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DESIGNERS AND
SCHOOL LEADERS



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SCHOOL
THAT DR. DRE
AND JIMMY
IOVINE BUILT

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Editor	Irena Barker
Editorial Board	James Clarke Murray Hudson
Production Editor	Suzanne Kyle
Sub Editor	Christopher Westthorp
Design	clockstudio
For A4LE (Europe)	Terry White

CONTACT:

magazine@planninglearningspaces.com

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PHOTO & ILLUSTRATION CREDITS:

Cover:	
Dr. Dre:	Trent Jones (centre) photographed by Chris Shinn
Rhode Island:	Marissa Moss, Marissa Moss Photography
P5	Tian Fangfang and LearnLife
P8-9	Emily Kingsolving
P10	Upper left and middle: Joel Sanders
P11	Upper right: Chris Shinn
P12	Upper left: Joel Sanders, Rest: Emily Kingsolving
P15	Steve Cohn
P23	Illustration by George Inwards
P26-29	Mark Lord on behalf of Learniture
P30-37	Marissa Moss, Marissa Moss Photography
P38-43	ADP Architecture

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AGENTS PROVOCATEURS

IRENA BARKER
EDITOR



At the beginning of the pandemic, our columnist Richard Gerver found himself in a state of paralysis. He was fearful of what might come next and hoarding kidney beans as a proxy for certainty. He eventually released himself from his “Covid-19 funk” by connecting with his “inner toddler”, being curious about his situation and embracing change.

Indeed, Covid-19 has been the ultimate provocateur – provoking change across the board, but this disruption may have provoked some positive developments too. In this edition, Professor Stephen Heppell looks at the “hybrid schools” using online and offline learning in tandem and predicts a trend for schools based in town centres – in the empty shops that internet shopping and Covid-19 left behind.

Thankfully, Covid-19 isn't the only provocateur out there. Beats Electronics' founders Jimmy Iovine and Andre “Dr. Dre” Young have set up an academy in California where traditional boundaries between university subjects – and departments – are smashed down and students learn to think across technology, business and the arts. We talk to the architects behind the Iovine and Young Academy.

We also report on the Ashley Hill Multi Academy Trust in the UK, which has brought in a learning formula of 50 per cent direct instruction and 50 per cent independent learning. Children who used to wait to be told what to do are now empowered to be independent learners.

They are tiny schools with big ideas and it is reassuring to see that revolutions can still start in such small, unexpected places.

If the virus has provoked anything within us, it is the importance of not simply acknowledging the importance of mental and physical health, but doing something to promote it.

In our feature on page 38, which explores design for well-being, we look at the wide variety of ways educational spaces can do just that: from enabling people to make healthier choices by providing bicycle racks to planting trees and flowers to appeal to our natural “biophilia”. While building design won't solve systemic problems with overwork, stress, isolation and a lack of resources in education, it can go a long way in supporting other efforts to improve staff and student well-being.

And as Richard Gerver says, we don't want children to grow up building and hiding in metaphorical toilet-paper igloos out of fear that things might go wrong. We need them to be confident and fearless so they can go on to be the next generation of provocateurs.

Irena Barker.

MAD SKILLS

In 2017, MAD Architects was commissioned to design a kindergarten next to a senior citizens' apartment block in Beijing, China, reflecting the client's ethos of "intergenerational integration" that blends pre-school education and care of the elderly.

"When I looked back at my own kindergarten years, and even the ones I saw after I grew up, I always wondered what it is that kids long for the most," says MAD Architects' founder, Ma Yansong. "Perhaps it is freedom and love. A kindergarten doesn't always have

to offer complex hardware or fixtures, but it must always make kids feel freedom and love – something that leads them to endless possibilities."

At MAD's YueCheng Courtyard Kindergarten in Beijing, this comes in the form of a beautiful, undulating rooftop playground wrapped around courtyards and towering trees.

Look out for a full report on this extraordinary building in the next issue of *Planning Learning Spaces* magazine.



LEARNLIFE LAUNCHES POP-UP CLASSROOMS



LearnLife, the global community of education innovators, have unveiled pop-up modules that enable learning to happen anywhere, at minimal cost while treading as lightly as possible on the earth.

"It's an infrastructure that can be multiplied, added on and plugged into existing schools or any outdoor space," explains LearnLife Learning Space Architect, Solange Espoille.

Designed using Passivhaus principles, these wooden, Nearly Zero Emission Buildings (NZEB) offer energy savings of up to 90 per cent compared to conventional buildings and can be constructed locally using a design process simplified through digitalisation. The first pop-up module will be built in Spain in spring 2021.

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SCHOOL DESIGN BEYOND COVID-19: A4LE (EUROPE) WORKSHOP REPORT

The recent series of A4LE “Designing Spaces for Future Focused Schools Beyond Covid-19” workshops saw a number of architects, specialists in acoustics, FF&E and educational consultants join (virtually, of course) representatives from the Organisation for Economic Co-operation and Development (OECD) and the UK’s Department for Education to develop ideas for sustainable school design post-Covid-19. Delegates worked in six groups, each considering a different aspect of school design, from whole-school space planning to the role of off-site and modular design. The outputs from these groups will be published as an A4LE (Europe) report in early 2021.

The specialists in interior design, quality environments, acoustics and FF&E looked at how good design could help make schools healthier post-Covid-19. We’ve learned much during the pandemic about virus (and bacteria) transmission and it makes sense to incorporate this into school design, if only to prevent the rampant spread of the common cold or flu. We also know that human-scale smaller social bubbles can, according to the Calouste Gulbenkian Foundation, improve

social cohesion, reduce bullying and exclusions while increasing staff satisfaction, so why not design schools around this principle?

It’s often the moving around between lessons in secondary schools that fuels both viral transmission and, sometimes, bad behaviour. By creating a learning hub that can accommodate 240 students (one year of an eight-form-entry school) you create a permanent year group “bubble” where relationships can thrive and infection control can be enhanced. With clever acoustic features that include curved bookshelves and multi-faceted teacher walls, some doors and walls can be removed, which improves ventilation and reduces the number of surfaces people need to touch – all while controlling noise levels. Agile and adaptable furniture enables a wide variety of pedagogies to be accommodated and a large open-plan space facilitates dining, assemblies or large group collaborative learning. In the image below you can see how some of these ideas would work in practice.

Watch out for the full report early in 2021.



Multi-faceted teacher wall reflects sound back into the learning space / Plant walls improve air quality / Agile furniture creates adaptable spaces / Dry-wipe surfaces increase engagement / Removing walls improves ventilation / Glass walls improve natural light levels and enhance collegiality

JUST WHAT DR. DRE AND JIMMY IOVINE ORDERED: INSIDE THE LA ACADEMY THAT BEATS BILLIONS BUILT.

As legendary pop producer Jimmy Iovine announces the sale of his back catalogue to fund a new high school in LA, we meet the architects of the original USC Iovine and Young Academy. Irena Barker spoke to Frederick Fisher and Partners, along with school dean Erica Muhl and student Trent Jones.

“There wasn’t as much making as I thought there would be...that is, physically tinkering with things,” says Trent Jones of the engineering degree he started but abandoned. “It definitely revealed maybe this isn’t quite the path I wanted.” Fortunately, the young innovator and maker wasn’t in the wilderness for long.





YOU HAVE ARRIVED
YOU ARE HOME

COHORT 6

THE REALITY OF
DISRUPTORS

THE DEGREE IS
IN
DISRUPTION

REFLECTORS

LOVINE & YOUNG HALL

COHORT 6

Ps

Handwritten signatures and scribbles in blue and red ink.

amara



A collaborative, creative model

His sister told him about a brand new interdisciplinary school at the University of Southern California (USC) that would allow him to explore his many ideas and bring them to life: the USC Jimmy Iovine and Andre Young Academy for Arts, Technology and the Business of Innovation.

Working from a central workshop known as “The Garage”, Jones would be able to innovate to his heart’s content, find solutions to real-world problems and collaborate on interdisciplinary projects with students and staff from a variety of backgrounds in art, tech and business.

Jones was part of the second cohort of the school in 2015, and he was delighted with his new milieu.

“The first thing that people notice is how unique they are from one another. While I came in as this kind of maker, who liked to tinker and build things, who loves engineering and technology, someone else may have had a background that was purely in art and design.

“I thought ‘oh wow’, everyone is so unique and different, everyone has their own thing; how can

we mesh our individual talents to make things that are collectively better than what we could do as individuals?”

This collaborative project-based working, with multiple perspectives and an interdisciplinary vibe, was exactly the intention of the school’s sponsors Jimmy Iovine and the rapper and hip hop producer Andre “Dr. Dre” Young, the co-founders of the wildly successful Beats Electronics brand.

Iovine, who was also instrumental in launching Apple Music, said in 2015 that the aim would be for the school to create a pipeline of professionals that are culturally fluent as well as technologically savvy: “We tried to hire people for Beats, and they were either engineers or music people. I’m like, ‘this is all wrong’. Of course, the guys that run Beats understand both.”

Students at the school have now gone far wider than that, however, with undergraduates and post-graduates working on projects as varied as a digital platform to transform recruitment in the maritime industry to an app that supports black people during encounters with the police.



Inspiration factory

There are now 120 undergraduate majors and 200 graduate students at the school and 250–300 other students taking courses.

