

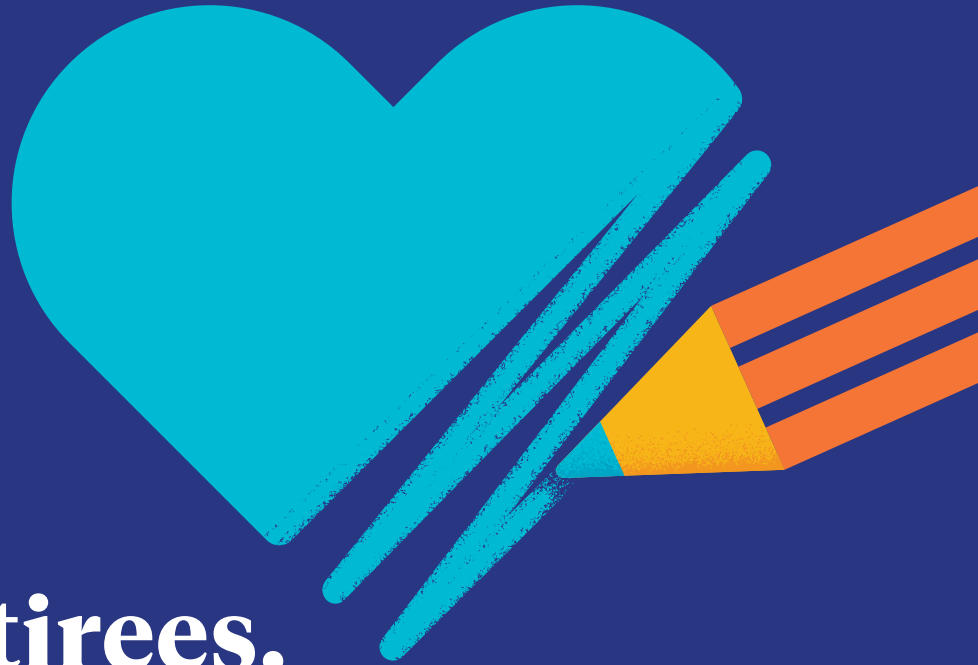
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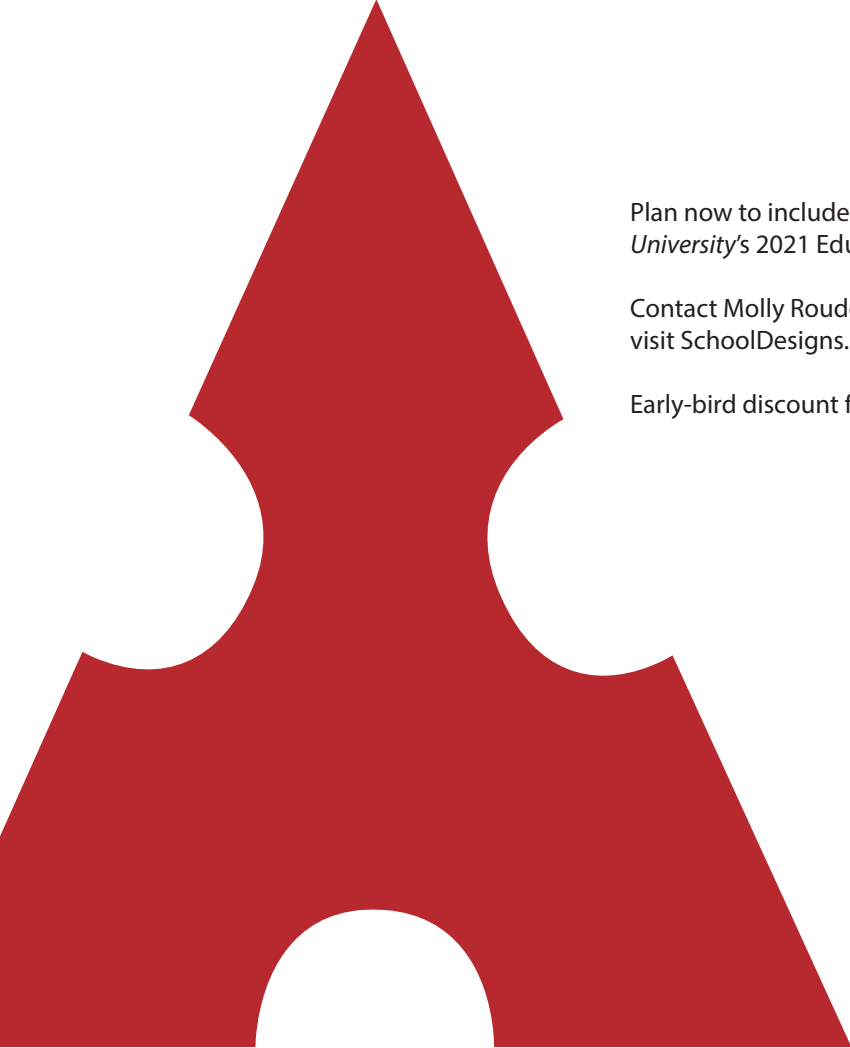
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Photo: Paul Rivera

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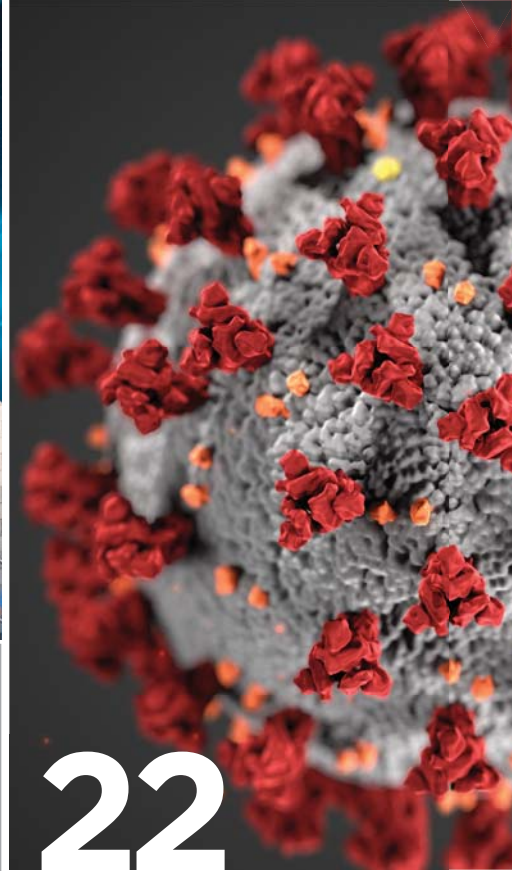
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Choose Your Own ADVENTURE

In the May/June edition of this column I detailed how quarantine has affected schooling in my own home. To call how curriculum was handled in the spring a “triaged solution” would be somewhat generous. But with no time to plan and no clear indication of what was to come, it was understandable that administrators, teachers, parents, and students were all doing the best they could under the circumstances. Most districts around the country were in the same boat. But there was no denying that both the implementation and the results were less than optimal.

