Re-thinking learning,
Re-inventing teaching:
Education in the 21st century

A journey of discovery, understanding and hope.

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Executive Summary

Introduction

Schools are living in the past. "They are still modelled on a curious mix of the factory, the asylum and the prison!" They reflect old beliefs of an industrial age, now gone. The amazing number of attempts at changing schools have failed time and time again. In a society going through major changes, educators are immersed in the situation and find it difficult to visualise the future, plan ahead and change. Educators have to 'rethink' teaching, 're-invent' schooling. Urgently, schools need to play a leading role in providing youths with the skills and knowledge, necessary for a life of work, a life of worth, in a sustainable future.

In this analysis, my goals are:

- 1) To gain a broad understanding of the latest research on "Education beyond the 20th century" and translate the complex findings from this body of information into a simple, clear summary for teachers, parents and students.
- 2) To suggest some options in order to change high schools within the new framework from the Northern Territory Department of Education and to propose some practical guidelines to bringing about these changes. These options could be used as a starting point for reflection, discussion and ultimately action.

My overall aim is really to 'rediscover' teaching in a 'post industrial age', to be able to transform schools and systems into 'communities of inquiry and continuous learning' in which all students feel valued, empowered and free, become highly competent and develop personal mastery and ultimately wisdom.

Chapter 1: The background

- A society in transition. Demanding times! Surrounded by changes, youths, parents and educators are about to enter the next millennium in a state of confusion and anxiety. Many feel powerless. Many schools have lost their clarity of purpose.
- We need to understand the forces that are shaping our future and the new framework in which schools have to operate.
- We are shifting from an industrial to a post industrial society, where social life, the world of work, the international community are going through major transformations. New employment patterns in particular affect the type of skills needed for the future: Unskilled jobs are disappearing but schools continue to produce substantial numbers of non achievers that are unemployable and marginalised. Skilled jobs require higher standards and higher levels of students' achievement.
- A new global consciousness is changing the way we understand our place in the universe. We are no longer viewing ourselves as masters of nature but as a part of a fragile, balanced living organism. The health and survival of our planet depend of higher awareness, critical thinking and foresight.
- Knowledge is no longer seen as only scientific and new modes of inquiry are needed.
- In this new context, schools must change as they are caught in a 19th century mental framework. We have to rethink the purpose of education, we have to rediscover teaching.
I argue that education should prepare youths for a 'life of work' in the new style of enterprises as well as a 'life of worth'. We cannot dismiss the moral dimension of
teaching, particularly when the future of next generations including the sustainability of the planet are at stake! Young people need the skills to avoid dependence. They need to be empowered to participate fully as employees or employers in the new economic and social structures; they also need to have the knowledge and insight to be able to change these structures, if necessary.

- The government response to these trends has been to mandate changes: National curricula; Outcomes Based Education; testing and quality audit; self managing school. So far, these reforms have resulted in very little changes at the classroom level. The more recent experience in Victoria with 'the Schools of the Future' seems to be more promising. However, it appears that one or two reforms, although necessary, are not sufficient to bring about major changes.

Chapter 2  Review of relevant literature

Three questions are investigated: (1) What are the characteristics of excellent schools? (2) Why have school reforms failed time and time again, why are schools so resistant to change? (3) What do we know about the change process and how to bring about changes and improvements in schools?

Some key findings are as follows:

- Leadership 'from the centre', a positive school climate, a collaborative school culture and a clear focus on teaching and learning are key characteristics of excellent schools.
- The business sector is giving us some answers: Peter Senge helps us to understand how systems work and how system thinking is the key for improvements. Total Quality Management promotes a process of continuous improvement.
- In education, changes at the system level have had limited impact, so far. The National School Project has failed to bring about changes in schools work organisation: e.g. time allocation, students groupings, mix and deployment of staff. Similar attempts in W.A. have failed despite new EBAs which should have allowed more flexibility in the deployment of staff. Schools continue to operate according to the industrial model.
- Top-down reforms do not work. Linear reforms involving cause and effect chains do not work. A single major reform done in isolation does not work. We need to understand organisations as a system, where all elements are interrelated and we need to 'dance' with these elements. Changes need to take place from various directions. An understanding of organisational structures and the use of points of high leverage for changes are crucial.
- Systems do not change themselves, people have to change. We have to understand the power of mindsets in people: Leaders, teachers, parents, students. Many operate with mental models that belong to the past. 'New ways of seeing' in schools are needed, not simply new programs or new forms of testing. Assumptions about learning, teaching and schooling need to be challenged. The focus for reforms is therefore at the classroom level. With the recent developments in the cognitive sciences, we need to look at 'authentic' learning and promote 'authentic' pedagogy.
- The emotional aspect of change needs to be understood. Changes mean loss. Rituals are needed to support the change process. Internal stability is necessary to encourage the pursuit of change.
- Schools need to become 'learning communities', 'communities of continuous inquiry and improvement'. In such cultures, the role of teachers, leaders, students and parents is greatly changed.

'Charter Schools' in the USA present an extreme case of deregulation and decentralisation. There is little evidence though, that the movement will have impact system wide.

'Central Park East' group of schools is a success story in New York City. It presents "a case of understanding" (Sirotnick, 1999), an example of a learning community, from which we can learn.
Chapter 3: Design of the study

Chapter 5: Action: What can be done?

A focus on ‘authentic learning’, ‘authentic pedagogy’, in a learning community of continuous inquiry and improvement, with external supports seem to hold the key for changing schools.

Priorities:
We need to:

• Focus on students’ learning with changes at the classroom level, ‘authentic’ pedagogy and changing roles of teachers and students. Teachers need to change their mental models. The curriculum has to be reviewed in terms of content, relevance, connections.

• Change the culture of the school and move towards ‘learning communities’, ‘communities of continuous inquiry and improvement’. The role of principals is essential for that shift: They need to have strong intra-personal and inter-personal skills, not only academic credentials!

• Facilitate the process by maximising and reorganising energies. Changing time arrangements and students groupings are a priority. Students, teachers and parents need to be empowered. The staff profile needs to change: Para-professionals should be used for tasks that do not require the same level of specialisation that teaching requires. Schools should become more like hospitals, where assistant teachers like nurses assist highly qualified, well paid professionals. “Portfolio” style of teachers could contribute very positively to the life of schools.

Guidelines for changes.
I believe that we have to push the change process against all the groups that are resisting it. We need to:

• Place professional development at the top of the agenda; a new type of professional development, one which motivate people to inquire, to learn, to develop ‘personal mastery’. This will lead to group mastery and cultural change. The focus is on changing mindsets, challenging assumptions about learning, pedagogy and schooling.

• Act first at school level, with small manageable initiatives. The focus should be on a change of culture.

• Build on existing strengths and use platforms for change - points of high leverage- in order to start shifting schools to more flexible organisational structures. These platforms for change are: Active students and parents’ involvement, school specialisation, use of Information Technology as the new tool for learning, use of flexible delivery services beside the school, e.g. Distance education, School of languages.

The emergence of a teachers’ shortage can be used as another platform for changes.

Chapter 6: Recommendations to systems administrators and conclusion.
Push and support from the Northern Territory Department of Education are needed to facilitate and ensure the success of the change process, at school level.

• • •
Introduction

At present, schools remain the most important institutions to shape the future of our children, our future. The responsibility of educators is therefore crucial.

Unfortunately, most schools operate in the past: “The six hour, 180 day school year should be relegated to museums, an exhibit from our education past” (quoted in Lee & Gaffney, 1996). Despite an amazing number of initiatives and efforts to change schools, educational reform has achieved very little.

We have to ‘rethink’ learning and teaching, we have to ‘re-invent’ education! By myself, I can’t do it. Teachers, on their own, can’t do it either, but as a group including students, teachers, leaders and parents, we can. It requires a better understanding of the present, a clearer vision of the future, knowledge from the research and guidelines for action. We have to regroup our forces. Yes, as educators, we can rediscover hope. It is not a matter of ‘more of the same’ or ‘much more of the same’. It requires us to challenge assumptions about learning, teaching and schooling that are hundred years old! It requires a complete shift from an outmoded mindset.

In this project, I intend to embark on a learning journey for myself and hopefully also for others. First I will present some thoughts about today’s society, with its uncertainties, and the forces that are preparing the future. As teachers, we need to understand “the currents, the winds that are shaping tomorrow’s education”, to use Bill Mulford’s (1994) metaphor. We are in a time of ‘turbulence’. Lack of understanding leads to frustration, fatalism and fatigue. I will review the latest research on school effectiveness, school improvement and the change process in order to analyse the reasons for the repeated failure of school reforms. Finally, I intend to prepare some practical guidelines for implementing change in high schools, within the new framework from the Northern Territory Department of Education.

While the future we will actually inherit is being shaped by many things beyond the control of any individual or group or institution, it is also to a greater or lesser extent being shaped by human enterprise or the lack of it... Vision, hope, energy and wisdom will have to win out over resignation, frustration, despair and divisiveness.

As the Secretary of the Northern Territory Department of Education stated in his 1998 Seasons Greetings,

What we do during 1999 and beyond and how we do it, will significantly affect the future lives of the children entrusted to our care. It is therefore not only a time of opportunity but also of great responsibility.

There is no more time for complacency!

• • •
Chapter 1

Background

The Present: a society in transition - demanding times!

The pace and scope of changes in the last twenty years is, to say the least, bewildering. Many youths, parents and educators are about to enter the next millennium in a state of confusion, disillusionment, fatalism and depression. As a result of too many changes introduced too quickly, coupled with a lack of clear purpose, meaning and faith in the future, society has many difficulties!

Teachers

Teachers, in particular, have to face uncertainty and anxiety: Many believe in the social and ethical dimension of teaching - this is why they selected teaching as a career, in the first place - but they have lost clarity of purpose, vision and direction and this is affecting greatly their effectiveness as educators. As Terence Deal (1990) points out, schools as social institutions for developing future generations seem to have "lost their moral fibre":

[They] are put in an impossible position. They stand at the crucial interface between past and future, charged both with the conservation of the culture and with its radical renewal. Yet the rule book keeps changing; some pages are missing, other are unreadable and some key terms like 'health', 'defence', 'progress', 'work' and 'leisure' no longer mean what they used to mean. (quoted in Mulford, 1994, p.15).

