet.
- **Laboratory Areas:** The median square feet of laboratory area per student is 34 square feet. This means that for every student, there are 34 square feet of laboratory areas maintained by the institution. NEOMED had the most laboratory areas per student at 99 square feet and BGSU had the least amount of laboratory areas per student at 23 square feet.

These observations are based on a single year of data and are useful in identifying normal ranges and potential outliers. With detailed data over time, ODHE could present more detailed trend data that can be used for planning purposes.

University Regional Campus Data Observations

Eight of Ohio's public universities also operate regional campuses. These regional campuses allow the universities to extend their reach and educate individuals who may not otherwise attend a main campus. Courses offered at the university regional campuses are at a lower cost to students through reduced tuition, which minimizes the economic burden of attendance.

- **Akron:** One regional campus located in Orrville.
- **BGSU:** One regional campus known as Firelands, located in Huron.
- **Cincinnati:** Two regional campuses located in Blue Ash and Batavia.
- **Kent State:** Seven regional campuses serving Northeast Ohio with locations in Ashtabula, East Liverpool, Burton, Salem, Canton, Warren, and New Philadelphia.
- **Miami:** Two regional campuses serving Southwest Ohio located in Hamilton and Middletown.
- **OSU:** Five regional campuses located in Lima, Mansfield, Marion, Newark, and Wooster, which is known as OSU – Agricultural Technical Institute (OSU – ATI).
- **OU:** Five regional campuses serving Southeast Ohio located in Chillicothe, Ironton, Lancaster, St. Clairsville, and Zanesville.
- **Wright State:** One regional campus, known as Wright State Lake, located in Celina.

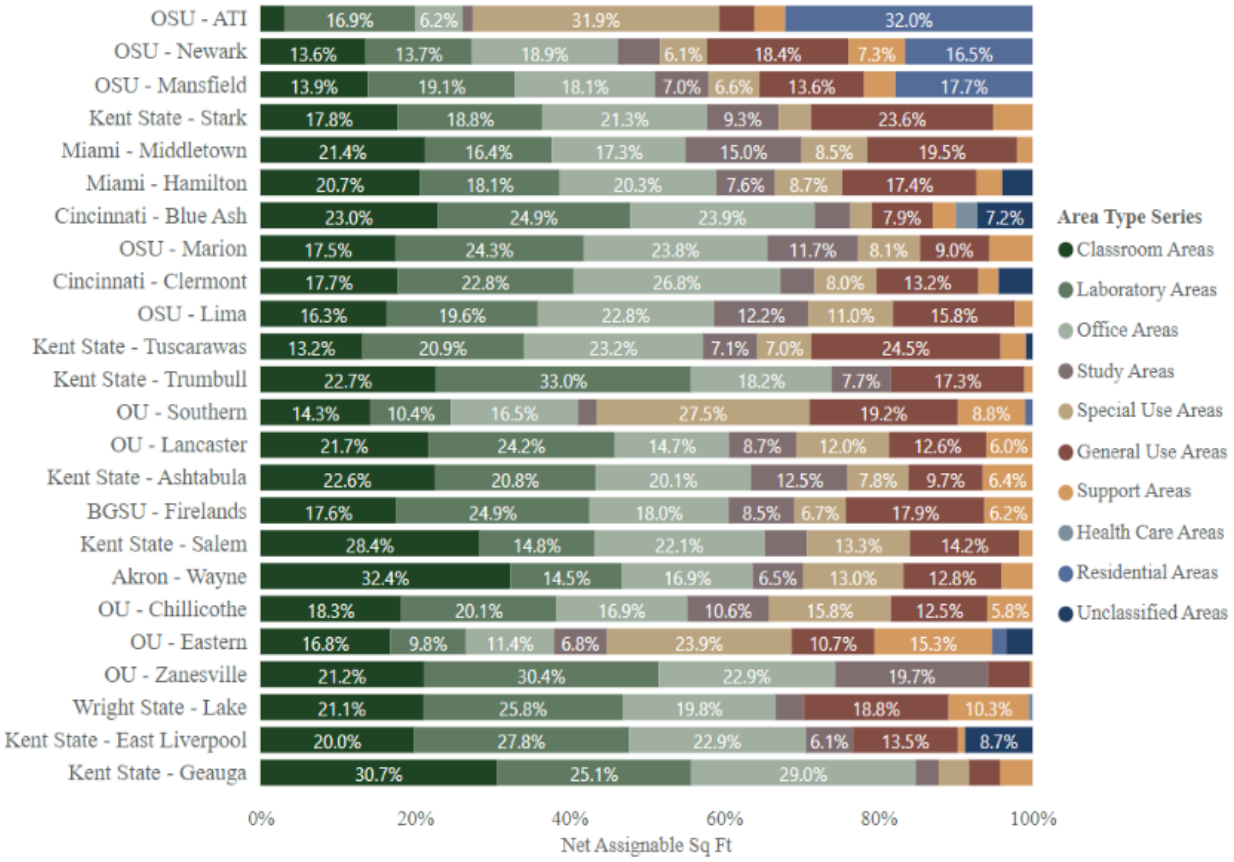
The total square footage of university regional campuses varies, from approximately 56,000 feet at Kent State – Geauga to nearly 400,000 feet at Ohio State – ATI.

University Regional Campus Facilities Data

Reviewing reported area data on a percentage basis results in a few notable elements. Primarily, while the majority of university main campuses reported some space in each category, there are three categories that are largely not present for university regional campuses: Residential, Health Care, and Unclassified Areas.

Because university regional campuses were intended to be used by the local community, it is reasonable that most would not have residential spaces. Further, because students are not living on campus the need for student health services are limited or nonexistent. Three of the OSU regional campuses are an exception to this trend. Notably, OSU uses two of these campuses as auxiliary campuses for individuals who are not admitted into the main campus. These regional campuses also offer four-year degrees, so an individual could remain on campus and obtain a baccalaureate degree. The third OSU regional, OSU – ATI, is a specialized agricultural institution. Those individuals seeking the program who live outside of the general area would benefit from the residential spaces provided.

Percent Institutional Space by Area Type | Regional Campuses



Source: ODHE
Note: Excludes Stadiums, Arena, Hospitals, and Parking Garages.