Cut to the 2020-21 school year, which got underway here in mid-August (two weeks later than it would begin under normal circumstances). For most of the summer it was an open question as to whether school would take place in person, virtually, or some combination of the two. As has been the case with many districts, that decision was made fairly late in the game: Virtual instruction it would be.

But many districts around the country are giving parents a choice

of which form of instruction they prefer, and some parents have opted to sidestep the school system entirely, seeking out their own quarantine education options. Every choice comes with advantages and disadvantages, and every circumstance is different. In some ways I'm thankful that the decision was made for us. Because I'm honestly not sure which way we would have gone had it not been. Each family's circumstance is different, and I empathize with all options on the table.

Although the challenges and compromises of virtual schooling are significant, so far the experiences of our two 3rd-graders have been a huge improvement over what we experienced in the spring. Knowing now that online instruction would be the reality for some time, we were able to create dedicated study space for each child, improving focus. The district has provided Chromebooks and supplies for every student and helped ensure wi-fi access for families that needed it. Live daily Google Meet classes with teachers and



Steven Averett

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classmates and a full schedule of subjects and assignments emulate a normal school rotation, but there is enough built-in flexibility to respect the realities of at-home instruction. “Wellness Wednesday” breaks up the academic week with a lighter, largely optional schedule of art, music and physical education activities.

No one can predict exactly how long it will be until some semblance of normalcy returns to schooling and public life in general. But by emphasizing common sense, pragmatism, and compassion in the meantime, we can ease the road to that hopeful future. ■

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► **READ** the white paper at <https://asumag.com/21140049>.





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APPEALS COURT IN FLORIDA BACKS THE STATE'S BACK-TO-SCHOOL ORDER THAT REQUIRES AN IN-PERSON INSTRUCTION OPTION

In a victory for state of Florida education leaders, an appeals court says that the state's school reopening order did not force students back to campus, nor teachers back into classrooms, and should remain in effect while the lawsuits challenging its constitutionality move through the court system.

The Orlando Sentinel reports that the ruling by the First District Court of Appeal put on hold a decision issued last week by a circuit court judge in Tallahassee.

That judge ruled in favor of teachers who argued in a lawsuit said that the state's July reopening order was unconstitutional because it required Florida's public schools to open "brick and mortar" campuses five days a week starting in August.

But appeal court judges say they expect the state will win the case eventually, so they put the lower court's ruling on hold during appeals, saying it had "caused confusion and uncertainty for students, parents, and teachers."

For more, visit <https://asumag.com/21140649>

STATES WITH THE HIGHEST INCIDENCE OF STUDENTS HAVING FIREARMS AT SCHOOL, 2017-18

In the 2017-18 school year, 3,482 public school students brought a firearm to or possessed a firearm at their school, according to the latest Indicators of School Crime and Safety.

The joint report by the National Center for Education Statistics and the Bureau of Justice Statistics says that for the entire United States, that number equates to 6.9 per 100,000 students.

The highest incidence per 100,000 students of firearm possession at school was in Arkansas, where 29.8 per 100,000 students had brought a firearm to school.

For the 10 states with the highest incidence per 100,000 students, visit <https://asumag.com/21137072>.

PEDIATRICS GROUP RECOMMENDS THAT SCHOOLS STOP ACTIVE SHOOTER DRILLS

The American Academy of Pediatrics, warning that realistic active shooter drills can unnecessarily traumatize children, says schools should stop running them.

CNN reports that the academy has issued a policy statement outlining the risks of active shooter drills that simulate an attack or drills that students believe are real.

Both types of drills can cause psychological harm to students and may even hinder the decisions that school faculty have to make in real crises, the pediatricians say.

For more, visit <https://asumag.com/21140417>.



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RESTROOM RIGHTS

A federal appeals court in Richmond, Va., has ruled in favor of transgender students' right to use the high school bathroom of the gender with which they identify.

The Richmond Times-Dispatch reports that Gavin Grimm has fought for five years against the Gloucester County School Board's refusal to allow him to use the boys' restroom at Gloucester County High School in Gloucester, Va.

"All transgender students should have what I was denied: the opportunity to be seen for who we are by our schools and our government," Grimm said following the ruling. "Today's decision is an incredible affirmation for not just me, but for trans youth around the country."

The 4th Circuit Court of Appeals rule that policies segregating transgender students from their peers are unconstitutional and violate federal law prohibiting sex discrimination in education.

The appeals court decision is based in part on the U.S. Supreme Court ruling earlier this year that dis-

crimination against people based on their gender identity or sexual orientation violates Title VII of the Civil Rights Act of 1964.

In 2015, the Gloucester County school board adopted a policy in which students could use only bathrooms that matched their "biological gender" and built single-stall bathrooms as an "alternative" for individuals with "gender identity issues."

Grimm was a sophomore in high school at the time.

Grimm's parents spoke out against the policy. They called the requirement to use the bathroom in the nurse's office "humiliating" and took away from their son's education.

Grimm said that no one had ever questioned his use of the men's bathroom prior to the school board's ruling.

The American Civil Liberties Union, sued the district on Grimm's behalf. The case reached the Supreme Court in 2017 but was sent back to the appeals court after the Trump administration rescinded Department of Education protections for transgender students.



NEUTRAL SPACE

THE Worcester Telegram & Gazette reports that the announcement responds to a push from students to have gender-neutral bathrooms included in all newly built schools in the city. An online petition started by high school and college students that has been signed by more than 500 people asks the school department to have at least one single-stall, all-gender bathroom at every new school building.

The replacement for Doherty Memorial High School, which is much earlier in the planning process than South High and thus does not have a design yet, also will have gender neutral restrooms, Superintendent Maureen Binienda says.

The new South High will have a gender-neutral bathroom on each floor, as well as another two inside the fieldhouse next door. The new facility is scheduled to open in 2021.

The inclusion of gender-neutral toilets in the South High and Doherty building plans reflects a recent trend in society to better accommodate transgender people, whom those facilities are intended to help the most.

In a presentation on the issue at a recent School Committee meeting, committee member Dante Comparetto said transgender people could even



Rendering courtesy of CBRE | Heery.

face violent reprisal for entering traditionally gendered bathrooms — a situation that gender-neutral bathrooms are designed to eliminate.

Some of the students involved in that effort were also pleased to hear the news, including Xio Alvarado, a sophomore at Claremont Academy who is transgender. Alvarado said Claremont recently converted a faculty bathroom for use as a de facto gender-neutral bathroom, but before that, he often would just avoid using the bathroom at school.

