A Primary Design
For Personalised Learning

How do you design a primary school that supports personalised learning? **Michal Cohen** describes her experience at Redbrook Hayes

Although personalised learning is not a new concept, the drive to bring its best practices into effect in every school in the UK is a fairly recent aim. Its advocates are in the process of establishing a clear definition of the principles and, more appropriately to us as architects, how these principles affect – and can be affected by – the built environment.

Personalised learning and teaching means taking a highly structured and responsive approach to each child's and young person's learning, in order that all are able to progress, achieve and participate. It means strengthening the link between learning and teaching by engaging pupils – and their parents – as partners in learning. To build a successful system of personalised learning, we must begin by acknowledging that giving every single child the chance to achieve their full potential, whatever their talent or background, is not the betrayal of excellence, it is the fulfilment of it. Personalised learning means high quality teaching that is responsive to the different ways students achieve their best.

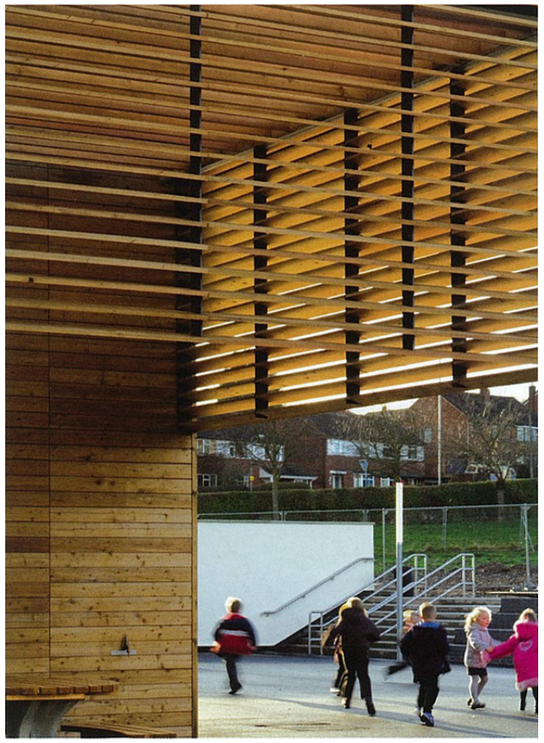
In December 2006 the government published its '2020 Vision' report. The objectives of this report were: "To present to the Secretary of State a vision for personalised teaching and learning in 2020 which enables every child to achieve higher standards; and to make recommendations which would support delivery of that vision." In the same month, Walters and Cohen's Redbrook Hayes School opened in Rugeley, Staffordshire; we were delighted to note the many similarities between the 2020 Vision recommendations and the learning provision offered by our design – evidence that our ideas are pre-empting the future of good school design. We were very proud when the school won an RIBA Award in 2007.

The 2020 Vision report acknowledges the importance of the physical learning environment. The client body for Redbrook Hayes was committed to the idea of personalised learning from the start of the project, and was prepared to take the risk of not simply 'making do' with a traditional school layout. Instead, stakeholders collectively considered and defined the way they wanted to teach and learn in this new school, how the entire site could be used and how the school community – and the community beyond the school – could be encouraged to 'own' the spaces.

The 2020 Vision report also says that new school buildings should be able to respond to change. Redbrook Hayes fulfils this criteria on too: the present school is demonstrably able to cope with various models of teaching and learning, but more than this, the steel frame structure means that the school can be added to in future if necessary, with minimal disruption and cost implications. The stud partitions can also be taken down and built elsewhere.

One fundamental thought in our school projects is unvarying: the pupil remains the focus of everything we do in education design.

