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New Directions  
for Tomorrow's Schools: A  
Personal View From New  
Zealand

Murray Coppen

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## NEW DIRECTIONS FOR TOMORROW'S SCHOOLS – A PERSONAL VIEW FROM NEW ZEALAND

By Murray Coppen\*

Is there a new paradigm emerging in education? There seem to be a number of forces coming together to challenge the current status quo. First, there is the change from industrial economy to the knowledge economy. Secondly, there is renewed questioning of the relevance of current education. Thirdly, there is a change in learning theory and pedagogy. And underpinning all this is the explosive growth in information and communications technology and the Internet.

As a strategic property policy manager an issue for me is the school for the future and the impact this will have on school property. I am concerned that we design schools by looking at the past rather than trying to think through what the future might hold. Although we may be in the midst of something quite dramatic I wouldn't prescribe top-down change. (I am always reminded of the "open plan classroom" fiasco.) We should either have small pilot projects or ensure that new schools (and major additions) are flexibly constructed.

I look here at the issue of design after first commenting on the three forces listed above.

### Change to the knowledge economy

Education (schooling and the school) largely reflects the society in which it takes place, and we are moving towards a knowledge economy and away from a largely industrial one.

In the past book learning was highly valued and it continues to be. Book-based schooling focuses on information transmission and puzzle-solving techniques to be regurgitated in exams. In this sort of schooling, students work as individuals.

High Tech High (United States)  
Commons group



Three workstations

Floor plan



The key competencies for the knowledge economy seem to be, in addition to analytic thinking (puzzle solving):

- creativity (synthesis thinking);
- the ability to communicate (orally, in print, video, etc.) in ways which lead to action on the part of the listener;
- the ability to form and manage productive relationships with other people: forming a team and working as part of it, and influencing and being influenced by others;
- enterprise (not just inventing something but being able to “sell” it).

A key feature of modern knowledge work is working in teams – not something we teach much in schools.

### Relevance of current education

The traditional curriculum and method of teaching are still desired by most of society, but has the schooling most of us received been of any use? For seven years I was a secondary school math teacher and would be hard pressed to give real practical uses for much of what I taught. Too much of what I taught and what I have learned was simply repackaging old information, not using it to solve real-world problems. Julia Atkin has characterised current education as “just in case”; we do differential calculus just in case we become an engineer.

Much of secondary education that I have experienced is what I would term “practising not using”. It is centred around the teaching and learning of individual disciplines. While most of us have gone through this, does it make any sense? We are assessed on how well we “know” the discipline by sitting an exam in it. While this model may seem to be reasonable, is it?

Apply this model to tennis. We would go to serving classes and then go to return of serve classes. We would practise shots individually and in isolation. To assess our tennis ability we would “sit” individual shot “exams”. Our overall tennis ability would be some aggregation of the individual shot exam results. And to give us a ranking we would compare our tennis exam results with those of others. In other words, students’ tennis ability would be assessed on individual competencies not on how well they could string it all together on the tennis court against real-life opponents. Likewise, current education is too often practising the components rather than playing in the real world.

Daniel Pink (“School’s Out”, *Reason*, October 2001) has pointed to a riddle for the education establishment. Invariably students in the United States come near the bottom among OECD countries on the international educational tests (e.g. TIMSS). But, which country has the most developed knowledge economy (which depends crucially on brainpower) and an economy which generally outperforms those nations whose kids outperform U.S. kids on the educational tests? The causes are complex but Pink argues that one could be that the “education”, as delivered in today’s classroom, is largely irrelevant. He asks whether it could be that the Americans are succeeding in spite of their education system.

Over 80 years ago Alfred North Whitehead, one of the foremost philosophers of his age, was criticising the education system, largely unchanged since that time, as being full of inert ideas. To Whitehead, if education isn’t useful, then there isn’t much use in doing it.

The more I look at the current education system – or what passes for education – I wonder if we can afford to continue to waste the time of so many students.

Some teachers recognising that rote learning and/or information transmission is rather useless have latched onto “project learning”. However, most of the project learning I have seen appears to be information transmission projects rather than projects with actual output that require the use of the information. For example, children do a project on flight that results in a large poster of pictures and text about flight; however the children don’t have to use this information to design something that would fly.

High Tech High classroom





High Tech High great room

## Change in learning theory and pedagogy

Over the last ten or so years there has been a lot of change in the two areas of learning theory and pedagogy. From talking to some of my curriculum colleagues I get the picture that broadly speaking the passive learner model is out and that meaningful learning requires the learner's emotional involvement.

### School for the future

For me education is all about self-reliant learners – would we need a change in property to support this?

Thinking of the school for the future, property personnel need to ask questions like:

- What are schools for? Will the knowledge economy impact on what is taught and how it is taught?
- Will new ideas on the nature of learning require a rethinking on property provision?
- What might be the impact of information and communications technology?
- What lessons can we learn from current “schools of the future”?
- What will the drive to lifelong learning mean? Do we need to provide a different type of school environment to accommodate adults?

Do schools exist that would measure up to my view of the future? I have come across three: Discovery 1 (New Zealand), San Diego's High Tech High (California) and the Met (Rhode Island). Discovery 1 and High Tech High

don't look like the traditional school but more like an open-plan office set up like the one that Gunnar Lowenhielm has proposed (see ITiS Web site below). I'm keen to track down others and see how the school has been configured; I would appreciate all leads on possible schools for the future.

E-mails and Web sites:

Atkin, Julia, e-mail: [bumgum@ava.com.au](mailto:bumgum@ava.com.au)

Discovery 1, e-mail: [Buckv@hermes.chchpoly.ac.nz](mailto:Buckv@hermes.chchpoly.ac.nz)

High Tech High, Web site: [www.hightechhigh.org/](http://www.hightechhigh.org/)

ITiS, Web site: [www.itis.gov.se/english/index.html](http://www.itis.gov.se/english/index.html)

Pink, Daniel, e-mail: [dan@freeageneration.com](mailto:dan@freeageneration.com)

Lowenhielm, Gunnar, e-mail: [gunnar@a-tre.se](mailto:gunnar@a-tre.se)

The Met, Web site: [www.metcenter.org/](http://www.metcenter.org/)

*\* Murray Coppen is strategic policy manager of the Property Management Group at the New Zealand Ministry of Education; he can be reached by fax at 64 4 471 44 14 or by e-mail at [murray.coppen@minedu.govt.nz](mailto:murray.coppen@minedu.govt.nz). These are his personal views only and in no way should be taken as representing the views of the Ministry, the New Zealand government or the OECD.*

If you are interested in schools of the future, PEB invites you to attend its conference in Galway, Ireland, on this topic in September (see page 2). Also see the article entitled “United Kingdom's schools for the future” on pages 7-8.



High Tech High great room