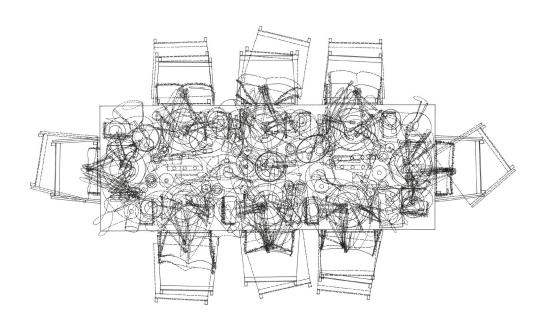




# What is the Role of the Physical and Sensory Learning in an Age of Digitisation?

Notes from the Education Round Table discussion



## Introduction

Sarah Wigglesworth Architects (SWA) has an extensive track record in delivering award-winning education projects. We work principally in the public sector, and wish to be opinion-formers, setting an agenda for the future. The discussion recorded here focussed on the role of physical and sensory learning in the age of digitisation.



In 2019 Sarah Wigglesworth Architects marks 25 years in practice. The Round Table was one of a diverse series of events to celebrate this milestone year.

The education Round Table was our first event, and took place at SWA's offices on 10 April 2019. It was held over dinner in our conference / dining room. We invited our six guests, together with two members of SWA, to debate this issue and explore more generally the relationship between place and learning across all ages.

As architects we are fascinated by what the environment, including buildings, can contribute as the 'third teacher' in a child's and young person's learning. As digitisation has come to prominence in every aspect of our lives

and has been hailed as both a blessing and a curse, we wanted to ask how the technology is changing our ways of being, knowing and playing. So we invited guests that teach young people, from nursery to sixth form, as well as a choreographer working with both children, young adults and dancers in midcareer to discuss the body as a critical site of knowledge and experience. Also invited was a digital specialist at the cutting edge of interaction design working on how virtual worlds can enhance our physical experience in exciting new ways.

## The Attendees

#### Eleanor Brough



Associate Architect at Sarah Wigglesworth Architects

Eleanor has worked for twelve years with SWA and has worked on cultural, educational and residential projects. She has been an Associate since 2013 and plays a key role in the practice. Eleanor recently completed an exemplar and award winning Forest School project in the Peak District.

#### Ben Clay



Pedagogy Manager at London Early Years Foundation (LEYF)

Ben is of the mindset that "an early years environment is not truly enabling if it isn't keeping up to date with the real world". He adds, "we should only be encouraging and promoting the use of technology when it enables us to perform a task better or more efficiently".

#### Siobhan Davis



Artistic Director at Siobhan Davies Studio

Siobhan Davies is a choreographer and dancer, whose studio in Southwark was designed by SWA. She aims to "contribute to movement being further recognised as an equal and distinct medium alongside the other arts: a medium in which thought, feeling and action are all contributors to the process of making, are able to be visible in the moving body."

#### Fiona MacDonald



Co-Founder of Matt & Fiona

Fiona endeavours to bridge design and participation in her practice, particularly from the perspective of young people. Matt + Fiona's projects ask young people how their built environment might be improved and empower them to bring that vision to life. Fiona established and now runs the National Schools Programme.

#### Neil Pinder



Founder of Celebrating Architecture and Teacher of Design and Technology at Graveney School in south-west London

Neil is committed to greater diversity and enabling young people into architecture. SWA have recently hosted a workshop through Neil's latest venture Homegrown Plus, an agency championing aspiring architects who may otherwise face barriers to the architectural profession.

#### Richard Roberts



Managing & Design Director at Jason Bruges Studio (JBS)

Richard's work at JBS involves creating interactive spaces and surfaces that sit between the world of architecture, site specific installation art and interaction design. The studio's work blends architecture with interaction design and uses a high-tech, mixed media palette to explore spectacle, time-based interventions and dynamic spatial experiences.

#### Sarah Wigglesworth



Director of Sarah Wigglesworth Architects

Sarah is director of her London-based architectural practice which she founded in 1994. Her work is acknowledged as a pioneering influence in British Architecture. Specialising in exploring ecological solutions, her practice has designed buildings for the educational, community, masterplanning, cultural and housing sectors.

#### **Eleanor Young**



Journalist at RIBA Journal

Eleanor is interested in all things spatial, green (leafy more than eco) and beautiful. Eleanor also has an interest in architectural apprenticeships and education. Last year Eleanor wrote an article titled 'Print vs Digital' which reveals how architects like to get their information. This feeds into an ongoing, broader debate about the role of technology.



