

Why Schools Have to Go Digital to Remain Viable

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It is becoming increasingly apparent, but as yet unheralded that schools will have to go digital to remain viable.

In the same way the digital masters of the corporate world are attracting the clients the trend line is revealing that will happen increasingly with digital schools at the expense of their traditional paper based counterparts, with potentially huge implications for governments and education authorities.

In today's world it is the organisations that have created ever evolving tightly integrated highly productive digitally based ecosystems and positioned themselves to accommodate rapid on-going digital transformation that will thrive. It holds equally of banks, media organisations and schools.

Schools operating on the old paper technological base don't have the structural capacity or mindset needed to evolve at pace and 'compete' with those that have moved to a digital operational base and mindset, and which are evolving and strengthening their appeal, at an accelerating rate. Simply putting a load of iPads on a horse drawn cart won't allow it to compete with a vehicle designed specifically to deliver an education for a digital world.

The organisational evolution literature (Pascale, et al, 2000) observes the danger for those living ecosystems that cease evolving and which move into a state of equilibrium.

Brian Solis, one of the leading analysts of digital transformation uses the succinct but very powerful expression Digital Darwinism to describe the scene where those organisations that adapt live and those who don't die.

In a world where the young, their parents and society have normalised the 24/7/365 use of the digital in virtually every facet of their lives and daily expect evermore from that technology they naturally assume the schools will make a similar all pervasive, increasingly productive use of the technology and critically will seek out those schools that do.

In 2015 relatively few schools globally have normalised the whole school use of the digital. There are however a burgeoning group of schools where all the teachers are using the digital naturally in their everyday teaching, that have moved to a digital operational base, adopted a digital mindset, have a digital vision for the school, have transformed many of their operations and structures to better accommodate the all pervasive use of the digital and are on track to digital normalisation and the provision of a highly attractive educational package.

However at the other end of the evolutionary continuum (Lee and Broadie, 2015) there are a plethora of schools, primary and secondary offering the same type of schooling as when you were a child, seeming unwilling or unable to change, falling ever further behind the pathfinders.

The crucial question for all societies, governments and education authorities is what does one do with the latter schools? It is a question being put already, in as yet select situations, as digitally aware public school parents ask why can't their children attend the contemporary digital school, and why must they attend what they perceive to be a dated increasingly irrelevant school.

The difference between the evolutionary position of schools, even within the one education authority and region, is already immense and growing at pace (Lee, 2014 a), with the digital pathfinders already providing a fundamentally different 24/7/365 mode of schooling (Lee and Broadie, 2015). Add to that mix governments globally giving individual schools greater responsibility for their operations and growth and you'll appreciate the differences will widen.

For a paper based school to move away from its traditional form and create an evolving, increasingly higher order digitally based ecosystem will take at least five years when led by an astute and capable principal. All the while its digital 'competition' up the road is accelerating its digital evolution and strengthening its attraction.

Fortuitously some education authorities have begun to address the issue, but it does require the Australian society and its governments to tackle what is on trend to be a major issue, for in most instances those less viable schools can't be allowed to close.

Paper v Digital

In considering the likely fate and continued viability of the traditional paper based schools reflect on the digital transformation that occurred in each of the following organisations, and how quickly the pathfinder organisations in each impacted their slower adapting competitors and practises.

- Banking - began its digital transformation in 70s
- Newspapers - from the 90's
- Booksellers - from mid 1990's
- Video/DVD stores - from the mid 2000s
- Retailers - significantly from the early 2000s

What became of, or is becoming of those organisations in those arenas wanting to stay with the old ways?

The first schools moved to a digital operational base in the mid 2000s. It took those schools another five to six years to move to the point where the digital underpinned every facet of the school's operations, where the school's operations, structures, mindset and ecology had been transformed, the schools had normalised the use of the digital and positioned themselves to continue their evolution, growth and provision of an apt and increasingly relevant and attractive mode of schooling.

