

(All content is copied verbatim from the consultation email thread.)

Why the continuing focus on the technology – and not the ecosystem and culture? - created by Mal Lee

After years of researching school's teaching and learning with the technology I'm still bemused as to why schools, governments, technology corporations and indeed educational researchers are still preoccupied with the technology and not the learning environment, culture, and ecosystem the young learn within.

It was strongly apparent in the writing of **The Use of Instructional Technology in Schools** that examined the history of the technologies in the C20 but also evident in the writing of the forthcoming publication on the **Digitally Connected Families**.

It is fascinating to note with the schools the labels used over the last thirty plus years with the digital education – from personal computers, Windows for Office, CD-ROMs, laptop computing, 1:1 computing, IWBs, BYOD, BYOT and more recently iPads and Chromebooks. The focus of all is the actual gear, the impact of specific technology – rarely the impact of increasingly integrated and powerful digitally based ecosystems and culture – with all their natural synergies – on the children's learning.

The business management literature, particularly in the last decade has very much focused on growing the desired digital ecosystem and culture, and the competitive edge that provides – but no so schooling.

Only the other day I read of a provincial government, with an election coming up that once again promised to revolutionise schooling by giving all students iPads.

To use a polite technical term such claims are utter twaddle.

Yes – I can understand technology purveyors flogging their technology making this kind of claim. They have done so for over a hundred and fifty years plus – starting with chalk!

Yes, I can understand researchers taking the scarce research monies and doing a government's bidding and concentrating on what the client believes are the desired learning outcomes.

But I can't understand why so many educational decision makers globally – and particularly supposedly intelligent heads – are still so preoccupied with the gear, and not the part they play in growing an increasingly powerful and effective learning environment and culture.

Steve Higgins – after his million years researching the various technologies – made the point back in 2012 that the gear alone will have little or no impact on the learning – it is the ecosystem that is crucial.

Why do folk think this focus on the kit continues?

How much is it impacted for example by the continuing focus in the external exams on subjects, and the continued use of silo like organisational structures in secondary schools?

How much is it the retention of linear hierarchical Industrial Age organisations and processes?

Thoughts?

Chris Yapp

This has been my frustration since first speaking at an education conference in 1990. I was explaining the findings of a 5 year project at MIT "Management in the 1990s" run by the Sloan School, in which I was involved through ICL.

The evidence by 1988 was that there was no direct link between investment in IT and benefits/outcomes in any organisation, be it public or private. The UK agency NCET, later BECTA, took this up well. However, the Dept for Education wanted the individual agencies to stick within their individual remits, such as inspection/teacher training/curriculum etc. I used to meet with some of the heads of the agencies unofficially as they were not supposed to meet, thus preventing any development of an ecosystems model, to use the jargon. There were some good examples at institutional level, especially in FE, but secondary has consistently struggled, with honourable exceptions.

In UK, the whole of the Public Sector, not just education has had similar problems. Health is less able to grasp than education. To be fair, before 2010, we had many visits to UK from around the world because we were at least trying. I was involved with Finland, Singapore, Australia, China and others.

If that sounds depressing, what I have observed in the police and health is that the new generation of management in their 40s are now adopting what we were doing as pilots around 2000-20005, when they were at the start of their careers. I was at BETT in London in January and while there are still lots of shiny toys on offer, few stands were pure tech which is an improvement on 15 years ago. I have hope for the next decade.

Malcolm Payton

One of the reasons is quite simple - "Governments overestimate what they can do in the short term and underestimate what they can do in the long term".

Because of this, we have to identify not just the overall strategy for them, we have to identify the next step for them - one small step that will move thing in a helpful direction; something that can have an impact in the short-term.

Long term strategies are great, but most governments want a new long-term strategy every few years (yup, bit of a contradiction there!)

That is why I am now structuring a lot of what I do around "having an impact on classroom practice from a strategic level" as it highlights the importance of having a (short term) impact while pointing out that there are ways to intervene at a strategic level (so tied to long-term goals) to achieve this.

Models like the [Three Horizons](#) approach developed by a Scottish Think Tank are also really helpful in addressing this sort of issue as it provides strategies to consider and address short, medium and long term issues in parallel.

Noeline Wright

I agree with Mal and Chris- this over-interest on the tool and not the impact on pedagogical practices, learning dispositions, learning outcomes etc. is such a waste. Unless the focus centers on how and why teachers are using a specific digital technology for learning, then we might as well all pack up and go home. Imagine if everyone had focused on the type of ballpoint pen teachers and students used, when those writing implements replaced pencils! Did they, of themselves affect learning? Did anyone notice?

It seems as if governments think a shiny toy will keep the teaching and learning masses occupied long enough not to notice that the infrastructure is wanting....

Sorry if I sound a bit cynical...

Mal

I can assure you that you are not the only cynical soul.

As Chris says it has been obvious for years.

The other disappointing aspect is the number of school heads globally who still go with the spin.

And promote in their school marketing the amount of kit they have acquired.

Saying nothing about any associated change in the teaching or learning.

Actually very assuring to hear the wide spread concern about the development.

Noeline Wright

I agree with you. Yes, it is something that has bothered me for a long time. Getting initial teacher education teachers and colleagues to focus on pedagogical purposes can be an uphill battle, let alone working with teachers.

Martin Longley

I remember as a fairly young teacher who was heavily involved with early IT being asked at short notice to address a group of older teachers/advisers in 1989. In something of a panic I said that IT wouldn't save you any time (intake of breath from audience) BUT it could enable you to be more creative and change the way pupils learn.

I still believe that although I don't think what I said at the time was what people wanted to hear.

Chris Thatcher

I agree with much that has been said here.