To stimulate our conversation we asked our guests to respond to a series of questions intended to illuminate their thinking on different aspects of the discussion topic. We recorded the conversation and this document summarises key themes from it. We also gleaned some interesting quotes and references from the discussion which are recorded here too.

The following themes emerged:

- Creative knowledge and sensory stimulation
- Structured and unstructured learning
- Space and place

# Creative knowledge and sensory stimulation

#### Questions

- do we as a society undervalue sensory knowledge and experience? What is an emphasis on the mind and the eye missing out?
- how does working in digital worlds stimulate and inform creativity?
- how is analogue/physical thinking different from digital? Are these two forms of knowing complementary or are they adversary?
- does a digital focus necessarily imply a loss of motor skills and social learning?

## **Emerging themes**

It was agreed by all in the room that our body hugely informs our relationship with our surroundings.

## The body as a site of experience

Siobhan Davies felt that we are all 'virtuosic' in the sense that we can get up in the morning without thinking about it. We acknowledge the existence of gravity, attention, relationships and an understanding of our environment and these shape our perceptions and movement. She reminded us that children explore the world by trying to test these sensory skills.

Siobhan Davies asked: how do you make design moves to accommodate people as they age and maintain that sense of childhood wonder?

"Failure is important! Kids are so scared to fail and this is affected by our education model."

Neil Pinder



Guy Claxton's phrase "I am a body, not that I have one" strongly resonated this message for Siobhan Davies. She also reminded us of the importance of Deborah Hay's question: "What if our body was our teacher?"

Several of our guests agreed that we take our (natural) environment for granted – the coast, making a fire, darkness, the taste of the salt, the pounding of waves. Many children have not experienced these things yet they are important experiences that virtual reality can't recreate. Children need to be exposed to them.

"....we have erased our attention
to our daily life which is hugely
stimulating and replaced it
with something that we think is
stimulation; it's like we want to be in
control of the stimulation."

Siobhan Davies

It was felt that education should celebrate this and encourage children to use their bodies, rather than placing too much emphasis on sitting still!

## The uses of light

Siobhan Davies said she felt that the importance of sensory knowledge is

huge. The quality and type of lighting, sound, smells, emotional embodiment – these things affect our circadian rhythms.

She explained that our responses can be changed according to the way spaces are illuminated, their colour and the amount of stimulation provided. This can be done digitally, through intelligent controlled lighting systems, so spaces can change over time, and are optimised for their inhabitants.

Fiona MacDonald added that currently there is a great interest in mindfulness. She felt that this was because

of the increased stimulation people experience in their lives. She argued that we should try to reduce the separation between mind and body through any means, including the digital, relearning how to be calm.

#### The uses of digital technology to create places

Neil Pinder said technology can lead to sedentary and isolated behaviour, particularly in virtual reality. On the other hand, he felt augmented reality can help people to be more active and engage with their environment. He commented that many people automatically see technology as the devil because of the noted negative effects associated with it. Richard Roberts agreed.

The discussion circled around the difference and capabilities of virtual and augmented reality (VR and AR). Richard Roberts explained that VR is a high resolution screen, strapped to your head, and you move around in a virtual world. This disconnects the user from the actual world. Augmented reality, however, uses glasses to give you a high resolution overlay over the world you actually see and move through, combining the real and the virtual.

He continued to explain that a headset that only one individual at a time can use is isolating. The handset/suit/interface/ mechanism between technology and the individual has a huge effect on how 'social' it is. Digital learning tables can each have 10 touch interactions, so more than one child can use it at once. This encourages children to achieve a common goal, and to be social. Developments in interactive digital technology for the physical environment enable it to sense people that are in it (where they are, what they're feeling) and adapt itself.

He argued that technology should not be a substitution for the built environment, but instead, look at how it can lead to something greater than the physical (such as using eye movement to communicate. This is hugely useful for individuals who struggle to communicate verbally.)



"When you are a child you test the boundaries, whereas it's culturally much less easy to test those boundaries when you're an adult. Where can you find the license to re-learn new modes of behaviour and have the freedom to experiment in ways you don't normally get."

Sarah Wigglesworth

"I love that Einstein quote; 'If you measure a goldfish by its ability to climb a tree, it will live its whole life thinking that it's stupid!' That's exactly what our education does, it doesn't recognise the musical minded, the problem solvers, the creative thinkers, because we as teachers don't have to measure it!"