"It's a very difficult choice. I can't really go into the female bathroom, since I have a more male, masculine appearance," he said. But he also feels unwelcome in the boys' bathroom. "It's just awkward."

The ideal outcome, he added, would be for the district to install a gender-neutral bathroom at all schools, not just new ones. ■

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RIVER VALLEY RENO

THE Midway (Texas) Independent School District board has approved a design for converting River Valley Intermediate School into a middle school.

The Waco Tribune-Herald reports that the \$43.1 million conversion is one of eight projects in a \$148 million bond package voters approved in November.

The district of about 8,200 students is expected to grow to 10,700 in 10 years, according to the facility committee's estimates.

River Valley Intermediate in McGregor, Texas, now serves fifth and sixth grade students. The school board is eliminating both of its intermediate schools with the bond package. The other intermediate, Woodgate, will be converted to an elementary.

Once the conversion of River Valley is complete, River Valley will serve grades six through eight. The renovation will add 87,859 square feet and increase capacity to as many as 1,300 students.



Photo courtesy of Google.

The district will continue holding classes on the River Valley campus while renovations are carried out. The design adds a new, two-story wing to the school for eighth grade students and a single-story addition for athletics, agricultural sciences and a cafeteria expansion.

Construction is expected to start in spring 2021 and be completed by June 2022.

The architect for the project is Huckabee.

LEVELING UP

THE Seymour (Ind.) school district has announced plans for a \$52.45 million project to convert the Seymour Middle School Sixth Grade Center into an intermediate school for fifth and sixth grade and to upgrade Seymour High School.

The Seymour Tribune reports that the construction project will provide more classroom space, improve security, increase accessibility for people with disabilities, and expand opportunities for music, career and athletic programming.

Construction would begin in 2022, and fifth-graders would start at the new intermediate school in 2023.

In the last eight years, enrollment in the Seymour district has grown 23% and reached a record 5,250 students in 2019-20.



Photo courtesy of Google.

"Our enrollment is what really brings us here today," Superintendent Brandon Harpe says. "It has just exploded. While most schools in the state are projecting a drop in enrollment, we're continuing to project an increase." In the next six years, officials expect enrollment to grow by another 500 students, Harpe says.

The plans at the intermediate school call for a new cafeteria and kitchen, library, gymnasium, band and choir rooms and main office. The number of classrooms will be increased from 15 to 38.

At the high school, a minimum of 25 classrooms will be added to meet modern educational and space requirements, Harpe says.

"Our classrooms are undersized," he says. "Many of them are smaller than what we have at the sixth grade center. We have major issues with our classrooms and how they are laid out."

With an enrollment of 1,550, the high school is bursting at the seams. During passing periods, the hallways have become uncomfortably congested, and there aren't enough lockers for every student.

"We have bottleneck and chokepoints throughout the building," Harpe says.

As part of the project, a new corridor will be added to relieve congestion and create space for additional lockers.

MERCY MAKEOVER

AFTER completing a \$115 million fundraising campaign, the **University of Detroit Mercy** is embarking on a major campus improvement project.

The university says the project, set to start this summer, will eliminate 100,000 square feet of building space, improve efficiency and reduce deferred maintenance costs by \$43 million.

“McNichols Campus enhancements will make the university even more attractive to high-achieving students who want a Jesuit- and Mercy-inspired education, as well as an opportunity to apply their learning to community needs in a city as culturally rich and diverse as Detroit,” says Antoine M. Garibaldi, president of Detroit Mercy.



Rendering courtesy of the University of Detroit Mercy.

The upgrades include several buildings:

The Student Union. A major renovation and addition are planned. The union will become the new home for all student-centered services from admissions to financial aid and student life.

Shiple Hall. The Freshman Residence Hall. Living spaces will be updated with new bathroom fixtures, paint, flooring, lighting and furniture. The front entrance will be rebuilt and the lobby will be modernized.

The Fisher Administration Center. The 54-year-old building will be demolished because of critical maintenance problems. The site will be used as parking and green space.

Reno Hall. The building will be demolished and replaced with new student apartments designed for upperclassmen and graduate students.

The university also has purchased vacant land abutting the south end of campus behind Shiple Hall. Plans for this space include an intramural sports field and potential gathering spaces. ■



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The **AS&U** **100**

By Mike Kennedy

The nation's three most populous states—California, Texas and Florida—continue to dominate the list of the 100 largest public school districts in the United States.

The 2020 AS&U 100, a compilation of enrollment data from the 2018-19 school year, shows that those three states account for 47 of the 100 largest school districts.

Twenty of the of the 100 largest districts in 2018-19 were in Texas; 15 were in Florida, and 12 were in California.

The enrollment numbers in the AS&U 100 are based on figures posted online by state education departments and individual districts. In some cases, the numbers differ from those found in federal data or other sources.

The list of the 100 largest districts doesn't vary much from year to year—enrollment fluctuations typically occur gradually. Even over a 30-year span, most of the districts on the list are the same. Figures from the National Center for Education Statistics in 1988-89 show that 73 of the 100 largest districts that year are still among the top 100 in 2018-19—and the four largest are the same: New York City, Los Angeles Unified, Chicago and Miami-Dade County.

Among those no longer found among the 100 largest are Memphis, which was absorbed into the

Shelby County system several years ago, and the Orleans Parish district, which was decimated in the aftermath of Hurricane Katrina.

Other districts have fallen from the list as their enrollments declined and fast-growing systems supplanted them.

Compared with 30 years ago, California, Texas and Florida have more districts on the list, and many of those school systems have experienced steady enrollment growth. In 1988-89, California had nine of the 100 largest districts, Texas had 12, and Florida had 13.

Of the 20 Texas districts on the 2018-19 list, nine of them have seen their student numbers at least double since 1988-89. The Frisco district in the Dallas-Fort Worth area has more than 46 times the number of students it had 30 year ago—60,182 in 2018-19 compared with 1,289 in 1988-89.

Texas and Florida also are well represented on the list of higher education institutions with the highest student enrollment in fall 2018. Texas has five schools on the list, and Florida has four.

