

# SCHOOL BUILDINGS OF THE FUTURE

LESSONS FROM THE PANDEMIC

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## INTRODUCTION

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To say that the year 2020 was disruptive to daily life as we know it is an understatement. Due to the pandemic, schools needed to switch gears especially quickly to figure out how to support students in new safe ways. Even educators who never imagined prior to 2020 they would be doing remote instruction suddenly got a crash course on how to deliver instruction online.

To address safety concerns, most schools shifted last spring from the traditional in-school learning model to an “emergency-mode” 100% remote operation. A few schools were able to switch into a mix of remote, technology-based instruction and in-person, classroom-based instruction (which we’ll refer to as “hybrid learning” in this brief).

As schools adjusted their instructional approaches and began leveraging technology to a greater extent, the Charter Schools Facility Center, an initiative within the National Alliance for Public Charter Schools, asked what impact innovative approaches adopted more widely during the pandemic may have on the charter sector’s thoughts on the future of school facilities.

For example:

- ▶ Will schools that recently adopted hybrid learning models, the mix of in-school and at-home learning, want to keep those models in some shape or form after the pandemic?
- ▶ Now that teachers have more experience delivering technology-based instruction, will we see an increase in technology in the classrooms to personalize instruction? (We refer to this use of technology for personalized support as “[blended learning](#)” in this brief - a mix of face-to-face and online learning experiences mostly delivered *within* the physical classroom versus remotely.)

In a nutshell, we want to know what future charter school facilities will look like in light of innovative new learning models.

To answer these questions, the Charter Schools Facilities Center turned to blended learning experts to conduct ten interviews with representatives from charter school management organizations (CMOs) and firms that support the design and construction of charter schools to get a sense of their current thinking on these topics.<sup>1</sup> The interviews conducted for this article were with organizations operating in mostly low-income, urban areas and thus the themes may not be less relevant to schools in suburban and rural areas.

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<sup>1</sup> Interviewees included representatives from Achievement First Public Charter Schools, Distinctive Schools, Fielding Architects, Intrinsic Public Schools, KIPP SoCal, New Tech Network, Pacific Charter Development Corporation, Red Hook Capital, Summit Public Schools, and Wheeler Kearns Architects.



Admittedly, it is early to ask schools about their thoughts on the long-term future of Pre-K to 12 instruction and its impact on facilities given the immediate pandemic crisis and need to address learning loss and recovery. As the CEO of one CMO shared candidly, “With all the things to focus on for recovery and learning loss, facilities are low on the priority list.” Thus, we understand the perspectives of interviewees and the field will undoubtedly evolve in the months and years ahead. This brief shares the initial key themes and insights that emerged and will, we hope, spur more discussion on this topic.

## Thoughts on the Current Model of Instruction

Now that the country has almost a year of experience with implementing distance learning with hybrid learning, we want to find out what lies ahead for the possible continuation of these models or adoption of other models in the long term. The options could range from continuation of partially remote instruction with hybrid learning to a more school-based blended learning model. When asked whether we would see a continuation or increase of hybrid and blended learning models in the future, many interviewees believed that districts and charter management organizations would likely offer both in their portfolio of options in the future but that hybrid models in which students learn remotely from home for part of the week would not likely become the norm, at least not in elementary or middle schools in low-income urban communities.

One of the biggest obstacles faced during the pandemic is the lack of internet connectivity for all students. Many homes do not currently have broadband connectivity. Beyond the technology, schools encountered other logistical problems with remote learning. For many families, hybrid learning is not feasible without a caregiver, or someone who can monitor, supervise, or troubleshoot the remote portion of the model, at home during instructional hours. Many parents and guardians work essential jobs that are not based at home, and childcare may be too costly for them. Additionally, research has supported the idea that in-person instruction is more appropriate for younger students since they, “need a level of guidance, social interaction, and tactile-learning opportunities that are difficult to replicate in an online classroom.” At the high school level, however, interviewees thought there may be more opportunities for remote learning in the future.

As for blended learning, given it typically takes place in the physical school setting while optimizing technology for personalization, interviewees were mostly aligned in their thinking that we will see an increase in blended learning in the future.



