Re-Designing Education Systems for the 21st Century

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> Education is an important instrument for the development of human persons and societies. It should foster peace, justice, understanding, tolerance, equality and health for the benefit of present and future generations.
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> UN Declaration on the Responsibilities of the Present Generations Toward Future Generations, Paris, November 1997.
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> The most interesting puzzle in our times is that we so willingly sleepwalk through the process of reconstituting the conditions of human existence.
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> L. Winner, *The Whale and the Reactor*, Univ. of Chicago Press, 1986.
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> The proof of improvidence lies in falling under the empire of necessity.
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> Bertrand de Jouvenel, *The Art of Conjecture*, Weidenfeld and Nicolson, London, 1967.

Introduction

Schools, education systems and the socio-economic milieu in which they are embedded, are all products of the industrial era. As such, and notwithstanding the rapid uptake of computers and IT, the assumptions of that time and worldview remain deeply inscribed within them. In stark contrast to the UN Declaration on the Responsibilities of the Present Generations to Future Generations,[1] they do not embody any articulated concerns about the future in general, or about future generations in particular. This article attempts to diagnose the causes of this oversight and to recommend strategies that would comprehensively deal with it.

The future as a missing dimension in education

As a specialist in the area of futures and education I have, for some 20 years, worked with a wide range of schools, school systems and tertiary institutions in several countries. What I've discovered is that forward-looking approaches appeal very strongly to the young, to visionary educators and those with progressive interests in education. I have seen many teachers, school principals and schools take up and apply a wide range of futures tools (see Tables 1 and 2, below) with clear and documented success.[2] In some cases district supervisors have played a strong, supportive role in this process. But what has really stood out is that as soon as one passes beyond the middle level of any school system, futures approaches are seen as of minor interest, at best; they vanish like smoke on a windy day and are seen no more. Grassroots practitioners are denied the long-term support they need; initiatives die and are forgotten. Return a few years later and it is as if they never existed; business-as-usual rules.

Table 1: Sample of Futures Concepts

- alternatives and choices
- breakdown and renewal
- cultural editing
- empowerment
- the extended present
- foresight
- future generations
- social innovations
- sustainability

- time frames
- vision
- wise culture

(Note. The starting point for futures understanding is through simple futures concepts and tools. Both can be introduced to youngsters from the primary years on up.)

Table 2: Simple Futures Tools

- assessing global health
- brainstorming
- critique of futures images
- dealing with young people's fears
- exploring the extended present
- futures wheels
- imaging workshops
- loop of futures scanning
- questions about future
- simple cross-impact matrices, scenarios, technology assessment and trend analysis
- social innovations process
- time lines, and,
- values clarification

(For more detail see: Slaughter, R. *Futures Tools and Techniques*, Futures Study Centre, Melbourne, 1995 and *Futures Concepts and Powerful Ideas*, FSC, Melbourne, 1996.)

A clear demonstration of the 'glass ceiling' that inhibits Futures in education occurred several years ago when I was invited to give an in-house presentation for the 'Schools of the Future' (SOF) task force at the Rialto Building (the government education offices) in Melbourne, Australia. (I note in passing that the so-called SOF program was an administrative initiative, not a pedagogic one - the title was political window-dressing, pure and simple.)[3] The workshop went well. The 25 or so people present were clearly responsive and I left feeling that there was some hope that some 'real futures' might be included in the program, the main concern of which was to decentralise some aspects of school administration. Yet the silence that followed made one thing quite clear: the Director or Minister of Education (or both) had made it quite clear to the team that this was *not* what the SOF program was about. The project went on its sterile pre-planned path and no more was heard of the wild notion of seeing Futures as a substantive focus in schools.

Those administering education systems are always much more comfortable with the occasional extrapolative exercise regarding the future *of* education. (Indeed, as this was written, another such was taking place in Queensland, Australia.) But it is still very, very rare to see high-level interest in futures *in* education, which is a completely different matter. In order to challenge and change this, we need to consider some of the powerful forces that constrain educational systems.

Redundant systems

School systems are quintessentially 'industrial era' organisations. They are rigid hierarchies, mandated and controlled by central and (in Australia) State governments, with top-down power structures. One of their key features, therefore, is inflexibility. Typically there is a minister at the top; teachers and students are at the bottom - rather like a 19th Century army. The 'meat in the sandwich' is a layer of bureaucracy in-between that must, at all times, toe the current party line. Teachers and students remind one of marginalised, disempowered 'foot soldiers'. The system imperatives are

neither about people, society nor, indeed, the future. They are largely abstract in nature and may be summarised as: power, control, economy and efficiency.[4]

