

## Education 2021 – Blended Learning Post COVID

*With Stephen Heppell, March 2021*

The third in the series of webinars from Learning Possibilities featured a conversation between the two founding fathers of the company – Mehool Sanghrajka and Stephen Heppell. Stephen is one of those rare polymaths who is not only a learning technology expert but also a deep thinker and highly knowledgeable teacher and authority on the psychology of learning, having been a professor in the field for more than 30 years.

The conversation began with a consideration of two key questions – how do we build and adapt schools to accommodate blended learning? and how do we optimise the learning more generally by taking account all the environmental factors, such as temperature, CO2 concentration, air-borne particulates, and the fumes from volatile organic compounds?

Stephen celebrated the fact that ‘learning has escaped’ during the extended period of lockdown learning that the world has experienced over the past 12 months – and as it has escaped from the boundaries of the classroom, the conventional curriculum and age-phasing, so learning skills have been able to flourish with many skills being developed through the opportunity to exercise agency – students having some choice in how, where and what they learn, and at what pace. In this environment, whilst there may have been some narrowing in the breadth of study, a great deal of deep learning has taken place.

He reflected on how learning undergoes transformations every 75 years or so – he pointed to the role of the churches around 1800 educating children in biblical knowledge through Sunday schools, which was a foundation for the mass education that became formalised in the UK with the 1870 Education Act, a product of the industrial revolution that created the need to basic numeracy and literacy amongst workers and made primary-age education compulsory; moving into the 20th Century, the shock of the Second World War led to a prefiguring of the disruptions in conventional school-based education that we are witnessing today. Urban children were evacuated to the countryside and had opportunities to learn outdoors, to learn from each other, to learn from adults who were not necessarily just their teachers; but, above all, they had the chance to be resilient, creative and ingenious – this ingenuity led to a generation of creative and free thinkers which culminated in the social revolutions of the 1960s the products of which were great artists like Vivienne Westwood, David Hockney, John Lennon and Hellen Mirren, and inventors like Clive Sinclair.

In exactly the same way, during the recent school closures of '20 to '21, individuals have developed ways of learning without walls. Stephen pointed to the great flowering of inventiveness that has emerged during the school closures with many examples of deep learning and skill development taking place. To celebrate the achievements of this Golden Generation of learners, through the heppell.net website Stephen has teamed-up with Tom Smith at the University of York to devise a certificate generator which celebrates all the creativity, ingenuity, resilience, imagination, progress, effort, helpfulness, curiosity, playfulness and learning that children have been a part of during the COVID Lockdowns.

As Stephen says “these experiences make this COVID generation unique, valuable and very, very special – all set to cope with the new, unexpected and difficult problems ahead, in this 3rd millennium. We haven't seen a generation like this for 75 years”



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## A CERTIFICATE TO CELEBRATE THE ACHIEVEMENTS OF A GOLDEN GENERATION



Certificate No. one thousand six hundred and six



Certificate No. one thousand six hundred and six

So what does this mean to the design of schools and schooling as education systems reopen and reorient themselves to a new world order ?

To begin with, they should be more agile and more responsive in their capacity to hear the voice of the children; as the realignment of learning takes place, schools should introduce surprise learning – such as “Thinking Thursdays” or “Discovery Days”, where the staged discovery of an unknown alien in the school leads a detective mystery trail that has to be solved by the students using forensic science. Through creating more learner agency in this way Stephen invokes a lesson learnt from the field of competitive sports, that is “the aggregation of marginal gains” – where small incremental steps along the learning journey, when taken together over time, can lead to huge strides forward.

An important feature also is the physical classroom environment, and how this affects learning. For example, at levels of CO<sub>2</sub> concentration more than 1,000 part per million there is considerable research evidence that shows attentiveness begins to wane – in most schools, as presently configured, the air quality is only optimal for the first hour of each school day – so ventilation is of paramount importance – both doors and windows should be kept open, for example, and it should be normal now for classrooms to have more green plants to soak up the excess CO<sub>2</sub>. High CO<sub>2</sub> levels represent only one environmental risk factor, there are also worryingly high levels of volatile organic compounds in the air caused, not only by white-board marker pens, but also, paradoxically, from the chemicals used to deep clean classrooms to suppress the spread of the COVID virus. High levels of small particulates in the air are also of significant concern, especially in those schools situated close to busy roads; and, of course excessive noise above around 70dB is significantly detrimental to learning.

Bearing in mind all these environmental factors, Stephen has invented a classroom environmental monitor, called a ‘Lear-nometer’ – this measuring device produces readings, in real time, of the levels of pollutants that damage students’ health and their learning.