Ben Clay

#### The all-rounded education

The creative industry is of huge valued industry in London, where it generates £4.6 billion per year, and across the country. However, this is not reflected in the value it is accorded in our education system which favours technical-instrumental subjects. Fiona MacDonald told us we are a "weird" country:

Fiona MacDonald told us we are a "weird" country: (W-westernised, E-educated, I-industrialised, R-rich, D-democratic). She said if you look at societies that are supposedly less developed, children don't necessarily go to school, but learn by copying, testing, trying. These are legitimate, proven ways of learning.

Neil Pinder commented that the UK education system compartmentalises subjects. Programmes such as the Forest Schools curriculum can facilitate a much more holistic, inquisitive, engaging and 'creative' approach to education.

The Leuven Scale measures levels of involvement and well-being, which affect a children's development, and aims to recognise more holistic skills, than subject areas such as 'maths' or 'English'.

# Structured and unstructured learning

#### Questions

• how important is our immediate environment to the way in which we learn and engage?

## **Emerging Themes**

Siobhan Davies observed that our ordinary lives offer us huge stimulation, but felt that we have erased our attention to our daily life and replaced it with something that we think is stimulation: the digital world. This offers us the attraction of being in control of our own stimulation.

"An environment that feels more 'bodily'

- where there are curves in it, textures,
variation - this is the world we live in".

Siobhan Davies

Neil Pinder agreed, arguing that it is difficult to benefit from the emotion, the warmth and the experience we get through all senses simply by switching a button on and off. As human beings we need

to be creative and stimulated by one another. Social contact and sensory knowledge are critical to this.

#### The role of Nature

One way to create a stimulating environment is to incorporate and take inspiration from nature; it is not programmed, it has natural variation, which means one can project one's imagination onto it. Another way is to place an emphasis on the body. As Siobhan Davies reminded us, the real world has great variety.

There is a huge emphasis on mindfulness, but we rarely talk about the physical conditions related to mindfulness. When thinking about our body in this way, we often come back to nature, which inherently offers us opportunities conducive to mindfulness.

The natural world is not the absence of stimulation (as in a set of white walls). It is complementary and not overwhelming. In cities children will have fewer spaces to retreat to, yet space and place is integral to local identity. Fiona MacDonald explained that we need to recognise the uniqueness of place and celebrate it.

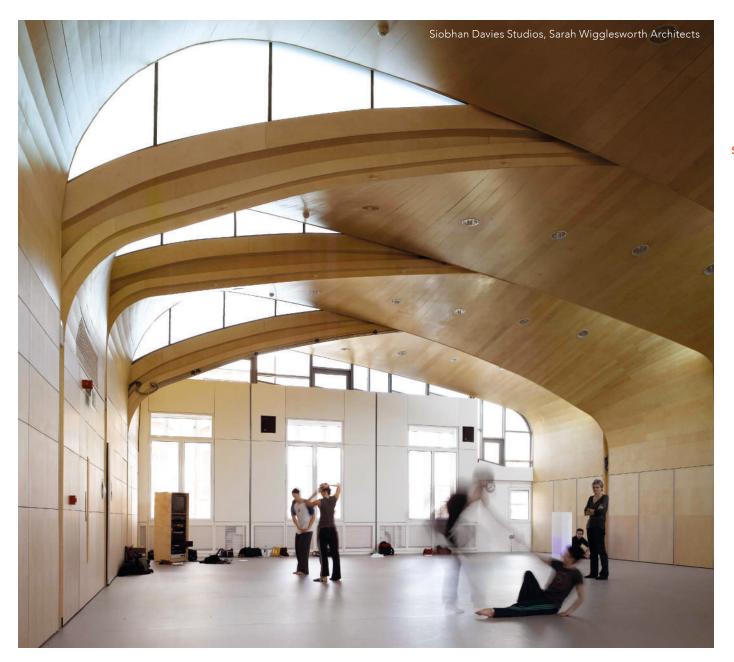
Neil Pinder echoed this by observing that he gets the best work out of people if they feel that they can work in the most comfortable environment for them.

Nevertheless, people benefit from visiting new environments that they have never been to before. We need to take risks and experience the unfamiliar.

Fiona MacDonald felt that as a profession, architects were not good at celebrating the benefits we help create that mean we live our day-to-day lives well. This connects with ideas of mindfulness and well-being and is an effect of the architect's work that should be advocated and valued.