Figures from the federal Integrated Postsecondary Education Data System show that the institution with the most students enrolled in fall 2018 was Western Governors University, an online school based in Salt Lake City, Utah, that had 121,437 students. ■

The AS&U 100

RANK	DISTRICT	STATE	2018-19	2008-09	1998-99	1988-89	30-YEAR % CHANGE
1	New York City	NY	1,126,501	1,029,459	1,072,628	936,153	20.33%
2	Los Angeles Unified	CA	607,723	687,534	695,885	592,881	2.50%
3	Chicago	IL	363,954	421,430	430,914	394,587	-7.76%
4	Miami-Dade County	FL	350,456	345,525	352,536	268,047	30.74%
5	Clark County	NV	335,333	312,761	203,777	105,151	218.91%
6	Broward County	FL	270,978	256,351	231,187	142,202	90.56%
7	Hillsborough County	FL	220,257	192,007	156,452	119,022	85.06%
8	Houston	TX	209,772	200,225	210,179	190,290	10.24%
9	Orange County	FL	209,144	172,257	138,866	91,752	127.94%
10	Palm Beach County	FL	194,986	170,757	146,568	95,433	104.32%
11	Fairfax County	VA	187,830	169,030	149,029	127,518	47.30%
12	Gwinnett County	GA	179,758	157,219	98,784	58,269	208.50%
13	Hawaii	HI	179,698	179,478	188,069	167,488	7.29%
14	Montgomery County	MD	162,680	139,282	127,933	98,533	65.10%
15	Wake County	NC	160,666	138,443	92,256	61,003	163.37%
16	Dallas	TX	155,119	157,352	159,908	130,904	18.50%
17	Charlotte-Mecklenburg	NC	147,639	135,064	98,758	75,064	96.68%
18	Prince George's County	MD	132,667	127,977	130,259	105,312	25.98%
20	Philadelphia	PA	132,520	159,867	207,465	191,141	-30.67%
21	Duval County	FL	130,245	122,606	127,411	105,269	23.73%
19	San Diego Unified	CA	124,105	132,256	138,433	117,168	5.92%
22	Cypress-Fairbanks	TX	116,512	100,685	58,044	36,324	220.76%
23	Baltimore County	MD	113,814	103,180	105,914	82,086	38.65%
24	Cobb County	GA	111,854	106,747	91,208	64,932	72.26%
25	Northside	TX	106,501	89,000	61,308	48,528	119.46%
26	Shelby County	TN	106,377	47,448	48,185	34,771	205.94%
27	Polk County	FL	101,673	94,657	77,300	62,538	62.58%
28	Pinellas County	FL	100,987	106,061	110,582	90,555	11.52%
29	DeKalb County	GA	99,166	99,775	93,171	72,738	36.33%
30	Jefferson County	KY	98,506	98,774	101,438	92,315	6.71%
31	Fulton County	GA	94,491	88,299	65,642	40,020	136.11%
32	Lee County	FL	94,417	79,434	54,779	39,264	140.47%
33	Denver	CO	91,998	74,189	68,790	58,664	56.82%
34	Prince William County	VA	90,876	73,917	51,111	40,127	126.47%
35	Albuquerque	NM	90,634	95,934	85,847	85,057	6.56%
36	Jefferson County	CO	84,623	85,946	88,654	75,316	12.36%
37	Fort Worth	TX	84,510	79,285	77,956	68,033	24.22%
38	Anne Arundel County	MD	83,300	73,653	74,079	64,328	29.49%
39	Loudoun County	VA	82,246	56,894	26,080	13,722	499.37%
40	Metro Nashville	TN	81,407	74,312	67,016	68,063	19.61%
41	Austin	TX	80,032	83,483	79,496	62,733	27.58%
42	Katy	TX	79,913	56,862	30,126	17,139	366.26%
43	Alpine	UT	79,748	62,281	45,208	37,571	112.26%
44	Baltimore City	MD	79,297	82,266	106,540	107,486	-26.23%
45	Fort Bend	TX	76,122	68,708	50,890	31,104	144.73%
46	Greenville	SC	76,058	70,441	57,884	51,150	48.70%
47	Milwaukee	WI	75,431	85,381	99,814	91,996	-18.01%
48	Pasco County	FL	75,059	66,784	46,065	31,619	137.39%
49	Brevard County	FL	73,734	73,098	68,681	51,583	42.94%
50	Long Beach Unified	CA	73,221	87,509	89,214	66,784	9.64%

The AS&U 100

RANK	DISTRICT	STATE	2018-19	2008-09	1998-99	1988-89	30-YEAR % CHANGE
51	Davis	UT	72,263	66,614	59,285	51,994	38.98%
52	Guilford County	NC	71,562	72,951	61,154	23,851	200.04%
53	Fresno Unified	CA	73,249	76,621	78,942	64,446	13.66%
54	Virginia Beach	VA	68,624	71,554	77,442	66,970	2.47%
55	Osceola County	FL	68,561	51,941	30,127	15,982	328.99%
56	Seminole County	FL	68,289	64,927	58,156	45,022	51.68%
57	Douglas County	CO	67,591	58,723	29,847	11,136	506.96%
58	Washoe County	NV	67,590	65,421	52,813	35,140	92.34%
59	Aldine	TX	66,854	61,526	49,453	37,983	76.01%
60	North East	TX	65,186	63,452	47,732	39,558	64.79%
61	Granite	UT	64,281	70,166	73,474	75,697	-15.08%
62	Elk Grove Unified	CA	63,917	62,172	42,484	22,077	189.52%
63	Volusia County	FL	63,249	63,018	59,851	43,922	44.00%
64	Mesa Unified	AZ	62,981	70,346	71,284	61,061	3.14%
65	Conroe	TX	62,837	47,996	32,290	21,544	191.67%
66	Chesterfield County	VA	61,608	59,080	50,621	41,469	48.56%
67	San Francisco	CA	60,390	55,183	61,042	62,528	-3.42%
68	Frisco	TX	60,182	30,797	4,473	1,289	4568.89%
69	Arlington	TX	59,900	63,045	55,709	42,153	42.10%
70	Knox County	TN	59,224	55,535	51,667	50,116	18.17%
71	Howard County	MD	57,907	49,905	41,858	27,564	110.08%
72	El Paso	TX	57,315	62,322	62,945	63,169	-9.27%
73	Garland	TX	55,987	57,510	47,967	34,923	60.32%
74	Cherry Creek	CO	55,791	51,199	40,089	27,193	105.17%
75	Seattle	WA	55,339	45,968	48,280	43,023	28.63%
76	Jordan	UT	54,865	81,485	73,286	62,702	-12.50%
77	Clayton County	GA	54,840	49,508	44,068	32,676	67.83%
78	Mobile County	AL	53,967	62,531	65,324	67,901	-20.52%
79	Winston-Salem/Forsyth County	NC	53,896	52,906	42,847	38,395	40.37%
80	Klein	TX	53,328	43,738	31,446	24,465	117.98%
81	Pasadena	TX	53,291	51,578	41,240	35,420	50.45%
82	Capistrano	CA	53,269	52,681	42,196	23,473	126.94%
83	Omaha	NE	53,149	48,014	45,118	41,243	28.87%
84	Plano	TX	53,057	54,203	44,229	28,724	84.71%
85	Corona-Norco	CA	53,002	52,138	33,168	19,887	166.52%
86	San Bernardino City Unified	CA	52,773	54,727	48,907	36,941	42.86%
87	Atlanta	GA	52,377	49,032	60,541	63,448	-17.45%
88	Lewisville	TX	52,218	50,216	34,870	18,561	181.33%
89	Henrico County	VA	51,523	48,991	39,995	31,587	63.11%
90	Santa Ana Unified	CA	51,482	57,439	56,071	40,028	28.61%
91	Boston	MA	51,433	55,923	63,043	59,184	-13.10%
92	San Juan Unified	CA	50,509	47,230	47,799	46,715	8.12%
93	Round Rock	TX	50,387	41,733	28,464	18,138	177.80%
94	Oakland Unified	CA	50,202	46,516	54,256	51,218	-1.98%
95	Cumberland County	NC	50,194	54,288	51,297	44,116	13.78%
96	Detroit	MI	50,176	97,577	173,557	174,081	-71.18%
97	Wichita	KS	49,953	47,260	47,479	47,107	6.04%
98	Forsyth County	GA	49,346	32,374	14,299	7,133	591.80%
99	Manatee County	FL	49,310	42,580	34,083	24,560	100.77%
100	Washington, D. C.	DC	49,056	44,331	71,889	84,792	-42.15%