Many teachers would like to see changes introduced in education, realising that the "institutions we call 'schools' are rapidly becoming artefacts of the past rather than springboards to the future"(Middleton & Hill, 1996, p.5) but they don't know how to go about the change process. Teachers are caught between different ideologies.

Schools in capitalist societies such as Australia are simultaneously attempting to develop all students to their fullest while sorting and selecting them for a hierarchical and differentiated labour force. Faced with this contradictory tension, most teachers attempt to relate to students in a spirit of liberal individualism while at the same time differentiating them for a stratified society.

(Henry et. al., 1992, in Middleton & Hill 1996, p.111)

Teachers are constantly bombarded with innovations, mandated at system and national level, which do not seem to bring about the outcomes promised. At the same time, the quality of schooling continues to be questioned by governments and parents. Teachers are under attack from all sides! No wonder many seek refuge in avoidance patterns and cling to past values, simply surviving day after day in their classes, with their doors closed, ignoring or refusing changes! Kanter (1990) talks about a "crisis of commitment, where the members of the profession are increasingly seen as not to think about the direction of education but merely hang on" (quoted in Mulford, 1994, p.1).
Youths

In schools, at present, too many youths are failing. "The rest are hampered by the intense pressure to succeed... [Students] fail so consistently in the crowded, impoverished central city that many experts admit that, here, education is defeated, that whatever takes place in school is not education" (Glasser, 1969, quoted in Middleton, & Hill, 1996, p. 39). What Glasser was writing in 1969, unfortunately, is still applicable now! This substantial group of non achievers, feel unwanted, not valued. They arrive at high school in a negative frame of mind. They know they are on the losing side and they decide not to play the game! "They invent a different game, a counter-culture of peer group solidarity, where stirring teachers and ultimately, controlling the teaching behaviours become a priority" (Middleton & Hill, 1996, p. 111).

Youths are anxious about the future, their future.

The world's environment has gone toxic both ecologically and culturally. There has been a shift from a supportive culture where people care and help each other to a hostile culture which is deliberately competitive and assaultive. People are more selfish and ready to make use of others for their own benefits. Everyday's non stop flow of crude violence, sexuality, crime and misconduct in the society, some of them performed by leading figures with no remorse or punishment will continue to dominate our society...


With family disintegration, lack of quality time spent within families, many youths no longer have the type of support needed to tackle the challenges of adulthood. They are facing many choices, what Alice Teasdale (1998) calls a "cultural smorgasbord". As she mentioned at a recent UNESCO international conference:

[As youths], on a day to day basis, we encounter different cultural iconographies, value systems, languages and idioms, religions, lifestyles, and behavioural dynamics. This is very exciting... It's also pretty frightening... In the past, pathways were clearer, cultural routines and certainties shaped our directions and choices.

( Teasdale, 1998, p. 1)

In the past, youths had the luxury of rebelling against their cultural background. Now many youths themselves belong to families from different cultural groups. They have nothing stable to rebel from or to build from in order to create their own personality. Challenged by so many choices, they are struggling to find their own identities.

Many youths fear economic instability and the prospect of unemployment. This is a serious problem since youth unemployment is disrupting the traditional industrialised societies process of 'initiation into adulthood'. This initiation was characterised by entry into a full-time job, bringing financial independence and social status. In the 1960s the belief was that technology was to bring a time of leisure where one, working fewer hours, would be able to pursue other interests in the arts, craft, sports, travel, etc. This is not the case: Technology is bringing unemployment! And I find it quite outrageous to hear on the News comments from journalists about billions of profit made, this year, by Company X, and at the same time, the statement that the same company had to reduce its workforce by a few thousands! The prospect for young people of not getting a job at all, or getting one below their qualifications and hopes, brings huge social problems such as violent behaviour, drugs dependency, depression and suicide.
Youths are also concerned about the deteriorating environment, the failure to eradicate poverty, the production of nuclear or biological weapons, etc. As Macy (1991) points out:

"With isolated exceptions, every generation prior to ours has lived with the assumption that other generations would follow... Now we have lost the certainty that we will have a future. I believe this loss, felt at some level of consciousness by everyone, regardless of political orientation, is the pivotal psychological reality of our time."

(quoted in Beare & Slaughter, 1993, p.162)

Many young people feel powerless. Not all of them of course, but optimism can often be naive, especially when based on a belief that ‘everything will be all right’. As Beare & Slaughter (1993) claim, this type of optimism is as dangerous as chronic pessimism, since both lead to avoidance strategies.

Parents

Parents, also, are looking for answers. Many rely on schools for giving them those answers... Can schools, given the way they operate at present and with existing resources, provide the kind of training and guidance that society and parents expect? This is the fundamental question that needs to be addressed urgently.

"Australia is moving into an unknown future with an unparalleled complexity of options open to us. We advance into a strange landscape without maps or sign posts."

(Beare and Slaughter, 1993, Foreword).

So what can we do? Let’s follow the advice of Bill Mulford (1994, p.1):

"If educators want to improve ‘things that matter in life’, they need ‘to join the river of life’... and have some understanding of the ‘elements’, the winds, tides, currents, we are likely to encounter on our way.

Mulford further suggests stepping back and looking again at the situation from a balcony. As educators, we are too much immersed in the confusion. If we want to recover meanings, purpose, we need to stop. We need to reflect, in order to understand. And only then, will we be able to act, to re-invent teaching. As educators, we will be able to fulfil our mission.

So let’s embark in a journey of discovery and understanding.

“The shaping winds, tides and currents”: their impact on schooling. Some visions of the future.

Much has been written about the changes that are presently transforming society and about possible futures. There seems to be general agreement that changes in the next century are likely to exceed those of the last one thousand years, although accurate
predictions of the future are impossible. However, if we can interpret some early warning signs, we should be able to gain ‘a forward-looking’ perspective of the future.

Richard Slaughter (1994, p.32) presents an interesting critical review of the literature on global trends, which puts the works he reviews into a more realistic perspective. He advises us to be cautious: “The worst thing possible is to uncritically utilise ‘off the shelf’ accounts as a default standard... Depending upon how one views the matter, the result is a marketing bonanza or a critical nightmare.” For example, he strongly criticises Naisbitt’s well-known ‘Megatrends’ and the set of ‘Megatrends 2000” outlined in Naisbitt & Aberdene. He claims that two-third of the trends presented are either “weak, ambiguous, superficial or problematic” and that the books have been popular because they provided a false sense of security, presenting the ‘big picture’ without much critical thinking and as such have been very marketable. After reviewing the literature on the subject and presenting his own ‘map of the future’, he suggests that individuals and organisations should custom-design their own trend-analysis programs (1994, p.32). This is what I intend to do. I will purposely be selective and synthesise the findings that represent an emerging consensus about ‘the new world view’. I will follow the analysis presented by H. Beare & R. Slaughter in Education for the 21st century (1993), which presents an in-depth study of three Macro changes (pp. 21-71):

(1) The limitations of the industrial world view and the shift to a post-industrialised culture.
(2) The condition of the planet and the understanding of its fragile ecology pushing people to review their place in the universe.
(3) The movement towards new ways of knowledge beyond scientific materialism.

Their analysis of changes is particularly interesting as it goes beyond the visible social structures to the underlying structure of cultural norms, assumptions, ethical frameworks and understanding of reality, nature and human nature.

1) **A post-industrial perspective.**

We are living in a post-industrial age characterised by the major impact of technology on all aspects of our life.

Rapid developments in transport and communication together with increasing use of automation and computers are revolutionising all aspects of our life. Further developments in biotechnology and nanotechnology will have impact on health care, defence, space travel, etc. A much longer life expectancy will have, in turn, a major influence on social structures like family and employment. Technology is often overrated. Although it does provide new solutions, unfortunately it also brings new problems of a physical or ethical nature that will need to be addressed by future generations!

- **Changes in employment patterns** are affecting and will continue to affect major aspects of our life.

At the end of the 18th century and during the 19th century, the development of the sciences brought about the industrial revolution and a kind of society in which factory production forced new life styles on most people in the developed countries; to only name a few: large-scale urbanisation with growth of super cities, development of a middle class and the demands of the traditional ‘9 to 5’ working day. For example, this time frame is no longer relevant. Time should become more flexible with more people working from home, even operating on international time.
Let us focus on schooling:

Middleton & Hill (1996, pp.20-29) in their analysis “Why do we have the schools we have?” explain forcefully, how education has served the needs of the privileged class for centuries and in fact continues to do so. Before the industrial revolution, education was only the privilege of the upper class. This ensured that the educated class would continue to occupy leadership positions in society while the uneducated class would perform manual labour. With the industrial age, the educational model changed: All children were given access to education, but not everyone was to succeed in learning!

The industrial school was set up in such a way that the power structures in society were reinforced rather than eroded. (Middleton & Hill, 1996, p.45)

The model involved taking all students into the schooling process, educating them according to standardised curricula and conditions, measuring their response and grading them accordingly before releasing them as products, suitably graduated for appropriate allocation into the layers of the industrial society... The grading system provided a guarantee that all could not succeed. Thus a certain percentage would remain who could justifiably be asked to do society’s unskilled and manual work. (Middleton & Hill, 1996, p.21)

Middleton & Hill (1996, p.21) sarcastically point out that this solution was brilliant. “In theory at least, the children of the wealthy no longer had a monopoly on entry to the professions”. The solution gave the illusion of social equality based on merits

In the post-industrial age, employment patterns are changing drastically:

(1) Full-time unskilled work is disappearing. Therefore students who are failing in their studies and do not complete high school no longer have even the security of joining the unskilled or semi-skilled work force.

(2) Increased skill levels are required for most full-time permanent jobs, particularly the ability to learn further. Success is depending more and more on brain power, on ‘know-how’ skills, on what knowledge to have access to, and how to get that knowledge (information literacy). It also depends on high level of professional and technological skills. “Knowledge is the steel of the modern economy” (Perelman, 1992). S. Papert, in his book The Children Machine (1993) states that the ability to learn is the most important skill for the future. He labels what many refer to as ‘the Information Age’, ‘the Age of Learning’. ‘Longlife learning’ is viewed as vital for economic and social changes.