"The ordinary is extraordinary."

Siobhan Davies



"Only since having the studio that SWA built am I so super-aware of its impact on everything. . . on how to be kind and thoughtful!"

Siobhan Davies

"Loris Malaguzzi says
'The environment is the third teacher'."

Ben Clay



One of the great things about digital technology is that it's easy to change, "so we can learn about how our pieces exist in their environment and we can adjust them." During the design development they can quickly create mock ups for focus groups because of the nature of digital technology, and it's easy to adjust and change once installed.

Richard Roberts

## Space and place

#### Questions

- what are the benefits of traditional 'class based' learning compared to different models of outdoor and place-based learning.
- what is the future of the classroom?

## **Emerging themes**

### A stimulating environment

It is important to stimulate curiosity. However a balance needs to be struck between an under- and an over-stimulating environment. Children can be over-stimulated, but equally it is not desirable for them to be taught in a 'safe cell' with no stimulation at all.

"An individual's relationship with the fact that 'you are a body' changes daily, psychologically, physically. Your body adapts and changes to the spaces you are in."

Siobhan Davies

## Classroom design

Best practice education models are often based on 'trust' and 'ownership' from the children, as is commonplace in Scandinavia and Finland. As a result education there is more fluid and less confined to a set classroom, especially at primary level. There are many more domestic references in the teaching spaces, such as fireplaces, deep window cills or corners where children can find spaces where they want to work. Furthermore, communities are more self-sufficient in Scandinavia, so there is a greater emphasis on craft, making and in the buildings themselves.

Neil Pinder observed that the model of the classroom has remained unchanged for many years. Pupils and teachers stay in their classroom from pretty much primary age to 16. Yet each child is unique and needs to find where they learn best. Different settings are needed to respond to these.

One participant argued that there is a heavy emphasis on legislating the formalities of education, on formal teacher/pupil behaviour and on attainment targets; this is manifested in the designed formal nature of the classroom. Adults have many more working arrangements now, including open plan/co-working/working from home, or in the evening/ morning. Children would benefit from these arrangements too.

Pursuing the theme of 'trust', Ben Clay posited that current policy emphasises the need for everything to be legislated. Teachers are discouraged from hugging pupils; the classroom environment and relationship between teachers and pupils reflects this 'hostility'/ formality.

Subject-based learning in secondary education can have a huge impact on restricting what can be done in a classroom, and associated learning styles. For example, the English curriculum is still narrowly focused on the 'three R's', and this is reflected in the spaces that are created to serve them. It could be useful to have as much space in an English classroom as is available in a drama studio, allowing English to be taught in different ways, such as by acting out the narrative.

Secondary school lessons are more subject based, which means on a subliminal level you are taught to compartmentalise knowledge. This is very different to life; it doesn't recognise natural overlaps in subjects and starts to affect spatial arrangements and constraints in the physical classroom.

"Instant returns are favoured because of the changes in government and 4 year political cycle. For education, nobody is really prepared to put the money where it's needed because they need the impact now."

Ben Clay

"... let our kids express themselves without quantifying it!".

Neil Pinder



### **Creating value**

Ben Clay argued that not everything can be monetised. It is difficult to cost the benefits of well-being and delight, but these things matter, and show how we value people.

The current funding regime in schools does not permit any research and development. The last time this was supported by Government was under the Building Schools for the Future programme. With the demise of state's stake in public education, there is no official body to champion quality.

Referring to her own studio, Siobhan Davies observed that she has learned by living in the Studio designed by SWA that her studio is (to some extent) equivalent to the body; it has texture, it has variation, it has structure, it has musculature. She said that she was not aware of a single person that has come through that studio who did not remark on the quality of the spaces they work in.



"I love those moments in buildings . . . when it encourages someone to do something that they wouldn't usually do. Some of the constraints of building in the city now allow you to be a bit more creative, like the vertical school, standard plans have to go out of the window."

Fiona MacDonald



"If your body is your teacher, then it has to be in a situation from which it is learning."

Siobhan Davies

## Conclusions

Our discussion was rich and broad-ranging. Reflecting on the role of physical and sensory learning, all of our contributors affirmed its importance. Indeed, the discussion demonstrated that, if anything, sensory knowledge is even more important in light of the distraction digital worlds can present to us in the face of other meaningful experiences.