School systems are widely thought to be serving some sort of human or social needs. But the fact is that they are not really guided by notions of social and human needs, or where society may be headed at all - though such themes are powerfully and repeatedly expressed in rhetoric and public announcements. There are perhaps two key sets of forces, two worlds of reference, that set the major 'rules' for such systems: politics and economics. The difficulty in both cases is that by the end of the 20th century each had become defective and incoherent. Politics is notorious for its short-term thinking and the ideological (not to say egoistic) conceit of many of its practitioners. Economics lost sight of human needs and aspirations many years ago and remains a very long way from reforming itself. As they presently stand neither politics nor economics are capable of expressing, or responding to widely understood human needs. According to John Saul, behind both lies a powerful, but regressive, corporatist ideology.[5] Yet these powerfully affect the way education systems actually operate. As a result, the latter tend to have the following characteristics.

1. They are inward looking. Unlike comparable businesses, they have few systemic connections with the wider world; hence they are largely insulated from the turbulence of the global system.

2. They are past-, and present-driven; hence they have minimal capacity to create, or engage with, a forward view. This is a major structural defect.

3. They are governed by fiat and powerfully resist any attempts that are made to overturn existing system imperatives; hence they seek to marginalise educational leadership and attempts at system-wide innovation. This cuts them off from sources of vitality that might otherwise be welcomed and used.

Need for educational strategies

If education systems (from schools to universities) are to ever focus on the needs of a changing world, let alone the needs of students or of future generations, then it is necessary to take action on a number of levels and in a number of different ways. A first step is to critique and replace the system imperatives that are currently operating. This will require sustained effort over a period of time. But there is no better time than the shift to a new century and a new millennium to re-negotiate what has for too long been accepted and taken-for-granted.

A second step is to enable a number of perceptual and organisational innovations. A few of these are sketched out below. Third, paradigms of education (i.e. 'what education is' and 'what it is for') will need to be revised in the light of the conditions facing society and individuals in the early 21st century. All entities within education systems, from primary schools to leading universities, will need to critically draw upon, and use, the tools of prospective analysis, understanding and strategy-formulation that have been commonplace in corporate environments for a long time. Finally, the social standing of those involved in education must be improved. The long decline of teaching as a profession will need to be reversed. Teachers must again be, and be seen to be, valued and essential people performing a vital social role. Of course, a short article of this kind risks merely skimming the surface, so I will now try to put a little more detail on this picture.

Strategies at four levels

The system level

The primary requirement for those heading up educational systems is that they begin to develop a clear understanding of the 'civilisational challenge' we collectively face. That is, an informed view of the outlook for humanity at the beginning of the 21st century. This is not particularly difficult to do,

but nowhere is it yet included in the job descriptions of those with executive responsibilities. This is a huge, and expensive, oversight.[6] In order to be able to read and interpret the signals of change educational systems desperately need some structural innovations. For example:

- the creation of an environmental scanning capability dedicated to educational needs;[7]
- the creation and staffing of functional niches to enable the forward view;
- the networking of both throughout the entire system to facilitate consultation, feedback and use.

Clear thinking is also required on the nature of 'industrial era' system imperatives and on the reasons why they are no longer adequate. Careful attention should be given to new imperatives, such as those embodied in the UN Declaration on Future Generations at the head of this paper. There will also need to be a profound shift of attitude at the top to educational leadership. Much rhetoric has been generated about its importance but, in fact, leadership of the kind that is now needed is precisely what has been discouraged. That is: leadership that is deeply ethical, unafraid to confront embedded interests and genuinely, substantively, proactive.

2. Tertiary institutions

Universities are the intellectual gatekeepers for education systems. They are the providers of advanced degrees. They employ influential people. They set standards for university entrance that define what is taught in the final years of schooling. In theory they support the educational profession. But in practice they too have widely failed to understand the 'civilisational challenge' themselves and have been too myopically preoccupied with questions of funding, status and boundary-maintenance to offer real practical support to hard-pressed practitioners in schools. Of the thousands of universities around the world there are barely half-a-dozen with departments of Futures Studies or foresight. This must change.

Universities should embrace the forward view and put in place the specific means required to create and sustain it. It is my contention that any organisation that attempts to confront the turbulence of the 21st century without investing substantially in environmental scanning and strategic foresight will quickly find itself sinking under a series of rapid and powerful 'tsunamis of change'.[8] Indeed, universities would be well advised to re-conceive of themselves as 'institutions of foresight' in their own right.[9] Where this is successfully achieved, new roles emerge. Universities will be at the forefront of new knowledge, not merely following on behind some of the newer entrepreneurial knowledge-brokers that are now springing into existence via the Internet. They will be able to lead in fact, rather than merely in rhetoric. They will be able to detect and avoid dangers, as well as exploit new sources of value and wealth-creation that are plentifully available. As such, they will be in a much better position to provide leadership and much-needed support to schools.