Erica Muhl, dean of the school (pictured above, to the left of Dr. Dre, Jimmy Iovine and USC President Carol Folt), and also a composer and conductor, says the school “responds to a new style of student” who has “a natural facility with technology” and a desire not to be pigeonholed into one strict subject area. “Students who had worked across music or across the visual arts or creative writing, filmmaking, etc., they were often faced with having to make a decision coming into college of doing a single major,” she explains.

“Let’s say they were really good at math and music, those things didn’t traditionally go together, so we realised it wasn’t so much about us driving anything new, it was about responding to a new style of student.

“We were incredibly lucky, we guessed right, we hit a nerve in particular with Generation Z and generations coming behind them.

“We were offering a place where students could bring

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their interdisciplinary pursuits, learn how to mould those, blend those into a very powerful new discipline which very carefully focuses on higher-level problem-solving using engineering, business, arts and design.”

This approach, she says, is in contrast to the 150-year-old higher education model that needed to change.

“We will always need specialists. If I have a medical problem that requires a specialist I’m very glad they are there, but in the twenty-first century we also need big picture specialists who can actually work across these disciplines very effectively.”

His love of the school eventually led Jones to stay. After graduating in June 2019, he returned that September to become a “maker in residence”, helping students to realise their ideas and designs. Providing this support helps students to have the confidence to think they can one day change the world, he says.

This work is rendered even more rewarding by the recent opening of the school’s brand-new 40,000-square-foot (3,716-square-metre) building at the USC’s sun-drenched campus in Los Angeles. With its impressive collegiate neo-Gothic exterior, featuring red brick, tall windows and stone arches, it fits in with the rest of the college architecture.

But inside the school takes on a far more industrial appearance, with concrete floors, vast high-ceilinged

workshops, lecture rooms and a variety of breakout spaces and meeting rooms. The “guts” of the building are on display in the form of giant air ducts, vents and cabling, evoking a giant factory or warehouse space.

“We actually love the fact that when you walk into the inside of the building it’s nothing like the collegiate neo-Gothic exterior; it’s very contemporary, and we love that kind of a creative tension. It’s unexpected – and there’s an ‘aha’ moment when you walk through the front door,” says Muhl.

Muhl, who helped to found the school and was heavily involved in developing the design with architects Frederick Fisher and Partners, says that, as well as being functional, they wanted the look and feel of the interior to inspire the work within it.

“I experienced this when I was invited to visit the new Pixar facility in Emeryville, which was one of the last facilities that Steve Jobs was directly involved with.

“When I walked into that facility, that’s its entire goal – the expanse of it, the height of the ceilings as you looked around, the visuals that you saw; I realised that when you walked into the building you immediately thought to yourself, ‘Oh, I want to play here’.”

At the Iovine and Young Hall, as it is known, workshop spaces include a fabrication lab for metal, wood, plastics and electronics. There is also a “rapid prototyping lab”,

WE WERE OFFERING A PLACE WHERE STUDENTS COULD
BRING THEIR INTERDISCIPLINARY PURSUITS, LEARN
HOW TO MOULD THOSE, BLEND THOSE INTO A VERY
POWERFUL NEW DISCIPLINE WHICH VERY CAREFULLY
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ENGINEERING, BUSINESS, ARTS AND DESIGN.

including 3D printing and laser-cutting facilities. Students also have access to a 2D print lab and multimedia zone for motion-capture, photo, video and audio.

The maker spaces are positioned to the front of the building and have large picture windows facing out, so the work of the school is on public display. Similar large windows in the interior walls dividing the different spaces encourage collaboration and “serendipitous” encounters between students.

This design was developed through the school's experience with its original maker space in another university building. “We had worked in our earlier educational facility that we lovingly called ‘The Garage’, in homage to the great things that have been launched in garages over the years: Apple and Hewlett-Packard – and many great bands, of course,” says Muhl.

There, they had learned that large, open concept spaces could drive spontaneous collaboration and innovation. “Initially our students weren't used to it,” she says. “The very first cohort referred to The Garage as ‘The Fishbowl’, but they got used to it very quickly and then in fact they began to crave it.”

Another feature of the building is the area of “alumni incubator” spaces, also at the front of the hall, which alumni can use for meetings when they are founding companies.

While clearly being a space of serious industry – the design draws inspiration from the Ford Piquette Avenue Plant in Detroit – it is also extremely playful and there are writable walls everywhere.

One of the first projects undergraduates collaborate on in their “rapid visualisation” work is a giant mural that is photographed and wiped away at the end of the year.

A giant staircase (more on which later) even features an understairs cupboard known as “The Harry Potter Room” where podcasting can take place.

“There are so many walls you can just scribble on, so if you have an idea that pops into your mind and you just have to get it out, you can just grab a marker, create a rapid visualisation of what you have in your mind and then begin having a conversation with whomever,” says Jones.

“It's a communal hub, with it being open, like a sandbox... It really is this collision space where people who have different backgrounds encounter one another, working on different projects.”

This idea of collision is one of the key concepts embraced by architect Fred Fisher, who explains that the building lies at the intersection of two LA gridlines – something that is expressed in the design of the building.



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“We exploited it by making that the entry of the building, so when you come in you’re really at the intersection of the collision of those two grids – and it creates eccentric spaces within the building.”

The grand staircase – built from concrete, glass and metal – lies at this point, forming a striking centrepiece.

“There’s this dialogue between rationality and irrationality, and play and collision; we wanted to make that the moment of entrance,” says Fisher.

He stresses that the spaces are: “Very flexible, raw, creative spaces they can play rough with.”

And flexibility is key, to ensure the building continues to serve its users into the future.

“The building is not designed like a custom-made suit,” says Fisher, “it’s like a pair of overalls; it’s meant to be flexible, to fit you, now and into the future no matter what goes on.

“That rawness I think supports people’s feeling that they can do whatever they want in the building and they don’t have to be in a precious, untouchable environment.”

The overall reaction to the building, adds Muhl, has been fantastic, even though the pandemic means

students have been unable to use it for some time:

“The general student response to the building is extremely high; it’s one of the lingering sadnesses of the situation with Covid-19 that we are not able to allow the students into the building right now. They feel as if it’s their home.”

Jones, meanwhile, has been allowed to come into work, but it is a less joyful experience without students around.

But there is hope – and more plans – on the horizon.

The university is currently planning on setting up a high school based around the same interdisciplinary model, and Jones is getting involved. It is hoped this school will open up opportunities to the wider community and promote diversity.

“Are the skills we are developing in the students here now exclusive to the collegiate space?” wonders Jones.

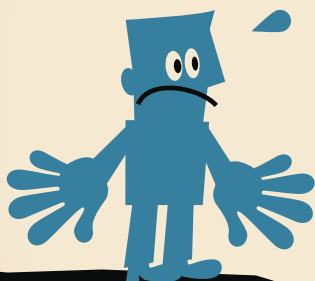
“What’s the impact that we can have if students can learn some of these skills earlier? And particularly among students of colour and around USC’s community, how could they benefit from this kind of education?”

Judging by what is going on at university level, an awful lot. ■



WE'RE ASKING THE WRONG QUESTION

James Clarke on why change in education is so elusive.



For a number of years – if not decades – now, we've been asking what the future of education should look like, and over the last few, challenging months this question has edged into the spotlight. In a nutshell, the argument goes that as the world changes, so too should education evolve – to prepare young people properly for their future. It's a fairly straightforward argument and, without wanting to sound trite, a pretty straightforward conclusion too – and one that is shared by the vast majority of educated opinion. The details might be different – Professor Sugata Mitra, for example, largely focuses on the use of computers and the internet – but the fundamental tenet remains the same: the world has changed. So too should education. Keep up!

But if I sit around the dinner table in the home of a member of the chattering classes in Middle England, I hear a very different story. Equipped often with no more than what they've seen on the latest edition of *Educating Greater Manchester*, parents mourn the disappearance of the fearful respect they showed masters who in turn addressed them by their surname when they attended school. They'll talk of "crowd control" and the lack of discipline. They'll complain of disengaged students and grade inflation. Whether or not that synopsis of the current education system is fair, it makes no difference.

As Shadow Secretary of State for Education (and *Times* journalist) in 2010, Michael Gove wrote that he felt "most parents would rather their children had a traditional education, with children sitting in rows, learning the kings and queens of England, the great works of literature, proper mental arithmetic ..." – and the trouble is he was right. That is what most parents wanted and as a politician needing their votes, that is what Gove promised. It would be easy to consider this a cynical sop to voters rather than an ideological argument. Just weeks later he was sat behind his desk in the Department for Education.

In her book *Inadequate: The system failing our teachers and your children*, Priya Lakhani asserts that both "classroom teacher and parents – with their unique views of education as both frontline practitioners and its primary consumers – are almost entirely excluded

from the 'why' of education". She continues: "They are crowded out from the decision-making process by powerful politicians and well-funded interest groups. The system itself is also unintentionally designed in a way that is incapable of receiving and considering feedback and data from the frontline. This is the opposite of how any successful operation works."

Hopefully, in 2021, we are starting to come through the global pandemic that has interrupted traditional schooling throughout the world; but whereas many commentators have talked about the fantastic 'once-in-a-lifetime' opportunity for renewal that the pandemic offers, what we hear on the street in large part is the desire to "get back to normal".