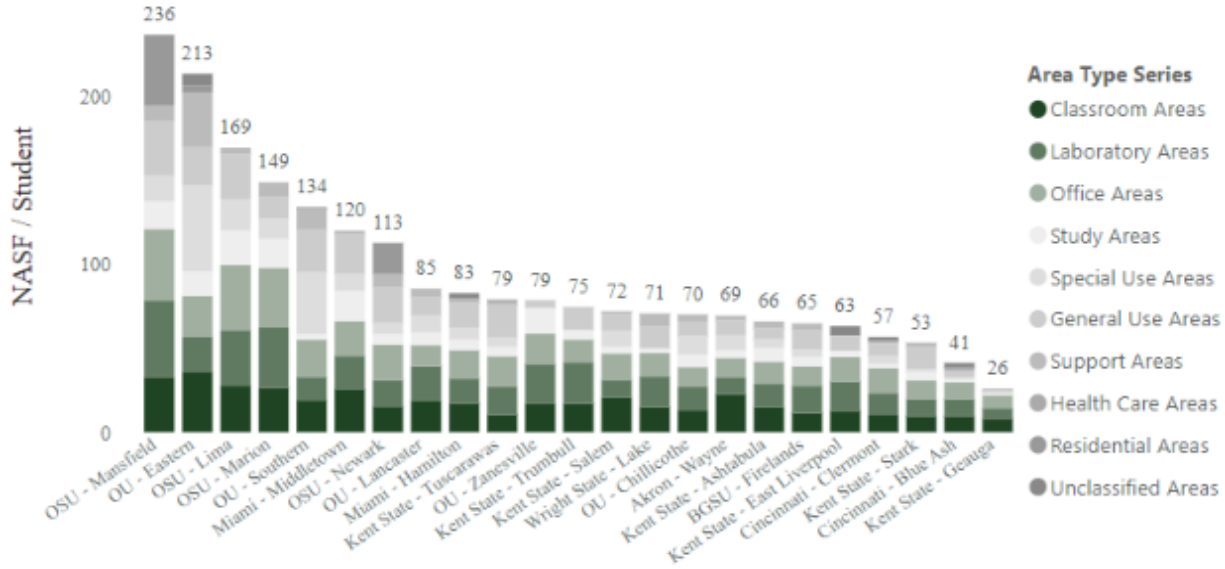
- **Classroom Areas:** Classroom areas range from 3.1 percent of total space at OSU – ATI to 32.4 percent of total space at Akron – Wayne.
- **Office Areas:** Office areas range from 6.2 percent of total space at OSU – ATI to 29.0 percent of total space at Kent State – Geauga.
- **Residential Areas:** Residential areas range from zero reported space at 19 institutions to 32.0 percent of total space at OSU – ATI.
- **Laboratory Areas:** Laboratory areas range from 9.8 percent of total space at OU – Eastern to 33.0 percent of total space at Kent State – Trumbull.

University Regional Campus Enrollment Data

During the first part of the past decade, total enrollment at university regional campuses steadily declined. At the same time, online enrollment remained the same. This means that the number of on-campus students was shrinking. Using 2018 facility and enrollment data, we identified the

amount of space per student at each institution. This is broken down by area type. In the chart below, the colored portions of the bar represent classrooms, laboratories, and offices. These spaces are those which have been reported to ODHE by institutions using the Department's definitions as general purpose and educational spaces necessary for the education of students. The chart below shows this breakout using total headcount which includes both online, on-campus, and hybrid learners.

2018 Space per Student | All Students | Regional Campuses

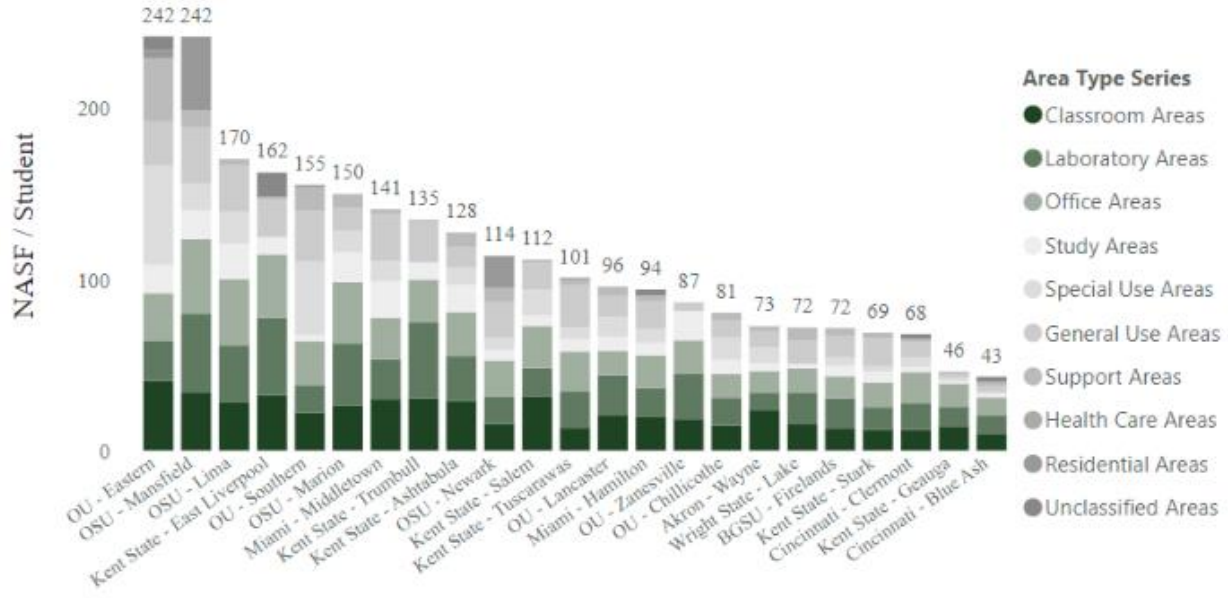


Source: ODHE and IPEDS

Reviewing space on a square foot per student basis provides another way to compare spaces at institutions. However, using total headcount is not the most accurate view of this data. Because students attending courses online do not utilize campus spaces in the same way that on-campus students would, removing those students from this analysis provides a more nuanced view of how existing space is allocated based on enrollment at the campus.

The chart on the following page reflects only students attending courses in-person. It should be noted that IPEDS reports data on hybrid learners. For purposes of this report, the hybrid learners are considered in-person as they may attend courses on campus.

2018 Space per Student | In-Person Students | Regional Campuses



Source: ODHE and IPEDS

Note: CCP students attending courses in a high school environment may be included in the in-person according to IPEDS data. The removal of these students could result in increases to the total square footage per student listed on this chart, depending on the popularity of that instructional method at individual institutions.

In comparing the two charts, there are several Kent State regional campuses that shift position when online enrollment is removed, moving up the ranking in regards to square footage per student. This indicates they have a higher than average percentage of online enrollment compared to the other regional campuses. Because this is occurring within one university, it is something that could be reviewed by ODHE and policy makers to determine the cause of the differentiation. See **Appendix B** for additional detail on the variation in space per student.

In three key area types; classroom areas, laboratory areas, and office areas, we reviewed the existing space on a per student basis for those enrolled on-campus or through hybrid methods.

- **Office Areas:** The median square feet of office area per student at university regional campuses was 22 square feet. This means that for every student, there are 22 square feet of office areas maintained by the institution. OSU – Mansfield had the most office areas per student at 44 square feet and Cincinnati – Blue Ash had the least amount of office areas per student at 10 square feet.
- **Classroom Areas:** The median square feet of classroom area per student at university regional campuses was 20 square feet. This means that for every student, there are 20 square feet of classroom areas maintained by the institution. OU – Eastern had the most classroom areas per student at 41 square feet and Cincinnati – Blue Ash had the least amount of classroom areas per student at 10 square feet.

- **Laboratory Areas:** The median square feet of laboratory area per student is 20 square feet. This means that for every student, there are 20 square feet of laboratory areas maintained by the institution. OSU – ATI had the most laboratory areas per student at 99 square feet and Akron – Wayne had the least amount of laboratory areas per student at 11 square feet.

For university regional campuses, Special Use Areas varied significantly from institution to institution. This is because some university regional campuses specialize in particular fields of study or maintain specialized facilities. In particular, the OSU – ATI is dedicated to agricultural sciences and has 186 square feet per in-person student designated as Special Use. This is likely due to unique needs relating to aspects of agriculture programs.

As with the university main campus data, these observations are based on a single year of data and are useful in identifying normal ranges and potential outliers. With detailed data over time, ODHE could present more detailed trend data that can be used for planning purposes.

Community & Technical College Data Observations

In addition to university regional campuses, the push to increase accessibility led to the establishment of two-year community and technical colleges. These institutions helped to serve the goal of every citizen having access to a public institution of higher education within a reasonable distance of their residence, established by the Board of Regents in 1966.