3. Schools

Schools have long been the focus of intense pressures and expectations. Yet in many places state schools have been starved of resources and teachers have not received the kind of support that they need in order to carry out a demanding role with the young. As this is written, an article in today's newspaper states that: 'once the backbone of the cohesive Australia, a system that crossed all lines of class and nationality, public education is under threat of becoming the marginalised territory of the disadvantaged in the new century'.[10] This is a sign of the malaise that has gripped education systems as the imperatives of 'power, control, economy and efficiency' have exerted their powerful effects, to our collective cost.

One result has been a flight to private schooling. This is understandable. Parents usually want the best for their children and the well heeled can afford to pay private fees. But this is where what Garrett Hardin called the 'tragedy of the commons' becomes evident. The drift to private schooling is one of a

number of social forces that is now actively creating a new disenfranchised 'underclass'. It does not take much foresight to realise that future criminals will emerge from it to plague the rest of society. The rush to private schools is partly a result of government neglect of the state sector and partly a security reflex on the part of parents. However, private schools are not immune from the defects mentioned above. Many actively cultivate the image of tradition, of the past, but do no more than state schools to prepare young people for the real future they will live in. The long-term solution is not to opt out of public schooling but to re-value and bring it up to a viable standard of operation.

Whether public or private, schools need much more help in carrying out their work to: socialise young people, help them develop their skills and abilities, prepare them for work and successfully integrate them into society. Seen in this light, schools have a long and vital future. With strong leadership and support they should be able to weather all the ill-conceived threats from IT that regularly appear. The view that you can 'do away with teachers' and abandon kids to the virtual realm with minimal human contact is profoundly misconceived. What is more likely, and useful, is for IT to be used to the full to supplement and support the crucial human work that teachers are centrally involved in. IT can supply floods of information, but only teachers can help to humanise kids and prepare them for the future. I conclude that the primary emphasis should be on looking after people.

4. Teachers, classrooms and kids

It is now over 30 years since the first futures courses were taught in US high schools. In the intervening period, the area of 'futures in education' has developed to the point where there is a well-founded body of practical and theoretical knowledge and a great deal of accumulated experience to draw upon, both in secondary and tertiary contexts.[11] More recently, the field of 'teaching and learning about future generations' has also developed.[12] The sad thing is that the viability of such work, the availability of these options, are still so poorly known. For reasons alluded to above, school systems have not taken them up, adapted them and applied them widely. Beginning teachers are still not given access to this toolkit, or, crucially, to the wider frame of understanding that underlies it, even though both have been tested time and time again. The result is that kids are not being given access to the simple futures concepts and tools that represent the starting points for futures understanding and capability. (See Table 2, above) There are still only a very few places where, for example, Masters courses in 'teaching futures' can be undertaken.[13]

Teachers have, for a long time, lacked the kind of quality support that they need in order to perform their work with energy and flair. They have instead been regarded as second-rate citizens doing what amounts to menial work. It is significant that they do not even qualify for the kind of sabbaticals that less hard-pressed academics regard as routine. But their role, and overall importance to society, has been drastically under-estimated. They are, in a real sense, guardians of our future societies. In other words, they already perform a powerful futures role. It is regrettable that those in authority have seldom acknowledged this in other than rhetorical ways.

What is now needed is a permanent and substantial change of emphasis.

We should understand that the industrial era is over and there is no going back to some comfortable notion of the past. We can only go forward. In this view, all schools, all educational institutions, are already in the futures business. To be sure, we should draw deeply on history, especially to understand how our 'now' was constructed from its historical antecedents. But the emphasis should move decisively beyond the past and present.

Humanity is now the dominant force on the planet. It therefore has a planet to manage. So far it is not doing too well and the life-support systems of the world are under unprecedented stress.[14] But this is not the only issue of concern. Beyond this are a series of technological revolutions 'in the pipeline' that promise to utterly transform human life and, indeed, the world: artificial intelligence, bioengineering, life-extension, nanotechnology ... and so on.[15] It's no exaggeration to say that humanity is not yet

prepared to deal with the implications of the 'tsunamis of change' that are already visible, let alone those much more numerous ones that are not. Those now in schools are the very people who will be living in the midst of the upheavals to come. Moreover, experience shows that, when provided with the tools of understanding and action that are needed, most young people find them very, very useful. Their whole attitude toward the future and its pattern of opportunities and threats undergoes a profound change. Pessimism falls away and is replaced by informed optimism. They can see that, in any scenario, there are ways ahead, social innovations to create, real hopes for improvement in the human prospect.[16]

Thus it is that for teachers, classrooms and kids to thrive in the years ahead depends to no small degree upon the adoption of the kinds of suggestions set out here.