While historically schooling took many more decades than most organisations to go digital now that has it is, at least in the pathfinder schools, evolving at a pace and in a manner paralleling the industry leaders.

In researching the pathfinder BYOT schools in the UK, US, NZ and Australia in 2014 constant reference was made by the schools of the strong impact of

their digital and contemporary nature on student enrolments. Yes all were very good schools, well led and managed, with a strong shaping vision, high expectations, excellent staff, very efficiently run but it was their digital standing that was singled out.

Client Expectations of Schools

Australia's schools, often unwittingly are increasingly working with a digitally empowered youth and parent group that have normalised the 24/7/365 use of an evolving suite of digital technologies, who have ever rising expectations of that technology, who no longer differentiate between online and face to face experiences (Westerman, et al, 2014) and who expect of schools what occurs normally in everyday society.

They expect the school to have the same kind of bandwidth and Wi Fi access as at home, for the children to use the technology they already use 24/7/365, for them to use the latest version of the software and apps and to be trusted to use the kit in the same way as they are in the 'real' world.

As the pathfinder schools meet those expectations so the client's will continually lift theirs, collaborating with the schools to provide an ever higher order mode of schooling.

The parents appreciate that 80% of the young's learning time each year occurs outside the school and that in their use of their increasingly sophisticated digital technologies the children are – often with the support of their peers – educating themselves in a largely laissez faire manner with no support from their schools.

They moreover understand their children are becoming proficient from a very early age with the digital technologies and will likely enter school well able to use their own kit.

As far back as 2010, pre the release of the iPad, the US Project Tomorrow (2011) study reported on the digital empowerment of US parents and children, the parents desire to buy their children's personal digital technologies and to collaborate with their schools in the use of that technology in the classroom.

The same survey indicated that 2/3 of school principals said no way was that going to happen.

The report noted the preparedness of the parents to exercise their new power.

An overarching feature of those organisations, businesses, public services and schools leading the way in the digital transformation is their unrelenting focus on the customer, and meeting or exceeding their ever evolving expectations.

School Productivity. Paper v Digital

The pathfinding digital schools globally have reached the evolutionary stage where one can safely compare their productivity with the traditional school and provide decision makers an insight into what is likely to occur with the two modes.

In examining the productivity of each consider which mode of schooling parents, seeking to best enhance their children's chances in a rapidly evolving 21st century will choose.

- **Potential.** The potential of the paper based school, after 150 plus years of experience and research has all but been maximised, while that of the digital is only just beginning to be tapped. While the projected increase in the power and sophistication of the digital technology might not be as fast as estimated it will nonetheless be considerable and ongoing.
- **Growth.** Where the paper based school is still characterised by its constancy and continuity the digital schools are distinguished by their taking control of their growth, willingness to take risks, on-going evolution and transformation and drive to take advantage of the opportunities opened daily by the digital.
- **Leadership.** As the digital transformation research affirms 'digital transformation starts at the top of the company (Westerman, et.al, 2014, p100)'. The digital schools universally are led by astute principals – CEOs – with a digital vision who have been able over time to successfully address the myriad of human and technological variables needed to go digital and strengthen the school's ecosystem. The principals of paper based schools in 2015 are invariably managers, and managers of loosely coupled organisations, where the 'siloes' conduct their own operations.
- **Shaping vision.** Schooling in the paper based school is strongly shaped by tests, internal and external, with much of the driving done through the rear vision mirror while that in the digital is increasingly being shaped by the school's – and hopefully the government's - forward looking educational and digital vision.
- **Culture and ecology.** The traditional school culture that you know well while invariably safe, ordered and constant year after year is also insular, risk adverse and sceptical of change. That in the digital is a culture of change, supportive of risk, often seemingly chaotic, rapidly evolving, tightly integrated and exciting for the students and teachers.

In 'standing alone', maintaining their traditional insular practises, banning the use of the young's technology paper based schools are becoming increasingly divorced from the networked society, its culture and norms. Culturally the more those schools separate themselves from the real world the more they risk being perceived as dated and irrelevant.