The Learnometer measures:-

- Light levels
- Temperature and humidity
- Sound volume and rhythms
- CO2 Concentration
- Air pollution

Excessive concentrations or imbalances in any of these environmental factors significantly impairs learning as well as children's health and well-being

<http://learnometer.net>

Stephen summarised the importance of environmental factors in education: across the world, of the 2.2 billion children and young people of school age, only around half of these have access to formal education; of the remainder, about ½ of these are exposed to seriously limiting factors caused by their learning environment. Of those who make it through this trauma they then have the additional burden of national examinations to contend with.

Mehool asked if examinations themselves are the limiting factor to attainment. Stephen lamented at the loss of trust in teachers' judgements that has taken place over the past decade but he rejoiced in the fact that the recovery measures put in place to cope with the emergency have reinstated the importance of teacher assessment. Surely it is more authentic and meaningful for an evaluation of student attainment to be based on the sum total of their achievements over the course of a learning programme, rather than upon a one-off exercise in recall and timed writing under custodial conditions.



As an example of portfolio and performance based assessment, Stephen recalled the eViva project<sup>1</sup> that he ran out his Ultralab in Essex. The eVIVA project involved students compiling online portfolios of their ICT work to show what they knew and could do, the processes used and the decisions they made. Annotating their work gave them an opportunity to show their thinking about their learning. Parents, teachers and other students gave feedback online or using a mobile phone. Once students completed their portfolio, they had unique oral assessment – known as the eVIVA taken on their mobile phone, using voice recognition to ensure security and authenticity.

Such evidence-based assessment of the knowledge, skills and understanding has to some extent been discredited by national policymakers. They see it as lacking in rigour, independent verification and prone to teacher bias leading to grade inflation. However, as a consequence the absence of available examination halls in recent times, there have been few alternatives. Time alone will tell if the experience will do lasting harm to this generation of learners or whether the whole international testing and examination machinery will be upended and transformed forever.

Having, over his several decades of professional practice, built a considerable international reputation for promoting alternatives to conventional schooling, it is no surprise that over 100 ministers of education across the globe have, over the course of the pandemic, been beating a path to Stephen's door to ask his advice on remodelling schooling for a digital age as they take some tentative steps towards reopening their schools after many months of closure.

<sup>1</sup> [http://rubble.heppell.net/archive/eviva/media/6928\\_eviva\\_project.pdf](http://rubble.heppell.net/archive/eviva/media/6928_eviva_project.pdf)



Everyone is concerned at the digital divide and how children in low income countries with poor connectivity and only sporadic access to devices will fare during a digitally reimagined education future. In many ways, as Stephen observes, some of the solutions are remarkably low-tech – using broadcast radio and TV as vehicles for mass dissemination of asynchronous learning, where students watch or listen to an episode of learning, which is supported by interesting and challenging project work and independent research assignments that improve the learners’ metacognition and self-management skills. What proved to be singularly unsuccessful over the period of school closures were attempts, online, to reproduce classroom teaching with a teacher being filmed in front of a whiteboard delivering a conventional lesson. Leaving aside the issues about transmissive teaching and the inherent learner passivity, this approach to distance and online learning requires good broadband connectivity and fully-specified learner devices to handle the streaming video, and therefore, is bound to exclude many if not most learners in most countries.

What is exciting and liberating about the integration of distance and online learning into the pedagogic mix is that schools and learning is no longer confined to rigid time allocations during school days that run from 9.00am to 3.30, five days a week, for 36 weeks a year – the new integrated learning can be 24/7, international and collaborative as learning goes around the world in a heartbeat!

Issues to do with poor attendance, weak motivation, and anti-social behaviour begin to evaporate as young people become engaged and wrapped up in the sort of learning over which they have some control and can regulate. There has, in Stephen’s view, always been a false dichotomy between learning and behaviour – it is beyond question that when the learning is interesting, engaging and relevant and deep, then many behaviour problems usually vanish.

So what of the future ? the economic and social consequences of the pandemic are only just beginning to be felt, not least in the retail sector, with high street stores closing and local authorities reimagining how town centres can be reinvigorated – as Stephen observed the downtown coffee shops have shown how and where learning without limits can happen with informal and spontaneous business and learning networking meetings taking place; he speculated that department stores, whose commercially viable days are definitely numbered, would make great spaces for learning !

Now that we have proved the concept of learning that is not tethered to the conventional classroom, and with the soon-to-be ubiquitous connectivity that 5G will offer, we can see that many schools, in their present form will not be needed. The need will be for agile buildings, they can be smaller, located in smaller communities within green environments and be multi-purpose facilities within their localities. So, as their learning can take place anywhere anytime, maybe learners would only need to attend school, in a formal sense, for two days per week with extended project work, collaborative learning off-campus and community learning taking place for the rest of the time.

There are very few ministers of education anywhere in the world who have the boldness, or indeed, the mandate to radically alter the time-honoured institution of bricks and mortar schooling, but now the genie is out of the bottle and we have shown that there is no going back – you can’t put the genie back into the bottle, and with a little imagination coupled with family and community support we can say that if the good lessons of the pandemic are well understood then ‘Learning can only get better !’