Standards in British schools have to be improved. In 2007, the Organisation for Economic Co-operation and Development's annual report comparing GCSE results or equivalents placed the UK 22nd out of 29 countries. British teenagers are out-performed by their peers in Australia, Scandinavia, the Czech republic and much of Western Europe, among others. The government and the Department for Children, Schools and Families (DCSF) believe that we will see a marked improvement in standards if each child is able to learn in the way they find most appropriate. This has already been recognised, and successfully implemented, in trail-blazing schools in Scandinavia where pupils and staff know if they respond best to, for example graphic, physical,

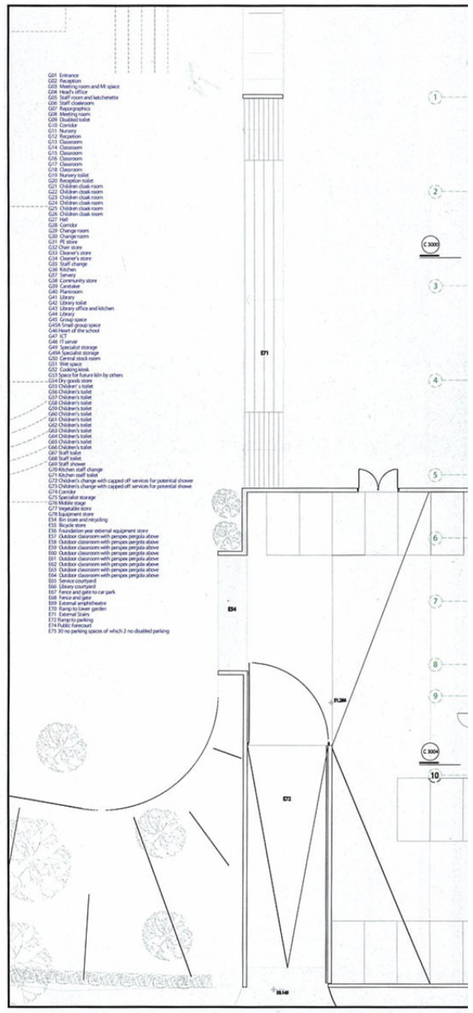


cognitive methods of learning. This places the onus on teachers to understand how each child in every school learns, and on the design team to develop the right environment in order for this learning to occur. We therefore need to include a full repertoire of different types of spaces in our schools; it is no longer adequate or accepted to design schools that are a series of generic classrooms situated off corridors.

During our investigations into how these spaces might appear and feel, we have explored the work of educationalists around the world, in particular Kenn Fisher and Prakash Nair. These educationalists have researched and documented the various ways in which children learn. These include:

The Pyramid

The Pyramid demonstrates perfect common sense. Pupils will naturally retain more information through active, multi-sensory participation, and even more so by then communicating what they have learned to their peers. Consequently we have endeavoured to create the best spaces to enable the pupils to learn in their own ways. This underpinned the thinking behind the 'Heart' of the school in our exemplar design: we need to create spaces which encourage and allow this type of learning to take place.