HIGHER-EDUCATION INSTITUTIONS WITH LARGEST ENROLLMENT, FALL 2018

INSTITUTION	LOCATION	TOTAL STUDENTS FALL 2018	TOTAL STUDENTS FALL 2017
Western Governors University	Salt Lake City UT	121,437	98,627
Southern New Hampshire University	Manchester NH	104,069	90,955
University of Phoenix	Phoenix AZ	95,777	103,975
Grand Canyon University	Phoenix AZ	90,253	83,284
Liberty University	Lynchburg VA	79,152	75,044
Lone Star College System	The Woodlands TX	73,499	72,336
Ivy Tech Community College	Indianapolis IN	72,006	75,486
Texas A&M University-College Station	College Station TX	68,679	67,929
University of Central Florida	Orlando FL	68,475	66,059
Ohio State University	Columbus OH	61,170	59,837
University of Maryland Global Campus	Adelphi MD	60,603	59,379
Florida International University	Miami FL	57,942	56,718
Houston Community College	Houston TX	57,200	57,120
Miami Dade College	Miami FL	54,973	56,001
University of Florida	Gainesville FL	52,218	52,669
New York University	New York NY	51,847	51,123
University of Texas at Austin	Austin TX	51,832	51,525
Arizona State University-Tempe	Tempe AZ	51,585	51,164
Tarrant County Community College	Fort Worth TX	51,100	52,957
Northern Virginia Community College	Annandale VA	50,929	51,190
University of Minnesota-Twin Cities	Minneapolis MN	50,734	51,848
Walden University	Minneapolis MN	50,360	49,680
Michigan State University	East Lansing MI	50,351	50,019
Rutgers University-New Brunswick	New Brunswick NJ	50,254	49,577
University of Illinois-Urbana Champaign	Champaign IL	49,702	48,216

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Hot Topic

Efficiency and BMS integration are major water heating trends in educational facilities.

By Dustin Bowerman and Keith Kuliga

Colleges and universities are more energy conscious than ever before, and that extends to equipment selected for heating domestic hot water. There are two clear trends—a move to nearly all high-efficiency equipment and integration of water heating appliances in campus building management systems (BMS). Consulting engineers that specify water heating products are specifying only high-efficiency products for new construction projects and for many retrofits. There also are requests for equipment with burner/firing rate modulation.

Larger colleges or universities are reaping the benefits of using a building management system to moni-

tor or control different appliances or equipment. BMS were first employed to monitor and control lighting, the power grid, security systems, fire protection and HVAC. Using BMS to monitor water heating operations is a relatively new development for tank-type water heaters. There also is more BMS integration on volume water heaters for domestic hot water and on boilers for hydronic heating.

THE ADVANTAGES OF BMS

When comparing the energy efficiency of a standard-efficiency water heater with a high-efficiency unit, the differential is 10% to 17%. As an example, let's com-



Photo 6081196 © Monkey Business Images | Dreamstime.com



Photo 86353462 © Bennn | Dreamstime.com

pare two commercial water heater models that might be used on a campus: a conventional 80% mid-efficiency and a high-efficiency model. Both have identical capacities and BTU input. If natural gas has an average cost per therm of \$1.09 and the appliance is operating 365 days a year, the 97% efficiency model will save \$1,115 annually. Even though the high-efficiency water heater is more expensive, there is a payback. That's why consulting engineers are specifying high-efficiency products. And of those, there's a high demand for equipment that will accommodate BMS integration and or burner/firing rate modulation.

Water heating constitutes 25% of the energy budget of U.S.-based colleges and universities, according to a white paper by National Grid, *"Managing Energy Costs in Colleges and Universities."* Water heating installation and retrofits should be paired with other water efficiency efforts, such as installing low-flow showerheads and specifying efficient dishwashing and laundry appliances.

It is important to select the best equipment to meet the needs of a given campus. Here are some of the factors that go into that decision.

The most important datapoint is how much hot water a building needs at any single time. In order to account for all potential demand for domestic hot water, you have to take into account layout of the distribution system, how much space is available in the mechanical room, the fuel type and what the venting options are.

Water temperature is another key variable. Dishwashing sanitation affects that

choice, because some devices require 180 degrees F for sanitation and others just 140 degrees F. If the specification calls for delivery of high-temperature water, a best practice is to employ anti-scald mixing valves certified to ASSE Standard 1017 at fixtures other than the

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dishwasher or washing machine. Conversely, a survey of your water heating equipment may show that the temperature of some units can be turned down, especially in residence halls.

PAIRING BUILDINGS AND EQUIPMENT

Equipment selection often varies based on the architecture of buildings and the layout of a campus. If, for example, a gymnasium and a cafeteria are next to each other, they could be paired for water heating. Each residence hall will usually have its own dedicated water heater, but in rare instances where hot water distribution is combined between near buildings, it is preferable to use a large volume water heater with a high BTU input and storage tanks.

The equipment must be sized properly to take advantage of its efficiency. Nobody wants to overpay for something when there's no need for it, and specifiers and facilities managers are conscious of that no matter how efficient the appliance may be. In general, planners don't want to over-size water heating equipment because of potential short cycling issues. That's true no matter the manufacturer.

SIZING FOR DIVERSITY

One new wrinkle in sizing the domestic hot water load for residence hall is diversity factor. Typically, the hot water load has been primarily based on the number and flow rate of the showerheads and then adding in lavatory sinks and mop sinks. Sizing for diversity enables planners to develop custom solutions around an estimate of what percentage of fixtures will be used simultaneously at any time of day.

Usually there's a spike in the morning and another later in the day. This percentage is dictated by the customer and his consulting engineer and can be anywhere between 20% and 100%. The system should be sized to meet that need.



Image courtesy of Bradford White Corp.



Image courtesy of Bradford White Corp.