In the 80s and 90s I was the Headteacher of a large primary school in Coventry. We strongly resisted the drive to make the use of computers in school a subject and went against the trend of setting up a computer room. With the help of a company (Akhter Computers) the school was networked and at least one computer was made available in each classroom.

I believed then, and still believe, that the need for access was more important than the skill of manipulating a computer; that they are a tool not a means in themselves.

Much of where we are now, is down to the fact that we still expect youngsters to "learn computers" not to use them creatively in the learning process. The advent of devices such as smart phones and pads needs to be taken on board much more and the obsession with computing as such, devalued.

As Chris Yapp says, the powers that be are (or were) to blame for taking us in the wrong direction nationally by creating the subject of IT and that ground has to be won back by education professionals with vision to lead the way. Technology, to be useful, has to be embedded in the educational process and not compartmentalised into a narrow subject.

Where is the thinking about how AI will transform aspects of education? We hear much of what it will do in fields such as medicine, law etc. but I haven't come across any decent thinking about how it could transform education.

I live and work in Thailand where I am now the Chairman of the British Chamber of Commerce and the same issues arise but the thinking is sparse.

JohnWastenev

I do find it sad that the debate we were having in respect of learning resources and their role in pedagogical practice in the late 60's and early 70's has obviously not moved on in some schools. Whether Banda machines and reel to reel tape recorders, TV and VCR, language labs and videorecorders some schools would embrace and utilise the physical resources effectively to enhance both the curriculum and opportunities to effectively engage learning. In other schools the resources were used with no consideration of impact on learning opportunities. I visited schools where TV and recorded education programmes were widely used – in good schools teachers showed a few clips from the broadcast stopping the tape asking questions or rewinding to demonstrate a point and then fast fwd to another key learning point. Another school, another day but teachers simply sitting a class with the same broadcast and letting it run for a full 30 mins and then saying right you have now learned how the solar system works or whatever. Multiply that for the student experience - just 3 lessons a day in different subjects and no wonder the students become bored and indifferent and develop behavioural issues.

What makes the difference – a belief by the SLT that tools are just that, and their effective use in the classroom needs to be modelled. Many teachers I worked with had never previously experienced the use of these tools in the classroom. They had TV and video at home but their use for entertainment did not automatically transcend into pedagogical practice. Dedicated slots in staff meetings, using tools subtly as part of the learning process for staff so they can start to make the connection and empowered creativity. So it was when we introduced our first computers BBC micro and RM380Z through every iteration – staff have to develop confidence and realisation of the potential to improve their teaching and focus on how it might enhance their learning but also monitor this. So many staff in so my schools I visited after moving across to the dark side did not monitor the benefits or lack of from their use of tools – they used them because they thought they should regardless of response.

Mal Lee

Again I'd agree with Chris.

The heads and potential heads of schools operating in an increasingly digitally based and networked world have never known anything other than the traditional linear hierarchical Industrial Age school and its now highly dated legacy processes

Moreover most have never been readied to genuinely lead in the new environment.

Most heads globally are still readied to manage loosely coupled, silo like organisations readying kids for paper based exams.

With many finding that a challenge.

The compounding difficulty is that after 50 plus years of exponential digital evolution the accelerating rate of change is finally kicking in.

As a very good Deloitte study late last year brought home the rate of technological change is now such that virtually no organisation - and particularly public sector - can keep up.

And to imagine what we have today will in likely two years be twice as sophisticated and powerful.

A flow on from the development is the increasing digital convergence, integration, complexity, synergies and natural unplanned evolution.

Chris you mention 97 - which to me was but yesterday - and yet the Mobile Revolution that has transformed life, work and education globally and which now sees over half the world digitally connected had just begun.

Nations need heads able to lead in that world.

And few can find or ready them.

Sarah Younie

This reminds me of the insight that it is very hard to change culture (beliefs & behaviour) & yet it is the culture that needs to be changed, and this is why educational reform so rarely works as to restructure is NOT to reculture.

John Preston

Please forgive the intervention of the husband (still a 'politically correct' word)? of a leading member of MirandaNet to write to you on the benefits and contribution of computers to company and industrial progress in the 1960s, when I started employment.

A strong reason for the success of the combination of computers and organisations stems from:

The pending retirement of a generation of an ageing chairman and board looking for a 'legacy'.

Computer companies fulfilled that legacy - they offered a new and future world.

The outcome and success story was the result of a younger generation (in both the selling computer company and then in the client company) deeply analysing the management processes and not just computerising the status quo but starting afresh with a 'new order'. The impact of the

1947 Marshall Plan on the Continent of Europe and the UK was that of begetting business and industrial planning simultaneously and on a large scale: a new thinking.

The computer certainly enabled the new system to take on a life of its own, but the agreement of the older generation to encourage management to computerise enabled new thinking and modernisation first and foremost - computers were the new means.

You guys are all in education. What happened there over the same period?

(refer to Professor Christina Preston for an answer at a higher level than mine).

Henry Liebling

It ain't what you do, it's the way that you do it.

That's what gets results.

Classroom climate.

Building a learning community.

Learning sets. 4 to 6 individuals working and learning together.

Share, co-operate vs competitive. Take a look at the natural world. We were taught survival of the fittest. Reality is far from this. Bacteria, fungi, trees nearly all do better by co-operation. Lichen, mitochondria

Toddlers pushing their boundaries with visual literacy to a high level before learning to read. Try charting their zone of proximal development. Pros And cons, but dangerous if all look at is consumerist crap.

Interaction and connectivity as never before. New networks evolving.

Out of control?? Self organisation and consequent emergence.

Exciting.

Looking at the Atlas Mountains covered in new snow, clear blue skies.

Need some blue sky thinking.

Move towards systems thinking please.