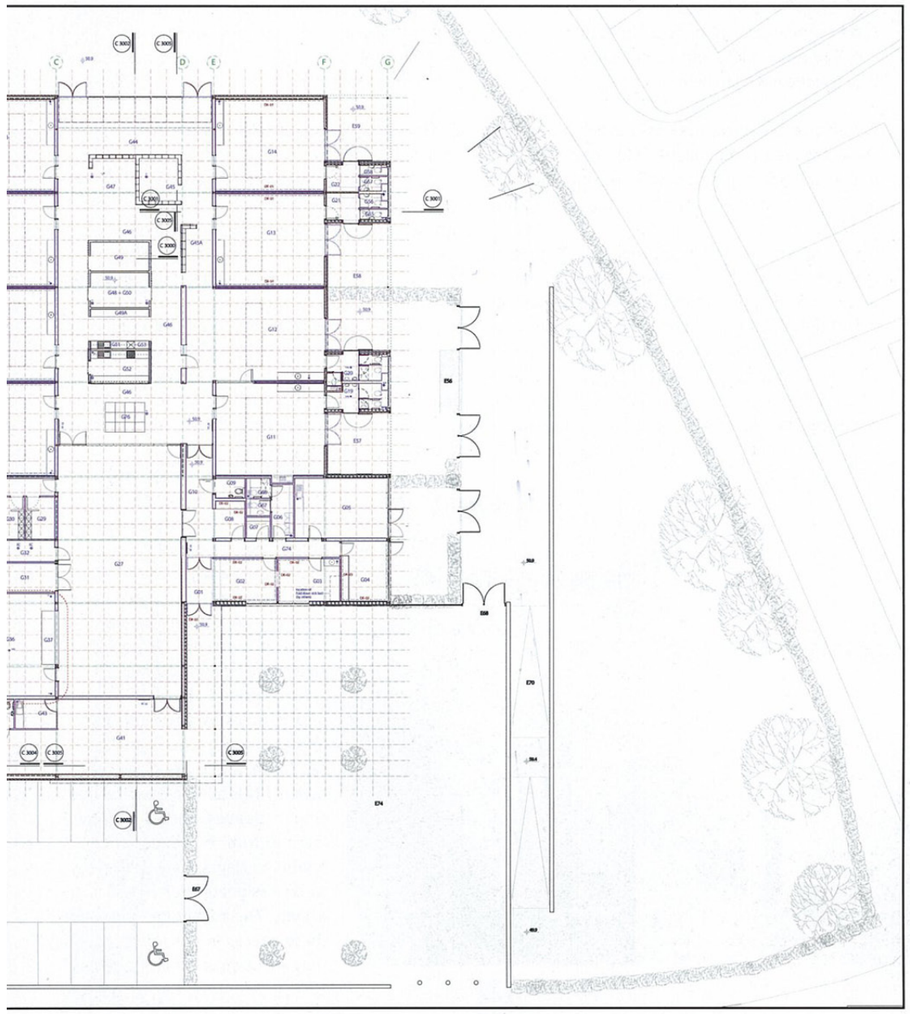
At Redbrook Hayes School we have been able to indicate these different spaces within the Heart of the school.

Background to the Appointment

This appointment followed the publication of the practice's exemplar primary school design, which was commissioned by the DfES (now the DCSF) in 2003. The exemplar was the result of an intensive three-month period of research and design development, testing and re-testing our ideas against the brief. The design for Redbrook Hayes School was based on this research, with the design to be altered to allow for specific sites and the needs and desires of the client body. We have completed another primary school, Cobblers Lane School in Pontefract, which was also based upon the principles of our exemplar design.

A key feature of the Heart is its location between classrooms, where it is passively supervised at all times by teachers and classroom assistants using the Heart and adjacent classrooms. The Heart allows pupils in the school to observe and understand what other pupils are learning. We believe this also engenders a sense of good citizenship (as important as raising standards) by encouraging independence and providing social spaces for the pupils.

1. Specialist focus lab
2. Individual pod – space to think
3. Project space and wet areas
4. Resources
5. Group learning
6. Outdoor learning
7. Breakout space
8. Presentation space



1. Specialist focus labs

These are the specialist spaces in any school. Good examples in Redbrook Hayes are areas such as the ICT space and the Cooking Kiosk, both in the Heart of the school.

The ICT space is an open, accessible computer-rich area in the centre of the Heart. This area is used for timetabled whole class teaching as well as a resource space for individual pupils. There is also an interactive whiteboard to support all teaching.

The Cooking Kiosk is a pod located close to the hall. It was perceived as a multi functional space that would:

1. Provide a safe specialist space to teach and cook
2. Provide a space that could serve the breakfast club, tuck shop and an alternative space to serve lunch (the pupils call it the Bistro)
3. Be used out of school hours in tandem with the hall to serve drinks and snacks without the need to use the main kitchen

To fulfil all of the above, the kiosk can be used as a self-contained area or the roller shutter may be opened so that one side of the kiosk will open into the Heart of the school, in a similar style to a beachfront fish and chip shop.