## KEY THEMES

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Many interesting insights were shared during interviews, with **four clear themes** standing out regarding interviewees' thoughts on the future of school facilities: **1) flexibility, 2) community connectivity, 3) efficiency, and 4) technology.**

### Flexibility

The number one theme that emerged from interviews loudly and clearly is more flexibility in the design and use of school facilities in the future as a guiding principle.

Interviewees mentioned the importance of school facilities being able to adapt easily to meet the needs of new learning models like blended learning where in some cases, students may want to work independently or meet in small groups, or in other cases, gather in much larger groups. Thus, retractable walls and partitions will be important in order to expand or contract meeting spaces as needed. Summit Public Schools has glass garage doors that can be pulled down to create quiet, smaller work spaces as well, which is an interesting feature and one that multiple interviewees cited as something we may see more of in the future at other schools.



Summit Sierra High School  
Photo: Washington Charter School Development

This concept of open floor plans might conjure up memories of failed open classroom designs in the 1970s. Thus, it should be noted that interviewees expressed a belief that these types of open spaces were more suitable for high schools and less effective and desirable in the lower grades, since younger students may be more prone to distraction and the acoustics are inevitably a challenge. These open spaces may also supplement the four walls of a classroom rather than supplant them.

The theme of flexibility also applies to furniture. Across the board, interviewees recommend flexible lightweight furniture that can be moved around and reconfigured easily as needed. One architect stated that the days of heavy wooden stationary desks are over.



## Community Connectivity

A second theme that emerged prominently from interviews is community connectivity.

Three interviewees predicted schools in the future will connect with the outdoors more. Charter schools must always be creative with space amid facilities budget constraints, so the idea to better use outdoor space seems natural, especially since outdoor space became a focal point during the pandemic as a safety precaution. In fact, one school builder, Pacific Charter School Development (PCSD), recently had clients ask for their construction plans to include extra doors leading to the outside directly from classrooms. PCSD's CEO noted that incorporating the outdoors into the school footprint has not only the physical health benefits when exercise and physical education are part of the outdoor space utilization, but also the mental health benefits related to sunlight and fresh air exposure for students. The importance of designing spaces to support mental health and social emotional learning was underscored by other interviewees as well (although referenced more generally and not necessarily tied to use of outdoor space).

While incorporating outdoor space is attractive in theory, one CMO made it known they have no plans to do so given safety concerns and the fact that their schools are located in areas where crime is an issue. Also, given facilities budget constraints, charter campuses often have limited outdoor space. Thus, this outdoor component of the community connection theme may depend on the specific location of the school, proximity to parks, etc.

Interviewees also saw schools in the future designed to foster community connections, both within the school community itself (gathering spaces for formal community meetings and casual college-like spaces for informal social bonding, particularly at the high school level) and with the broader community outside the school walls. The school experience over the past year brought families into the educational process like never before, and families may want to stay more connected in the future.

This community connectivity may result in an increase in workplace learning and connections to corporate partners or industry professionals. Two interviewees expressed a belief that there will be more opportunities, especially at the secondary level, for students to learn off campus in the form of internships.

One architect highlighted the need for schools in the future to serve as resources to the local community, particularly in areas where resources are limited, by opening up their buildings for community use (e.g., auditorium). He did acknowledge that resource sharing would be challenging for schools to coordinate, but felt it was necessary.

## Efficiency

A third theme that emerged is efficiency. Numerous interviewees said the future of school facilities for charters—by necessity—will require even greater efficiency. One cited the increased expenses associated with a need to improve ventilation systems as a driver for finding more cost efficiencies elsewhere. Since charters are already underfunded for facilities when compared to district schools, they will need to continue



to figure out how to do more with less. This may be more prevalent during the near term as fiscal pressures continue until the economic situation brightens.

Interviewees indicated this likely means more schools will not have dedicated classrooms for teachers in middle and high schools. After all, dedicated classrooms mean rooms are not used as efficiently as possible when left empty during teachers' prep periods or lunch breaks. One interviewee believes asking teachers to rotate classrooms fosters more innovative planning by teachers, too.

