

## **Rethinking Education in the New Digital Landscape**

**by Ian Jukes**

The world has changed and continues to change in dramatic, exponential fashion. So why do we in education continue to struggle with the issue of change in schools?

This is a tough one. Education is a personal subject because we're talking about our children and their future. For that reason, it's essential that the public be regularly reassured that all is well. They need to be left with the feeling that schools are doing a good job and that their children are being well taken care of.

Because of the emotional nature of this issue, educators, politicians and decision-makers spend a great deal of their time encouraging people to believe that their policies and their programs are having a positive effect on schools.

This is why reports on just about everything from test scores to attendance to innovative initiatives to special programs are designed to put schools and the school system in a positive light. Think about the kinds of information that come from a Department or Ministry of Education. Their reports don't generally focus on the problems.

This approach is nothing but a façade. A facade that masks the real issues - that masks what's really happening or not happening in schools today - that masks what's actually been happening with our schools for a long time.

The problem is that the digital divide has created a fundamental disconnect between students and the schools they attend, particularly as it relates to how and what students are taught as they progress through the school system

The smoking gun is that today many of our students graduated as highly educated useless people. Students who are good at playing the game called school, good at writing tests - but completely unprepared for the world that awaits them beyond school. Then, when they fall flat on their faces after having spent 16 or more years in the school system, we can't understand why this happened.

As educators, it's our fault because from the earliest years on, we've cultivated and maintained a culture of dependency - dependency on the textbook, dependency on the test, dependency on the teacher to tell them what to do to pass the test,

pass the course, pass the grade, and to graduate - largely disconnected from the world that awaits them.

But it's more than just a matter of disconnect. There's an additional problem - a problem that's invisible to most people. It's the issue related to the real digital divide. This is about far more than the widening gap between the haves and have-nots, or the know and know nots. It's about the generational divide based on the age gap between the digital and the non-digital generations. This is a divide that most people of our generation can't, don't or won't recognize unless they live in that world every day

The digital, interactive, visual world is an experience unlike that any previous generation has ever experienced. And as I outlined earlier, there's strong empirical evidence that digital bombardment is fundamentally altering the way that the digital generation thinks and views the world.

This is something that most adults including many educators just don't understand or accept. That said, it will not be possible for very much longer to engage young people in an educational system where the quality of experiences the schools provide are not as inviting or engaging as the quality of the experiences they get outside of school, through the Internet, computer games, teen magazines, and interactive TV. All of these experiences are designed specifically for them.

This is particularly the case when you compare these experiences to the experiences provided by the existing educational model - a model that was essentially designed for the life and times of 100 years ago.

In addition there is the accountability problem. Many well meaning politicians, parents, and adults understand the critical role that public education plays in our society; and they appreciate the essential role that education plays in creating an educated new citizenry and workforce. So with the very best of intentions, they have tried to make the school system better by constantly tinkering with schools and offering the ongoing reform of the day, week or month.

The problem with the reform of the week mentality is that education is a complex issue. These same well meaning people have sought simple solutions to the complex educational issues, and they have done this by deifying content recall and raising test scores.

There are several huge problems with this primary focus on raising test scores. The major emphasis of test score fixation is on LOTS (lower order thinking skills) and short-term recall of information.

Using this approach, students pass the tests, but their retention of the information is short term. Test them at the time, they can remember the content, (maybe) - but test them two weeks later, it's like they've never heard the information before. This is an approach has little long term on real world thinking patterns

More than that, the emphasis on content recall has little impact on real world thinking patterns. Learners are not provided with the opportunities to develop the necessary HOTS that are increasingly required for jobs and dealing with the growing complexity of the digital world.

As Thomas Friedman in "the World is Flat" points out, computers, high speed communications and a wide range of powerful new technologies are taking over more of the lower level repetitive tasks and allowing many types of jobs to be and allowing many types of work to be automated and/or outsourced.

So at a time when both as a citizen and as a worker our world requires increasingly higher level thought and the application of content to real world circumstances, in schools we continue to focus on lower level thinking. What's wrong with this picture?