- **Mode of schooling.** The paper based mode you know well. It is conducted physically within the school walls, within set limited hours, undertaken mainly by sole teachers in 'their' classroom, with little or no collaboration with anyone outside the school walls. The digital schools, while still making extensive of the in school teaching are using the technology to reach out, to socially network, to collaborate with

their homes and community, and to marry the in and out of school learning and teaching to provide a 24/7/365 mode of schooling. Suddenly the latter are recognising, building upon and enhancing the untapped 80% of learning available outside the classroom.

- **Accommodating on-going rapid evolution.** 150 plus years of constancy and continuity, and the five plus years to move to a digital operational base highlight the difficulty of paper based schools accommodating rapid change. In contrast schools that have achieved digital normalisation can and are daily accommodating rapid evolution throughout all facets of their operations.
- **Customer focus.** The driving wish with the digital schools is to provide their clients – their parents and children – the schooling they desire, and increasingly to anticipate the schooling that will best meet their future needs. The traditional school invariably believes it knows what is best, and as such the parents and children should, as always follow the school's advice and often dictates.
- **Empowerment.** Within the traditional highly hierarchically organised school the teachers – the line workers – are invariably micro managed and expected to focus on 'their' speciality, having limited awareness of the macro workings of the school. Most teachers are disempowered. In contrast teaching within a tightly integrated, ever evolving digital ecosystem where all operations are closely intertwined requires all staff, teaching and support, to have a macro understanding of the school's workings and vision, as well as the in-depth knowledge of their speciality and to be able to contribute as a professional to the school's growth and evolution. They are empowered, encouraged to lead, to take risks and to fly.
- **Mindset.** Bhaduri and Fischer (2015) ask if you are an analogue or digital leader, contrasting the markedly different mindsets of those working in the traditional and the digital organisations. While pitched in Forbes magazine at business the contrast holds equally of schooling, with many leaders in the traditional school in 2015 still seeing no reason to change.

Until school principals are of a mind to transform 'their' school the staff and the school's community have little likelihood of changing the status quo.

- **Collaboration.** Until very recent years schools had for centuries seen no reason to genuinely collaborate with any outside its walls. That changed virtually overnight (Lee and Ward, 2013) when schools moved to a digital operational base and recognised the many educational and economic benefits of genuinely collaborating with their homes and community.
- **Control of teaching and learning.** An associated development is that the digital schools move quickly from their traditional unilateral

control of the teaching and learning to a more distributed approach where the school collaborates with and supports the efforts of all the 'teachers' of the young.

- **Trust, respect and recognition.** In distributing that control the school and the teachers recognised the very considerable contribution the parents have made to their children's learning from birth onwards, the extent, nature and importance of the student learning happening outside the schools and placed increasing trust in all staff, the parents, students and the wider school community. Paper based schools work primarily on distrust; distrust of the children, their parents and most of the staff, particularly as regards the use of the digital (Lee and Winzenried, 2009).

So important is that trust, schools cannot consider BYOT or achieve digital normalisation without being willing to trust the children to use in class the kit of their choice.

- **Student learning.** In maximising the potential of the paper based school, continuing to use the same loosely coupled organisational structure and insular teaching mode and maintaining the same risk adverse ecology it is of little wonder that school literacy and the proportion of students alienated with schooling in the developed world has basically plateaued since the 1980's.

In contrast it is increasingly apparent that evolving tightly integrated, highly focussed, ever higher order digitally based school ecosystems that simultaneously address all the variables that impact each child's learning in and outside the school walls have the potential to markedly enhance both the learning and its aptness of each child and critically to get more than the current top third of students to value and enjoy their schooling (Lee, 2014 b). When all the students have in their hands current digital technologies and the skills to use them everywhere, anytime the way is opened for all manner of enhanced more individualised teaching, learning and assessment.

