



BRINGING STUDENTS BACK TO A HEALTHY CAMPUS

How Voice Technology and Operational Savings Help You Improve Health and Engagement



*Transform the learning experience
by solving resource challenges
with energy savings and integrated
facility management.*

“It All Depends...” Isn't What You're Looking For

Leaders across academia are answering uncertainty with action. While COVID-19 will continue to change how we learn, institutions are moving forward and presenting clear paths forward for students.



DATA SNAPSHOT | MAY 26, 2020

The majority of colleges (67%) were planning for in-person classes in the fall.¹



DATA SNAPSHOT | MAY 1, 2020

Over 400 colleges had extended decision deadlines.²

The challenges are clear and mounting, however. Almost every resource has or will be impacted by the pandemic, including long-term economic effects on public funding, private giving, and student spending. A poll by the Association of American Colleges and Universities found that 70% expect revenue decreases of 10% or more.³

Resource Challenges on the Rise



The American Council on Education predicted a 15% drop in enrollment next year.⁴

20% of high school seniors say COVID-19 has made unlikely they'll attend next semester.⁵

- Unprecedented cuts in state funding for education⁶
- Losses from refunds for room and board⁷
- Declining enrollment
- Sports revenues lost⁸
- Decreased giving
- Fewer scholarships⁹
- Loss of international students¹⁰
- Lost income from event and conference rentals¹¹

With student enrollment already depressed in the U.S. (11% fewer students enrolled in 2019 than in 2011¹²) many institutions are familiar with the need to push transformational projects forward with less resources on hand.

1 <https://www.chronicle.com/article/Here-s-a-List-of-Colleges-/248626>

2 <https://www.insidehighered.com/news/2020/05/01/amid-pandemic-may-1-national-college-decision-day-means-less-ever-year>

3 <https://abc-insights.com/wp-content/uploads/2020/04/ABC-Insights-Covid-19-Strategy-Survey-of-AACU-Presidents-4.3.20-Final.pdf>

4 [https://www.acenet.edu/News-Room/Pages/Higher-Education-Community-Requests-\\$47-Billion-for-Students-and-Institutions-Proposes-Tax-Changes.aspx](https://www.acenet.edu/News-Room/Pages/Higher-Education-Community-Requests-$47-Billion-for-Students-and-Institutions-Proposes-Tax-Changes.aspx)

5 <https://cdn2.hubspot.net/hubfs/4254080/SimpsonScarborough%20National%20Student%20Survey%20.pdf>

6 <https://www.insidehighered.com/news/2020/05/15/size-state-budget-cuts-becomes-clearer>

7 <https://www.educationdive.com/news/college-presidents-anticipate-cost-cutting-layoffs-from-coronavirus-surve/575647/>

8 <https://www.usatoday.com/story/sports/ncaaf/2020/04/14/college-football-major-programs-could-see-billions-revenue-go-away/2989466001/>

9 <https://www.forbes.com/sites/andrewdepietro/2020/04/30/impact-coronavirus-covid-19-colleges-universities/#e57ec2461a68>

10 <https://www.forbes.com/sites/andrewdepietro/2020/04/30/impact-coronavirus-covid-19-colleges-universities/#e57ec2461a68>

11 <https://www.governing.com/finance/can-colleges-reopen-in-fall-if-not-some-wont-survive.html>

12 <https://www.npr.org/2019/12/16/787909495/fewer-students-are-going-to-college-heres-why-that-matters>

ANSWERS THAT CREATE OPTIONS – AND ALIGN FUNDS TO YOUR PRIORITIES

One in four students said COVID-19 affected their choice of college.¹³ answers that create options – and align funds to your priorities, institutions are investing in transformational change across their facilities and operations.

To cut costs and protect funding for upgrades, leaders are assessing and reducing facility costs like energy, maintenance, and operations. A facility services partner able to impact multiple budget items can deliver innovative efficiencies beyond basic savings.

Our upgrade projects can fund IT and communication needs. Can voice technology tools help everyone reduce contact with high-touch surfaces?

> See Page 9

Need to move on capital projects now, instead of five years from now? ABM structures service agreements to help you move investments forward. Ask us about Professional Service Agreements (PSAs).

Integrated services multiply savings, if your service partner has the scope for it. Can critical services like disinfection be delivered efficiently?

> See Page 13

Are teachers and students concerned about your in-house disinfection protocols? ABM can help you step up disinfection with EnhancedClean™, and help you prioritize health and wellness with projects to fund the transition.