The key skill that students develop with a content focused curriculum and associated standardized tests is memorizing information; and while memorization is not a bad thing, as Friedman and Pink note, it's decreasing in importance in the online digital world.

Besides, we've all heard the complaints that students today can't focus and can't remember the names of the states or their capitals. But this same student who can't remember the provinces or their capitals, can clearly, concisely and instantly identify the attributes and abilities of dozens of characters in a multitude of video games or describe the nuances of 100's of Pokemon characters.

So when a teacher asks kids to find and memorize the names of the capitals of the 50 states the student is thinking, "I can find that out any time I want to in seconds on Google." - meanwhile the teacher is thinking, "What's a google?"

It's not that students can't memorize. It's that they can't see the relevance of having to memorize things. They just don't think that way. This is what has led to the disconnect.

Students have a just-in-time mentality - an "I'll get the information when I need it" mindset. Students are more interested in a general conceptual awareness of the world, not just a factual awareness of the world. In fact our continued fixation and focus on a factual awareness of the world is what has led to many of our problems.

Beyond this, we live in the Age of InfoWhelm. The amount of information in the world is growing at an exponential rate, which is reinforcing the decreasing importance of memorization, while at the same time increasing the need for a general conceptual awareness of the world.

In light of these developments, the current primary focus on traditional instruction and content-based, low-level recall testing just doesn't make sense and it certainly can't continue. By focusing on content and emphasizing memorization at the exclusion of all else, we are failing our students with the best of intentions

And there's more. If we want to fully understand why students are disconnecting, we also need to acknowledge that the rush towards accountability is forcing teachers to teach to the test, which means that there's a narrowing of focus in the classroom to tasks that are intended to enhance short term memory and content recall - elements that can be more easily remembered. This continued focus is having a disastrous effect

Students are disconnecting because schools are so boring. This is because many of the broader activities that address the conceptual nature of world, the complexity of modern life, and the contradictory nature of being are experiences that lead to more educated citizens. But today, much more engaging activities for students are being dropped because they aren't assessed or are far more difficult to assess.

A focus on test scores says *something* has to go. Teachers aren't stupid. When your evaluation is based on student test scores then higher order thinking skills are inevitably the casualty. This narrowing has made the classroom less interesting at precisely the wrong time. At the very same time that research tells us that students are questioning the lack of engagement and relevancy and voting on this lack of relevancy with their feet and minds.

In our rush to accountability, we are losing our students. We're actually making schools less relevant and less interesting for students.

This is an absolute recipe for disaster. In the short term, we get the warm fuzzy that test scores are going up and that therefore schools are accountable - they're doing their job. But at the same time what's lost is interest and engagement in learning. This is a classic example where the operation was a success but the patient died.

The bottom line is that schools must change drastically if we are the reverse this growing disconnect. If we're going to make schools more relevant, there are there are five fundamental changes that need to take place.

First we must shift instruction to the higher level thinking skills needed for the 21<sup>st</sup> Century. In "A Whole New Mind" Daniel Pink points out that we live in a predominantly left brain society - a society that has long honored linear, logical, left to right, top to bottom beginning to end, piecemeal content recall-based knowledge and analytical thinking. This is the predominant mindset of schools today.

The role of the right side of the brain, which handles pattern analysis, creativity, empathy, big picture thinking, intuition and the ability to combine seemingly unrelated ideas into something new, has long been undervalued and misunderstood in our predominantly left-brained society.

But as Pink points out, just about anything that requires left brain thinking can be automated, turned into software, or outsourced to the third world. Pink says in the emerging world critical thinking, problem solving, and a deep level of information fluency - in other words using both hemispheres - using the whole new mind. It must be emphasized that this is not a matter of either/or - it's a matter of both.

Using left brained thinking in conjunction with right-brained thinking will increasingly be more highly valued than simple content recall.

The second point is that we must embrace the new digital reality of the online, computerized world described by Friedman and Kurzweil. But this doesn't and won't happen just because a school has a high-speed network or students have access to laptops or handhelds. Even when hi-tech resources are available, if the resources are used to reinforce old mindsets about teaching and learning and how that learning is assessed, little will have changed.