During [RE]LEARN 2020, Learnlife shared its new learning paradigm, containing 21 components, divided into three groups of seven, the first of which is "preparing the community". And it is this that I believe is the most important thing we should be doing. The question we should be asking is: "how do we persuade parents to demand a different education for their children?"

Until we truly understand the "man (and woman) on the Clapham Omnibus" – and overcome their resistance to change - we'll achieve little more than continuing to sit in our ivory towers pontificating. We must adopt some humility and work out how to achieve real change, otherwise we'll still be asking what the future of education should look like another 15 years down the line. ■

James Clarke is the Divisional Director of Learniture and a contributor to the book Planning Learning Spaces.

Inadequate: The system failing our teachers and your children is published by John Catt Educational Ltd. Priya Lakhani founded the educational technology company CENTURY in 2013 after being struck by underachievement rates in schools. She is a former member of the Secretary of State for Business, Innovation and Skills' Entrepreneurs' Forum.



DEB

THE EVOLUTION OF HYBRID MODELESS SCHOOLS

Professor Stephen Heppell, a global expert in online education and learning spaces, explores the emerging world of new environments for learners.

Just before Christmas 2020, in the UK, the closure of a department store chain that had long been a feature of almost all our large towns' high streets was announced. Debenhams is not the first victim of the changing world of retailing, but its closing down seemed, for many, like the end of an era. With 12,000 jobs lost, it was the end of a career for many too. We all have childhood memories of department stores, each with much in common: typically, the ground floor housed perfumes and cosmetics with theatrically made-up assistants in white coats. A central escalator linked floors grouped as menswear, toys, electrical goods and so on. Menswear was always upstairs. At Christmas, on the top floor, Santa enjoyed starring in 1,000 selfies while listening to wide-eyed wishes.

No doubt there was a whole industry of finessing those unchanging department store details: improving the coffee in the café, and so on. But for those with eyes to see, the writing had been on the wall for department stores for years: shoppers found that the stores indeed had everything, but never quite the right version, or size. It was fun to be in the town centre, but access

was a problem for getting purchases home; the many little coffee shops spreading across high streets offered even better coffee; and, anyway, online shopping gets delivered within 24 hours and is more convenient than waiting until the weekend to shop at Debenhams.

Which brings us round to schools. A large school arguably parallels the department store in several ways: the one institution has everything, from music and 3D printing to lunch and nativity plays. There is a whole industry of finessed details around behaviour, well-being, appearance and more. And "Big School" contains a generation of learners who are asking, as shoppers did with Debenhams, if this is where they want to be at all. Writing this as we approach Christmas 2020, returns show that 22 per cent of secondary students are not currently attending school. The exit has begun.

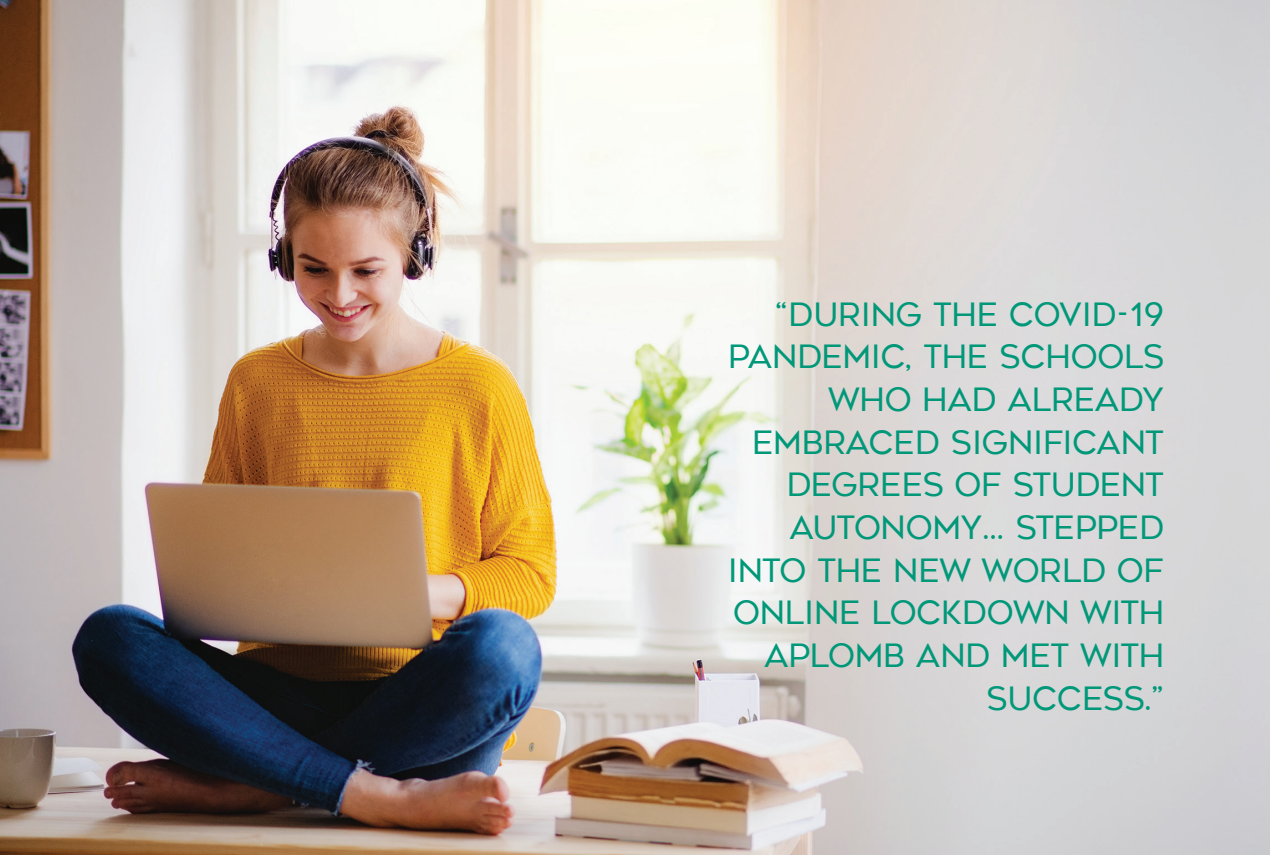
Autonomous attainment

It's not too late to save schools, of course, and we are entering a millennium of learning, but Covid-19 has shown the viability of alternatives, which we ignore at our peril. Let's consider what we know about "learning elsewhere": we have known for a very long time that it

ENNHAMS

can provide either an effective supplement or substitute. In New Zealand's Christchurch, after the terrible earthquakes and aftershocks in 2011, children were out of school for terms, not weeks. Student results actually went up in their final exams and high school students did not drop out. In ten years of the DfE-supported Notschool.net, a 100 per cent online project for the many thousands of children excluded from school by behaviour or circumstances, it was normal for those excluded students to outperform the schools that they had been excluded from. Around 70 per cent went on from Notschool.net to college or university, and indeed we had to set up unique degree pathways so that their successful learning model could continue to degree level and beyond.

Notschool.net began in 1997; what we learned then still holds true today. During the Covid-19 pandemic, the schools who had already embraced significant degrees of student autonomy – with carouselled activities, a project-based overarching learning focus, peer-to-peer mentoring and support (including some all-age learning), learning pathways rather than rigid timetables and with



“DURING THE COVID-19 PANDEMIC, THE SCHOOLS WHO HAD ALREADY EMBRACED SIGNIFICANT DEGREES OF STUDENT AUTONOMY... STEPPED INTO THE NEW WORLD OF ONLINE LOCKDOWN WITH APLOMB AND MET WITH SUCCESS.”

high levels of student agency – stepped into the new world of online lockdown with aplomb and met with success. Sadly, but predictably, where a Zoom-based analogue of the traditional school day and timetable, was attempted, children quickly fed back the equity problems (“My brother is online then, and my mum needs to be too, for her work in the afternoons”) alongside the sense of missed opportunity (“I wish I could show you what I’ve been learning with my pals – we’ve really got into space science!”) – and, indeed, they mentioned boredom too (“I’m Zoomed out Miss”). Successful Covid-19-era schools have, by and large, blended their face-to-face with their from-home learning. Teachers have been SO ingenious and resilient.

A modeless future?

Much is made of the blended, or hybrid, school, offering a mix of online with face-to-face learning. For teachers this two-mode model has been exhausting! However, very few companies outside of the education sector operate with two modes, with distinct online and also face-to-face teams. Those modeless companies are normal, with employees sometimes beaming in remotely, sometimes in the office physically, but always part of a unified professional team, working at common

projects. This modeless future is surely where surviving schools are headed and it is a design challenge to make our learners feel “part of the team” at all times. You will recall the rejection of mass hot-desking in office buildings – with the loss of agency and mutuality felt by office workers? Well, the many adults now working from home (WFH) will certainly not all be returning to the anonymity of hot-desking any time soon. They have enjoyed working from home, and that has profound implications for commercial real estate. But WFH has unlocked the door to childcare changes, too. Children don’t need to be sent away to be looked after daily – they can now stay home safely, which has the same profound implications for educational property.

Of course, most parents don’t want to be the teacher, by and large, but they are happy to oversee small clusters of learners. Around the world these “pandemic pods”, with a paid private tutor overseeing small clusters of children, and Zutors (Zoomed-in tutors) have shown explosive growth. The 2020 Facebook Pandemic Pods group grew to 30,000 registrations in its first three weeks! These pods for wealthier families are an existential threat to private schools, which as yet don’t see either the danger or the opportunities.