ISSUES WITH ONLINE LEARNING

A 2014 Journal of Higher Education study found decreased performance for all groups in online courses, noting both a drop in completion of the course and average grade achieved.¹⁴ This study focused on student's ability to adapt to online coursework, and concluded that negative impacts of online learning have been missed because students that chose online courses in the past tended to have strengths that compensated. Furthermore, the study suggested that performance gaps, such as those facing minority students, are widened by online courses.

One key finding was the peer effect. Students in online learning suffered when their course peers also adapted poorly. Social sciences and applied professions (such as nursing, law, and business) also appeared more difficult for students to adapt to.



¹³ <https://cdn2.hubspot.net/hubfs/4254080/SimpsonScarborough%20National%20Student%20Survey%20.pdf>

¹⁴ <https://ccrc.tc.columbia.edu/publications/adaptability-to-online-learning.html>



BUILDING A WAY TO BE TOGETHER

**Today's educators face a practical problem:
investing in the positive outcomes of both online
and in-person learning.**

DIFFICULTY TRANSITIONING

A recent poll of Higher Education services documented the difficulty of transitioning to remote learning during the COVID-19 outbreak. Sixty-three percent reported student issues with internet access as either somewhat or extremely difficult, before digging into the details of student collaboration, library resources, and access to faculty.¹⁵

DIFFICULTIES REPORTED¹⁶	Moderate or Extreme Difficulty	Somewhat Difficult
ACCESS TO INTERNET	36%	27%
USING REMOTE LEARNING	14%	28%
COLLABORATING	18%	24%

68% of college presidents polled in March said they were very concerned about disproportionate impacts on needy students.¹⁷

Institutions now face the dual problem of investing in instructional technology that alleviates those difficulties while planning for the realities of social distancing and staggered scheduling in physical learning environments.

PROTECTING STUDENTS AND FACULTY IN THE PHYSICAL ENVIRONMENT

Every sector of public life faces unique challenges implementing COVID-19 recommendations, but institutions of higher education have particularly complex schedules. The normal order of the day would bring any one person into contact with multiple groups across multiple facilities. Thinking through those physical realities is taking both creativity and careful attention to the qualities of our built environments.

Colleges and universities will have to coordinate complex and constantly changing schedules. Clear communications will be a necessity, and forward-thinking leaders are planning for nimble, well-managed communications to reduce frustration, enhance cooperation, and protect a key resource for students and faculty: their time.



¹⁵ <https://er.educause.edu/blogs/2020/4/educause-covid-19-quickpoll-results-help-for-students>

¹⁶ <https://er.educause.edu/blogs/2020/4/educause-covid-19-quickpoll-results-help-for-students>

¹⁷ <https://www.insidehighered.com/news/survey/presidents-biggest-covid-19-worries-low-income-students-and-colleges-financial-strain>

SAFETY MEASURES UNDER CONSIDERATION

- Fixed entrance and exit points
- Mono-directional hallways
- Rotating schedules
- Smaller classes
- Face covering policies and resources
- Staggered departure for classes
- Updating codes of conduct/good neighbor policies
- Decentralized groups/student cohorts
- Handwashing / social distancing policy reminder signage
- Modified room layouts
- Improved ventilation
- Installing physical barriers
- Residential quarantine spaces
- Temperature screening
- Close common and shared spaces
- Frequent cleaning and disinfection
- Staggered food services
- Hand sanitation resources
- Reducing touch points



Time for Transformational Technology

Voice interaction can answer the need for improved communication and co-ordination across campus life. It also provides new tools for distance learning. And with the right systems in place, voice technology can also help you protect the health of your campus community by reducing interaction with high-touch surfaces in residential and common areas.

Integrated voice controls can be used for more than speedy access to information. Students could access controls for their environment, like lighting and ventilation in their residence areas, all without touching physical controls.

A voice technology device also empowers touchless management of common spaces. Faculty can command

classroom technology. Students could control common area resources without touching switches.

Improved control for both students and operations helps reduce energy costs. Voice technology can make that control more effective and help you collect energy use data that can inform even more proactive energy saving plans.

Voice technology provides multiple benefits beyond providing tools for energy cost reduction, but that energy cost reduction can be used to fund upgrades. To help fund upgrades, like voice-technology, an energy performance project creates savings your institution can invest where you need it.