The kiosk is larger than allowed for in both BB99 and the client brief, but performs in a number of different ways, justifying this greater area. In fact, the school uses this space and the space adjacent to it (an open, multi-functional space) in ways that had not been envisaged by the client or the architects when devising the brief. For example, a typical day might see the Bistro area used for a presentation to pupils on healthy eating, then later as a place for meeting friends at lunchtime, then again by some of the older children, perhaps preparing for a presentation to their peers. The adjacent spaces work as a cohesive unit.

2. Individual pod – space to think

These are spaces in the school that are set apart from the hustle and bustle, and can be as simple as a beanbag or an alcove, somewhere a child can sit quietly, read or prepare for a presentation. One example at Redbrook Hayes School is the 'nurture space' (named by the school and decorated by the pupils with their own work), an area within the Heart that is enclosed but not shut off (there is no door), and visually semi-transparent. Another is a small area with beanbags; this area is only orientated towards the outside, and is not part of the main thoroughfare through the Heart. Even the location of the bookcases within the Heart of Redbrook Hayes gives a space to think, set away slightly, giving a pleasantly introverted character.

3. Project space and wet areas

As this is a one-form-entry school, there is nothing in BB99 requiring the need for dedicated project spaces and wet areas. However, wet areas have been provided in all classrooms and, because of the way the resources in the Heart are pooled between all classes, we were able to provide a dedicated art space here, open to all but sufficiently contained so as not to present a Health and Safety issue. Although this art space is not located on the main thoroughfare, everyone walks past it on the way to their classroom or to any other part of the Heart, and it is sufficiently open that they can see what is happening and what pupils have been making.

This shared incidental learning is something that the school community at Redbrook Hayes love about their new building. Activities such as preparing a puppet show or having a dressing up session are clearly visible to everyone passing by, so pupils know what other classes are learning about.

As described above, the Bistro also doubles as a project space, and at a larger school you could replicate these areas in other parts of the school. They can be simple alcoves, and as we have learned from our experience at Redbrook Hayes, they don't need to be designated for a particular activity. The advantage of having these spaces in the Heart is that they are open to pupils from their

classroom, and they can safely be there on their own if they wish. It is common at Redbrook Hayes to see a child working on his or her own, finishing off a piece of work.

4. Resources

We believe that in any school, pupil resources – books, ICT, various supplies and materials, access to space – should be fully accessible to all pupils at all times. At Redbrook Hayes School, the library is an open space in the Heart of the school, located off to one side. ICT is available throughout the Heart and in every classroom, as well as there being a dedicated ICT space. Every classroom has bookshelves and material stores, with more resources located throughout the school. Curriculum resources, for example reading books, are placed very deliberately just outside each classroom, so that everyone passing by can see what the children are learning.

5. Group learning

We understand that children learn in different ways, and as a direct response to the principles of personalised learning, we have provided a school flexible enough to provide spaces to accommodate various sizes of pupil groups. This is also dictated in part by the DCSF's requirement for teachers to have at least two hours every week "non-contact time", when they are not with pupils. This can partly be managed by having, say, one teacher and two classroom assistants with a large group of pupils, briefing them on a particular topic, then breaking this large group into smaller working groups, with staff walking round from group to group, helping where necessary. For the briefing session, staff at Redbrook Hayes might use the large area of the Bistro plus the Hall, after which they could distribute smaller groups of, say, six to eight pupils around the classroom and Heart.

The nature of the spaces provided at Redbrook Hayes means that pupils can work there quietly, unsupervised; passive supervision can take place because pupils will always be within sight or hearing of a classroom.

Group learning might also take place for Gifted and Talented pupils or those who need extra help. Self-teaching by pupils in small groups is also a very successful learning method (see Pyramid diagram), and at Redbrook Hayes this is particularly enabled by the nurture pod which, as mentioned above, has been colonised by pupils. This is also where the school council meets, and is a place full of foam seats and colourful displays created by the pupils, rather than a formal arrangement of tables and chairs.