Some months back, we asked online groups of schoolchildren, returning from lockdown, about which aspects of home learning they would miss and similarly which dimensions of face-to-face learning they looked forward to rediscovering. As part of the conversation we asked how many days a week they would need to attend school physically, to “still feel a part of the community” and still “keep a bond with their besties”. Their average response was two days a week. Everyone reading this can do the simple maths: if children attend perhaps only two or three days a week, then we have considerable excess capacity in our large school buildings.

Making places our spaces

What does all that mean for school design and for our learning spaces? Well perhaps there is a clue to be found in what happened to the retail industry (although, of course, learning is far more complex than retail). Before the millennium my team worked with Tesco, Intuitive Media and others to create Tesco SchoolNet 2000. It became a Guinness World Record holder as the then biggest internet learning project in the world. We set children of all ages a string of online challenges: “Locate the oldest person in your community and find out about their school days.” Tesco saw very smart collaborators; they saw the levels of engagement and immediately understood the implications for online activity (sadly, our own English Department for Education and Skills didn’t). With that head start Tesco has gone on to be far and away the UK’s dominant online supermarket chain.

“WRITING THIS AS WE APPROACH CHRISTMAS 2020, RETURNS SHOW THAT 22 PER CENT OF SECONDARY STUDENTS ARE NOT CURRENTLY ATTENDING SCHOOL. THE EXIT HAS BEGUN.”

When Covid-19 hit, Tesco was, just like the successful schools, already on a path that made a substantial further expansion of online, easy. Tesco increased online weekly orders from 600,000 to 1.3 million, in less than a year. While many Tesco shoppers rushed online, the places where they still enjoyed shopping face to face were often now the small local “express” branches, right in the heart of the community. The land banks for planned new superstore sites were sold, as the growth in big superstores gave way to an explosion of tiny local stores. It is what people want, to complement their online shopping.

When we were exploring with groups of children, in Scotland’s Dumfries and Galloway, where they wanted their new maker space to be, the children were unequivocal: “In the heart of the high street please.” We took over an empty high street shop. It was what the children wanted to complement their online maker communities – and it gave access to new adult learners. Once it was open, mums peered through the windows to ask about 3D printing and more.

Working with an elite sport (which I won’t name), it was apparent that its leading athletes didn’t feel membership of their huge training premises. Photos on the walls were of past champions; the design was corporate; they felt like users rather than owners of the space. It now has photos of the athletes’ children, or themselves as youngsters. It feels like their space; they want to be there. I’ve been in too many schools where that same alienation applies, right down to the boundary razor wire and signs telling you what you must not do.

If we want children to keep coming to school, now that they have choices, it needs to feel like “their” school and that is a simple design challenge. We know how to do all this: co-design, student agency, ever-changing premises, agile furniture, adaptable spaces, small scale, multiple locations. And surely we can be smarter than Debenhams before it’s too late? ■

Professor Stephen Heppell is CEO of Heppell.net and holds the Felipe Segovia Chair of Learning Innovation at Universidad Camilo José Cela, Madrid.

“...WE WILL NEED TO BE AGILE, COMFORTABLE WITH A LACK OF CONTROL AND AT EASE WITH THE NEW.”

FROM CHAOS TO CONTROL: THE VALUE OF CAN-DO CHANGE

Richard Gerver is a well-known speaker, author and former headteacher. He describes how his experience of the global pandemic has altered his perspective on learning.

At first it was all about toilet rolls. That was when I knew something about this Covid-19 crisis was seriously going to disrupt our lives. It was the end of February and I was on my way back from working in Australia. I was in a hotel room at Tullamarine Airport, just outside of Melbourne, the night before my flight home. I turned on the TV in my room and saw a live press conference being given by Scott Morrison, the prime minister. It was a day or two after people had started stripping the shelves of toilet paper; quilted, moisturising, absorbent, you name it, it was gone. The prime minister had to calm the situation. Mobile phone footage had been posted on social media of people fighting with each other to get their hands on the last few packs. The videos had gone viral and like the virus itself had spread across the world. The panic began because some Australians assumed, wrongly, that their supplies were manufactured in China – and as a result of the lockdowns there they had feared that the supply chain would be cut and that their bottoms would suffer. Morrison appealed for calm and to explain that over 90 per cent of Aussie supplies were in fact domestically produced. It was, however, too late.

Within a few days of returning home to the UK, people here had seen the videos and, without finding out why, started to do the same thing. What is extraordinary is that this was before lockdown was even a thing in the UK.

As the virus hit our shores and the magnitude of the crisis came in to focus my schoolboy snigger about the

toilet paper was replaced with a sort of mental paralysis. My work evaporated; my wife, who is a headteacher, was faced with closing her school; and my daughter, a young teacher, was suddenly asked to move her teaching online.

From paralysis to denial to despair

The paralysis lasted for a week or so; it was weird, something I had only ever experienced during a sudden family bereavement. I was reading and watching the news, but nothing was going in; I was speaking to my wife and daughter, but again I was absorbing nothing.

The paralysis gave way to denial. As the numbness subsided, I simply refused to believe that this thing was real, or that it would impact on us – or if it did, it wouldn't be for as long or be as bad as the experts were saying.

Eventually, though, the hard truth hit home and denial was replaced with anger. I needed to find someone to blame: politicians, scientists, the Chinese... even my neighbours, who were definitely breaking the rules.

Within a couple of days, though, I found myself in a fourth phase, the one I would be stuck in for a while. I felt a listlessness, a loss of hope. I found it hard to get up, to go to bed, to care.

Despite trying everything, I had lost any sense of control over what was happening in our lives. At best I was being reactive and doing irrational things; suddenly I was hoarding toilet paper and bulk-buying kidney beans – and I hate kidney beans.

THE WORST THING
How do I prevent?

THE BEST THING
How do I work towards?

THE MOST LIKELY
How do I deal with?



In search of certainty

On reflection, it was clear that I was not alone, and the irrational behaviour of so many, I realised, stems from the way we are educated and raised. The actions so many of us were taking were desperate attempts to find a level of control, of security, of certainty.

From an incredibly early age we are taught to seek out certainty and when we find it, to protect it. As we get older, it becomes the goal and the symbol of a successful life: good and steady, safe employment; a home with a mortgage; a sound pension.

We are not good with change and uncertainty, which is strange, because we weren't born fearful of the unknown; in fact, as infants most of our experiences are new, uncertain and ever-changing – and we don't just survive those early years, but thrive in them. Apparently, we take in somewhere between 70 and 75 per cent of everything we learn in our lifetime before we are five years old.

As we get older, we become increasingly averse to change and risk because we are taught to believe that certainty – getting stuff right, not making mistakes or taking risks – is the route to security and a happy life. Somewhere along the way, we forget that you only ever learn something new at the point of a mistake or the realisation that you do not know something or can't do something.

Cultivating the can-do and new ways of thinking

I eventually pulled myself out of my Covid-19 funk by realising that I needed to reconnect with my inner toddler. I knew that I had to stimulate my curiosity, not be frightened to stick my head above the parapet, and explore the world as it was becoming.

I started to engage and explore a little, looking at what I could do rather than what I could not. I started working through the six questions first developed by the founding father of positive psychology, Martin Seligman:

- What is the worst thing that could happen?
- What could I do to prevent the worst thing from happening?
- What is the best thing that could happen?
- What can I do to help the best thing to happen?
- What is the most likely thing to happen?
- What can I do to deal with the most likely thing happening?

“WHAT CAN I DO TO HELP THE BEST THING TO HAPPEN?”

The point of the questions is to help you work towards a feeling of control by stimulating your curiosity and creative thinking. It helps you to problem-solve in the way very young children do subconsciously. They do it through play and discovery.

Not only did the process make me feel better but it also meant that gradually I became more productive and engaged.

For me there are significant lessons here for learning, for schools and how we use design to stimulate a new way of thinking.

The challenge is clearer now than it ever has been: the world is turning and changing faster than ever and it will not slow down; we will have to cope with uncertainty more and more; we will need to be agile, comfortable with a lack of control and at ease with the new.

To do that and to ensure that we don't all end up living in toilet-paper igloos, we need to ensure that our children live in educational settings that can change and adapt, which stimulate curiosity and constant questions. We need to ensure that our pupils develop mental agility and are comfortable with the unknown. ■



Richard Gerver is author of the international bestselling books Simple Thinking and Change: Learn to Love it, Learn to Lead it. He is now regarded as one of the world's most original and authentic thinkers around human leadership and organisational transformation.

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BUILDING EACH OTHER UP

A multi-academy trust with three small village schools shows that you don't have to be big, shiny and new to embrace a revolutionary approach to learning. Suzanne Kyle reports.

Nestled in the leafy Home Counties in the south of England, the three schools of the Ashley Hill Multi Academy Trust enjoy idyllic locations: Bisham C of E Academy borders the majestic River Thames and has a sixteenth-century church next door; White Waltham C of E Academy sits in a conservation area replete with historical buildings; and the Knowl Hill C of E Academy is perched moments from the village common. So far so traditional. Look inside their classrooms, however, and you'll see half the class under direct instruction from their teacher while the other half work independently. You'll notice children sitting at tables, standing at huge whiteboards, lying on the floor, sitting on a mat with a ZigZag table or plugged into a tablet with headphones on. Supervised they may be, but no one's telling them what to do and they all look busy, engaged and focused.