COMPARING ISSUES AND INVESTMENT

80% of institutions say they're looking for new donors, grants, and additional state support. Less than a third wanted to address budget issues by reducing offerings or changing tuition pricing.¹⁸ To avoid layoffs, furloughs, tuition increases, or cuts to critical services and educational offerings, many institutions need to find cost reductions elsewhere.

Deferring maintenance is an option many have already taken. In some cases, the short-term needs outweigh the long-term risks and costs. Reducing energy costs sometimes depends on capital needed elsewhere. An energy performance contract can help an institution break that cycle.



DATA SNAPSHOT | APRIL 2020

Presidents' Most Pressing Issues

Upcoming enrollment	86%
Long-term financial viability	64%
Sustaining online learning	45%
Laying off faculty and staff	44% ¹⁹



DATA SNAPSHOT | APRIL 2020

Most Likely Actions to Increase Revenue

Seek New Donors	87%
Seek More State Support	85%
Seek Additional Grants	83%
Start/Expand Capital Campaign	49% ²⁰

¹⁸ [insidehighered.com/news/survey/presidents-biggest-covid-19-worries-low-income-students-and-colleges-financial-strain](https://www.insidehighered.com/news/survey/presidents-biggest-covid-19-worries-low-income-students-and-colleges-financial-strain)

¹⁹ <https://www.acenet.edu/Research-Insights/Pages/Senior-Leaders/College-and-University-Presidents-Respond-to-COVID-19-April-2020.aspx>

²⁰ <https://www.insidehighered.com/news/survey/presidents-biggest-covid-19-worries-low-income-students-and-colleges-financial-strain>

It's Already Happening

Voice technology is already helping students access and engage with:

- Library services
- Disability support services
- Recorded lectures, notes, review material, and practice quizzes
- Dining options
- Parking availability
- IT service status
- Scheduling information
- Campus information and news

<https://aws.amazon.com/blogs/publicsector/just-in-time-for-back-to-school-updates-from-alexa-on-campus/>

TAKING ACTION FOR EFFICIENCY AND COST-CONTROL

96% of presidents plan to re-engineer operational processes.¹² And of those looking to identify efficiency and cost-control, 34% anticipate doing so, and 65% report they've already done so.²² In many cases, finding more effective cost reductions may require a deeper dive.

An assessment of energy costs, control systems, and operations can discover where dollars are being spent without benefiting students and faculty. For instance, overspending on heating and cooling takes money out of the budget without improving ventilation or air quality. Both addressing older equipment and implementing innovative controls can help keep those dollars on campus.

Moving to an integrated facility service model can also create efficiency, helping you manage costs across multiple service needs, reduce staffing issues, redirect resources to priorities, and improve facility outcomes for everyone.

21 <https://abc-insights.com/wp-content/uploads/2020/04/ABC-Insights-Covid-19-Strategy-Survey-of-AACU-Presidents-4.3.20-Final.pdf>

22 <https://www.acenet.edu/Research-Insights/Pages/Senior-Leaders/College-and-University-Presidents-Respond-to-COVID-19-April-2020.aspx>



INNOVATION THAT MAKES A DIFFERENCE

Energy-saving projects often use smart controls that help reduce energy waste. Voice control technology takes that a step further, with a touchless interface that helps everyone use controls more intelligently.

Imagine simply asking a voice control program to turn the AC on in your room five minutes before you'll be back from class. Without having to understand the controls or navigate the interface, you're able to engage in energy-saving behavior.



MAKING THE PLAN HAPPEN

Most institutions can access energy-saving ideas, either from their own engineers or from hired consultants. But those ideas have to compete for capital along with every other spending priority. Now that COVID-19 has crowded the field, capital improvements are even harder to prioritize. To make energy-saving ideas work, institutions need more options. An energy performance contract makes it possible to pay for energy saving improvements without competing for capital. The strategy takes advantage of budget dollars already dedicated to utility bills. By stopping energy overspending, it's possible to use those budget dollars where they're needed.