6. Outdoor learning

We believe that outdoor learning is essential in all

primary schools, and would like to see more of it in secondary schools too. Redbrook Hayes School has a very easy relationship between indoors and outdoors: all classrooms have a protected outdoor space, which is not a play space but a learning space. If ICT has been planned correctly, laptops and tablets can be used outside. These learning spaces are a buffer between classrooms and the playgrounds.

7. Breakout space

The whole of the Heart serves as a breakout space for the whole school community. For example, a group of children might be rehearsing a play in the Bistro area; teachers might be receiving ICT training in the ICT area; parents could be using a space in the heart to plan a future PTA event. The use of the school building by parents is entirely up to the school, but at Redbrook Hayes parents are welcomed and are using the school very effectively.

Although Redbrook Hayes does not have a dedicated music space, our larger (1.5-form-entry) school at Cobblers Lane in Pontefract, also based on the principles of our exemplar design, has enough space in the Heart to accommodate this. It is a fully enclosed space within the Heart of the school, very visible but acoustically separate from the rest of the school. Both Cobblers Lane School and Redbrook Hayes School can open the Heart onto the Hall, which provides a very useful larger space.

8. Presentation space

Presentation and display spaces are everywhere and show what each class base is working on. As you walk through the Heart, the transparency of the Heart and clear visibility to the classrooms gives a good idea of what is going on at any given time. Teachers usually choose to leave their classroom doors open, and the resulting low-level noise is not a distraction but creates a stimulating atmosphere.

There are displays within the classrooms and outside each classroom in the Heart, and these function as a crossover with the project spaces (see above). The good light and height of the Heart means that further work can be hung from the ceiling. Even before the children moved into their new school building, the various year groups worked on banners to be hung from the ceiling, identifying each classroom. This is just one example of how they have claimed the building as their own.

Role of ICT in the 21st century personalised learning school

The client body for Redbrook Hayes School took a more traditional view in that a dedicated ICT space was required, but untraditional in that the school wanted this to be an open resource located in the Heart of the school, which would sometimes be used for whole class learning. New thinking is that ICT must be portable and small. This changes the school environment again, and ensures that each pupil has constant controlled access to the intranet and web. It also allows staff to share relevant information on each pupil, ensuring an understanding of and continuity in the approach to each pupil's education. At another school we are currently designing, the local authority is aiming to have tablets for each child; these are to be used around the whole of the school site, encouraging outdoor learning. We are talking about having long bench tables (much like those in some offices or restaurants) where pupils can casually sit down to learn individually or in a group. These benches may be shared by groups of pupils of different ages and abilities, once again encouraging peer communication.

Flexibility and adaptability

Redbrook Hayes is designed to accommodate short term changes such as different classroom layouts as well as long-term developments such as changing ICT requirements: ICT suites are rapidly becoming a thing of the past – learning technology is increasingly becoming an individually empowering tool and therefore requires flexible space planning.

In the efforts to move away from anachronistic, uniform education provision we have demonstrated the essential role architecture plays. We hope to continue working alongside educationalists and stakeholders to bring greater awareness of the benefits of personalised learning.

To summarise: the 2020 Vision report suggests that school design can enable personalised learning by:

- being flexible
- being familiar, welcoming and inviting
- being open and safe, encouraging participation and collaboration
- supporting interaction
- using technology to enhance learning

Redbrook Hayes School has all this and more: the flexible layout, the variety of indoor and outdoor spaces, the sense of ownership that has been nurtured and the way that IT provision was, from the outset, integral to the design, all make this an exceptional school. Natural light and natural ventilation enable good environmental conditions where pupils always feel comfortable. Our design also pre-empts the report's recognition that good behaviour and a reduction in bullying can be achieved by avoiding long corridors and 'hiding places'. Further, the position of small toilet blocks between pairs of classrooms makes the toilets – often a place where pupils do not feel safe – much more 'observed' and secure.

The report also says that it is important to ensure that "the whole school community can take advantage of [the new spaces] in the ways that were intended". We would go one step further, and suggest that a truly successful school can be used in ways that the client had never imagined; by this measure, Redbrook Hayes is a success.

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