Child empowerment

It wasn't always like this. Four years ago, the trust began to recognise the negative impact that streaming by ability was having on some pupils. The leadership team knew things needed to change and was unafraid to grasp the

nettle. Isabel Cooke, CEO and Executive Principal of Ashley Hill Multi Academy Trust, explains: "Like most schools we used to stream children according to ability. The lower-ability children were given huge amounts of support and direction but we came to realise that this was leaving them disempowered. They would wait to be told what to do and lacked the independent learning skills they would need when moving from a small setting into a secondary school cohort. We also came to recognise that identifying yourself as 'low ability' can be really damaging to a child's self-esteem – it can take a long time to recover from that label.

"What's also interesting is that some high-ability children were good at grammar and at getting things down on paper – skills that so-called 'less able' children may have found harder – but they weren't necessarily highly skilled when it came to their imagination. Also, we saw higher-ability children who instinctively knew an answer but struggled to show their reasoning, which is something they have to be able to do to demonstrate embedded skills and knowledge. We knew we had to change."



“CHILDREN MUSTN'T THINK YOU ONLY LEARN SITTING AT A DESK.”



The leadership team worked together to design and implement a radically different approach, trialling various types of mixed ability learning to find the right combination that would give all their pupils the skills they needed. Working in mixed ability groups, the children now spend half their time under direct instruction from their teacher and the other half working independently on what the trust calls “continuous provision” tasks. These are tasks set by the teacher but completed independently in resource-rich areas of the school dedicated to different subjects. The children can choose the resources that will best help their learning and work independently or in groups depending on the task, providing peer-to-peer support to each other along the way. For maths they may choose, for example, beads, counters, Numicon, a variety of measuring devices, large wall-mounted whiteboards or tablet computers. Literacy resources include dictionaries, thesauruses, books, word maps, examples of text and access to online resources via tablet computers. The children are empowered and able

to exercise autonomy while building their resilience, independence and collaboration skills.

A supportive ethos

A strong Christian ethos permeates these church schools. Their motto “Encourage one another and build each other up” (taken from 1 Thessalonians 5:11) resonates strongly with continuous provision, where children of all abilities support each other with their learning. One eight-year-old boy was overheard talking to a peer who was struggling, saying: “Let me help you get started. I’ll read you the question, you tell me what to do next and then you can carry on. But I’m not giving you the answer because you need to work it out on your own.”

“This was a child who may struggle in other areas but the compassion he showed just blows me away!,” says Isabel Cooke. “The children are so intuitive towards each other and so supportive. It gladdens our heart when we see things like that; it brings us such joy and it’s a wonderful demonstration of our values and ethos.”

This supportive ethos extends to the staff, too, some of whom found it difficult to switch to a culture of continuous improvement and challenge. “The leadership team is passionate about what we do,” says Isabel. “The heads of school are very visible in the classroom, supporting and encouraging, and we share the planning across the trust to lessen the load on individual teachers. It doesn’t suit everyone; some people are more comfortable sticking to what they know. We are very honest when interviewing to make sure people know that we don’t rest on our laurels. We are always looking for ways to improve.”

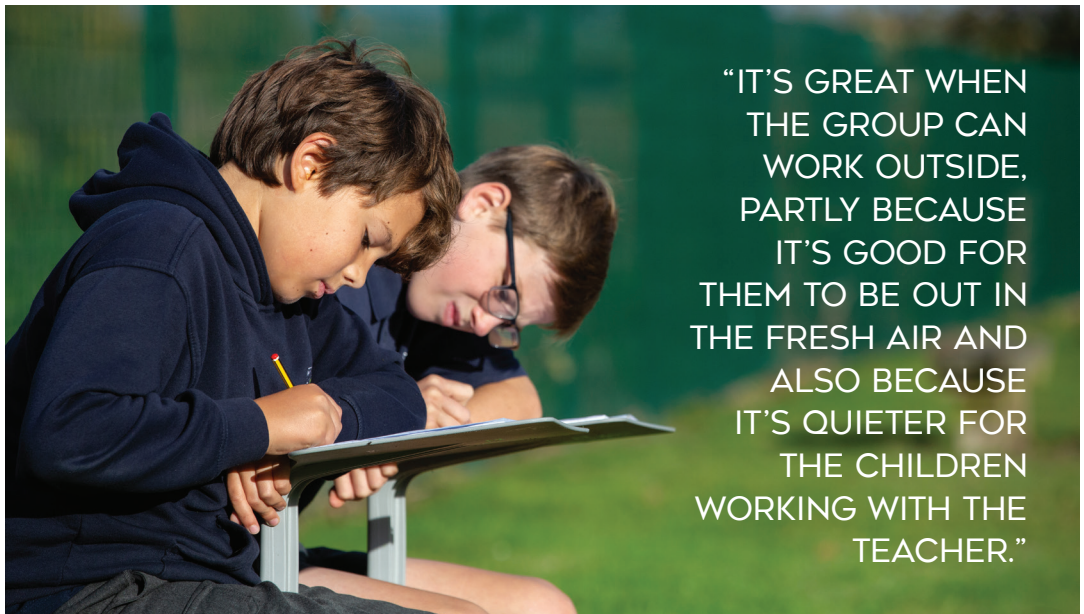
The radical shift to 50/50 learning meant remodelling the trust’s learning environments to accommodate this new way of working, but revamping the classrooms wasn’t purely pragmatic.

“Children mustn’t think you only learn sitting at a desk,” explains Isabel. “We’ve got mats for them to lie on, ZigZag tables they can use while sitting on the floor, LearningWalls with huge whiteboards they can stand at to work, group tables, standing tables and individual tables to allow children to find which way they work best. When they are writing lots of them will take a

ZigZag table and sit on the floor because it’s more comfortable. Some of them, especially boys, like to lie on their stomach. What matters is that they can make a choice and take responsibility for their learning.”

Hi-tech, low-tech

Technology also plays a significant role in the trust’s continuous provision. “We try to use as much technology as possible because the children find it so engaging,” says Isabel. “We’re aware that we’re competing with gaming consoles so we’ve invested in fibre optic broadband and dual tablets. Children can scan a QR code and access a video made by their teacher to explain a task. We also use technology to help children overcome barriers. We used to scribe for children who were very imaginative but found it difficult to get their ideas down on the page, but we found that they’d be waiting for an adult to help them. Now they can use headphones with microphones in, speak their text and see it flow onto the screen. We’re lucky that we have fantastic PTAs to help raise funds to buy this kit; the problem now is that it will be obsolete within five years and need replacing.”



“IT’S GREAT WHEN THE GROUP CAN WORK OUTSIDE, PARTLY BECAUSE IT’S GOOD FOR THEM TO BE OUT IN THE FRESH AIR AND ALSO BECAUSE IT’S QUIETER FOR THE CHILDREN WORKING WITH THE TEACHER.”



While hi-tech is very much on the agenda, low-tech outdoor learning is also encouraged to make the most of the schools' locations. Rather than simply taking work outside, the children are encouraged to learn about the natural world on their doorstep, observing seasonal changes, exploring bug hotels and absorbing the world around them. The recent installation of a CC20 Studio at White Waltham has provided additional classroom space that the children are making the most of.

"The children love going outside and using the outdoor classroom," enthuses Isabel. "We'd like more outdoor provision so we can really be indoor/outdoor. It's great when the group doing their continuous provision tasks can work outside, partly because it's good for them to be out in the fresh air and also because it's quieter for the children working with the teacher."

While the trust is continually fine-tuning, the impact of the new approach has been clear. One child, who previously would barely pick up a pencil and always waited to be told what to do, is flying along because they are taking responsibility for their own learning. Other children are blossoming because learning has become a shared endeavour, boosted by help from their peers; solving a maths problem as a group helps them articulate their methodology because they have to explain it to other people. And others are sharing their natural compassion while helping their friends. It seems that, for the Ashley Hill schools, encouraging one another and building each other up really are more than merely some words from the Bible. ■

"ENCOURAGE ONE ANOTHER AND BUILD EACH OTHER UP..."

I Thessalonians 5:11

Ashley Hill specified CC20 Studio, Bloq, ZigZag and BioCases from Learniture. For more information see learniture.co.uk.

"I can see the children's self-confidence has grown, how this approach builds their self-esteem and how they benefit, hugely, from peer-to-peer learning. We find this approach raises attainment across the spectrum of abilities. Beforehand, particularly with the least able children, there was no 'learning mobility' – as they progressed through the school, they would stay in the same ability groups. Now we are seeing those children make fantastic progress. I'm so behind continuous provision because it opens doors and keeps independent learning skills strong, which is great preparation for senior school. The payoff is amazing. It's painful to start with, but it changes the children's thinking from 'what I can't do' to 'what I can do' and that is why it has such an impact on their outcomes."

Laura Morel, Head of School
Bisham C of E Academy





Jay Litman AIA, Jill Ackers and Jennifer Leyva from Fielding International explain how their company has reimagined a school for the needs of the modern age.

EDEN PARK'S LEARNING COMMUNITY: MORE JOY AND MORE LEARNING

What should modern learning look like in 2021 and beyond? It's a question we have been asking ourselves for the last 15 years. We know the answer does not begin with the school building. It lies with our Fielding mantra, "We start with the child".