Outside of schools, the digital world has fundamentally and forever changed the way things get done. This is not just the case for business but for many aspects of our life.

This new digital landscape is allowing students access to information and learning experiences outside the classroom and away from schools. This is access to experiences that have traditionally been solely the domain of teachers and the adult world.

From home - at the mall - whenever and wherever they are, students have access to information, music, original sources and multi-media full motion color images from friends and acquaintances, as well as people who might have diametrically opposed perspectives.

But with our increasing fixation on testing, this means that we're not able to provide them with the guidance and direction they need to develop the essential skills required to effectively use these resources. Instead, students are defining where they go, how they get there and what they do when they get there.

This is compounded by the fact that many adults, because decision makers, and educators are not immersed in the new digital reality of students. We don't have the experience, skills or even the inclination to help them even if we have the time. Schools and teachers persist in using new technologies to reinforce old mindsets. These are issues beyond computers and networks and way beyond testing.

To understand their world we must be willing to immerse ourselves in that world. We must embrace the new digital reality. If we can't relate, if we don't get it, we won't be able to make schools relevant to the current and future needs of the

digital generation.

Third, we must address the shift in thinking patterns that are happening to digital students. They live and operate in a multimedia, online, multitask, random access, color graphics, video, audio, visual literacy world.

As Steven Johnson points out in *Everything Bad is Good For you*, these new literacies are generally not valued, not recognized nor addressed in our schools because they do not represent our traditional definition of literacy.

The starting point is to understand how much differently they learn from the way we learn and then to reconsider what we can do to modify what we teach and how we teach it and how we assess learning.

Fourth, we must broaden evaluation to encompass activities that provide a complete picture of students learning.

As management guru Tom Peters says "what get measured gets done" and conversely "what doesn't get measured doesn't get done" - it's imperative that we begin to measure more than information recall

Dave Masters uses this analogy: "you can get a good picture of a person's health by taking their height and weight but would you go to a doctor who only took your height and weight and said here's a picture of your health. The answer of course is no. It would require a battery of tests - urinalysis, blood tests, blood pressure, cholesterol, checking for lumps and so on to get an accurate picture of your health."

However schools act like the doctor who only takes height and weight and then says here's a complete picture of your health. We test students using standardized instruments that measure inform recall and low level understanding and then say here's a complete picture of a student's learning which is absolutely not the case.

A complete picture of student learning would also include portfolios of performance, demonstrations of the application of theory to solve real world problems and the like.

It's presumptuous for us to say that current test scores are a complete indicator of student learning. This is part of the façade - in fact, content-based test and test scores are only a small aspect of learning.

And finally, we must increase the connection between instruction in schools and the world outside if we hope to increase the relevancy of the learning that takes place. The key point here is that the students must perceive the relevancy of what they're learning. They need to understand not just the content but also the context of that content and how that content is used in the world outside of schools.

For this to happen, schools need to become far less insular. But for this to happen, we need to systematically work to bring the outside world into our schools while at the same time sending our schools into the community. New technologies and an understanding of the new digital landscape can help us do that. The online world creates virtual highway and virtual hallways to both the local and the global community

If we want to unfold the full intellectual and creative genius of all of our children - if we want to prepare them for the new world that awaits them - if we want to help them prepare for their future, not our past - if we are going to march through the 21st Century and maintain our tradition of success. If we want our children to have the relevant 21st century skills - we must create a bridge between their world and ours.

The bottom line is that there needs to be fundamental shift in how teaching and learning takes place in schools. We must look for alternatives to the traditional organization of schools. We need to reconsider our longstanding assumptions about teaching and learning, about what a classroom looks, where it is, the resource that used to support it. We need to reexamine the use of time - the length of the school day and school year, the school timetable, and we need to re-examine the traditional methods used of instructional delivery and consider the potential of online, web-based, virtual learning that can be used to augment, extend, and transform the role of the traditional classroom teachers.

As we do this, the assumptions upon which the architecture of schools is built must be re-examined to support these changes in instruction and learning. If we're going to succeed, it's imperative that all who are involved in the designing of school

facilities consider the problems discussed in this chapter and the changes we must make to reverse the disconnect that students increasingly experience in schools today.