Conclusion: education strategies and the future

The pivotal contradiction of present school systems is that they ostensibly exist to prepare the young for active citizenship in the future. But, unlike many 'Fortune 500' companies, these systems have little grasp either of 'the big picture' in the present, or of what 'the future' might actually mean. For school systems to be able to comprehend and deal actively with the early 21st century context, the forward view must begin to permeate educational administration, thinking and practice at every level. As this gets under way, so an active consideration of future generations will become a natural part of this process. Indeed, future generations studies will thrive in many locations. There will be a kind of cross fertilisation as the kinds of values that are inherent in the UN declaration are brought to the forefront of educational theory and practice, and thus included in educational programs across the board. Notions of prudence, care, stewardship and responsibility will permeate the whole educational enterprise.

In summary, the central strategies that will move education systems from a past orientation to an explicitly future-oriented one are as follows.

1. The active de-legitimation of 'industrial-era' notions of education based on redundant abstract principles.

2. The re-focussing of education systems and universities from the past and short-term present, toward understanding the emerging near-term future.

3. The creation and use of a range of Institutions of Foresight (IOFs) designed to create and apply the forward view in a wide range of contexts, including those in education.

4. The flourishing of a new type of ethically based and fearless generation of educational leaders who will overturn bureaucratic rationality, control etc. in pursuit of the public good in the long view. [17]

The challenge is to reinvent schools on a new philosophical and operational basis, not see them overwhelmed by economic rationalism and the 'communications revolution'. The walls are certainly coming down around most built institutions and schools cannot escape powerful competitive forces from e.g.: new media, entrepreneurial penetration and autonomous learning. The lure of cyberspace will make most industrial-era schools seem dull and unresponsive.

School systems are so change-resistant that they may be undermined by new circumstances. Alternatively they can choose to adapt and re-invent themselves. In the former case public education will cease to exist as a viable entity and the social consequences would be immense. Schools are vital locations for socialisation and social cohesion. Without some shared locus of learning, social fragmentation, the rise of exclusive sub-cultures and greater social conflict would be likely.

It is difficult to see how humanity can respond to the coming transitions without maintaining socialisation and social cohesion. Seen in this light, school systems should be regarded as assets, rather than costs. Above all, they should be protected from the irrationalities of economic rationalism and carve out for themselves a new futures-oriented *modus operandi* that meets a wide range of human and social needs. In so doing, they will necessarily distance themselves from the assumptions that flourished within the earlier industrial worldview.

Notes and References

1. UN Declaration on the Responsibilities of the Present Generations Toward Future Generations, Paris, November 1997.

2. For an up-to-date overview of the 'state of play' in this area see, Hicks, D. & Slaughter, R. (eds), Futures Education, *World Yearbook of Education 1998*, Kogan Page, London, 1998.

3. See Slaughter, R. Schools of the Future Still Lost in the Past, *The Age*, 7th August, 1997, p 15, Melbourne.

4. See Saul, J. R., *The Unconscious Civilisation*, Penguin, 1997.

5. Ibid. p 162.

6. Slaughter, R. *The Foresight Principle. Cultural Recovery in the 21st Century*, Adamantine, London, 1995.

7. Choo, C.W. *Information Management for the Intelligent Organisation. The Art of Scanning the Environment*, ASIS, Information Today, Medford, NJ, 1995.

8. Dator, J. Surfing the Tsunamis of Change, *Proceedings from the symposium 'Construction Beyond 2000'*, Espoo, Finland, 1992.

9. See Slaughter, R. Universities as Institutions of Foresight, *Journal of Futures Studies*, 3, 1, 1998 pp 51-72, Tamkang Univ., Taiwan.

10. Hope, D. Farewell the 'fair go' society, *The Australian*, 19th April, 1999, p 10, Sydney.

11. See Dator, J. (ed) Futures Studies in Higher Education, *American Behavioural Scientist*, 42, 3, 1998, Sage.

12. See Slaughter, R. & Tough, A. Learning and Teaching about Future Generations, Special issue of *Futures*, 29, 8, October 1997, Pergamon.

13. Masters courses are available in several locations. Further information about some of them can be found via the links on the Futures Study Centre website at: futures.austbus.com

14. See Brown, L. (et al), *State of the World 1999*, Worldwatch Institute, Norton, New York, 1999.

15. Broderick, D's book *The Spike: Accelerating Into the Unimaginable Future*, Reed Books, Melbourne, 1997, provides one overview of some of the technological revolutions to come.

16. See Hicks, D. & Holden, C. *Visions of the Future: Why we Need to Teach for Tomorrow*, Trentham Books, London, 1995.

17. Duignan, P. & Bhindi, N. *A Quest for Authentic Leadership*, BMAS Annual Conference, Balliol College, Oxford, 1995.

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