(3) Manufacturing industries are no longer the main employers of the work force. Most employment is found in the Services and Information sectors or in Human Services like health and education. It has been suggested that Australia will not succeed in the 21st century by focusing only on export goods when 50 per cent of world trade is in services, including tourism and education (Mulford, 1994, p.5).

These changes have major impact on schooling. Are schools going to continue to produce a large group of non achievers that perhaps had their place in an industrial society but are now unemployable, and therefore marginalised, in a post-industrial one? Are we going to create an Australian society divided between the ‘haves’ and the ‘have-nots’?

• Cultural globalisation:

A global community is being created electronically. People are able to move away from big cities, operating in a ‘global village’ where they can connect to national or international networks. Rapid and cheaper forms of transport are also reinforcing this trend. Various media are bringing the world to our homes. This is generally seen as a positive development, but it also leads to major concerns about the maintenance of individual cultures and the promotion of individualism. Mulford (1994) claims that the
Tuaregs, the largest tribe of nomads in the Sahara, postponed their annual migration for ten days, in 1983, in order to see the last episode of Dallas! (p.5). To preserve their cultural inheritance, the French refused to sign the section of the World Trade Agreements dealing with the arts and intellectual productions. They did not want their cultural market invaded by American soaps.

**Global economy - a bordeless world**

Commerce is dramatically changing. The corporate giants now operate across national boundaries. Nations have to compete in an international market place. These new economic conditions have a major impact on education. The new growth areas in the economy depend on adequate education and training. As previously mentioned, a majority of professions require specialist skills:

A country has little chance of developing a sound post-industrial economy unless it has the backing of a well educated community which values those specialist skills ... and unless there exists within the country the depth and range of training programmes which will keep up a supply of the skilled people necessary to make these areas competitive...

Put simply, education is the pivotal factor on which depends that shift in economy... [which] is itself an integral part of the burgeoning sectors of the post-industrial economy... People acknowledge that education is itself an information industry.

(Beare & Slaughter, 1993, pp. 30-31)

Education, itself, must be internationally competitive. Students, when they leave school, will find themselves increasingly in an international environment. No doubt our top university graduates will have to compete with young people from other countries. Are they ready for it?

**Political intensification**

Nations interested in enhancing national economic productivity have therefore turned their attention to schools and their effectiveness and many attempts have been made to introduce changes in order to raise both standards and performance. Standards are to be understood as the yardsticks used to measure educational outcomes, while performance is the level of achievement of individual students in relation to these standards. The impact of initiatives such as the National curriculum and new forms of assessment will be the focus of another section in this study.

What once were primarily the domains of professional educators and academics are subsumed into the realm of policy makers and government officials. Central government specification of curricular goals, widespread use of standardised tests for measuring the 'productivity' of an educational system, efforts to link education more tightly to business, the world of work and economic development are all consistent trends throughout Western nations.

(Mulford, 1994, p.7)

**Changes in organisations: the hierarchical pyramid is replaced by a network organisation**

The way organisations are managed is changing drastically. Hayes & Watts (1986, cited in Beare & Slaughter, p. 34) view most firms of the future as small, semi-autonomous units linked by computers to a central base and bonded together through a strong corporate culture. No longer are people paid for marking time; they are paid for the value they add to the enterprise. Contracts are common practice.
These new kind of public institutions are lean, decentralised and innovative. They are flexible, adaptable, quick to learn new ways when conditions change. They use competition, customer choice and other non-bureaucratic mechanisms to get things done as creatively and effectively as possible.

(Beare, 1995, p.11)

In the Public Service, there is a movement towards local management. Governments have started to sell off the parts of their operations which can be run by private enterprises or are running them like private enterprises. The same model is being promoted in education around the world in the ‘Self Managed Schools’. The Americans, Osborne & Gaebler (1983) present an excellent summary of what has been advocated for a while by a number of writers and practitioners and translate what applies to public services into school systems (Appendix 1).

Schools have been confronted with the need to restructure in face of the dominant economic-rationalist paradigm, with priorities like improving quality of outcomes, trimming expenditure, saving government money and managing themselves like a business. More and more, education is described in terms of economic terminology and is redefined in terms of a business enterprise. These analogies between schooling and the business sector present problems for many educators who believe rightly that many of the outcomes of education cannot be measured. However, we have much to learn from the business model.

In this macro-shift, from an industrial to a post industrial society, the international community, social life, the world of work, and education are in the process of going through a major transformation. Schools do not appear to do to well with all these forces.

2) A new global consciousness also characterises today’s society. The introductory paragraph of the Brundtland Report (1988) sets clearly the message:

In the middle of the 20th century, we saw our planet, from space, for the first time... From space, we saw a small and fragile ball dominated not by human activity and edifices but by a pattern of clouds, oceans, greenery and soils. Humanity’s inability to fit its doings into that pattern is changing planetary systems fundamentally. Many such changes are accompanied by life threatening hazards. This new reality, from which there is no escape, must be recognised and managed.

This reminds me of the experience I had, following cyclone Tracy. Coming back to Darwin after 5 hours flying over desert Australia, our ‘big’ capital city from 6000 feet looked like a tiny toy village surrounded by millions of matches - our tall eucalyptus trees, laying down on the ground! This certainly had a major impact on my thoughts! No, we are not the centre of the universe; neither is our city or our country. We really look insignificant in the cosmos!

Earth, the Brundtland report says, is “an organism whose health depends on the health of all its parts” and the balance can be achieved only from the deliberate actions of human beings. Some of the consequences of human behaviours like the greenhouse

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1 As cited by Beare and Slaughter (1994, p. 41), this report was published by the United Nations, in 1988, under the title ‘Our Common Future’. It was the result of the discussions of a group of international experts convened by the the World Commission on the Environment and chaired by the Prime Minister of Norway.
effect, the acid rain, the ozone depletion, can be viewed as ‘cancers’ and could become fatal illnesses unless we do something about them. Youth are seen as key agents for action and the report presents some achievable strategies to restore the balance to the life of the planet.

Three hundred years ago, Newton and Descartes constructed a view of the world where “men were the ‘masters of nature’, separate from all natural processes. We are learning the hard way that this is simply not true... The Western/industrial world view based on certainty, predictability, control and instrumental rationality has become fractured and incoherent”. (Beare & Slaughter, 1993, p.13).

Many people, in the western world today, have an intuitive sense of the need to build a sustainable future for the survival of the planet but many factors prevent action.

• The economic, political systems still have a short sighted vision based on immediate material profits.

• Science is not considered to be value free. As Lovelock (1988, p.44), cited in Beare & Slaughter (1993, p. 44) argues:

> Nearly all scientists are employed by some large organisation such as a governmental department, a university or a multinational company. Only rarely are they free to express their science as a personal view. They are constrained by official frameworks and attitudes, by the ‘tribal rules’ of the discipline.

• The way communities in the world are organised as nations follows a fragmented world view. There is a movement towards globalisation - the formation of Europe being an example - but nationalism is still very strong. We are far for viewing ourselves as citizens of the world!

Although economic, political and educational systems continue to be caught up in the Newtonian/Cartesian word view, there is through international movements like the Green movement, etc a shift in the way of viewing the world. “The globe is itself a single, delicately balanced living organism and human beings are merely one species in that incredible ecosystem” (Capra, 1982, quoted in Beare & Slaughter, p. 47).

Many writers ask us to see the Earth in its wholeness, as one living system. Beare & Slaughter mention the work of Thomas Berry (1988) *The Dream of the Earth*. Berry criticises our failure to think of ourselves as a species and points out that many sages in various cultures, East or West, have, seen the relationship between human beings and the universe.

Such consideration brings us back to the ancient sense of ‘logos’ in the Greek world, of ‘riti’ in Hinduism, or ‘dharma’ in Buddhism, of ‘tao’, ‘cheng’ and ‘jen’ in the Chinese world. These are the ancient perceptions of the ordering or the balancing, principles of the universe, the principles governing the interaction of all those basic forces constituting the earth process. To recognise and act according to those principles was the ultimate form of human wisdom.

(quoted in Beare & Slaughter, 1993, p.48)

The Judeo-Christian tradition describes as ‘shalom’ the world order. The word is “variously translated as the peace, balance, fulfilment, order, well-being which pervades the universe. Anything which causes ‘shalom’ to be violated... is to be condemned” (Beare & Slaughter, 1993, p.49).

In summary, to preserve this incredible life-form called planet Earth, parents, politicians, public and educators need to adopt quickly this new way of thinking about our world and to construct with the rising generation a different frame of thinking both about the world and also about our place in it. (Beare & Slaughter, 1993, p.50).
Beare and Slaughter (1993, p. 45) consider it is superficial to believe that Western cultures are in crisis because of politicians or greed or economic shortsightness. They claim that the problem is deeper. "It comes from inadequate ways of knowing and from an only partial understanding of connectedness." In order to act, it is not sufficient to have computers in all classrooms, or to fix the economy. It is necessary to recover a new sense of human identity and purpose. "Higher awareness, critical thinking and foresight" are needed!

3) New ways of knowing.

We have to change our attitude to modern science and to what constitutes knowledge. Beare and Slaughter (1993) summarise the views of the physicist Capra (1982, pp. 56-61). Over the past three hundred years the world has been seen as a machine, so enquiry became positivistic and reductionist. The belief was that if we were to understand the parts, we would understand the whole. The scientific method became the only method for knowledge. Harman (1988), cited in Beare & Slaughter (1993), describes the characteristics of the scientific framework:

(1) Reductionism: Each part is to be studied in detail. Scientists are specialists.
(2) Positivism: We need to rely on observation and through experimentation and measurement, we can verify the truth (empirical methods).
(3) Materialism: we rely on evidence which can be examined.
(4) Objectivity: What is objective, what all observers can view in the same way, is reliable. What individuals view in their own consciousness is subjective and lacks validity unless it can be confirmed by the subjectivities of other people.
(5) Rationality: Reason, logic is the only way to approach knowledge.
(6) Quantitative analysis: There is a need to measure, quantify what is observed.