The child we are now contemplating will not be out of college and into the "real" world until the early 2040s. What will that world be like, and how do we ensure these future young adults are equipped with the durable skills needed for times that are so far ahead from now? What can we do to prepare this incoming generation to be successful and happy in the years to come?

“THE BEAUTY OF PLAY AND MOVEMENT IS THAT IT GIVES CHILDREN THE CHANCE TO ACHIEVE THE NECESSARY LEVELS OF PHYSICAL ACTIVITY IN A WAY THAT IS MOTIVATED BY THE FUN OF IT.”

We believe that for tomorrow's children to find success in a wired, AI-driven, technocratic society, they must also have a solid grounding in the physical world. Our future schools must create a learning environment that fosters the development of critical human qualities and skills, such as patience, empathy, inquisitiveness, curiosity, collaboration, confidence, humour and critical thinking.

Developing a Learning Community

It has been evident for many years now to all of us at Fielding International (FI) that the antiquated “cells and bells” school model can no longer support the development of the human skills, competencies and behaviours essential for young adults. To find success in the rapidly approaching AI-driven digital world of the mid-21st century, schools must prepare students to thrive in the Fourth Industrial Revolution. Much like the post-Covid-19 workplace has evolved, so too must our learning ecosystems by breaking free from traditional school schedules and reconsidering the boundaries of when learning, playing and socialisation occur. This new kind of collaborative teaching and mentorship has taken root in many of the schools we have designed over the last 18 years. Although the world has changed and become flatter and faster, schools have not. To support these changes, we conceived new design patterns and evolved the “neighbourhood” model into what we call a Learning Community.

A Learning Community is a powerful ensemble of spaces. At its heart is a “Commons” for shared learning, which acts not only as a social heart but also the main venue for teaching and student-directed learning. The learning begins in the flexible Learning Commons, but surrounding it is a collection of discrete learning studios, small group and seminar rooms, which provide a variety of breakout spaces for teachers to personalise learning through a workshop model and to respond to individual needs. This represents a paradigm shift from the neighbourhood model, which is no longer viable to enable learner independence, resilience when making decisions, or engaging in sustained enquiry through problem-solving.

Educators work in cross-functional teams to support learners' growth collectively. Therefore, no one teacher owns a classroom. Teachers and children select appropriate spaces that best suit their learning or best elicit the types of thinking they are engaged in at the time. To support these spaces' planned use, teachers now have a collaborative workspace where real-time professional development can occur.

With the departure of corridors and autonomous classrooms has come new freedom in the language of school design. The shift in pedagogical programming has meant that the fundamental form of a school building has shifted from a rectilinear office building to something far more organic. A new school must be far more than a place to work and learn. It is also where we begin to build relationships with other people, find out how we work collaboratively, develop a sense of ourselves and discover how we as individuals fit into our world and society. At FI, we believe that it takes an entire community to educate a child.

Our Learning Community's systems are grounded in best practices for cognitive development and learning while proactively being focused on well-being, digital innovation and problem-solving. Sustainable schools must be adaptable on many levels. These new spaces are cultural ecosystems that transcend the traditional notion of school because they are based on interactions, relationships and meaningful curriculum design. An excellent example of this type of reimagined environment exists at Eden Park, an elementary school in Cranston, Rhode Island, USA.



Eden Park Elementary

Cranston Public Schools (CPS) is an average-sized American school district of 22 schools that serve an economically and ethnically diverse population. Cranston is the second-largest city in Rhode Island and, typical of most American cities, most of its schools were built in the 1950s and '60s. Despite the advanced age of many schools in the District, CPS leadership proclaimed that "we must go beyond warm, safe and dry". Fielding had just completed a comprehensive school facility plan, reinventing and reimagining Cranston's schools for the next 20 years and beyond. When approached by CPS district leadership to identify a potential "Pathfinder" or demonstration project, Eden Park presented a golden opportunity.

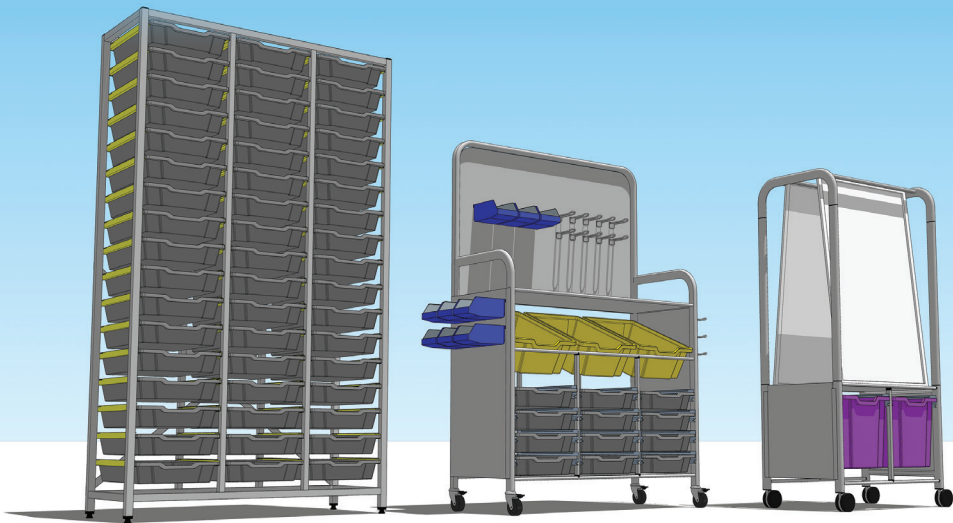
In addition to a forward-thinking School Superintendent and District administration, Eden Park has a very progressive principal and a teaching staff that was ready to reimagine and redefine their roles as teachers by letting go of the assumptions of what used to be school. They have fully embraced new instructional methods, real-time collaboration and a flexible schedule to match their learning environments' flexibility. Although limited in scope, the Eden Park project entailed a total transformation of the 12,000-square-foot (1,115-square-metre) west wing, of this 68-year-old, K-5 elementary school, including a new main entrance.

We demolished everything back to the original structural frame and then rebuilt from the ground up.

When designing this Eden Park wing as a Learning Community, as we do with any FI learning community, our focus was to craft an ensemble of student-centred collaborative spaces. Moving away from the model of one teacher—one room—and sole care of one group of students, we create an environment that supports learner-agency, transparent technology, and supports a wide variety of teaching and learning situations. These situations range from small group and independent study to whole group instruction or one-on-one with a teacher. FI spaces also emphasise the importance of teacher collaboration and include workspaces that allow teachers to work both independently and as a team.

The adoption of the Learning Community model at Eden Park allows for more flexibility and variety in day-to-day learning activities. The old corridor was absorbed into the Learning Commons, leading to an agile space that supports multiple ways of learning, and multiple groups of learners. This type of shared commons creates a diffuse distribution of students and collaborative work areas. Transparency between the Learning Studios and the Commons facilitates interdisciplinary learning activities for kids, adults and folks who use these spaces for special services.

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“A NEW SCHOOL MUST BE FAR MORE THAN A PLACE TO WORK AND LEARN. IT IS ALSO WHERE WE BEGIN TO BUILD RELATIONSHIPS WITH OTHER PEOPLE.”

Measuring success

Teachers' professional development is embedded into the fabric of our work. Cranston is involved in ongoing professional development, which includes a three-year teacher coaching programme. Teachers develop mastery in a collaborative, interdisciplinary, project-based curriculum. Each year, the programme becomes more student-centred, with learners identifying and defining problems and projects themselves by year three. The results are in: at the 3rd–5th Grade Learning Community at Eden Park Elementary, the first completed, the level of engagement, personalisation and physical comfort has reduced absences, seen a huge drop in disciplinary issues and all but eliminated the need for specialised isolation and decompression rooms for students with special needs – instead, they are thriving within a suite of spaces shared by everyone in their learning community. The result is more learning, more joy and less space required.

In March, when schools shut down for Covid-19, Eden Park Elementary found that students who had been in a Fielding International-designed Learning Community were more successful when setting up their at-home learning environments. Teachers found these students could work more independently than those who were not used to learning environments that provided freedom and agency – where learners have to make an independent choice over the type of space to work in based on the kind of learning and thinking they are engaging in.

Our team designed a new exterior envelope with a highly insulated rain-screen system that uses a sustainable fibre cement panel cladding. All the new windows were sized to bring in the maximum amount of natural light, and operable with screens to allow for the ventilation of fresh air. Our consulting engineers, Creative Environment Corp., designed the mechanical systems to deliver dedicated, Merv 13-filtered outdoor air to each space through an energy recovery ventilator (ERV).



THE MULTI-SENSORY ROOM IS A SPACE WHERE CHILDREN CAN UNWIND MENTALLY AND EMOTIONALLY.





The heating, ventilation and air-conditioning (HVAC) system is controlled by a building management system (BMS) that enables pre- and post-purge occupancy of indoor air. Many of these features have just been recommended by a joint US Environmental Protection Agency/Energy Star Task Force on preventing the spread of Covid-19 in schools. We mention this here because this level of performance will now be part of our post- Covid-19 reality for all new schools.

Eden Park's furnishings were carefully selected for this new way of learning and teaching. The space was fitted out with agile and flexible pieces, engaging the learner to be autonomous and create their own learning environment. Therefore, the furniture is intentionally selected to reinforce the pedagogy, not the other way around. Soft, sturdy building blocks in various shapes, sizes and colours allow users to explore their learning community and find new ways to work together rather than being tied to a desk and a chair.