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Consulting engineers that specify water heating products are specifying only high-efficiency products for new construction projects and for many retrofits.

MAINTENANCE DECISIONS

Maintenance requirements influence the kinds of equipment selected. There's been a lot of buzz around tankless water heaters, especially in the residential market, but that hasn't played out in the college and university market. Facilities managers and their vendors are comfortable with tank-type water heaters. One large, Midwestern state university splits its maintenance tasks and budget between in-house personnel and outside contractors. In-house staff maintain the simpler tank-type units, but they call outside service specialists for the more complex systems.

It's incumbent on campus facilities managers to maintain their equipment regardless of its type or fuel sources. Among the service items are burner systems, ignition sources, flame sensors, safeties, and additional safety devices that have been integrated into the water heater operation. It doesn't make sense to buy high-efficiency modulating equipment and then not maintain it. It's like changing the oil in your car. You won't need to fix it very often if you take the time to maintain it. ■

BIO

Dustin Bowerman is director of technical services and **Keith Kuliga** is commercial product manager for Bradford White Corp.


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The CHAOS of Coming Back

As schools and universities begin 2020-21 classes in a world still beset by the coronavirus, they have to navigate continued health and safety concerns as well as political pressures.

By Mike Kennedy

WHEN the spread of Covid-19 forced an abrupt nationwide shutdown of schools and universities in the spring, nobody could predict with certainty how long it would be before classrooms could reopen, but many were hopeful that the common sense steps put into place to combat the coronavirus—social distancing, wearing masks, hand washing—would make it possible for students and educators to return to some semblance of normalcy for the 2020-21 school year.

But after months of mixed messages and inconsistent guidance from government officials, and in some cases, the outright repudiation of the recommendations provided by health care professionals, the spread of the Covid-19 virus has not abated—as of the end of August, nearly 6 million Americans have tested positive for the virus and more than 180,000 have died.

The continuing disruption of society caused by Covid-19 has left many education institutions struggling to satisfy the conflicting wants and needs of their constituents. To those who feel that businesses can't begin to recover until students return to a regular school schedule, reopening classrooms is a priority. But to

those who are concerned that bringing large groups of students together in a confined space will exacerbate the spread of the virus, keeping classrooms empty and relying on online instruction is a more prudent path.

Education institutions have taken many steps to create a safe and healthful learning environment while Covid-19 still is spreading. Millions of masks and countless gallons of soap and disinfectant have been acquired to keep hands clean and inhibit transmission of the virus; capacities of classrooms and residence halls have been shrunken to accommodate the required social distancing.

But as many schools and universities have learned, carefully developed plans may have to be quickly discarded when the coronavirus refuses to cooperate and continues its spread.

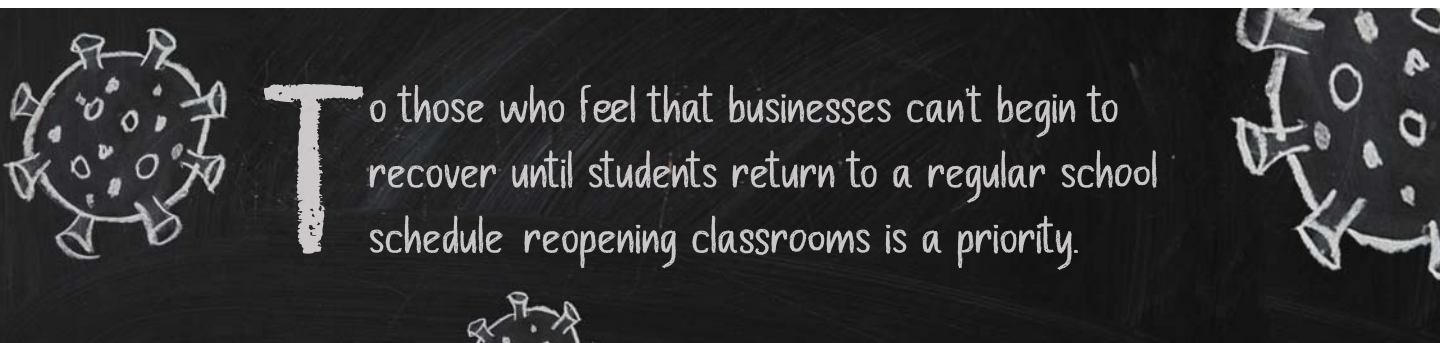
The result is a chaotic mix of fully open campuses, those who have opted for fully online instruction, and schools with hybrid schedules that try to split the differences. The plans can change quickly as rising virus numbers set off alarms or as impatient community members push back against restrictions.



Image courtesy GettyImages.com

For example:

- Many of the largest districts—Los Angeles, Chicago, Dallas—were preparing to offer some amount of in-person instruction when classes resumed, but as the number of positive cases rose, administrators pivoted back to virtual instruction for at least the first several weeks of the 2020-21 school year.
- Large universities such as Notre Dame, Michigan State and North Carolina had begun some in-person classes this summer, but they quickly switched to online-only instruction because of a steady increase in positive Covid-19 test.
- College football, a critical revenue generator for many institutions, is set to move forward with games in some conferences—the Southeastern Conference, the Athletic Coast Conference, and the Big 12, but others—the Big Ten, the Pac 12, the MidAmerican Conference—will not play games in the fall.
- The Cherokee County (Ga.) district began in-person instruction at its three high schools in August, but after a few days, positive cases began to mount, and more than 1,000 students and teachers were put in quarantine. The district canceled in-person high school classes for the rest of the month. The schools are set to reopen in September with a hybrid schedule of in-person and virtual instruction.
- So many teachers in the Freehold Regional High School District in New Jersey have asked for leaves of absence or other accommodations that the district has had to switch to online-only classes when school resumes in September. Officials say 250 of the district's 1,300-person teaching staff have requested leaves or other accommodations, leaving the district without enough faculty to carry out the hybrid schedule it had planned.
- An increase in Covid-19 cases in Douglas County, Kan., attributed to the testing of returning students at the University of Kansas in Lawrence, has prompted the Lawrence school district to begin 2020-21 with six weeks of online instruction. The Lawrence-Douglas County Health Department says it has ordered residents of nine KU fraternity and sorority chapter houses to quarantine for two weeks following a coronavirus outbreak on campus.



To those who feel that businesses can't begin to recover until students return to a regular school schedule reopening classrooms is a priority.

As has happened with other aspects of the coronavirus response in 2020, the in-person vs. remote instruction debate has become enmeshed in politics.

Earlier in the summer, President Trump and Education Secretary Betsy DeVos threatened to withhold federal funding from school systems that did not resume in-person classes for 2020-21. Many have pointed out that the Trump administration does not have the authority to withhold funds, but the comments from the president made clear the administration's desire to see in-person classes resume.

The conflict over Covid-19 also has wound up in courtrooms around the nation.