Although it is recognised that the scientific method has advanced world knowledge enormously and will continue to do so, it should not be considered to be the only way to generate and validate knowledge. "To put it bluntly ... scientists do not deal with truth, they deal with limited and approximate description of reality" (Capra, cited in Beare & Slaughter, 1993, p.61). Beare & Slaughter (1993) present the views of a number of writers about the new framework for thinking and knowing, Ken Wilber's work being the most accessible one. Wilber (1983) considers three ways of knowing, which he calls 'sensiblia, intelligiblia and transcendlia'. 'Sensiblia' deals with sensory experience, the domain science has traditionally studied. 'Intelligiblia' deals with thoughts "as they display themselves to the inward mental eye. The raw materials are therefore reported... The mode of inquiry is mental" (Beare & Slaughter, 1993, p. 67). There is a need for communication and interaction with others. The verification is intuitive and based on views generally agreed upon. 'Transcendlia' represents deeper perceptions and experiences. The mode of inquiry is contemplative and meditative. Wilber argues that each domain is distinct and attempts to mix them result in 'blurred visions'. Beare & Slaughter (1993, p. 69) argue that:

[this is] why many attempted solutions to problems do not work... there are, very often, no effective solutions at the level at which they are experienced. It is often by understanding the broader structure and the creative potential within the problem or conflict that a conscious decision can be made to transcend the level upon which the problem first manifests.

Beare and Slaughter (1993, p.61) further claim that schools treat education in that same 'bits and pieces' approach. The curriculum is divided into learning areas, subjects and courses with the assumption that the whole is the sum of the parts.

For the 21st century, we had better discover quickly how schools in particular can sponsor a different orientation: in place of fragmentation, wholeness and connectedness, in place of devastation and disease, health and balance.
Patrick Duignan (1997), in *The Dance of Leadership* emphasises the need for a major paradigm shift in the way we think. We should move away from certainties and logic, from Aristotelian logic toward 'Fuzzy theories' where all truths are grey truths and where there is no linear movement between them (p.4). To act, we have to 'dance' with contradictions, chaos - An important lesson we have to remember when dealing with the change process!

Making sense of all these forces: What are the skills needed by young people and what is the role of schools in meeting these needs?

1) Skills needed - Education for what?

As Bill Mulford (1994) notes, different stockholders have different agendas and all groups are pushing in various directions! Parents view education as a pathway for fame, happiness, fortune or more simply a decent working life for their children. The corporate sector views education as a means of increasing corporate earnings. Governments want a skilled workforce and good citizens. I agree with Mulford: We must respect these different agendas, be responsive to them, but we can never allow a single goal to define education's mission.

Education should be preparing tomorrow's adults to meet ethical as well as economical imperatives, preparing them not only for a life of work but also for a life of worth... We must bolster students' will to seek wisdom. We must enable them to think creatively about complex issues, to act responsibly and when necessary to act selflessly. Education must help Australia to meet its moral imperatives. If our nation and the world are to be free of pestilence, hunger and fear, we need scientists, communicators, business people, organisers, technicians and dreamers.

(Mulford, 1994, p.38)

• Education for a life of work
The claim that we need a more educated society is now becoming a cliche.

If the services, information and technological sectors of the economy are to be expanded to provide employment openings for a greater percentage of the work force, then the educational table of the entire population has to be raised. (Beare & Slaughter, 1994, p. 76)

Students need to stay longer at school and even undertake further training when leaving school. Those who drop out not only will find it very difficult to find employment as there are fewer and fewer non skilled jobs, but they won't have a sufficient general foundation to be able to learn new skills and as mentioned previously will find themselves marginalised. Courses and learning are being organised in a more career-conscious way, targeting skills and knowledge development. Credentials are becoming essential as a passport for employment and these credentials need to compare to world standards.

Different skills are needed for different jobs. All levels of ability need to be catered for: academic as well as vocational. But, as Hattie (1993) points out, we must ensure that the push towards vocational education, which is addressing the needs of a proportion of the school population, is not now driving the curriculum for everyone. We have to be cautious of 'an education system which seems to place less emphasis on
creating geniuses than on upgrading the average competence level of the population” (p.7).

Young people need to be able to function in the new style of enterprises. Beare (1995, pp.17-18) quotes Reich (1991) who presents a ‘brilliant’ exposition of the way companies and employment look like in the new international web of enterprises:

- Few people work solely for the company.
- Communication is more horizontal than vertical.
- The corporate pyramid is replaced by what looks like a spider web.
- Speed and flexibility are valued.
- Large overhead costs are minimised.
- Mutual learning is essential.
- Risks are encouraged.
- Each segment is an independent cost centre with a one line budget.
- The job of head office is to build partnership.
- There is little direct control from the executive who guide the network.
- Routine functions are contracted out.
- Power in the organisation is linked to the ability to add value to the enterprise.
- The Key assets are talented people, not property.
- Information technology is a link between all areas of operation.

Beare further refers to an article by W. Kiechel (1994) in ‘Fortune’ magazine which describes the profile of the new kind of professional emerging in companies around the world and claims that, of course, it should be the portrait of the teacher of the 21st century (p.19). Kiechel argues that there will be a period when:

The job, as we know it, will cease to exist; indeed it will be obsolete to think of an occupation as a regular set of duties with regular pay and regular hours and a fixed place in an organisation’s structure. Quite rightly this is an artefact of the Industrial Revolution. The biggest propellant out of that era is the computer, information technology and international information networking... There is now a shift in thinking from ‘business as making things’ to ‘business as providing a service’. As jobs evaporate, they will be replaced by work done by individuals hired for a particular project; it will be a world of term contracts of working in relatively temporary teams of projects or assignments that have a beginning and an end and are being paid on the extent to which you add value to the enterprise.

The overarching principle in such a working economy is to think of yourself as a one-person business with expert skills in a particular area which you trade within a networked society.

To be a ‘one business person’ and function in that type of enterprise young people will need to have:

- A strong desire for life long learning, as expertise requires constant updating and acquiring deeper and deeper knowledge and skills. “The successful people are always learning, always reading, always questioning”.
- ‘Learning how to learn’ skills, problem-solving skills, gained through becoming active learners in the classroom, responsible for their own learning
- Strong interpersonal skills and the ability to work in teams and interact with a wide range of people.
- Ability to adapt to changes, to take risks, to be creative and even ‘thrive’ on change.

As a one-person business, one becomes responsible for one’s own career. It is unthinkable that anyone would want to spend a career with the same company or employer.
Education for a life of worth

“A skills crisis would indeed be bad enough but a value crisis would be devastating” (Mulford, 1994, p.38). Many youths at present feel unwanted, unconnected, powerless. They are trying to find their identity. They need to feel valued, they need to have a sense of purpose, they need hope. “Regardless of heritage or tradition, each person searches for some larger purpose. We all seek to give special meaning to our lives” (Boyer, 1995, p.24).

Young people need the skills enabling them to avoid dependence. Education can empower them. They all need to be successful in their studies.

The more we educate people, the more they become ‘global citizens’. The poor and uneducated are anchored to time and place and are subject to manipulation and exploitation - political, religious, financial. But the rich and the educated are independent and free.


Middleton & Hill (1996, p. 4) present a view of a society where

All Australians have a place. They have a place because their education has given them opportunities to achieve the knowledge and skills to participate fully and positively in the future developments of Australian society and their place in it.

Of course this view is highly desirable but is it too optimistic? A skilled work force does not imply more jobs for everyone. Governments are addressing the issue of reskilling but have yet to find solutions for employment for all! In fact, a new form of inequality is appearing. We are moving from a society where most were employed earning various levels of awards towards a society even “much less equal than before, where there would be some people... permanently dependent on part time work or casual work and on social welfare payment while others would monopolise the full-time professional and skilled force” (Middleton & Hill, 1996, p.63).

Education is the key to enable youths to take their future in their own hands. They need to have their own goals and skills and knowledge to achieve these goals.

The contribution education needs to make to the future of Australian society... is to provide all young Australians with the learnings they will need if they are to participate fully in the life of society... [They will need ] to have the competencies to participate as employers or employees in the economic and social structures but they will also have the knowledge and insights necessary to participate in changing these structures.

(Middleton & Hill, 1996, p.65)

But here, we are at the heart of a dilemma facing politicians: “If we wish to become a learning society, then we must make people good learners. But good learners cannot be controlled - Well trained people can be controlled” (Middleton & Hill, 1996, p.42). Unfortunately, history has shown that in the past education seems to have maintained the power structures in society, rather than changing them. As A. S. Neill, the well known headmaster of Summerhill School has said when referring to the industrial age type of schooling:

The State schools prepare the new generation to fit the system. And because any real education would lead to an attitude that would sweep away the system, the state substitutes schooling for education and children spend ten or more years learning all the things that are of no positive matter.

(Neill, 1939, quoted in Middleton & Hill, 1996, p.45)
Solutions to unemployment need to be found. Of course it will mean a change of mind towards status and consumerism. It will require insight and creativity in order to reconcile the interests of the different power groups, but a new generation of well-educated youths can do that.

Youths need an understanding of the ‘new world view’. Once more Beare (1995, p.15) presents the case very strongly:

To help [them] to develop high quality responses to their hopes and fears about the future... Shifts from despair to empowerment are critical for the future of civilisation. They depend most centrally upon the recovery of meaning.

Young people are going to be the key agents for bringing about changes and recovery of meaning. In order to do so, they need to develop higher awareness, critical thinking and foresight. They need to believe they can make a difference in their life and in the world and move away from the ‘she’ll be right mentality’. They need to be given the opportunity “to develop autonomy through decision making and choice” (Beare & Slaughter, 1993, p.127). Slaughter (1994, p.41) summarises the need of young people in this context:

- Self-knowledge and self mastery
- a cognitive and ethical framework (needed for insight/ values, priority commitments)
- practical and artistical skills
- contextual insights (into culture and the global system)
- foresight, vision and skills of social innovation
- informed optimism and sense of empowerment
- the sense of participating in a larger whole

2) The question is : Should schools provide all these skills?