The beauty of play and movement is that it gives children the chance to achieve the necessary levels of physical activity in a way that is motivated by the fun of it. Developing a pattern of being active will stay with a child because it teaches us how we learn through our whole body and not just our minds. Studies have shown that when our bodies are engaged physically, our minds are more alert and prepared. This allows the children to feel a part of their community and to respect the space they share with their teachers and peers.

There are valuable lessons to be learned here, which should be repeated elsewhere worldwide because we are at a pivotal moment of change. This is a turning point in history. The reimagination of learning spaces, along with the critical issues of health and well-being, will play a vital role in the development of this new, holistic, sustainable design strategy for our schools. Only this kind of approach can address the challenges posed by the broad spectrum of ecological, energy, educational health, and social issues humans now face. The Eden Park project proves that when a school is designed to support the whole student at every level, it will prepare them and their teachers for the twenty-first century and show them a new vision of the future through the joy of learning. ■





Dianna Fletcher, studio director at ADP Architecture, explains how the “five ways to well-being” can be applied in almost any school situation.

DESIGNING FEEL-BETTER EDUCATIONAL ENVIRONMENTS

We're all growing more aware of just how common mental illness is, and many will already be familiar with the statistic that one in four of us will suffer from it during our lives. What might come as more of a surprise is how early these issues can start.

Half of mental health issues are established by the age of 14, and – shockingly – 10 per cent of 5–16-year-olds suffer from a diagnosable mental health disorder. But mental health is concerned with more than a diagnosable illness; it is about whether we are genuinely thriving and happy.

We all experience day-to-day changes in mental health, just as we feel physically different. It's not without reason that the World Health Organization (WHO) defines health as a state of complete physical, mental and social well-being – rather than just the absence of disease or infirmity.

These sorts of statistics call for deeper scrutiny, and we've spent the last year researching how something as simple as design can have a surprising impact on mental health in schools and universities. And it's not just about students: staff and visitors can benefit hugely from better-designed spaces.

Five ways to wellbeing

In 2008 the government-appointed New Economics Foundation (NEF) took on the task of creating a clear, simple message that would help everybody to improve his or her mental health and wellbeing. The result was the “five ways to wellbeing”: a set of actions that can be applied in almost any situation, and at any age, and that are useful anchors for a more-complex set of definitions.

The five actions are:

Connect – to the people and to the places where we live and work.

Be active – keep moving and stay fit through sport and incidental movement.

Take notice – practice “mindfulness”, be in the moment, and observe your surroundings.

Keep learning – throughout your lifetime and include the creative arts.

Give – research suggests that this provides a sense of self-worth and purpose.

A vast number of organisations, from churches to GP surgeries, have since put these ideas into practice to focus on individual interventions. There is a wide body of research supporting the idea that “upstream” interventions – targeting the root causes and environments where behaviours occur – are generally more effective than “downstream” interventions, which try to mitigate problems on an individual basis.

Improving built environments

What better place to start than with the way we design those “upstream” environments? As architects, we've looked carefully at how we can design these five sorts of activities into our buildings, creating spaces which encourage them throughout.

There are two key strategies here: we can design spaces that make it easier to make better choices, such as by adding bicycle racks; and we can also try to constrain behaviours by making certain actions more difficult.

“DESIGNING A RICH AND
VARIED ENVIRONMENT HELPS
STAFF AND STUDENTS TO BE
PRESENT IN THE MOMENT
- AND THIS, IN TURN, AIDS
THEIR WELL-BEING.”



HADDENHAM ST
MARY'S CHURCH OF
ENGLAND SCHOOL

The underlying idea is known as “nudge theory”: the belief that, by using small but significant changes in the way we make our world, we can “nudge” people into making better choices.

Relating this back to the “five ways to well-being”, we can think of each one as a goal, and then look at small, localised means of achieving that goal. Those means could include lighting, comfort, control, biophilia, aesthetics, layout and the organisation of space, sustainability, safety and accessibility. Biophilia in particular is a powerful tool, and we've seen it used effectively in architecture and building design to achieve all five goals.

1. Connect

To feel connected to a place, it's important to understand how the connections already work within that place: how objects, locations and spaces relate to one another. In other words, we need a sense of direction, and landmarks to help orient ourselves. Some ways to achieve this are:

- Include adaptable spaces without a prescribed use, such as benches along routes.
- High-quality, usable green space (no “keep off the grass” signs).
- Social learning areas such as breakout spaces, and the elimination of hidden corners.
- An intimate café (as opposed to a large dining hall), to bring a flavour of the outside world into school.

- Attractive spaces for students, and a place where staff and students can mix.
- Well-designed acoustics as you progress through the building: an echoey hallway and stairwell can help to signal when people are gathering.
- Intelligent layout of offices: staff need to feel supported and have locations to go for a contemplative moment.
- Shelter among foliage, such as indoor pergolas or seating areas under tall trees.

2. Be active

Encouraging activity outside of programmed sports and exercise is important for good mental health. Stairs and routes through the school that promote walking or cycling should be encouraged, with a focus on making the journey easy and enjoyable. There are many ways to encourage physical activity – not least the following:

- Separate key spaces with stairs (while providing for those with mobility requirements). Stairs provide the most intense personal energy expenditure and they encourage movement, so we need to make them as inviting as possible – not hide them away.
- Make circulation an enjoyable experience and provide “rewards”. This means avoiding boring corridors, while aiming for good natural light, views, spatial variation and opportunities for encounters. Allow students to walk towards daylight and a view, up to an interesting balcony level, and include artwork en route – both internally and externally.



BIRKDALE PRE-PREP SHEFFIELD

- Bring the outdoors indoors.
- Consider nature trails and trim trails in your landscape design, and incorporate secure cycle storage, making it both easy and inviting to be active.

3. Take notice

Designing a rich and varied environment helps staff and students to be present in the moment – and this “mindfulness”, in turn, aids their well-being. These are the sorts of things they could take notice of:

- The external environment, provision of art, planting and landscaping, and wildlife features (such as insect boxes) are examples of the kind of interventions that significantly increase the number of people who stop to take notice.
- People are strongly affected by building façades. If the façade is complex and interesting, it affects people in a positive way; monotonous façades have the opposite effect.
- Highlight interesting historic buildings and features, and think about making structure visible.
- Frame views of the campus and nature, and try to create views on tight urban sites: low windowsills and openable windows are valuable aspects.
- Use natural materials with interesting textures, such as timber, metals, stone, cork and bamboo.
- Consider random arrangements and species of plants to reflect nature.
- Horizons are important. Views towards landscape

features give a sense of perspective, and they help us to look across a space.

- Think about light – such as the shaft of sunlight in a recessed window seat, combined with a glimpse of nature and soft, acoustically absorbent seat materials. Our well-being is intimately linked with these little moments of delight.
- Introduce the sight and sound of water, whether external or internal. Sound effects are a useful way to create relaxing spaces.
- Curves rather than angles. One study showed that curved forms are perceived as pleasant: most people feel better in rooms with curved edges and rounded contours than they do when in sharp-edged rectangular rooms. (It’s perhaps telling that the design students taking part in the study preferred the opposite!)

4. Keep learning

Surprisingly, research suggests that although learning improves when comparing a poorly maintained, run-down environment with one that is simply adequate, the addition of more extravagant facilities can often have little effect. The key, then, is getting the basics right. This includes the thermal environment, acoustics, lighting and reducing glare, as well as such simple measures as placing whiteboards at the right height for the age group.

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PLANNING LEARNING
SPACES



“LOOK BEYOND THE BOUNDARIES OF THE SCHOOL, AND PROVIDE ACCESS TO COMMUNITY ASSETS OFF SITE AS WELL AS ACCESS FOR THE COMMUNITY TO ASSETS ON SITE.”

Just as design can strongly influence teaching methods, the pedagogy of a particular institution can place constraints on what sort of designs are appropriate – or even possible.

- Give staff and students greater control over their environments. For example, spaces are more satisfying when we have personal control over the amount of daylight we work or study in.
- The importance of space. Even ceiling heights can make a difference. Low-ceilinged spaces are ideal for focused tasks such as studying or reading, while more generous spaces give us a sense of freedom – encouraging more abstract styles of thinking. This can help with forming shared goals, making higher ceilings a good choice for social gathering spaces.
- Offer variety. Spaces should encourage a wide variety of learning, from music and arts to practical skills. Green, outdoor spaces are perfect for these hands-on activities: dipping ponds, bug hotels and wildflower meadows are all great examples.
- Use thoughtful landscaping. This will allow access to the outdoors throughout the year, from sheds, canopies and outdoor auditoriums to tree stumps that can be used as seats. Swales and rain gardens can support wider learning, and have the added advantages of boosting biodiversity and helping with rainwater attenuation.

5. Give

The relationship between altruism and design is especially tough to observe and measure. However, people are more likely to self-report altruistic behaviour in neighbourhoods that incorporate particular design characteristics. Here are some ways to foster an environment for giving and encourage pro-social behaviours rather than self-centred ones:

- Include allotments in your landscape design to help people connect their food to its origins. There is evidence that people are less altruistic in urban than in rural environments, suggesting that the green space and contact with nature can be valuable tools for boosting empathy.
- Encourage staff and students to engage in the design of their environment, and promote passive, sustainable design.
- Incorporate a range of positive environmental and physical characteristics. Look beyond the boundaries of the school, and provide access to community assets off site as well as access for the community to assets on site. ■

Thanks also to Claire Mantle and Craig Cullimore from ADP Architecture.