A federal judge in Washington state temporarily blocked DeVos from enforcing a rule she promulgated that directs states to give private schools a bigger share of federal coronavirus aid than Congress had intended. Washington attorney general Bob Ferguson sought the injunction because the DeVos rule would deprive

Washington schools of coronavirus relief that was part of the Cares Act approved by Congress.

Ferguson argued that under DeVos's rule, the Seattle school district would be forced to choose between sending nearly 20% of its Cares Act funds to private schools—much higher than the just over 3% Congress intended—or deprive 73 of its schools of critical relief funding.

"Betsy DeVos has continued to try to hijack much-needed Cares Act relief funds to satisfy her own political agenda," Ferguson said. "Congress explicitly provided this money to help the most vulnerable students, who have been hit hardest by this pandemic. I won't allow her to unlawfully funnel these funds to private schools."

In Florida, which has reported more than 600,000 positive Covid-19 cases, state officials mandated that districts reopen for five days a week of in-person instruction. In August, after a teachers union sued to



Photo 181186663 © Andrei Dodonov | Image courtesy Dreamstime.com.

overturn the mandate, a judge ruled that the order was unconstitutional and “arbitrarily disregards safety.”

In Texas, the Cypress-Fairbanks district was sued by the local teachers union, which contended that some of the campuses in the district were not following safety protocols with regard to the coronavirus. A judge granted a temporary restraining order that meant teachers wouldn’t have to report to school buildings for professional development, but the state Supreme Court overruled that decision.

In Detroit, teachers threatened to strike over safety concerns related to Covid-19, but reached an agreement with the district. It gives teachers the right to choose between teaching online or in a classroom; sets a class size maximum of 20 students, with social distancing of at least six feet; provides a \$750 bonus for each marking period in which a teacher provides in-person instruction; and gives teachers the right to bring their school-age children to classrooms instead of placing them in child care.

Schools that intend to rely on virtual instruction now are confronted with another problem: The laptop computers that their students need to take part effectively in online classes are increasingly difficult to come by.



Image courtesy of the California Interscholastic Federation.

Computer companies such as Lenovo, HP and Dell have said they are experiencing a shortage of nearly 5 million laptops, in some cases made worse because of Trump administration sanctions on Chinese suppliers. ■

BIO

KENNEDY, staff writer, can be reached at mkennedy@endeavorb2b.com

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Designing for Distance

Images courtesy of Interface.

Fostering safe learning environments from the floor up in the new normal.

By Paula Meason

THE beginning of an academic year has never looked so different as it does this fall. As the Covid-19 pandemic continues its surge across the nation, K-12 and higher education institutions have had to make drastic changes to their protocols and processes in the interest of fostering the health and safety of students, staff and their families.

Whether hosting instruction online, delaying re-opening, or forging ahead with on-campus learning, school administrators are navigating uncharted waters as they aim to offer the most optimal educational environment. At the same time, they must do everything in their power to mitigate the chance of an outbreak within their communities.

However, this is just the beginning. Even with new policies and procedures put into practice, school systems must continue to think about and prepare for the future of learning. What is the long-term plan if the pandemic continues beyond this semester? How can administrators ensure that students and staff return to campus safely if they haven't already? What ongoing health and safety measures should remain in place even after this crisis has ended?

Though most of the current public health guidance focuses on advanced cleaning protocols and practicing social distancing behaviors, but school administrators also must consider how much the built environment itself can affect health outcomes. How does the layout of school facilities optimize or threaten student and staff health and safety?

As administrators consider the long-term effects of Covid-19 on their schools, they should lean on design to answer this question and look to modular flooring as a flexible design solution

SHORT-TERM FIXES VS. LONG-TERM SOLUTIONS?

In preparation for this school year, schools have put a variety of short-term fixes into place to support a more healthful learning environment—from increasing spacing between desks and limiting classroom capacity, to closing common spaces and taping for socially distanced queuing and movement.

These strategies will help foster a sense of safety in the existing environment, but schools must consider how they will address coronavirus-inspired protocols in the long run.

To properly prepare for a full return to campus, administrators should evaluate how built spaces are being used and what could make them more effective. What underused spaces have the opportunity to be repurposed for learning? Do you need to add furniture or take it away to foster social distancing? Which changes are temporary, and which should be permanent? How can you make students and faculty feel safe and connected at the same time?

Safety and functionality will be important design factors as schools make decisions for the post-Covid learning environment, but flexibility will be critical.

To be flexible, built spaces must be able to pivot to meet the demands of social, economic and physical changes, as well as the evolving needs of their occupants. Prior to the pandemic, many newer school buildings were already embracing this idea with more multipurpose spaces for flexible learning. Other school systems will be wise to follow this example.

MODULAR FLOORING PROMOTES PHYSICAL DISTANCING

The future of in-person learning environments will depend on flexible and adaptable spaces to foster a sense of health and safety for students, staff and their families. How can you amplify those attributes in design decisions for your school facilities?

This is where strategic planning meets the pavement—or flooring—to adapt to the new normal.

In the past, floor design has been instrumental in wayfinding and celebrating school branding, but it also should play a key role in promoting safety in the future. From the ground up, a school facility's floor can offer visual cues to keep students connected while also maintaining a safe distance.

Through design, school facilities can support proper physical distancing requirements while still establishing a collaborative learning environment. Modular flooring can support these efforts by:

- Creating lanes for organized, one-way or two-way movement in corridors.
- Designating “zones” in open spaces through furniture arrangements and floor designs that create boundaries.



- Providing visual cues for distancing via alternating colors or patterns.

Modular flooring—hard and soft surface tiles in squares and planks—can create flexible floors that are aesthetically pleasing and uniquely functional. These flooring systems can play a significant role in the future of design by providing built-in cues that prompt safe distancing behaviors, instructing cleaning crews on proper furniture placement and zoning, and supporting proper movement through common spaces.

FOSTERING SAFETY AS HIGHEST PRIORITY

The events of the past several months have proven that there is no cookie-cutter solution for reopening schools. Budget, location, and local guidelines are just a few of the factors that will influence each school system's process for getting back on campus and resuming a sense of normalcy.

No matter a school's timeline, however, the health and safety of students, faculty and staff are the highest priority. As schools work diligently to foster new behaviors and rethink existing protocols, administrators should seriously consider opportunities within the built environment, including flooring choices, to reinforce those efforts. ■

BIO

MEASON is the senior segment marketing manager for healthcare and education at Interface.

Future IMPACT

How education and facilities may change after Covid-19.

In a matter of a few weeks Covid-19 changed how students are educated, and perhaps provided a glimpse of how education and facilities may change for the future. It is unknown how education systems will be affected, but there are signs of lasting impacts in learning.