What is really the role of schools beyond the core responsibility of teaching and learning? Are schools responsible for the education of the ‘whole child”? Are we aiming too high, ask Beare, Caldwell & Millikan (1989)? They point out that many educators have refused to fill the broader role of being a ‘one stop social welfare agency’ (p.62). And so they should! According to Beare, Caldwell & Millikan, a school, to become excellent, must focus on the essential tasks of teaching and learning, rather than dissipating its energy on peripheral goals. This is what Peters & Waterman (1982) mean when they emphasise the need to “stick to the knitting”! I believe the issue has been largely misunderstood and needs clarification.

No doubt, education used to be the responsibility of various groups beside the school: the family of course but also the church and community groups such as clubs and sporting associations. These traditional patterns of responsibility have diminished and this creates conflicts and uncertainties between the public, teachers, teachers-union and employers.

I certainly strongly believe that the essential focus of schools is student learning and this view matches the Northern Territory Department of Education’s guiding principle (1999): “The core business of education in the N.T. is to deliver high quality and relevant student learning”. Therefore the social, moral, aesthetic, cultural, physical, psychological, spiritual development of children should continue to remain the responsibility of other agencies beside schools. Schools presently are not equipped, anyway, with the support mechanisms (finance, staff, specialist skills, facilities, time) to fully undertake major responsibilities in that area. It may not be even desirable.
Learning, anyhow, takes place in many other environments than schools. However, schools should play a major role in developing students' individual abilities, academic as well others. One should not forget that the ultimate goal of learning is the development of the mind - certain forms of intellectual habits and the development of character. It would be ridiculous to expect to teach skills or values in isolation at school or outside school! Values are integrated in all aspects of daily life. Teachers teach values, not during a ‘Moral’ lesson, but indirectly. They are role models.

Great teachers allow their lives to express their values. They are matchless guides as they give the gift of opening truths about themselves to their students. I often think of three or four teachers out of the many... who changed my life. What made them truly great? They were well informed. They could relate their knowledge to students. They created an active not passive climate for learning. More than that, they were authentic human beings who taught their subjects and were open enough to teach about themselves.  

(Boyer, 1995, p. 24)

“Scratch a good teacher and you will find a moral purpose” states Michael Fullan (1993, p.10).
So let's make it clear: Yes, teaching is a moral craft. Sharing responsibilities is the answer.

Response from the government: mandates then restructuring education

Bill Mulford (1994, pp.8-19), in ‘Shaping tomorrow’s schools’ gives us a clear summary of the situation: Since governments, in Australia and abroad felt that Departments of Education had not done too well in their endeavour to deal with societal changes, they decided to intervene and they did it in a big way by introducing speedy, top down measures. In Australia, heads of department were reassigned other duties². Many CEO's were no longer educators as it was viewed that persons in managerial positions do not have to be professionals in the field.

Two waves of reforms, generally, have been identified by researchers in Australia and abroad: mandates first, then restructuring.

(1) First wave of reforms: Mandates:

One of the main consequences of the economic crisis was that the business sector demanded better education! The push was toward raising standards and improving students' performance through greater attention to results and testing. Curriculum, assessment and reporting were to become part of the national and political agenda. A national curriculum and testing quality audit were developed.

² As Hedley Beare (1989) stated: "during the 1980’s, twenty four people have occupied the eight positions in the [Australian] States and Territories, equivalent to that of Director-General of Education. Only five of them have retired the normal way, eleven almost half of them have been reassigned or have retired early, or have moved to another posting" (quoted in Mulford, 1994, p.9). The same pattern has continued perhaps even intensified in the 1990’s.
A National curriculum and Outcomes Based Learning

In April 1989, the State, Territory and Commonwealth Ministers of Education endorsed ten Common and Agreed National Goals for Schooling in Australia. This has since come to be known as 'The Hobart Declaration'. Over the following years, work proceeded on the development of National Statements and Profiles in eight Learning Areas, following the direction of The Australian Education Council. This new approach to education is 'Outcomes based'. Middleton and Hill (1996, pp.55-69) view this as "an emerging new logic in Education". The industrial logic was "taking different children, exposing them to a standardised process which gradually differentiated them and certified them for different layers in society, providing the skilled and unskilled needed for an industrial economy. The new logic looks at outcomes as clear goals of the learning program that can be achieved by all. Teachers start with a set of expectations about desired learning results and students demonstrate the achievements of these outcomes. The process of learning is to vary widely to meet the needs of individuals. In particular, because students learn at different rates, the time to achieve the outcomes becomes a variable factor. Assessment is developmental: teachers map students' performance along the continuum of learning. No longer are students results positioned in relation to other students. The concept of fail is no longer applicable, but rather it is considered that students have not passed the level, as yet.

Outcomes Based Education seems to be a major step in the right direction for educational reforms. However, how effective is it really? William Špady (1994, quoted in Middleton and Hill.1996, p.69) argues that changes have been implemented superficially, leading therefore to problems and criticisms. For example, the following mistakes have been made: Teachers looked at existing curricula to write outcomes rather than planning curricula to facilitate achievement of outcomes. They linked outcome performance to the calendar and equate time-based standardised testing and results to outcomes.

In the area of post compulsory education, major reforms have been initiated by the business sector. The focus is on Competency-Based Training where the goal is to train individuals to perform specific job-related skills. The Finn Review (1991) specified six Key areas of competency considered essential for most Australian youths involved in post compulsory Education and Training as they should allow for job shifts or career pathways and for multiskilling. The Mayer Committee, whose task was to look at the implementation of these key competencies added three more areas: creativity/Information Technology/Family household management. They developed the concept of Key competency strands with performance levels. The Carmichael report (1992) recommended reforms to the apprenticeship system and created a new New Australian Vocational Certificate Training system (AVCTS) which is meant to achieve Competency-Based Training through work experience and Vocational Education and Training, changing curriculum in the Senior Years. As a result more students stay longer at school creating a new profile of school population with different needs. Again Competency-Based Training moves away from the traditional time-based approaches to education and focus on the success of all participants.

- Testing / Quality Audit.

There has been an increased demand for accountability in all areas of public services, including education. For example, in New South Wales, Quality Assurance units have been created in each of the ten regions to review schools' performance every four years. In Western Australia and in the Northern Territory, students are externally assessed at different stages of their schooling (Years 3, 5, 7, and 10). In England,
Parents have access to school results and there is a public release of performance tables.

These mandated reforms in the area of assessment have been criticised: Fullan (1993) has argued that top-down approaches to reforms are not working. He claims that the increased testing only relates to narrow objectives, hence narrowing the curriculum. Some consider that Competency-Based Learning has negative effects as it requires a huge bureaucracy and is not always well implemented.

This issue of testing, including appropriate accountability mechanisms is another area of continuous debate. Basically the picture is one of too much change, too quickly, imposed from above!

(2) Second wave : systemic reforms: Devolution of responsibility to schools. Self Managing Schools.

Once more this movement reflects an international trend. Various models of school self-management have emerged in different countries but in broad terms this reform represents decentralisation of the education system. With a devolved approach to school management, individual schools through their principals and school councils have greater administrative responsibilities (financial, staffing and resources) and the power to determine their priorities within a centralised framework of policy guidelines.

This kind of structure explains why educational organisations can appear to be travelling in two directions at once, decentralising and recentralising, concurrently, laying down strong control from the centre for some parts of the enterprise's operations but at the same time trying to encourage local autonomy, school-based decision making.

(Beare, Caldwell and Millikan, 1989, p.79)

Many criticisms have been expressed against this model: For example, according to Chubb and Moe (1990), these reforms will fail because the system leaves in place bureaucratic structures. "Higher level authorities are jealous of their power... Delegations are more apparent than real... When things go wrong in schools, the tendency is to gravitate back to central authority... Empowerment of teachers cannot be dictated. Tony Townsend (1996) points out that opponents of self-management argue that governments are not really concerned about the improvement of students' learning but about reduction of the states' financial commitment to education. Self-managed schools are meant to be very different from each other, hence allowing parents greater choice. This approach should present a regulatory mechanism, as parents and students as customers will be the judges of the quality of schooling.

Caldwell & Spinks (1992) claim that "further movements to embrace the market model are both probable and preferable" (Quoted in Mulford, 1994, p.17). This is not the opinion of Ian Snook (1992), who argues that "there is no reason to believe that free market schooling will improve education standards any more than free market food chains improve our dietary habits" (quoted in Mulford, 1994, p.17). I certainly see some problems with this market control approach. As John Hattie (1993) points out: "The major fault of market control is uninformed consumers, as poorly informed consumers are poor regulators" (p.2). And customers can be poorly informed, not only through lack of knowledge, but also by 'false advertising'! Some teachers do not like to see education reduced to market principles. They prefer the focus on family values where love and acceptance are more important than achievement. Lyndsay Connors' address to the University of Canberra Teachers graduation summarises that type of thinking:
Today, ... there is an obsession with rather narrowly defined and readily measurable skills and levels of achievement on those skills.... In public policy, there is little recognition of, or sympathy for, the sheer social and intellectual difficulty of what we ask our children... There is consequently little sympathy for the fact that teaching is difficult... In fact it would not be unfair to say that one of the competencies teachers need is the ingenuity... to lure young people, by non violent means away from things they would much rather be doing to address themselves to learning what adults think they need to know.

(Connors, 1992, quoted in Mulford, 1994, p.18)

Let’s look at a specific example of self-managed schools by analysing recent reforms in Victoria and the creation of the ‘Schools of the Future’.

Susan and Robert Pascoe (1998) present an in-depth study of the implementation of recent systemic reforms in Victoria. They point out that the pace, the scale and complexity of the changes have no precedent.

The magnitude of changes was possible due to a unique political context: a newly elected right wing government with a substantial majority, after ten years of left government, weakened by financial scandals and unemployment. Jeff Kennett decided to act across several areas simultaneously: health, education, industrial relations, the economy. The context of education in Victoria was also unique: The Victorian Commission of Audit report had stated that Victoria spent fifteen per cent more than other government education systems in 1991/1992. Attempts at site-based management had met with strong opposition from unions. Union membership was high in schools, with teachers actively involved in decision making. Principals were feeling constrained, unable to manage their schools. Previous governments knew there were too many small schools, but could not act, as unions were powerful in protecting jobs and parents were protecting community-based schooling. There was a strong culture of school-based curriculum development and a strong resistance to external assessment.