PUTTING PLANNING LEARNING SPACES (PLS) INTO ACTION

Bhavini Pandya, a former teacher at Trumpington Park Primary School, which featured in the last issue of *Planning Learning Spaces*, explains how the PLS approach has unfolded there in practice.

How often do you hear about teachers who find it difficult to teach effectively in the classrooms they have been given? The “one-size-fits-all” approach simply does not work in schools and the sooner this is understood the better the future we will be building for our children. Students spend the majority of their time in school, so the spaces they learn in should be fully equipped, age-appropriate and adaptable to suit a range of subjects being taught.

The Planning Learning Spaces (PLS) Design Framework helps schools to translate their educational vision into learning space design principles, enabling them to create new, or refurbish existing, spaces that actively support their learning goals. Schools are guided through a reflective process, building the link between curriculum and design through a structured framework. Focusing on the school’s vision, values and ethos, the process helps translate learning behaviours and activities into design principles. The process builds consensus throughout the teaching staff and the wider school community to support sustained change, empowering schools to be creators of a new, ongoing relationship between pedagogy and space. The message is simple: “you can’t successfully design education spaces unless you fully understand the learning and teaching practices they need to support.”

The Trumpington Park pilot

The PLS team, along with Gragnells Learning Rooms and Professor Peter Barrett, has chosen a primary school based in Cambridge to be the first in the UK to pilot this project. Trumpington Park Primary School is a fairly new school in the centre of Cambridge. The school welcomes children from the surrounding areas and is currently open to children in Reception to Year 4. Because the school is newly built, it is not yet full to capacity. This has proved very beneficial, especially

in terms of the recent pandemic, which has meant teaching in smaller bubbles, utilising more classroom spaces.

Despite Covid-19 restrictions, the PLS team has been able to go ahead with the project at Trumpington Park by ensuring workshops either happen with social distancing in place or virtually. The staff at the school are eager to enhance the space they are currently teaching their Year 4 children in. All classrooms in the school are in the “one-size-fits-all” category and the teachers are keen to explore new ways in which they can adapt their spaces to best fit their school aims, ethos and – most importantly – their students.

Recognising limitations, the project leaders and school staff have faced so far, Professor Peter Barrett says: “The commitment of the school is truly impressive. Against the challenges and constraints of Covid-19, they are determined to grasp this opportunity to reflect deeply on their values and pedagogy and then work through the practical implications for teaching practice and the set-up of the classroom. Here the opportunity to experiment with an empty classroom is being fully exploited and the Gragnells team are engendering a creative, expansive mindset, tempered by a pragmatic recognition of the physical and human limits of adaptation. A delicate but well-judged balancing act. I am fascinated to see how the project develops as ideas begin to crystallise into different behaviours and adaptations of the classroom features.”

Reflections and refinements

The project itself commenced at the start of the new academic year. Although the staff were teaching smaller bubbles due to Covid-19, we were able to get a glimpse of how they would set up for a full class of 30 under normal circumstances. After observations were made, we started to look initially at the school’s vision

“FOCUSING ON THE SCHOOL’S VISION, VALUES AND ETHOS, THE PROCESS HELPS TRANSLATE LEARNING BEHAVIOURS AND ACTIVITIES INTO DESIGN PRINCIPLES.”

statement and reflect on it in relation to pedagogy, curriculum, leadership of learning and organisation of learning. This moment of reflection brought with it a lot of discussion because there were elements that the school wanted to further refine.

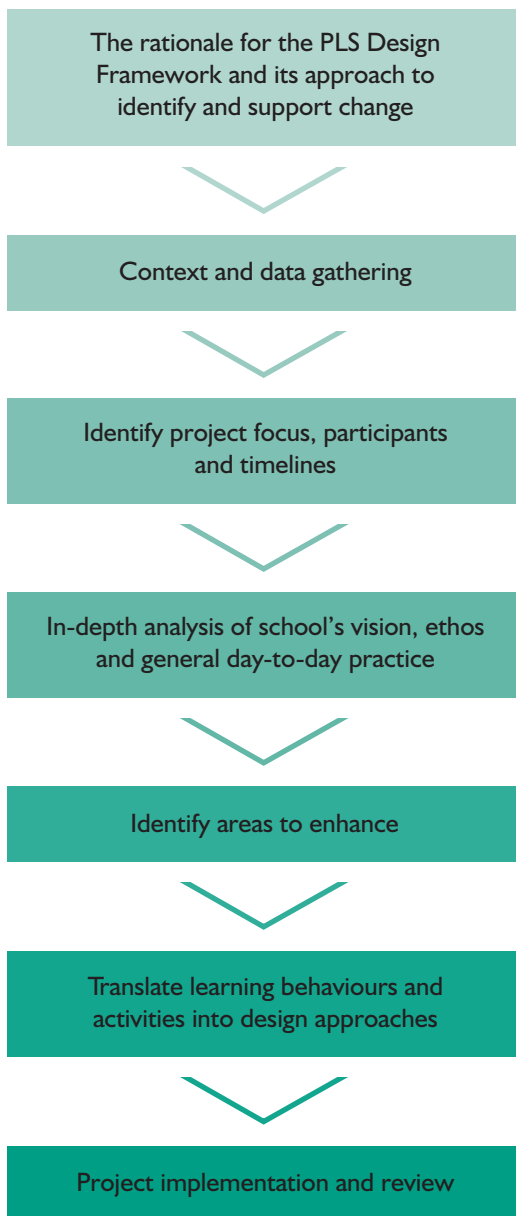
Following this session, we discussed with the teaching staff their current practice and aspirations for future practice. We wanted to get a deeper understanding of what is currently going well in the classroom and what areas they were hoping to enhance in relation to their school vision and ethos. By allowing the staff to have time to reflect on past teaching, it gave them an opportunity to celebrate and be proud of what they have achieved so far. All teaching staff need to be able to recognise what is working well on a day-to-day basis, so this was very important for the team to capture.

Once the staff had defined current and future practice, we then looked at ways they could potentially deliver their future aspirations in the classroom they are in. The room itself is 61 square metres, but staff recognised that not all the space was being utilised effectively. The PLS team shared with the staff a variety of different teaching and learning options that could be used within the space and discussed the pros and cons for each. It is important to highlight that not every classroom should look the same and they should be adaptable for the children's needs.

This workshop was followed by one that focused on translating learning behaviours and activities into design approaches. The staff at Trumpington chose a selection of furniture that they thought would best suit the needs of the children and enhance their teaching methods. We then looked at the choices in further detail to ascertain whether it would enhance the learning activities, and to what depth. The staff understood that the furniture should be chosen with purpose: to have the greatest impact on the teaching and learning taking place within different zones in the room.

Reflecting on the design framework, Terry White, the project director, said: “Our methodology places learning and teaching at the heart of a reflective process that empowers schools and stakeholders to become the creators and not just the consumers of the design of spaces and places for future learning.” ■

PLS DESIGN FRAMEWORK THE PROCESS



on reflection

EMBRACING THE FAMILY

I was Zooming with a group of headteachers the other day and, of course, the impact of the Covid-19 pandemic was part of our discussion. One of them said, “I’ve stopped thinking about how we work with the unique child now”, and, of course, a lot of eyebrows were raised. But then that headteacher added, “Now we talk about how we can work with the unique family” – and, of course, much nodding ensued.

That refocus – to fully embrace the family, in whatever myriad forms are included – has come about for a host of reasons. With children “learning at home” it would be perverse to ignore the home and family as an extension of the school learning environment. But what does it mean to embrace family? Some schools responded to lockdown and closure by filling vans with school desks and chairs before distributing them on loan around their community. Others saw every school laptop trolley emptied to support the least-connected families – aware of the widening technology equity gap.

With school visits, or induction programmes, suddenly being provided by “from home” virtual walkthroughs of the school premises, it was not surprising that these tours have become competitive. Schools compete to devise the most seductive tours. Parents’ evenings are scheduled on-screen, from home – and overnight that home has become a part of the school, and vice versa.

Parents are partners

For home learning activities to be effective, our advice about learning – the importance of movement, of ventilation, of high-quality light, of posture and writing surfaces, of well-being – needs to be directed to our families. Let’s be honest, we haven’t done that very well in recent years. Ask three generations of family members about the letter “L” and you’ll get three very different ways to sound that consonant, from “El” to a phonic grunt. And if we have taken an unforgivable decade to properly enthuse parents about the power of phonics, then we have done an even worse job at saying to our parents: “Please, please, please turn on the excellent subtitles when watching Netflix (other streaming services are available!) because we know how that impacts hugely and helpfully on literacy.” Learning is 24/7, the home today is a key part of it.

The bottom line is: when we design our learning spaces for better learning, those spaces now (and probably forever) include the homes of our young learners. Our big responsibility just got even bigger!

“PLEASE, PLEASE, TURN ON THE EXCELLENT SUBTITLES WHEN WATCHING NETFLIX BECAUSE WE KNOW HOW THAT IMPACTS HUGELY AND HELPFULLY ON LITERACY.”

Professor Stephen Heppell is CEO of Heppell.net and holds the Felipe Segovia Chair of Learning Innovation at Universidad Camilo José Cela, Madrid.





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