There are currently 23 community and technical colleges throughout the state. Through a number of agreements and programs, the transfer of credits between public institutions is designed to be relatively easy and student friendly. These colleges typically have an institutional goal to offer higher education courses to their local communities.

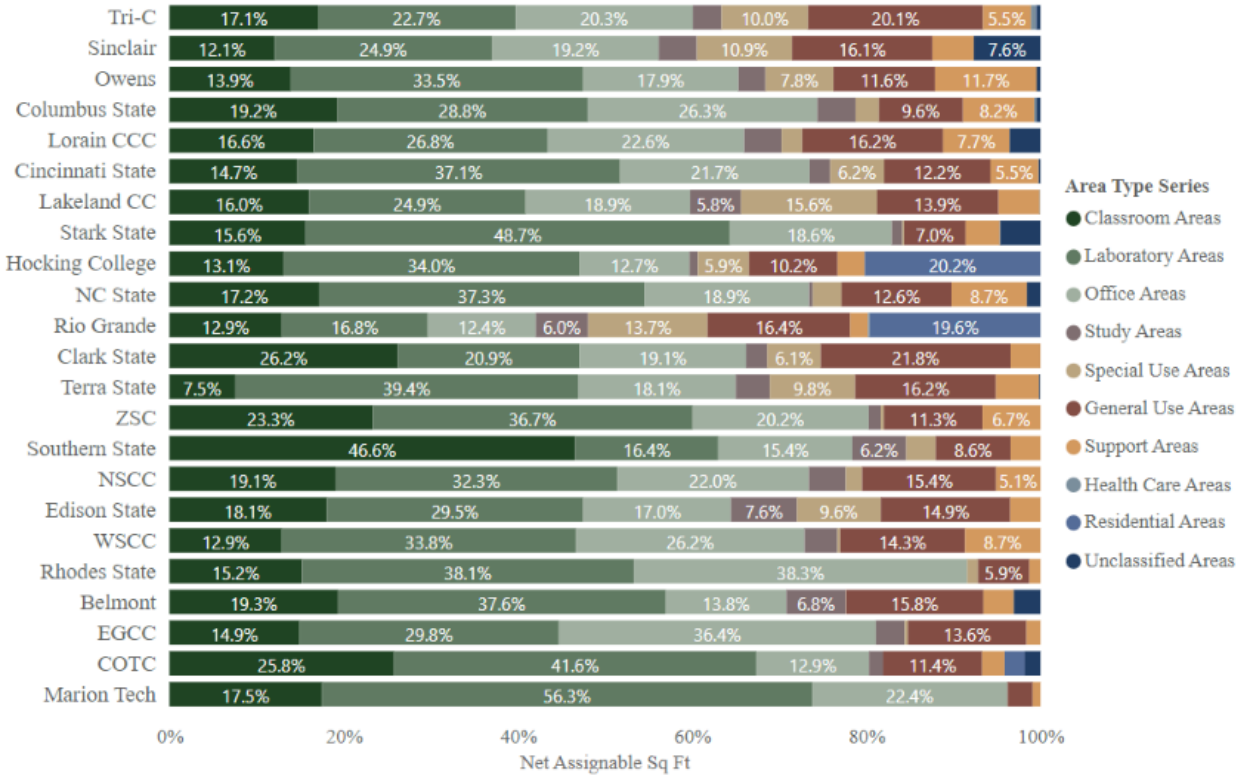
While originally designed to provide certificate and two-year degree programs, some now provide bachelor's degrees in specific fields of study. One of these programs, the Bachelor of Applied Science, Electrical Engineering Technology at Zane State College (ZSC), was created in partnership with American Electric Power to address an identified need in the community for an electric utility workforce.

Community & Technical College Facilities Data

The community and technical colleges in Ohio vary greatly in size. Cuyahoga Community College (Tri-C) reported more than 1.8 million square feet whereas Marion Technical College (Marion Tech) reported approximately 19,000 square feet. It should be noted that Marion Tech shares a campus with OSU – Marion. Their shared campus involves the sharing of building facilities. As such, the facility space reported in the ODHE data may not be reflective of the actual space utilized by the institution due to space being reported by OSU – Marion rather than Marion Tech.

Despite the variation in total space, which is likely driven by the local population, these institutions have similar missions – to provide quality general and technical education to the community. The breakdown of space by area type by campus illustrates the shared nature of each institution's mission. Particularly the significant percentage of space assigned to general purpose spaces of classrooms, laboratories, and offices.

Percent Institutional Space by Area Type | Community Campuses



Source: ODHE
Note: Excludes Stadiums, Arena, Hospitals, and Parking Garages.

There is one notable outlier within this set of institutions, Rio Grande Community College (Rio Grande). The space at Rio Grande is allocated in a manner which is more akin to a university main campus, with less than half of the available space being assigned to classrooms, laboratories, and offices. It is important to note that Rio Grande shares space with the University of Rio Grande, a private four-year institution, which likely is the cause for this variation. Marion

Tech, by comparison, allocates nearly all available space to classrooms, laboratories, and offices, however as a collocated institution,[17] it shares utilizes space owned by OSU – Marion.

- **Classroom Areas:** Classroom areas range from 7.5 percent of total space at Terra State to 46.6 percent of total space at Southern State.
- **Office Areas:** Office areas range from 12.4 percent of total space at Rio Grande to 38.3 percent of total space at Rhodes State.
- **Residential Areas:** Residential areas range from zero reported space at 19 institutions to 20.2 percent of total space at Hocking College.
- **Laboratory Areas:** Laboratory areas also have a wide range between colleges from 16.4 percent of total space at Southern State to 56.3 percent of total space at Marion Tech.

Community & Technical College Enrollment Data

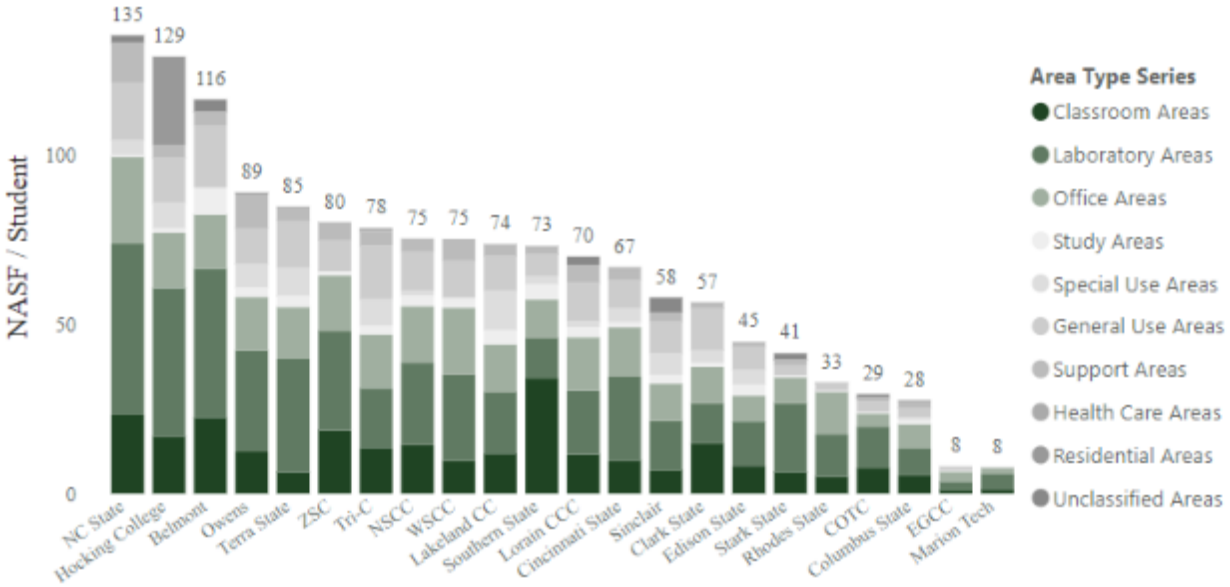
Total enrollment at community and technical colleges declined between 2012 and 2018, from to 185,000 to 167,000.[18] However, during that time frame online enrollment at these institutions increased from approximately 22,000 to just over 36,000, approximately a 64 percent increase.