Two sides of teachers’ professional culture had opposite effect on reform implementation. The positive side was the tradition of school-based management, the negative side was the resistance to external monitoring. A key question is to take advantage of the former while overcoming the latter.

(Pascoe & Pascoe, 1998, p.7)

• Nature of the reform

Site-based management was introduced under the framework of ‘Schools of The Future”. Four elements were introduced:

(1) Financial management was devolved to schools; that is to principals and school councils.

(2) A new accountability framework for schools was introduced: Through a ‘School Charter’, a contract between themselves and the Department of Education, schools were to set their priorities and means to achieve these priorities over a period of three years. Annual reports were to review progress toward these goals. A review every three years was to be carried out by an external body after self appraisal from schools. Many indicators of success were used, beside traditional students’ results. For example, the following were assessed: school climate, student absenteeism and school retention. Schools with students from similar backgrounds were compared.

(3) A new curriculum framework: Standards for students achievement were made explicit through Curriculum and Standard Frameworks (CSF), in the eight key learning areas.
Students’ progress was assessed against the CSF in a program of state-wide assessment, the Learning Assessment Program (LAP) with annual assessment in Maths and English and assessment every five years in the other key learning areas. Year 12 credentials were revised and re-accredited.

The LAP reports to parents took the locus of information control on students’ progress from teachers’ hands. It gave parents’ objective feedback on their children, gave schools feedback on their performance vis a vis other schools and gave the system information on overall attainment. (Pascoe & Pascoe, 1998, p.7).

(4) People framework
A Professional Recognition Program offered teachers the option of accepting a system of enhanced pay and career structure which included annual appraisal. Schools were given an annual grant per teacher for Professional Development ($240, in 1995). A Quality Provision Strategy was also introduced to deal with the issue of school closures.

- Implementation strategies

In order to become ‘Schools of the Future’, schools were offered the opportunity to join voluntarily. Although it was going to be a phased implementation, allowing improvement along the way, the response was overwhelming (300 schools were selected in the first intake although 830 expressed interest. By July 94, 1000 extra schools were involved. By 1997, all schools but one were involved.)

The change agents were the principals. The government had skilfully made the right alliance with the principals associations which "wanted to get control of schools, inside the school fence" (Paul, 1997, quoted in Pascoe & Pascoe, p.9).

Preempting obstruction, a number of strategies were used. For example the government had an open door policy with the principals, but not with the unions or the lobby groups; information was relayed to teachers, but not to unions; a comprehensive communication strategy was organised through regular face to face meetings, publications, talk back radio; no teachers were to be sacked; and state wide assessment data was to be kept confidential.

- Reform impact

The reform was monitored by the principals associations and the University of Melbourne. Researchers Allen and Eleanor Odden were commissioned to carry out research on the impact of the reform on classroom practice. There is evidence of cost efficiency. Within four years, Victoria has now the lowest per student expenditure of any state in Australia. However, Pascoe & Pascoe (1998, p.19) point out that the literature is conclusive that there is no causal link between site-based management and improved student learning. (See, for example, Caldwell, 1996 - Hanusheck, 1996 - Smith & al, 1996 - Summers and Johnson, 1996 and Townsend, 1996). I strongly believe that site-based management is not an end in itself, but only a means to an end and that “to improve student learning, the content and instruction delivered to students must change as well as the organisational structure of the school” (Smith et al, 1996, quoted in Pascoe & Pascoe, p.19)

The message here is very clear: Reforms such as Schools of the Future are necessary. They are an excellent step in the right direction to facilitate improvement, but many other changes must take place as well, particularly at the classroom level. One type of reform, in isolation, is not sufficient to bring about the desired outcomes. Top-down reforms must also be supported by strong professional development and continuous monitoring.
Our journey has taken us from a brief overview of the present crisis amongst educators, parents and youths to an analysis of the forces that are shaping to-morrow’s society. We have considered major social and economic trends and attempted to look at the skills that are going to be needed by young people, not only to meet short-term economic imperatives, but also long-term personal goals and even objectives which assume that the survival of the planet must be at the centre of the agenda. We analysed how education systems have reacted to these trends and emphasised the limited success of their reforms.

So what’s next? Where should we go? What can be done? How can we transform schools out of the ‘industrial model’ so that students can gain the type of skills that will enable them to live a fulfilling life, both ‘a life of work’ and ‘a life of worth’. Fortunately, we don’t need to start from scratch. It is essential that our journey takes us now to the research carried out over the last twenty years to consider the three interrelated questions:
- What makes a good school?
- Why are so many efforts at school reforms failing time and time again?
- What do we know about change processes and what can they tell us about improving schools?

These topics have been extensively researched and can provide us with excellent insights.

We will also look at the Charter School movement in the USA and at a ‘success story’ presented by the principal of Central Park East group of Schools in Harlem, New York City.

The school effectiveness research. What are the characteristics of excellent schools?

Dimmock, Shaplin & Walker (1993) point out that the measurement of effectiveness is difficult. As a result much of recent research has adopted a qualitative approach and produced check lists of characteristics of effective schools. The number and nature of variables have differed according to researchers but findings are consistent. Leadership, School climate and School Culture are identified by the literature as essential for creating an excellent school. Mc Gaw, Piper, Banks and Evans (1992) also found that a curriculum that is coherent, inclusive and relevant is a feature of effective schools.

- Three characteristics of excellent schools

Leadership
Principals are both strong managers and strong leaders. They have long term vision for their schools and have the ability to regroup all energies within the school to fulfil that goal. They motivate, inspire their staff. They empower others. They play an educative role and promote self-learning and reflection. They manage the present well while pushing towards changes and improvement for the future.
They have strong intrapersonal and interpersonal skills. They don’t view themselves on a pedestal, but share power and often rule from behind. This has nothing to do with weakness, in fact they are profoundly in control. This control does not come from the title or the power they have within a hierarchy, but from real power because people respect knowledge, strength of character, persistence including toughness, when necessary, and wisdom.

As for the best leaders,
people do not notice their existence.
The next best,
people honour and praise.
The next,
the people fear.
The next,
people hate.
When the best leader’s work is done,
the people say,
“we did it ourselves”.
(a Chinese Scholar, 604 B.C., quoted in Mulford, 1994, p.41)

School climate
According to Owens (1991) a school climate is the combination of four key environmental factors: (1) The ecology - the physical, material aspects of the school (e.g. design of building, landscape, equipment etc...), (2) The milieu - characteristics of individuals (motivation of both students and teachers, socioeconomic level of students, morale, etc.), (3) The organisational structure (instructional program, communication networks, decision making processes, etc.) and (4) The culture (values, norms and beliefs).

A positive school climate is essential for students’ learning. The research shows that emotionally stressful school environments are counterproductive for learning. Robert Sylwester (1995) in his book on cognitive science *A Celebration of Neurones* explains how emotions affect learning: "Our brain constantly surveys our internal and external environment and determines what’s important through emotion and attention. "Emotion is very important to the educative process because it drives attention which drives learning and memory" (Sylwester, 1995, p.72).

Mulford (1994) compares an educational institution to a family. The factors making the success of a family or the success of a school are subtle and intangible. No two families are the same and in the same way, no two schools are the same.

We know a good family when we see one... and when we do see it, we regard it more as a work of art... A school does its work through creating an environment... the environment consists of attributes some seen or unseen... the invisible environment is the culture... it consists of the prevailing ways of doing things, the common values, expectations, standards, assumptions, traditions, behavioural patterns and an ineffable quality we call 'atmosphere'.

(Mulford, 1994, p.31)

School culture
The term 'culture' comprises the beliefs, values and norms that are characteristic of an organisation. Sometimes the word 'ethos' is used to define this concept.

Importance of collaborative cultures:

The research has emphasised that school cultures, traditionally, tend to be isolated cultures and this is bad for the health of the organisation. Teachers work
independently in their classrooms within the framework of the school organisation. Hargreaves & Fullan (1991) have also identified 'balkanised culture', particularly in high schools where collaboration usually takes place within departments but not really at school level. The importance of collaborative cultures, where teachers work in teams, is essential for school improvement (Fullan, 1992; Beare, Caldwell & Millikan, 1989).

Beare (1989)'s outline of a good school certainly presents us with a compelling vision.

Good schools have clear educational aims, which apply to the behaviours of staff no less than to students. Good schools target learning outcomes. They believe that every student can learn and is willing to learn. An attitude of success permeates the whole school. Good schools are constantly on the search for a better way of doing things. They do not just talk about good ideas; they go out and practise them. A good school has a good principal who is an educator rather than merely a manager... Good schools concentrate on teaching and learning. They understand that their core task is educating, they devote more classroom time to that task, their teachers direct their energy to academic learning... Good schools maintain an orderly and safe environment for learning. In good schools, it is safe for students to be curious, to play with ideas, to experiment and to make mistakes. Good schools do not burden either their students or their staff so heavily that time for enrichment, time to reflect, time to participate in recreation or artistic or professional or other educational pursuits are crowded out of the program. To quote Clark, Lotto and Astuto (1989:183), "good schools are good places to live and work (in), for everybody". 

(Beare, 1989b, In Beare & Slaughter, 1993, p.73)

• Focus on teaching and learning

Beare, Caldwell and Millikan (1989) point out that the 'effective school movement' has focused on what educators consider the prime function of schools: Teaching and learning. They quote nine principles identified by the Coalition of Essential Schools, in the USA, headed by Theodore Sizer, formerly Dean of Harvard's Graduate School of Education.

*Schools have an intellectual focus.
*The school goals should be simple.
*They apply to all. All students are to be successful.
*The focus is on student as a worker responsible for his own learning.
*Students ‘exhibitions’ are required. Students must demonstrate they have mastered the course.
*Attitudes are important: trust, respect.
*Staff are generalists first, specialists second.
*Education is personalised learning.
*The budget demonstrates priorities.