Also, in the spirit of using space efficiently, common functional areas like entrance ways and staircases may need to serve multiple purposes. A strong example of this efficient use of space can be seen in the photo below, where a stairwell doubles as a gathering space (each stair as a form of "stadium seating") for performances, assemblies, etc.



Ednovate Campus  
Photo: Ednovate

At schools operated by the Los Angeles-based CMO Ednovate, not only are stairwells used for multiple purposes, but hallways and passing areas are eliminated through an open floor plan where learning areas are distinguished by visual cues and intentional acoustic separations.

Staggering students' schedules to fit more children in a building during a given week is another efficiency possibility in the future. Due to the pandemic, schools became more adept at creative scheduling so that not all students would be onsite at once. While this scheduling was for COVID-19 safety purposes, one interviewee speculated it could be practiced for space efficiency purposes in the future (not necessarily in the form of a hybrid model, but instead simply as staggered schedules).

## Technology

Every interviewee commented on technology-related insights pertaining to the future of school facilities. Five helpful and interesting insights include:

- ▶ **Wi-fi Connectivity.** Buildings must have strong Wi-Fi throughout the campus, not just in the classrooms, although fortunately most of the interviewed schools had already made major improvements in this area. Ensuring students also have strong Wi-Fi outside of school will be just as critical, although most interviewees believed this is a role for the broader community (i.e., local governments and corporate partners) to solve. If this is not addressed by the broader community, they recognized schools will need to help with work-around solutions like hot spots.



- ▶ **Charging Stations.** New Tech Network found that student devices like Chromebooks are much more affordable and commonly used in schools (especially with their model), but the devices have a battery life shorter than the school day. Therefore, schools will need to install charging stations in classrooms or have extra devices so some can be charging on carts while others are in use.
- ▶ **Decline of Dedicated Computer Labs.** One interviewee shared the belief that “with the advent of reliable strong wireless technology and the continued evolution of computing power on smaller and smaller personal computer devices, dedicated computer labs are absolutely a thing of the past.”
- ▶ **Broadcast Booths.** Pacific Charter School Development found it interesting that a couple of their school clients expressed interest recently in creating broadcast booths as part of their facilities plans to create a place for teachers to film a lecture or mini-lesson.
- ▶ **Teaching In-Person and Remote Audiences Simultaneously.** The pandemic created the challenge where some teachers are simultaneously teaching an in-person group of students while allowing others to tune in remotely. For this scenario, one design change that could extend beyond the pandemic would be better technology to support the teachers and control over ambient light and sound when teachers move around while being filmed and recorded.

## Mini-Theme

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Another idea that was raised and is worth mentioning relates to the nature of the space.

**Creating a sense of place for students.** As much as every student over the last 100 years has complained about going to school, the pandemic taught us that students want to be in school. Students want to socialize, and parents want them to develop interpersonal skills, not to mention just getting out of the house. This suggests school buildings have a sense of place for students and families, and the facility should be designed as such. This led to one interviewee discussing how to use this space as a learning tool in and of itself. One example is students studying the building design. With the expectation that a far greater number of school buildings in the future will be built with sustainability in mind (reusable materials, solar panels, etc.), schools can find a way to use these features as learning opportunities for students. Lesson plans can be designed around how much energy the buildings are consuming and how much the schools’ carbon footprints are being reduced due to the facilities’ design.

**Creating a sense of place for teachers.** In terms of spaces for teachers, a couple interviewees noted that teachers will need more collaboration and workspace. Few teachers were adequately prepared for the emergency transition to technology. To help with a transition to more blended learning, teachers will have to find ways to work together and learn from each other. These spaces were often overlooked in facility designs. Interviewees felt it would be great to see more focus on designing spaces to support best practices for teacher collaboration and planning. As one CMO leader



lamented, too often teachers are given a small room with a sink and fridge and that is it. To add injury to insult, such a room is typically called a lounge as if teachers are lounging around all day.

## Conclusion

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Once our schools can finally go back to normal after the pandemic, it will be exciting to see how the lessons learned and new models that emerged during the pandemic inform facility designs down the line. We will not know until then if the guidance and early insights shared by the architecture firms and CMOs interviewed for this brief hold true, but we hope they will be useful considerations for the field in the meantime as we all navigate these uncharted territories together.