Using 2018 facility and enrollment data, we identified the amount of space per student at each institution. This is broken down by area type. In the chart on the following page, the colored portions of the bar represent classrooms, laboratories, and offices. These spaces are those which have been reported to ODHE by institutions using the Department's definitions as general purpose and educational spaces necessary for the education of students. The chart below shows this breakout using total headcount which includes both online and on-campus learners.

[17] Fourteen of Ohio's public higher education institutions are co-located, meaning they exist on the same or contiguous plot of land and share resources. Typically, a regional campus of a four-year institution (e.g., OSU – Marion) is co-located with a two-year community/technical college (e.g., Marion Tech). Among other resources, co-located institutions can share facilities, which affects the analysis. The degree to which co-located institutions share their facilities varies; Kent State Stark and Stark State College share no buildings, while OSU Newark and COTC share ten. Similarly, the sharing agreement for a single building may vary—an institution might choose to not share the building with their partner, share it with their partner, or solely let their partner use it.

[18] Excludes Rio Grande Community College, who is combined with the University of Rio Grande in IPEDS for enrollment purposes.

2018 Space per Student | All Students | Community Campuses



Source: ODHE and IPEDS

Note: Rio Grande Community College is not included in this data set because it submits enrollment data to IPEDS that is combined with the University of Rio Grande.

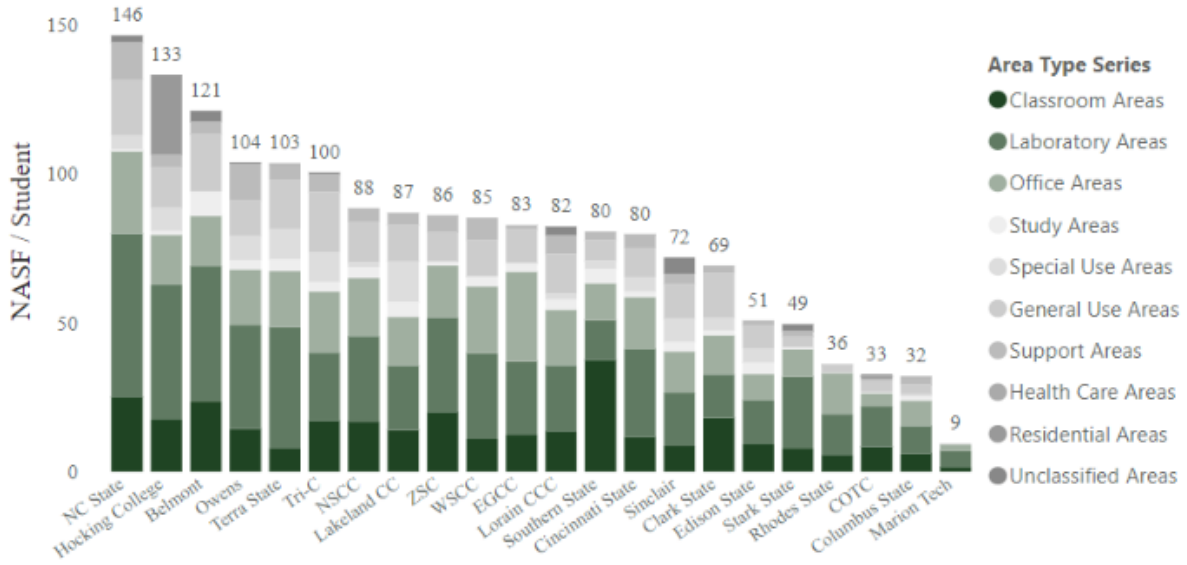
Reviewing space on a square foot per student basis provides another way to compare spaces at institutions. However, using total headcount is not the most accurate view of this data. Because students attending courses online do not utilize campus spaces in the same way that on-campus students would, removing those students from this analysis provides a more nuanced view of how existing space is allocated based on enrollment at the campus.

The chart on the following page reflects only students attending courses in-person. It should be noted that IPEDS reports data on hybrid learners. For purposes of this report, the hybrid learners are considered in-person as they may attend courses on campus.

Most notably, when reviewing the two charts, Eastern Gateway Community College's (EGCC) space per student is only 8 square feet when considering total headcount but is 83 square feet when counting only those students attending class on-campus. This an increase of 937.5 percent. The institution has, over the past several years, increased enrollment through partnerships to provide online courses. With this type of data, changes like this could be monitored so that ODHE and policy makers are aware of significant operational changes in a timely manner. See **Appendix B** for additional detail on the variation in space per student.

In three key area types; classroom areas, laboratory areas, and office areas, we reviewed the existing space on a per student basis for those enrolled on-campus or through hybrid methods.

2018 Space per Student | In-Person Students | Community



Source: ODHE and IPEDS

Note: Rio Grande Community College is not included in this data set because it submits enrollment data to IPEDS that is combined with the University of Rio Grande.

Note: CCP students attending courses in a high school environment may be included in the in-person according to IPEDS data. The removal of these students could result in increases to the total square footage per student listed on this chart, depending on the popularity of that instructional method at individual institutions.

- **Office Areas:** The median square feet of office area per student at community and technical campuses was 17 square feet. This means that for every student, there are 17 square feet of office areas maintained by the institution. EGCC had the most office areas per student at 30 square feet and Marion Tech had the least amount of office areas per student at 2 square feet.
- **Classroom Areas:** The median square feet of classroom area per student at community and technical campuses was 13 square feet. This means that for every student, there are 13 square feet of classroom areas maintained by the institution. Southern State had the most classroom areas per student at 37 square feet and Marion Tech had the least amount of classroom areas per student at 2 square feet.
- **Laboratory Areas:** The median square feet of laboratory area per student is 23 square feet. This means that for every student, there are 23 square feet of laboratory areas maintained by the institution. NC State had the most laboratory areas per student at 55 square feet and Marion Tech had the least amount of laboratory areas per student at 5 square feet.[19]

[19] Marion Tech has reported a total of 9 square feet per student. As a collocated institution, Marion Tech shares a significant amount of space with its partner institution OSU – Marion. As such, the reported space as used in this audit is artificially low.

As with the previous two sections, these observations are based on a single year of data and are useful in identifying normal ranges and potential outliers. With detailed data over time, ODHE could present more detailed trend data that can be used for planning purposes.

Recommendation 1: Improve Data Quality and Timeliness

Prior to FY 2013, capital allocations were distributed to colleges and universities based on a formula which took into consideration the age of an institution's facilities, enrollment numbers, and the amount of infrastructure the institution needed to maintain. In order to submit a budget request, ODHE collected facilities and enrollment data from institutions. While the formula is no longer used to allocate funds, data is still collected by the Department; however, the data is not collected in a timely manner and is not routinely verified by ODHE. This leads to stale and potentially inaccurate information being reported. The Department should work to ensure that all institutions report data by a specified date and it should develop and follow internal data verification methods. Accurate information relating to facilities is an important tool for both policy makers and institutions when making decisions relating to allocations and investments as well as future educational needs.