(Sizer, 1986, quoted in Beare, Caldwell & Millikan1989, p.63)

• Organisational differences between 'low and high performing schools'

Mulford (1994) presents the findings of John Chubb & Terry Moe (1990) who investigated the factors that had the strongest influence on students' achievement gains. They found that the strongest one was student ability followed closely by two factors roughly similar in impact: school organisation and family background. They identified the organisational characteristics that distinguish high and low performance schools: leadership, professionalism and team work rather than graduation requirements, homework and written assignments. "Low performance schools look less like professional teams and more like bureaucratic agencies" (Mulford,1994, p.26).
Teachers’ effectiveness

Other researchers have looked at teachers’ effectiveness. Fullan and Hargreaves (1991) report a more recent study by Ashton and Webb, who compared a Junior High and a Middle School. In the Junior High School, teachers were pessimistic about their students’ academic potential due to factors such as lack of motivation, behavioural problems. In the Middle School, teachers had a strong belief they could make a difference despite any given student’s characteristics. Although the schools catered for students from similar backgrounds, the Middle School gained better results in the basic skills. Ashton and Webb argued that the differences were linked to the teachers’ sense of efficacy and the way they viewed their role in the schools. The Middle School teachers believed they could make a difference and had a higher vision of their responsibilities. They emphasised both personal and academic development.

Research from Holloway, Abott-Chapman and Hughes (1992) presented in Mulford (1994, p.27) shows that effective teachers can bring about great changes in students’ motivation and achievement, including those considered to be the most disadvantaged. There is a need for mutual trust and respect; teachers have to develop special relationships with individual students and classes and use a great variety of teaching styles. Techniques could include, for example, role reversal, role negation, role exaggeration and role diffusion. Extra-curricular activities enable students to know the teacher as more than ‘just a teacher’. As Mulford (1994, p.28) concludes "What is compelling about this research is how teachers become better teachers, in some schools while teachers, in other schools, fail to grow or even become worse."

These findings are very interesting, particularly for those teachers who still have an ‘industrial mind set’ about schooling and think like in the 1960s, that schools can’t make a difference for ‘certain categories’ of students! They continue to believe that students fail in schools because they have neither the ability nor the motivation or persistence to study; it has nothing to do with schools or teachers! This mind-set must be challenged.

School improvement / The change process

The school effectiveness research, by helping us to understand what the characteristics of good schools are, does not tell us how to create one. This is the domain of the school improvement research. Researchers in this field have analysed how systems or individual schools have initiated, implemented and managed changes. They have also analysed the results these changes have had on improving students’ learning outcomes.

A very striking finding of this research is that, despite the multiplicity of innovations and the variety of approaches used overseas and in Australia, in fact very little has changed in schools. Most schools continue to operate in the past. They “are still modelled on a curious mix of the factory, the asylum and the prison” (Hargreaves, 1994, p.43). Organisational structures continue to be unchanged, little has happened at the classroom level and there is no evidence of major improvement in students’ learning. As Fullan & Hargreave (1991) state: “Education reform has failed time and time again!” Of course, there are exceptions: a few individual schools or a few groups of teachers; some individuals are ‘success stories’ and could show us the way... but their experience does not appear to have been easily transferable.

How to explain this situation and what can be done? In an attempt to try to explain the failure of both educational systems and schools at bringing about improvement, researchers have looked at different areas of inquiry. They have studied
the business sector and focused on the understanding of the change process. They have also analysed and evaluated initiatives at both the system and school levels. As a result, now, we have a huge amount of knowledge about the change process and school improvement.

**Lessons from the business sector - Understanding the change process in organisations**

Reforms have failed because people did not understand how organisations operate as a system where all elements are interconnected. Peter Senge (1992) presents a brilliant analysis on how systems work. Deming introduces us to the principles of Total Quality Management and more recently.

**Peter Senge (1992)**

Senge starts from the premises that we need to have a whole perspective of a problem if we want to understand it. A fragmented view of the world prevents us from seeing the ‘forest as well as the trees’. He believes that the organisations that will thrive in the future will be ‘Learning Organisations’ where leaders do not think they have the monopoly of knowledge and wisdom and are able to tap on people’s skills and commitment.

His argument develops as follows: We are naturally all learners and we love to learn. We like to belong to teams where we complement each other and can create extraordinary things. And ‘learning organisations’ are now possible because we understand better how they work. Such organisations need the mastery of five basic disciplines.

1. **Personal mastery**: It is the ability to continuously clarify and deepen our personal visions, continuously becoming committed to lifelong learning. Often people know what they don’t want but do not clarify things that really matter to them.
2. **Mental models**: We judge, act, according to mental images. We fight for our mental images and try always to justify them! We need to scrutinise them, challenge them and share our findings with others.
3. **Shared visions**: Personal visions need to be translated into shared visions that will galvanise the energies of an organisation.
4. **Team learning**: Senge wonders how a team of managers with an I.Q. above 120 can have a collective I.Q. of 63? Team learning is essential and starts with genuine dialogue, genuine ‘thinking together’.
5. **System thinking**: The disciplines, previously mentioned, complement each other and must develop as an ensemble. This is hard to implement but the results are spectacular if we succeed, claims Senge. This is why ‘System Thinking’ is the most important one - ‘The Fifth Discipline’. It integrates all the others and reminds us that the whole can be greater than the sum of the parts.

“A learning organisation is a place where people are continuously discovering how they create their reality, and how they can change it” (Senge, 1992, p.13). To understand further what a learning organisation is, we have to understand that it represents a complete shift of mind. We have to grasp the deeper meaning of learning, learning not just taking in information but understanding and extending our ability to create. System thinking, today, is vital as it helps us to deal with complexity rather than being overwhelmed by it. Often we hear there is nothing I can do, it’s the system! System thinking helps us to see structures that underlie complex situations. It also assists us to see high leverage points for changes: “Seeing relationships rather than linear cause and effect chains, and seeing processes of changes rather than snapshots” (Senge, 1992, p.73). System Thinking is dealing with dynamic complexity when
cause and effect are so far away from each other than it is not possible to ascertain that a possible action will have a certain outcome. This is very much what Beare & Slaughter (1993) consider 'as a new way of seeing' in schools.

Senge further explains that organisations too often have learning disabilities. He identifies seven of them which I wish to present here as they represent mind sets we need urgently to challenge. (1) We tend to focus on our positions and lack responsibility for the whole product, made of the interactions of all positions. This is the "I am my position" syndrome. (2) "The enemy is out there", when something goes wrong, we tend to blame others. (3) Being proactive can be an illusion. If we become more aggressive in fighting the enemy out there, we can forget to look at ourselves and the way we contribute to our own problems. (4) We may have a fixation on events and as such, we limit our ability to create. Events prevent us to see deep long-term underlying causes to problems. "Today, the primary threats to our survival both of our organisations and of our societies, come not from sudden events but from, slow, gradual processes" (p.22). (5) We are not well adapted to gradual threats. We need to slow down and scrutinise those gradual processes that may present in fact the greatest threats. Senge uses the parable of 'the boiled frog' to teach us this important lesson: If you throw a frog in boiling water, it may jump out of the pan, but if you place one in warm water and gradually heat the pan, it will die, as a boiled frog! (6) In organisations, we rarely experience the direct consequences of our actions, so we can't really learn from experience. (7) We believe that the management team understands the complexity of the organisation. This is a myth and often managers work with an illusion of cohesiveness and understanding. Senge argues that 'the five disciplines' of the learning organisation can counteract these disabilities.

Senge analyses the patterns that control events. He refers to them as 'systems archetypes' that enable us to understand structures and leverage for change. 
- Archetype 1: Limits to growth: Don't push growth but limit the factors that prevent growth. If you push growth at first you may get good results but soon the balance will be broken. The more you push changes, the more the system pushes back.
- Archetype 2: Shifting the burden. People tend to address symptomatic problems by 'quick fixes' rather than looking for fundamental causes. Often the best results come from small, well-focused actions rather than large scale effort.

There is an absolute need to understand the low and high leverage strategies to deal with a problem. What is important is to look at changes that can lead to significant, enduring improvements. Often the best results come from small, well-focused actions rather than large scale effort.

As a summary, these are the laws of the "Fifth Discipline"

- Today's problems come from yesterday's 'solutions'.
- The harder you push, the harder the system pushes back.
- Behaviour grows better before it grows worse.
- The easy way out leads back in.
- The cure can be worse than the disease.
- Faster is slower.
- Cause and effect are not closely related in time and space.
- Small changes can produce big results, but the areas of highest leverage are often the least obvious.
- You can have your cake and eat it too, but not at once.
- Dividing an elephant in half does not produce two small elephants.
- There is no blame. "You and the cause of your problems are part of a single system. The cure lies in your relationship with your enemy."

(Senge, 1992, pp.57-67)
Total Quality Management (TQM)

TQM looks also at the organisation as a system where all elements interact and promote a process of continuous improvement. An important factor of this philosophy, outlined by Edwards Deming, is that leadership and people are key to the organisational success. The leader needs to empower others so that everyone in the organisation makes necessary improvements to meet and even exceed the expectations of those who receive the products of the organisation.

If the TQM approach is to be implemented, it must be adopted by the system as a whole. A complete "metamorphosis, not mere patch work on the present system of management is required" (Deming, 1990, quoted in Hord, 1994, p.1). According to Shirley Hord (1994, p.8), TQM is viewed as an effective school improvement strategy, however there has not been sufficient time to ascertain its effectiveness, as yet.

It appears that implementing TQM in schools is an opportunity for improvement but also a major challenge. For Murgatroyd and Morgan (1993, p.201), the failure rate for implementation in the business sector is high - some say as high as 70 per cent - and in schools there are many problems and pitfalls. Some aspects of the TQM philosophy are certainly very positive, however its implementation requires a whole-school approach with a strong top-down strategy put in place. As Hargreaves (1994, p.10) reminds us:

Defining an ideal, such as comprehensive schooling, or market mechanism and then sticking fast to a rational blueprint to achieve the ideal will no longer do. We have had 30 years of it in education and it has not worked well.