- **Attraction.** All the above go a long way to explaining why an increasing number of parents want their children to move out of area and attend good digital schools. Culturally and educationally the latter are perceived as exciting, dynamic, relevant and enjoyable schools – good schools - that are attracting the pick of the teachers; staff that find it professionally rewarding to be empowered, treated as a professional and supported to fly to ever greater heights.
- **Efficiencies, effectiveness and economies.** Coincidentally the schools where the digital underpins every operation are already appreciably more efficient and cheaper to run than their traditional counterparts and are on trend to be increasingly so. The school's scarce monies go further. With the advantage of hindsight it is evident paper based schools are inefficient, highly labour intensive and expensive to operate, with the schools unable to achieve the economies, synergies and automation readily achievable in the digital.

- **Recurrent resourcing.** Not only are digital schools already cheaper to operate than their paper counterparts they are ideally positioned to both reduce costs as the technology develops and to secure significant additional resources. In genuinely collaborating with the parents and community and in pooling the resources and expertise of the school, its homes and community digital schools are daily afforded the use of a considerable amount of material and social capital that doesn't appear on the school's books. An obvious example is BYOT where the parents provide the personal digital technologies used by their children – a sizeable sum of money the school doesn't need to find - but the more schools genuinely collaborate the more the parents, the school's community and businesses are willing to contribute in kind and cash.

The strengthening cultural, educational, organisational and economic advantages of the digital school are considerable.

Vitality while some of these attributes are particular to schooling the vast majority are evident in the digital transformation of all organisations. Responsiveness to on-going evolution, a strong shaping digital vision, a CEO ready and able to lead, an unrelenting focus on the customer, an empowered staff with leaders at all levels and an evermore mature, tightly integrated and efficient ecosystem are to be found in all.

It bears underscoring that those schools that have, after many years of astute and concerted effort achieved digital normalisation are in anyone's terms very good schools. To that is added the qualities of the digital school.

How well placed is the paper based school is to compete, and to compete over the long term with the good digital school?

What mode of schooling would you chose for your children?

In 2015 while the majority of schools are still operating in the traditional way the parents will employ the traditional school selection but as soon as a quality digital school, public or independent enters the scene those old criteria will likely rapidly change.

Implications and challenges

How governments and education authorities address this global phenomenon is as yet unknown.

The first step is to recognise it is happening.

The second is to appreciate the immensity of the challenge and the years it will take even with the most astute of principals to move paper based schools into the game.

Fortuitously to name but two the NSW Department of Education and Community Services (DEC) and the Tasmanian Department of Education have begun tackling the issue. Tasmania has for the last three years been conducting for its aspiring and current principals a program on 'Leading a Digital School'. NSW DEC, building on the Government's introduction of

Local Schools, Local Decisions, and with the support of the local member Andrew Constance has in its Far South Coast Network backed the introduction of 'a hub and spoke networking' model (Morris, Lee and Lowe, 2015) for facilitating whole of region school change.

Hopefully there are others but the lack of any mention in the literature suggests only a handful of political and educational leaders have as yet read the trend lines.

As an educational administrator of old I can well envisage the heat in the Minister's Office when the child of digitally empowered parents is forced to attend a dated paper based school.

Conclusion

Schooling globally is just beginning to experience the kind of digital transformation that has impacted virtually every other paper based or analogue industry.

While schooling's move to a digital operational mode lagged most other organisations the pathfinder schools – the digital masters – are evolving at a pace never seen with schools, positioning them quite literally years developmentally ahead of their 'competition'.

Schools can sit unconcerned about 'Digital Darwinism' or recognise they have to go digital as soon as feasible to remain viable.

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	Paper	Digital
Potential		
Growth		
Leadership		
Shaping vision		
Culture and ecology		

	Paper	Digital
Mode of Schooling		
Customer focus		
Change		
Empowerment		
Mindset		

	Paper	Digital
Collaboration		
Control of teaching		

Trust, respect and recognition	
Student learning	

	Paper	Digital
Attraction		
Efficiencies, economies and synergies		
Recurrent resourcing		
* Material capital		
* Social capital		