UNLOCKING TECHNOLOGY AND BLENDED LEARNING

During the pandemic, the use of digital content by educational institutions has exploded. Flexible learning offers new choices for students as previously untapped methods have become mainstream. Future-ready learning will blend physical learning with synchronous/asynchronous online strategies, enabling students to engage course content at their own pace and on their own time. Because remote learning can be an isolating experience, there should be awareness that digital tools are complements to, not substitutes for, face-to-face learning with peers and facilitators.

Parallel tracks will combine physical classroom settings with online learning to capture best results. Who says school ends at 2:30 p.m.? Video conferencing and social media offer opportunities to continue “class” remotely for furthering learning. Increased online education may lead to the realization that classroom time is best reserved for discussion, debate, and guidance.

The rationale for online education as a source for new revenue will be overshadowed by the realization

that it is core to every school’s plan for resiliency and growth. This post-pandemic understanding may change how schools manage and pay for online education.

DESIGN AND FURNISHINGS TRANSFORMATION

How will the pandemic affect design? Will it bring less collaboration and flexibility for a return to assigned seating? Or will regimens of classroom instruction evolve so that students can learn any place at any time? What considerations will there be for building materials, mechanical systems, and furniture?

The emphasis on healthful buildings will intensify. Effectual design and management of building ventilation, filtration, and humidification will continue to be essential. Hard materials resistant to viruses and bacteria will be favored over soft, hard-to-clean fabrics. Pandemic-driven design changes may include automatic doors throughout buildings becoming standard, eliminating drinking fountains in favor of automatic bottle/cup fillers, and wide adoption of hands-free fixtures (e.g., toilets, faucets, elevator controls).

Furniture industry leaders forecast an increase in products that provide separation and social distancing, are quick-ship, easy to assemble, and easy to clean (e.g., bleach-cleanable, non-porous surfaces that are antibacterial and antimicrobial). Antibacterial technology integrated into products (e.g.,



Paul Erickson
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silver ion, UV/blue light, nanotechnology, copper infusion) as well as sanitation products integrated into work settings will be standard. There will be an increase in agile furniture for flexibility in open plans and meeting rooms, portable transparent dividers, leasing versus buying furniture, and hands-free furniture adjustment.

Meanwhile, it is reasonable to assume a phaseout of benching and open workstations with no screens, high-density meeting rooms, porous materials, and products with many seams or folds. High-contact unassigned spaces, shared storage and community lockers, and floor-set personal belongings also may be history.

The incorporation of artificial intelligence will become more prevalent. Video surveillance and security infrastructure will be used for monitoring occupancy levels and adherence to social distancing guidelines. Thermal imaging will be used to detect individuals exhibiting a temperature outside the set threshold and deny those individuals access through the secure entry. ■

BIO

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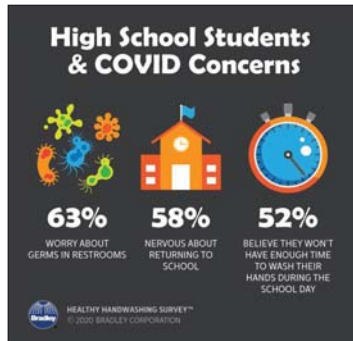
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Thinking Ahead: Interface

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*Based on April 2020 testing performed by LMS Technologies.



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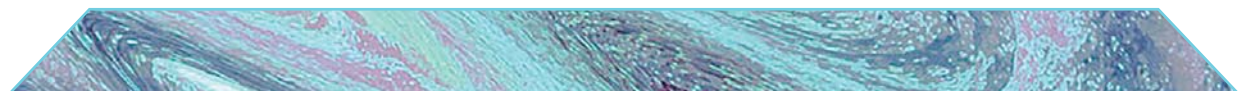
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INADMISSABLE

THE U.S. Justice Department has accused Yale University of violating civil rights law by discriminating against Asian-American and white applicants.

The New York Times reports that the finding is the Trump administration's second confrontation with an Ivy League school; two years ago, it publicly backed Asian-American students who accused Harvard University in a lawsuit of systematically discriminating against them.

"There is no such thing as a nice form of race discrimination," says Eric Dreiband, the assistant attorney general for the civil rights division. "Unlawfully dividing Americans into racial and ethnic blocks fosters stereotypes, bitterness and division."

The Justice Department says Yale has violated Supreme Court rulings on affirmative action by using race not as one of many factors, but as a predominant or determining factor in admissions.

It ordered Yale to suspend the use of race or national origin in its admissions process for one year. At the end of that year, the university would need to seek clearance from the government to begin using race as a factor again, the department said.

Yale pledged to fight the department's order, saying that it "categorically denies this allegation" and that it would hold fast to its admissions process. The university says it looks at the "whole person" when deciding whether to admit a student—not just academic achievement, but



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interests, leadership and "the likelihood that they will contribute to the Yale community and the world."

Dreiband says evidence indicates that Yale was racially balancing its classes by admitting similar proportions of each major racial group year after year, and that it had not made a serious effort since at least the 1970s to find another way of building a diverse student body.

The Ivy League schools are unapologetic about their use of race and ethnicity as a factor in admissions. Harvard has argued in a Supreme Court brief that while it sets no quotas, if it wants to achieve true diversity it must pay some attention to the numbers of students it admits of different racial and ethnic backgrounds.

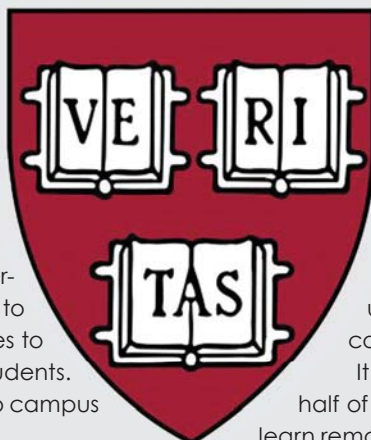
IVY LEAVE

MORE than 20% of Harvard University's incoming freshmen have deferred their enrollment.

CNN reports that the university is planning to have 1,168 first-year students in residence for the Fall 2020 semester, compared with 1,650 first-year students who started in Fall 2019.

Altering campus operations to address the Covid-19 pandemic, Harvard announced a plan last month to bring back 40% of its undergraduates to campus, including all first-year students. But many of those eligible to return to campus have declined.

"While our plan prepared us for as many as 40% of our typical undergraduate population learning



in residence, we are currently anticipating a residential cohort size of closer to 25% based on the number of students who have accepted our invitation to learn on campus," the university says.

The Harvard Crimson reports that 340 freshmen deferred their enrollment to next year, representing more than 20 percent of the freshman class. Between 80 and 110 students take a gap year under typical circumstances, according to the school.

It's not just freshmen: More than half of all 5,231 total undergraduates will learn remotely, the university said. Most classes have moved online, and most faculty and staff will work remotely. ■

Image courtesy of Harvard University.

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