Important points to emerge include:

- Technology can be used to promote and supplement physical and sensory learning. It can enhance accessibility and promote adaptability, sociability and curiosity
- Physical/ bodily learning using all our senses is important to pursue throughout our life course
- Unprogrammed learning can be readily accessed though nature, which offers a balance of stimulations
- We should not fear taking risks, since new experiences allow us to learn. As designers we should not be fearful of the unknown either. We should embody the spirit of a child's curiosity in the approach that we take to design, and enjoy the adventures that arise.

## Key themes

## Creative knowledge and sensory stimulation

- Use of light
- The body as a site of experience
- The uses of digital technology to create places
- The all-rounded education

## Structured and unstructured learning

- The role of nature
- The limitations of traditional classrooms

## Space and place

- A stimulating environment
- Classroom design
- Creating value

## **Further References**

Augmented Reality (AR): example is the exhibition by Marshmallow Laser Feast, at the Saatchi, which incorporates more than just visual senses.

https://www.marshmallowlaserfeast.com/experiences/ocean-of-air/

In New Zealand, Councils are looking towards technology to provide a solution to bring young families and technology-loving kids back to parks. Eight parks around some of their biggest cities incorporate 'digital playgrounds'. Children can, through a phone, run away from sharks, catch giants, go on adventures. It encourages them to walk between 2-5km per day. <a href="https://www.geoargames.com/magical-park">https://www.geoargames.com/magical-park</a>

#### **ECEERS**

Early Childhood Environmental Education Rating Scale and Sustained Shared Thinking and Emotional Well-being Scales place importance on and measure the interaction between teachers and children.

https://naaee.org/eepro/resources/earlychildhood-environmental-education-rating scale-eceers

https://naturalstart.org/resources/earlychildhood-environmental-education-ratingscale

## Now Press Play

Carry out school workshops – their school becomes a whole other world that they can explore. http://nowpressplay.co.uk/key-stage-3/

## Great Ormond Street Hospital

Jason Bruges Studio created a 'distraction piece', located on the journey between the ward and theatre. Forest wallpaper and digital animals appear as trolleys are wheeled by. <a href="https://www.gosh.nhs.uk/parents-and-visitors/gosh-arts/art-collection/nature-trail">https://www.gosh.nhs.uk/parents-and-visitors/gosh-arts/art-collection/nature-trail</a>

#### Colour

This You-Tube video showcases different one-off singers, all set in different coloured square boxes. The site helps focus on the colour, assisted by good lighting. <a href="https://www.youtube.com/channel/UC2Qw1dzXDBAZPwS7zm37g8g">https://www.youtube.com/channel/UC2Qw1dzXDBAZPwS7zm37g8g</a>

#### Loris Malaguzzi

Educational Psychologist and founder of the Reggio Emilia School's educational philosophy and pre-school pedagogy. <a href="https://www.reggiochildren.it/identita/loris-malaguzzi/?lang=en.">https://en.wikipedia.org/wiki/Reggio Emilia</a>

#### Ken Robinson

Ted Talk discusses flaws with our education system. <a href="https://www.ted.com/speakers/sir\_ken\_robinson">https://www.ted.com/speakers/sir\_ken\_robinson</a>

#### Leuven Scales

A 5-point scale used to measure emotional well-being and involvement. <a href="http://magicnursery.co.uk/pdf\_documents/LevelsofWellBeing.pdf">http://magicnursery.co.uk/pdf\_documents/LevelsofWellBeing.pdf</a>

## Vicky Wright

Movements and geological movements.

Conducts theatre work in schools using masks.

<a href="http://www.makespacestudios.com/artist/vicky-wright/">http://www.makespacestudios.com/artist/vicky-wright/</a>

#### Attendees

Sarah Wigglesworth Architects <a href="https://www.swarch.co.uk/">https://www.swarch.co.uk/</a>

London Early Years Foundation <a href="https://www.leyf.org.uk/">https://www.leyf.org.uk/</a>

Siobhan Davies Dance <a href="https://www.siobhandavies.com/">https://www.siobhandavies.com/</a>

Matt + Fiona <a href="http://mattandfiona.org/">http://mattandfiona.org/</a>

Celebrating Architecture <a href="https://www.urbanlearners.org/celebrating-architecture-initiative/">https://www.urbanlearners.org/celebrating-architecture-initiative/</a>

Jason Bruges Studio <a href="http://www.jasonbruges.com/">http://www.jasonbruges.com/</a>

RIBA Journal https://www.ribaj.com/



Dusk falls as diners continue their conversation





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