Impact

The state allocates approximately a half billion dollars for higher education in each capital budget. Understanding the facility spaces available at higher education institutions in Ohio is a critical first step in ensuring these capital funds are spent strategically. While the needs of institutions may vary, having a centralized data set will allow for critical analysis across all colleges and universities.

Background

Ohio's public colleges and universities are responsible for submitting data relating to facilities and other areas to ODHE annually. This information is to be submitted once a year between December 1st and February 6th.[20] The data submitted by institutions is supposed to reflect the status of facilities and areas as of the 15th day of the fall term. This information, along with enrollment data, was previously used to allocate funds set aside in the state's capital budget, but is not currently used for this purpose.

While facilities data is no longer used for capital allocations, it is still collected and maintained by ODHE. Guidance for the process is provided on the Department's website, featuring instructions on which data fields must be included, how these fields are defined, and how to submit. Once submitted, this data becomes part of the Department's Higher Education Information (HEI) system, a comprehensive database that includes student enrollment, course, financial aid, personnel, facilities, and finance data from Ohio's colleges and universities. High-

[20] In 2022, this deadline was extended to March 1, 2022.

level accuracy checks on the data are typically conducted by ODHE, though there is no formalized process in place for this.

Methodology

After making high-level observations regarding the data maintained by ODHE, we attempted to conduct analysis regarding particular areas of interest. The information used for analysis is contained in two databases: the Physical Structure Inventory and the Area Inventory. We conducted data reliability tests on the information to determine if the data set was accurate. Due to time constraints, we were unable to conduct a site visit of each campus; however, we did visit 14 institutions that are located on shared campuses throughout Ohio. The purpose of our site visits was to determine the accuracy of the data contained within ODHE's databases used for analysis.

Analysis

Information regarding physical structures and areas is supposed to be submitted by institutions to ODHE annually through an online portal. Instructions to the institutions state that the data should be submitted between December 1 and February 6 of each academic year. The physical structure data is meant to identify buildings owned or leased by an institution that are used by the institution. The area inventory provides detailed information regarding the type of space located in each building. ODHE provides institutions instructions on how to classify space by area type. The institution is responsible for classifying areas within a facility based on ODHE's definitions.

When obtaining facilities data from ODHE, we observed that institutions are not uniformly complying with this requirement. Our data request, made in August 2021, should have resulted in institutional data from the fall of 2020. However, the most complete set of data for all institutions was from the fall of 2018. Further, while this was the most complete data set, we did not have information from each institution for this year and also noted some errors in the data. Because of these issues, for ten institutions we were required to use an alternative year of data.

- Three institutions, Hocking College, Rio Grande, and OSU – ATI have not submitted data in several years. The most recent data from Hocking College and Rio Grande is from the fall of 2016, while the most recent data from OSU – ATI is from the fall of 2017.
- Five institutions, Cuyahoga Community College, Eastern Gateway Community College, Rhodes State, Owens Community College, and Southern State all submitted data for the fall of 2019, but did not submit data for the fall of 2018.
- Two institutions, Wright State and Wright State – Lake submitted data for the fall of 2018 that indicated there was zero classroom space at either location. This was corrected in the data submitted for the fall of 2019 term.

While the facilities data is no longer used in an allocation formula, it is still an important resource for ODHE and other policy makers in understanding the footprint of Ohio's public

colleges and universities. However, this information becomes less useful if it is not collected in a timely and consistent manner.

Impact of Outdated Data

Testing for data reliability is a standard audit step; however, due to the age of the available data, we underwent additional tests to identify and address variations. The building inventories for the 14 institutions tested for data reliability were reviewed to identify changes that had occurred in the roughly two years since the Fall 2018 data was collected. We found that approximately 175,000 gross square feet had been added at the institutions, while approximately 32,000 gross square feet had been removed. This reflects a 4.9 percent change in total space.

While generally space may not increase over a short period of time, the variation noted in these sample institutions is important. As not all capital projects are funded with state dollars, maintaining accurate data provides additional insight into ongoing projects at institutions. This, in turn, will allow ODHE to work with institutions to ensure the prioritization of limited capital funding.

Conclusion

The Department requires the submission of facilities data, but does enforce submission deadlines nor does it conduct standardized data quality checks. Because of this, the data that is collected is of limited use for analytic purposes. Higher education institutions and ODHE are allocated nearly a half billion dollars for capital projects each biennium. While the process of identifying projects is currently is left to institutions, accurate and timely data would allow for the Department and policy makers to develop strategic goals related to facilities.

Recommendation 2: Data Transparency

Collecting timely and accurate data is especially useful when it is used in a transparent manner. Once ODHE implements procedures to ensure the timely collection of data as discussed in **Recommendation 1**, it must also provide this information in a timely manner so that policy makers can make informed decisions relating to necessary changes in the state operating and capital budgets. This information could be provided to stakeholders and published in a dashboard similar to the one available on our website here **Campus Profile Dashboard** and here **Area Inventory Dashboard**.

Impact

In the most recent capital budget, higher education institutions and ODHE were allocated nearly $500 million. These funds were distributed primarily to Ohio's public colleges and universities for a variety of capital improvement projects. Dating back to 1960, the state has allocated more than $21 billion in capital funding.[21] Because the General Assembly lacks detailed insight into the current inventory of facilities, it is allocating these capital dollars without strategic guidance.

The current inventory of facilities is quickly reaching what is considered the end of its useful life. This means that costly renovations or demolition and new construction will be necessary in the near future. However, based on enrollment trends, it is possible that the current inventory of buildings may exceed the actual needs at some institutions.

Having timely and accurate data available will allow policy makers to allocate funds to those projects that will best serve the goals of higher education in Ohio. Further, this data will allow ODHE to advocate for policies that will benefit all public higher education institutions in Ohio.

Background

The Department previously used facilities data to allocate capital funding on a formula basis. However, the formula is no longer used to allocate funds, and the Department does not enforce annual reporting requirements. While ODHE does not presently use the data for funding purposes, it is important information to maintain and publish, particularly as institutions justify the need for new or improved buildings.

In particular, based on enrollment trends, the number of students attending courses on campuses has been declining for a decade. This trend does not appear to be slowing, and in fact was

[21] Funding has been adjusted to account for inflation.

accelerated due to the COVID-19 pandemic. As more students attend courses online, the need for campus facilities may decline at several institutions.

Methodology

We reviewed the reports which ODHE makes readily available to the public to review them for facility related data. Further, we interviewed the Department to determine how existing facility data was being utilized. We found through our interviews that the data is collected and maintained and occasionally used for the verification of other data submissions, though not always made publicly available.

Analysis

In the state's capital budget, higher education institutions routinely receive one of the highest total combined allocations. Most recently, they received nearly $500 million. These funds are primarily distributed to institutions based on the recommendation of agencies that represent the institutions. The funds are supposed to be distributed according to guidelines designed to ensure the use of state resources is strategic and focused. However, without aggregate detail regarding the total inventory of existing facilities, it is not possible to determine if the funds are being allocated appropriately or effectively.

After adjusting for inflation, the State of Ohio has allocated approximately $21 billion dollars toward higher education facilities since 1960 and continues to allocate funds for the repair, renovation, and replacement of facilities each biennium. Prior to the capital budget for FY 2013 and FY 2014, capital allocations for higher education institutions were distributed according to a formula based on the age of an institution's facilities, its enrollment numbers, and the amount of infrastructure it needed to maintain.