VENTILATION IS KEY TO COVID-19 RESPONSE

Humid air can prolong survival rates of viruses indoors²³ and relative humidity plays a role in aerosol transmission of viruses.²⁴ While the virus can also be spread in other ways (such as touching contaminated surfaces and then the face), the CDC has noted that COVID-19 spreads primarily through respiratory droplets.²⁵

That makes HVAC systems an important area of focus, impacting energy spend as well as key health factors: humidity and indoor air quality. Building controls can help control costs and ensure proper air exchange, while high-efficiency filters can help you remove particles from the air. For instance, the EPA recommends 8-13 Minimum Efficiency Rating Value (MERV) for schools.²⁶

Ventilation systems also present opportunities to introduce new disinfection technologies. Ultraviolet germicidal lights can reduce bacteria and mold on surfaces or flowing air; strategically placed to reduce growth in the HVAC system, they may also improve energy performance.²⁷ Cold plasma, a technology for air filtration, has shown up to a 99.9% pathogen kill rate in studies.²⁸ Cleaning indoor air with filtration technology can reduce the need to bring more outdoor air into the building. That can save your system the energy cost of heating or cooling that air.

HVAC systems can also positively impact student engagement and performance. For instance, improved ventilation and fewer volatile organic compounds (VOCs) led to 61% higher cognitive test scores in adults.

Why Parents Care About Voice Technology on Campus

- Safety:** Voice access to campus security services
- Health:** Reduced interaction with high-touch surfaces
- Service:** Improved access to campus services
- Learning:** Engaging educational resources
- Preparing:** Experience with new technology

Humidity, temperature, and ventilation all impact how diseases spread indoors.²⁹

COVID-19 has been detected on particles of air pollution.³⁰

23 <http://www.arb.ca.gov/research/indoor/ab1173/finalreport.htm>

24 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3457514/>

25 <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-covid-spreads.html>

26 <https://www.epa.gov/iaq-schools/heating-ventilation-and-air-conditioning-systems-part-indoor-air-quality-design-tools#AirFiltration>

27 <https://iaqscience.lbl.gov/air-uv>

28 https://mishe.org/images/downloads/Conference_2016/single_point_bi_polar_ionization_by_global_plasma_solutions.pdf

29 <https://www.lung.org/clean-air/at-home/indoor-air-pollutants/bacteria-and-viruses>

30 <https://www.theguardian.com/environment/2020/apr/24/coronavirus-detected-particles-air-pollution>



The Right Partner

Energy performance may not be a new strategy, but it's a great tool for funding new ideas and transformation projects. To create the most effective opportunities to protect your campus and improve the student experience, look for a partner that provides turnkey, brand-agnostic energy solutions.

Turnkey-Ready: Able to manage the complete project with in-house expertise and minimal subcontracting, including engineering, planning, and implementation

Brand-Agnostic: Not limited by equipment sales, focused on what's best for your institution

Technical Experts: Skilled in every area that impacts energy use, like HVAC, lighting, building controls, water use, the building envelope, and more

Financial Experts: Experienced in creating options that make the technical work possible

Innovative: Ready to bring the technology you need for sustainability and innovation to your energy project, including solar renewables, electric vehicle fleets, or voice interaction capabilities.

ONE MORE SERVICE, A LOT MORE SAVINGS

Energy performance contracts help you reduce utility spend and operational costs. An integrated facility management model can extend your cost control over multiple budget lines.

Integrating services drives even more efficiency by unifying overhead and administration for custodial, facilities engineering, and landscaping. Proactive and predictive maintenance approaches can also protect or extend your energy savings.

LET CAMPUS COMMUNITIES KNOW WHAT YOU'RE DOING TO RESPOND

Disinfection: Clear and visible protocols for cleaning and disinfection

Air Quality: Control particles and humidity, which can affect aerial transmission of viruses, including COVID-19³¹

Stewardship: Keeping tuition costs down for students and families

31 <https://www.medicalnewstoday.com/articles/how-humidity-may-affect-covid-19-outcome>



CONCLUSION

Energy projects can give institutions of higher learning the cost control and investment opportunities they need to meet funding reductions while protecting and improving the learning experience for students. The unique possibilities of voice technology can augment energy savings projects while providing key communication and distance learning tools and reducing interactions with physical controls.

Visit ABM.com/Higher-Ed to learn more
or call **866.624.1520**.

ABOUT ABM

ABM (NYSE: ABM) is a leading provider of facility services in the United States and various international locations. ABM's comprehensive capabilities include janitorial, electrical & lighting, energy solutions, facilities engineering, HVAC & mechanical, landscape & turf, mission critical solutions, and parking, provided through stand-alone or integrated solutions. ABM provides custom facility solutions in urban, suburban and rural areas to properties of all sizes — from schools and commercial buildings to hospitals, data centers, manufacturing plants and airports. ABM Industries Incorporated, which operates through its subsidiaries, was founded in 1909. For more information, visit ABM.com.



Building Value

866.624.1520

ABM.com