In 2011, the formulaic method for distributing capital funds was replaced with a more collaborative, conversation-based process that was implemented for the FY 2013 capital budget. Institutions were challenged to work together to distribute capital funds amongst themselves in a manner that best serves all Ohioans. The commission created a set of guiding principles to help ensure that the use of state resources by higher education institutions is strategic and focused, and institutions requested funds along these principles. This new process for allocating higher education capital funds has been used in every capital budget cycle since.

Because capital allocations are no longer distributed according to a formula, decisions regarding renovations and facility replacement have more opportunity to be arbitrary and not data-driven for the changing needs of students. Institutions already report enrollment and facilities inventories to ODHE each year, however facilities data is not reported upon to the general public or policy makers. While partnerships exist for the creation of select buildings, either with corporate or private donors, institutions continue to receive capital funds from the state, and transparency should exist regarding what buildings exist and their relative utilization.

Conclusion

ODHE should provide accurate and transparent information to the general public and policy makers on a regular basis. This type of reporting is essential to making informed decisions on how to spend limited capital funding. It also provides the public with transparent information regarding the inventory of facilities owned or operated by public colleges and universities as well as the priorities of ODHE and the University System of Ohio.

Recommendation 3: Facilities Strategic Plan

Beginning in 1966, there have been several strategic planning documents created with the goal of advancing higher education in Ohio. These plans provided goals and a roadmap for the future of public higher education in Ohio. The most recent document was a ten-year plan published in 2008. The Department should develop a strategic plan for higher education, with a focus on facilities. Due to the aging nature of existing facilities and declining demographic and enrollment trends, institutional leadership and policy makers will need data-driven guidance as they determine how to best address future facility needs.

Impact

A strategic plan is used to communicate organizational goals and the actions needed to achieve those goals. Developing a strategic plan for higher education would allow ODHE to clearly communicate the goals and objectives for the University System of Ohio over the long term and help to further the mission of the Department. An effective strategic plan is needed to address changing circumstances, such as declining on-campus enrollment, and will allow the Department to best advocate for policies that will benefit the goals of Ohio's higher education system.

Background

In 1966, the Ohio Board of Regents published the Master Plan for Ohio's Higher Education. This document was the first of several strategic plans for higher education. In 1966, government officials saw a boom in population and based their plan on the need for individuals to have access to higher education across the state. The most recent strategic plan for higher education was published by the Board of Regents in 2008. This plan provided a 10-year guide for the future of Ohio's public colleges and universities. The goals of the 2008 document reflected changes that had occurred during the previous 40 years and included improvements to technology, facility renovation needs, and alternative learning pathways.

Since 2008, Ohio has seen declining enrollment in primary and secondary school. The decline in school age children, coupled with overall population stagnation, has resulted in a smaller pool of individual residents who are seeking higher education. Further, enrollment at public colleges and universities in Ohio has shifted over the past decade with more individuals opting to enroll exclusively online. The decline in enrollment on-campus requires strategic planning related to the future of facilities.

Methodology

The Government Finance Officers Association (GFOA) recommends that all governmental entities use strategic planning to provide a long-term perspective for service delivery and

budgeting. We reviewed existing documentation and determined that ODHE does not have a strategic plan related to higher education facilities. As the Department responsible for coordinating higher education in Ohio, a strategic plan related to facilities is a critical component to ensuring that educational opportunities are delivered in a manner that meets the needs of Ohioans. Further, the strategic plan would assist in the allocation of capital funds and identifying the impact of facilities on institutional operating budgets.

We reviewed enrollment data from Ohio's public colleges and universities to identify how space is being utilized on a per student basis. This information was compared across institutions within similar categories. Further, we reviewed the enrollment type over time to determine if on-campus enrollment was increasing or decreasing. Finally, we reviewed strategic plans for higher education published by other states in order to identify potential benchmarking criteria.

Analysis

The Department has not published a strategic plan in more than a decade. Having such a document would allow ODHE to determine how available resources can be used to achieve future goals. The regular updating and publishing of strategic plans is important as there are many external factors, such as demographics or stakeholder needs, which can impact goals. The GFOA suggests that strategic plans be reviewed every one to three years and updated every five to ten years, depending on how quickly conditions change. The Department has the authority to conduct studies of higher education to assist them in making the best and most efficient use of their existing facilities and personnel.[22]

Aging Facilities and Enrollment

Many of Ohio's higher education facilities were built in the late 1960s and early 1970s. These facilities, which are 50 to 60 years old, are reaching the end of their useful life cycle and institutions are currently facing the decision to renovate or replace existing structures. This decision is coupled with declining enrollment on-campus. This is important because the use of facility space going forward will be drastically different than in the 1960's and 1970's when many of Ohio's higher education institutional buildings were built. The space that was previously used for students may be underutilized due to changing student enrollments as many of Ohio's buildings were built expecting a continued student growth. Prior to the COVID-19 pandemic, the majority of Ohio's institutions had lost enrollment since 2010. Further, the estimated population of school-aged residents declined 33.2 percent between 1970 and 2020 in Ohio.[23]

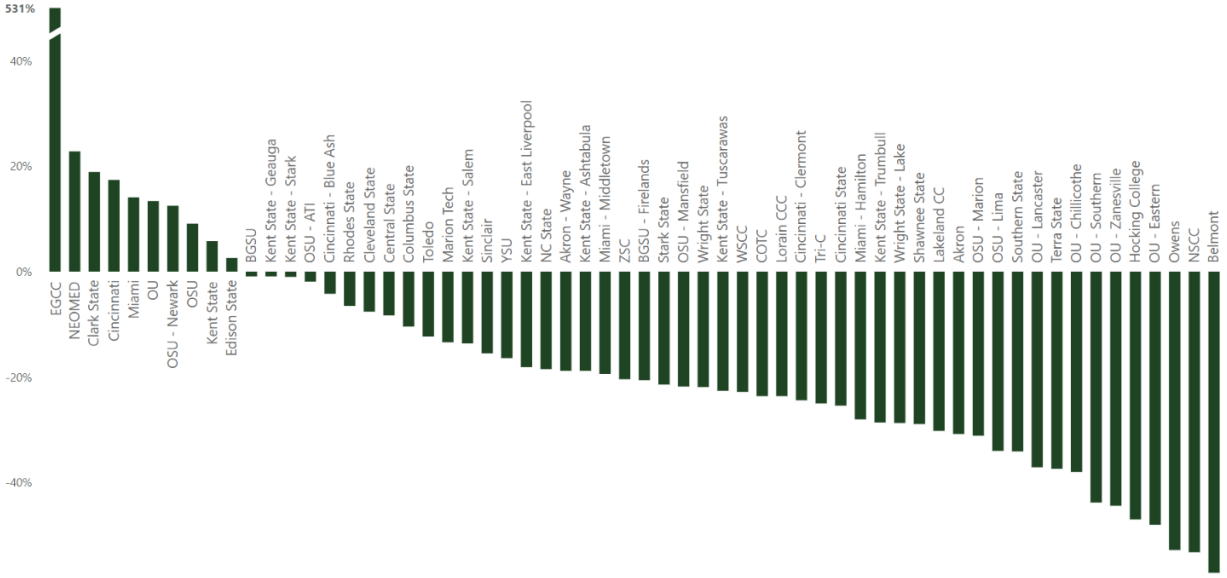
On the following page, the chart shows declining enrollment at the majority of public institutions between 2010 and 2018. This data reflects total enrollment. As discussed in the **Data**

[22] ORC§ 3333.04(H)
[23] Information taken from the National Center for Education Statistics. School-aged children are those individuals aged 5 to 17 years old.

Observations section, this declining enrollment is paired with an increase in on-line enrollment, which further emphasizes the need to plan for facility utilization in the future.

It should be noted that enrollment did increase during the COVID-19 pandemic, but this increase is expected to be temporary. During previous economic recessions, secondary institutions across the state have received temporary enrollment bumps and the COVID-19 pandemic was no different.

Total Enrollment % Change by Institution, 2010 to 2018



Source: IPEDS

The COVID-19 pandemic also highlighted the importance of a strategic plan for facilities. Every campus was forced to go online for some or all of its course delivery. While in-person classes have slowly returned, particularly as it relates to trades where hands on learning is necessary, online learning will continue to be a popular choice among students. Institutions built many structures with plans of having a growing in-person enrollment and this has led to underutilization on some campuses that may worsen with time.

Benchmarking

Several benchmarks exist for how space in a particular facility should be allocated. For example, Ohio's Department of Administrative Services suggests that state agencies maintain 250 square feet of office space for every full-time equivalent employee. While a single standard may not apply to the operational needs of a college or university, some guidance is necessary to allow for strategic planning.

ODHE does not provide standards regarding how space at public colleges and universities is utilized. However, in our review, other states such as Texas and Washington, have undergone

processes relating to space utilization and have provided broad guidance to colleges and universities. As the Department identifies benchmarks for Ohio public colleges and universities it should provide a broad range for the area types used in the inventory data. This range would allow for operational differences between institutions that were discussed in the **Data Observations** section of this report. For example, NEOMED will require a higher amount of laboratory space per student compared to other universities that have non-science related disciplines.

Conclusion

The Department has the authority to conduct studies needed to create a strategic plan. This strategic plan will need to address the changing needs of students. In the 1960's ODHE used the idea of bringing the college to the student, not the student to the college. Leaders were picturing campuses being built across the state and creating a community of colleges for students. This mantra, however, is relevant and useful today more than ever. With online courses, schools can offer classes and learning opportunities at a more efficient rate than ever in Ohio's education history. At minimum, the state should develop criteria for the benchmarking of facilities space per in person student. This can be considered during the construction of new space or when utilization deviates substantially from the benchmark. ODHE and the state may need to prepare for difficult decisions regarding what to do with underutilized buildings.

Issue for Further Study: Ensure Higher Education Quality

Total enrollment at Ohio's public colleges and universities has remained stable for most of the past decade. However, during that timeframe there has been a steady shift in how individuals attend courses –students are increasingly opting to enroll online rather than attend courses on campus. Policy makers should be aware of how students are accessing education as increases in headcount do not always mean that there are more students attending class on-campus. This information is important for policy makers so that they can make informed decisions regarding future capital projects.

Understanding the operational choices being made at these institutions is an important step to knowing the impact of focusing on online enrollment. Providing online courses requires technology infrastructure in order to support students. This infrastructure can be costly and requires planning to be adequately prepared. Additionally with the increase of online enrollment come questions regarding the quality of education being offered and potentially issues around accreditation.

During our audit we identified several institutions that, over a short period of time, significantly increased online enrollment. While online enrollment is increasing across all public colleges and universities, Eastern Gateway Community College, had enrollment increases that warranted further review. Total enrollment at this institution grew from 4,527 in 2016 to 40,036 in 2020, an increase of nearly 785 percent during the time frame.

EGCC Headcount by Year, 2016 to 2020

Institution Name	2016	2017	2018	2019	2020	5-Year Difference	5-Year Change
Total Headcount	4,527	8,526	13,940	25,648	40,036	35,509	784.4%
Distance Only Headcount	2,101	6,088	12,576	24,208	38,343	36,242	1725.0%
In-Person+Hybrid Headcount	2,426	2,438	1,364	1,440	1,693	(733)	-30.2%

Source: IPEDS

This increase occurred exclusively through distance learners and, during the course of the audit, the institution was placed on probation by its accrediting body, the Higher Learning Commission (HLC). In a November 8th letter, the HLC identified the following as some of the reasons for the probation:

- The Institution does not meet Criterion Three, Core Component 3.C, "the institution has the faculty and staff needed for effective, high-quality programs and student services"
- The Institution does not meet Criterion Three, Core Component 3.D, "the institution provides support for student learning and resources for effective teaching"

- The Institution does not meet Criterion Four, Core Component 4.A, "the institution ensures the quality of its educational offerings"
- The Institution does not meet Criterion Four, Core Component 4.B, "the institution engages in ongoing assessment of student learning as part of its commitment to the educational outcomes of its students"
- The Institution does not meet Criterion Four, Core Component 4.C, "the institution pursues educational improvement through goals and strategies that improve retention, persistence and completion rates in its degree and certificate programs"

While growth through online education can be done successfully, considering the rate of expansion associated with EGCC, it should be monitored to ensure that quality is not sacrificed when student quantity is pursued as should other institutions emulating this model.

Client Response Letter

Audit standards and AOS policy allow clients to provide a written response to an audit. The following letter is the Department's official statement in regards to this performance audit. Throughout the audit process, staff met with Department officials to ensure substantial agreement on the factual information presented in the report. When the Department disagreed with information contained in the report, and provided supporting documentation, revisions were made to the audit report.

Ohio | Department of Higher Education

Mike DeWine, Governor
Randy Gardner, Chancellor

March 29, 2022

The Honorable Keith Faber
Auditor of State
88 E. Broad Street
Columbus, OH 43215

Dear Auditor Faber:

The Ohio Department of Higher Education (ODHE) sincerely appreciates the work of the Auditor of State, specifically the Ohio Performance Team, on the recently completed Performance Audit related to public higher education facilities. As an agency, we are always looking for ways to improve operations and enhance the value that our colleges and universities can provide to all citizens of Ohio. We look forward to incorporating your recommendations into our strategies, policies and procedures as we move forward in completing our mission.

The following are general responses to the three recommendations included in the report.

1. **Data Quality and Timeliness**
   We agree that institutions should submit data by a specified date. In pursuit of this outcome, we recently re-emphasized the importance of timely data submissions to public colleges and universities by revising and strengthening our comprehensive data submission policies. We also agree that data should be verified and accurate. The Higher Education Information (HEI) system contains internal data validations and verification processes that are customized for each file that institutions are required to submit. These validations and verification processes undergo continuous review and adjustment to ensure the data submitted by institutions are accurate and valid. ODHE will take steps to reinforce the processes surrounding facilities data submission and verification.

2. **Data Transparency**
   ODHE provides timely information to policy makers in response to specific requests. Information for the most frequently asked questions or requests is readily available on the ODHE website. Due to ODHE's limited role in the capital budgeting process as executed over the last six capital biennia, there have been few information requests of this type regarding public higher education facilities. ODHE is poised to promptly answer information requests about facilities as they arise, but there has been very little recent demand for that information. Nevertheless, to fulfill this recommendation, ODHE can add a standard facilities report to the list of annual reports already prepared and made available for public utilization.

3. **Facilities Strategic Plan**
   ODHE will review this recommendation with public colleges and universities and encourage institutions to continue taking into consideration the changing nature of the online student and

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campus landscape for future planning purposes. As demonstrated by each institution's six-year capital improvement plan required each biennia by Ohio Revised Code section 126.03, and the composition of higher education projects appropriated to institutions in recent capital budgets, the focus of state capital appropriations for higher education facilities has shifted dramatically in recent years from new construction to renovation/rehabilitation of existing facilities. ODHE expects this to remain consistent for the foreseeable future.

Thank you once again for the opportunity to provide this response. We appreciate the work of the Ohio Performance Team and look forward to our continuing partnership.

If you have any additional questions, please don't hesitate to reach out.

Sincerely,

Randy Gardner
Chancellor

Appendix A: Purpose, Methodology, Scope, and Objectives of the Audit

Performance Audit Purpose and Overview

Performance audits provide objective analysis to assist management and those charged with governance and oversight to improve program performance and operations, reduce costs, facilitate decision making by parties with responsibility to oversee or initiate corrective action, and contribute to public accountability.

Generally Accepted Government Auditing Standards (GAGAS) require that a performance audit be planned and performed so as to obtain sufficient, appropriate evidence to provide a reasonable basis for findings and conclusions based on audit objectives. Objectives are what the audit is intended to accomplish and can be thought of as questions about the program that the auditors seek to answer based on evidence obtained and assessed against criteria.

We conducted this performance audit in accordance with GAGAS. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Audit Scope and Objectives

In order to provide ODHE with appropriate, data driven recommendations, the following questions were assessed within each of the agreed upon scope areas:

Summary of Objectives and Conclusions

Objective	Recommendation
What inventory of facilities space exists within Ohio's public institutions of higher education, and how is that space being used?	**Rec. 1, Rec. 2, Rec. 3, and IFFS**

Although assessment of internal controls was not specifically an objective of this performance audit, internal controls were considered and evaluated when applicable to scope areas and objectives.

Audit Methodology

To complete this performance audit, auditors gathered data, conducted interviews with numerous individuals associated with the areas of ODHE's operations included in the audit scope, and reviewed and assessed available information. Assessments were performed using peer benchmarks, laws, rules, and policies and procedures.

Appendix B: Additional Information

Area Type Categories

Assignable space data is measured by square feet and categorized by Area Type. These Area Types use specific codes and definitions which are published by ODHE. The Area Types and codes were adapted by ODHE from the FICM. The use of codes and specific definitions allows for the data collected by ODHE to be standardized, which in turn, allows for the data to be compared across institutions. These Area Types are taken directly from ODHE and are used in the analyses of the audit:

- **Classroom Areas:** classrooms and classroom services areas.
- **Laboratory Areas:** class laboratory, class laboratory service, open laboratory, open laboratory service, research/non-class laboratory, and research non-class laboratory service.
- **Office Areas:** office, office service, conference room, and conference room service.
- **Study Areas:** study room, stack, open-stack study room, processing room, study service.
- **Special Use Areas:** armory, armory service, athletic or physical education, athletic or physical education service, athletic facility spectator seating, media production, media production service, clinic, clinic service, demonstration, demonstration service, field building, animal quarters, animal quarters service, greenhouse, greenhouse service, and other (all purpose).
- **General Use Areas:** assembly, assembly service, chapel, exhibition, exhibition service, food facility, food facility service, day care, day care service, lounge, lounge service, merchandising, merchandising service, recreation, recreation service, meeting room, and meeting room service.
- **Support Areas:** central computer or telecommunications, central computer or telecommunications service, shop, shop service, central storage, central storage service, vehicle storage, vehicle storage service, central service, central service support, hazardous materials, hazardous materials service, hazardous waste storage, hazardous waste service, and unit storage.
- **Health Care Areas:** patient bedroom, veterinary medicine animal quarters, patient bedroom service, veterinary quarters service, patient bath, nurse station, veterinary medicine nurse station, nurse station service, veterinary nurse station service, surgery, veterinary medicine surgery, surgery service, veterinary surgery service, treatment/examination, veterinary medicine treatment/examination, treatment/examination service, veterinary medicine treatment/examination service, diagnostic service laboratory, veterinary medicine diagnostic service laboratory, diagnostic service laboratory support, veterinary medicine diagnostic service laboratory support, central supplies, public waiting, veterinary medicine public waiting, staff on-call facility, and staff on-call facility service.

- **Residential Areas:** sleep/study without toilet or bath, toilet or bath, sleep/study with toilet or bath, sleep/study service, apartment, apartment service, house, and guest room.

Space per Student Comparisons

The following tables provide additional detail regarding the total space per student at all institutions that is assignable, broken down by institutional category. The first column identifies the amount of space maintained by an institution on a per student basis using total enrollment. The second column shows the total space maintained by an institution on a per student basis using only hybrid and on-campus students. Finally, the third column shows the difference, in square feet, between the two columns.

These tables show the impact online learners can have in relation to the amount of space maintained by an institution. Higher numbers in the third column indicate a greater number of online only students. This is an important distinction that can be made using IPEDS data. For example, as noted in the **Issue for Further Study**, enrollment at EGCC has grown significantly over the past several years. However, this growth is exclusively in online students. Understanding how and why the enrollment at a particular college or university is shifting will assist policy makers in making informed decisions regarding the allocation of resources in both operating and capital budgets.

2018 Main Campus Space per Student Comparison

Main Campuses	Square feet per Student In-Person	Square Feet per Student, All Students	Difference
Akron	204	196	8
BGSU	188	172	16
Central State	317	316	1
Cincinnati	185	154	31
Cleveland State	181	169	12
Kent State	156	134	22
Miami	216	205	11
NEOMED	326	326	0
OSU	227	219	8
OU	225	162	63
Shawnee State	155	153	2
Toledo	209	190	19
Wright State	124	123	1
YSU	140	132	8

2018 Regional Campus Space per Student Comparison

Regional Campuses	Square Feet per Student, In-Person	Square Feet per Student, All Students	Difference
Akron - Wayne	73	69	4
BGSU - Firelands	72	65	7
Cincinnati - Blue Ash	43	41	2
Cincinnati - Clermont	68	57	11
Kent State - Ashtabula	128	66	62
Kent State - East Liverpool	162	63	99
Kent State - Geauga	46	26	20
Kent State - Salem	112	72	40
Kent State - Stark	69	53	16
Kent State - Trumbull	135	75	60
Kent State - Tuscarawas	101	79	22
Miami - Hamilton	94	83	11
Miami - Middletown	141	120	21
OSU - ATI	583	581	2
OSU - Lima	170	169	1
OSU - Mansfield	242	236	6
OSU - Marion	150	149	1
OSU - Newark	114	113	1
OU - Chillicothe	81	70	11
OU - Eastern	242	213	29
OU - Lancaster	96	85	11
OU - Southern	155	134	21
OU - Zanesville	87	79	8
Wright State - Lake	72	71	1

2018 Community College Campus Space per Student Comparison

Community Colleges	Square Feet per Student, In-Person	Square Feet per Student, All Students	Difference
Belmont	121	116	5
Cincinnati State	80	67	13
Clark State	69	57	12
Columbus State	32	28	4
COTC	33	29	4
Edison State	51	45	6
EGCC	83	8	75
Hocking College	133	129	4
Lakeland CC	87	74	13
Lorain CCC	82	70	12
Marion Tech	9	8	1
NC State	146	135	11
NSCC	88	75	13
Owens	104	89	15
Rhodes State	36	33	3
Sinclair	72	58	14
Southern State	80	73	7
Stark State	49	41	8
Terra State	103	85	18
Tri-C	100	78	22
WSCC	85	75	10
ZSC	86	80	6

OHIO AUDITOR OF STATE
KEITH FABER

OHIO DEPARTMENT OF HIGHER EDUCATION

FRANKLIN COUNTY

AUDITOR OF STATE OF OHIO CERTIFICATION

This is a true and correct copy of the report, which is required to be filed pursuant to Section 117.26, Revised Code, and which is filed in the Office of the Ohio Auditor of State in Columbus, Ohio.

Certified for Release 4/12/2022

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