So results are not conclusive. Further research needs to be undertaken to ascertain the feasibility and potential success of this approach in a school setting.

• Changes at 'the system level'

Most of these changes involving National initiatives in the curriculum area or devolution and movement towards 'Self Managing Schools' have been already discussed in chapter 1. They are all characterised by 'top-down' approaches to changes, in other words imposed changes. We have already developed the idea that such reforms, although necessary because they facilitate the improvement process, are not sufficient. Implemented in isolation, they do not bring about major changes at the classroom level and do not seem to improve students' learning outcomes.

The analysis of the initiatives of the National School Project and of Catholic Secondary Schools in W.A. are other striking examples of failed reforms. Both projects, which focused on changing radically the way schools are organised, represented a system's effort towards improvement through a pilot school approach. Schools could choose to be involved or not.
The ‘National School Project’ (NSP) / ‘National School Network’ (NSN) and the issue of work reorganisation. A failed dream.

In 1991, The National School Project, as part of the National Project on the Quality of Teaching and Learning, emerged from discussions between employers and teacher unions. The purpose was to study how changes to work organisation could lead to the improvement of students’ learning outcomes. “By using rule ‘waivers’, the project offered schools a mechanism to try new types of work organisation currently prohibited by awards, regulations and unions and employer policies” (Louden, Wallace, 1994, p.3). Pilot schools were to review their organisational structures: e.g. their use of time, the mix and deployment of staff and student groupings. Ultimately, the goal of the Project was to use successful trials as a basis for broad systems reforms.

This approach was linked to the views of Dean Ashenden (1993), who believes that the work of teachers is poorly designed. Teachers have to do too many tasks beside teaching, including those which could be carried out by less qualified people. “He sees teaching as the last of ‘the cottage industries’, where the traditional classroom is the cottage-housing with only one type of education worker: the teacher” (quoted in Tutt & Chadbourne, 1998, p.132). The day is divided into periods, students are grouped according to age and taught from a teacher-centred mode of instruction. Ashenden believes that the number of qualified teachers could be reduced with their work focusing on the development of higher level skills, while para-professionals could be employed, at a cheaper rate, to carry out ‘low level’ tasks.

Hargreaves (1994, pp.23-31) compares the organisation of a hospital with that of a school and points out that in a hospital, doctors are in minority and do only specialised work for which they are well paid. They are assisted by competent but less qualified staff. He suggests that schools should become more like hospitals.

- Non teachers should manage schools: the best teachers should not be promoted to non teaching positions. The status of ‘Master Teachers’ should be further developed.
- Schools could recruit the equivalent of nurses - assistant teachers, and as highly qualified teachers become fewer, they should be paid more.

A hospital run entirely by doctors without the support of nurses would be grossly wasteful. Why do we not see schools without assistants to teachers as similarly prodigal with scarce resources? (Hargreaves, 1994, p.24)

After three years of the project operation, according to Louden and Wallace (1994) “the evidence of the success is not convincing”. Although they temper their conclusion by saying “It is too soon, to tell”, it appears that the dream of the NSP that pilot schools’ experimentations will lead to major restructuring reforms, system wide, has not been achieved.

While these initiatives enjoyed some local success they made little impact on breaking the dominance of the ‘cottage model’ across the country. (Tutt & Chadbourne, 1998, p.132)

Reasons for failure:
According to Louden & Wallace (1994), schools involved in the project focused on cultural reforms rather than tackling the issue of work reorganisation. They did not see major structural changes as a priority.

Reforms, no matter how well conceptualised or powerfully sponsored, are likely to fail in the face of a culture of resistance. Equally, it is important to recognise that
overcoming cultural resistance takes time, preceding by many months (years) any tangible structural shifts.

(Louden & Wallace, 1994, p.15)

Louden and Wallace also view as a paradox that existing structures in schools limit teachers’ capacity to visualise another world: Bureaucratic organisation in schools “often serves to stifle change...[as it] cultivates in people a bureaucratic mind set”. For a specific type of change to take place, schools need to challenge their mental models. It is a priority among other improvement agendas.

Since 1994, the work of the National School Project continues under the umbrella of the National School Network.

Catholic Secondary Schools, in Western Australia.

Kevin Tutt & Rod Chadbourne (1998) have analysed more recent attempts to introduce major work reorganisation in W. A. schools. Their hypothesis was that in the NSP project, the centralised industrial awards helped to maintain the power of unions, in resisting change. With new industrial relations agreements achieved through ‘Enterprise Bargaining’, schools should be in a stronger position to introduce changes, such as using time more flexibly and deploying a new mix of staff including para-professionals.

Their findings are very interesting: After the introduction of Enterprise Bargaining, the principals that were surveyed, although interested with work reorganisation possibilities, in fact did not actively press for this type of reform. This correlates with the findings of Louden & Wallace regarding the impact of the National School Network. Tutt & Chadbourne think that perhaps it is because Enterprise Bargaining is still imposed by a system wide approach:

Like its predecessors, the new industrial relations can easily be co-opted by centralist teacher employer and union bodies and used almost exclusively to improve teachers’ employment conditions... As such [enterprise bargaining agreements] can continue to be used as instruments of uniformity and thereby maintain traditional patterns of work organisation in schools.


Tutt & Chadbourne ask therefore a fundamental question: Should efforts continue to be made to restructure first traditional work organisation or should improvements be made within old structures?

According to Shirley Hord (1995), too much attention has been given to organisational structures, to ‘what to change’ rather than ‘how to change’. “What change is really about, rather than structures and strategies, is people... Change is about each and every individual who will be involved in implementing new policies, programmes and processes” (Hord, 1995, p.92).

The more recent research considers that the success of school reforms in reducing inequalities in achievement between students of high and low socio-economic status is due to the combination of three factors: restructuring, re-culturing and changing pedagogy. The Centre on Organisation and Restructuring of Schools at the University of Wisconsin -Madison (USA) has done extensive research on these issues. According to Julie Harradine, who is in charge of the research section of The National School Network, “it is now largely accepted that restructuring, by itself, will not lead to improved learning” (1996).
Harradine points out that for a while the message was that 're-culture' came before 'restructure', but now the more recent research argues "that in fact 'authentic' pedagogy holds the key".

‘Authentic’ pedagogy [being] defined as construction rather than reproduction of knowledge, disciplined inquiry using established knowledge bases, substantive conversation and elaborated communication, application of learning beyond the classroom.

(Harradine, 1996, p.4)

She cites Newmann and Wehlage (1995) who describe the context for successful school restructuring using the image of circles of support: (1) The first circle at the centre represents the core concern: high intellectual quality learning for all students. (2) The second ring presents pedagogy as ‘authentic’, where teachers use the most recent knowledge on how students learn and apply it to their teaching methodology. (3) The third circle deals with school organisational culture which is built to deliver quality student learning and (4) Finally the last circle highlights the need for the provision of external support.

It would appear that a school wide focus on authentic pedagogy, and a culture of critical collaboration, within a communally organised school structure, offer the best chance of improving student learning.

(Harradine, 1996, p.6)

•Changes at ‘The school level’

We have been fighting an ultimately fruitless uphill battle. The solution is not to climb the hill or getting more innovations or reforms into the educational system. We need a different formulation to get at the heart of the problem, a different hill, so to speak. We need, in short, a new mindset, about educational change.

(Fullan, 1993, p.3)

People mind sets are responsible for the failure of reforms.

Senge (1990) uses the Greek word ‘metanoia’, to describe the ‘fundamental shift of mind’ needed in organisations. Beare and Slaughter (1993) gives us the same message by saying that we do not need new programmes, but “different ways of seeing”, in schools. Mind sets are mental models of the world, ways of seeing the world. As previously outlined, we have to understand that the traditional notion of scientific objectivity is to be challenged. “The act of observation changes the nature of the thing observed... the observer and the observed, far from being separate are coupled in the most intimate of ways” (Reanney, 1993, quoted in Middleton & Hill, 1996, p.12).

Our mind constantly scans the environment, but

the real act of seeing that allows us to make sense of the world goes on behind our eyes. It is the mental program that integrates the data we receive not the receiving organ(eye) which permits us to see... The limits to our understanding the universe are in our minds and our own habits of mind.

(Middleton & Hill, 1996, p.12)

If school reforms are failing it is because we do not change fundamentally our ways of thinking. “Without... a shift of mind the insurmountable basic problem is the juxtaposition of a continuous change theme with a continuous conservative system” (Fullan, 1993, p.3).

Middleton and Hill (1996, pp.7-11) emphasise the power of mindsets, these “idols that keep us in the dark” and control our educational thinking. They strongly
argue that school reforms are failing because they are implemented within patterns of thinking that belong to the industrial age. "These preconceptions have the power to lock us into a framework of the past and veil from us the possibilities of the future." If we want to change schools, we need urgently to challenge assumptions, question the values that have shaped our practices in schools for a long time and explore options. They consider that four elements are sustaining an 'industrial educational mindset' and we should urgently challenge these assumptions.

**Wrong assumptions about schooling:**

1. Formal education is a scientific process: Students have different abilities and achieve different results. The process of schooling is the constant. Learning outcomes have nothing to do with the learning program. In this way, society can justify that some students are failing therefore are destined to unskilled work.
2. The teacher is a transmitter of knowledge. He/she teaches subjects, content. The teacher role is complete when some students have learnt and others have failed to learn the material.
3. Learning is absorbing knowledge. Students are the recipient of knowledge. Freire (1972, quoted in Middleton and Hill, p. 28) describes this style of learning as a banking concept. "Teachers deposit knowledge into students who later cash it in the form of credits at an exam".
4. Absorbed knowledge can be measured and compared. It takes place in a fragmented way.

So, for Middleton and Hill (1996, p.33), incremental reforms are not sufficient to bring about successful reforms, because mind sets prevent progress.

In the long term, the transformation needs to be much more fundamental than a safety valve approach or even a gently incremental approach. We need to ask some central questions about the operation of schools and the relationship between the organisational elements and the values and beliefs they imply. We need to realise that these elements are like facets of a single crystal. They are interdependent. We cannot focus merely on operational adjustments. It is in the revision of the whole pattern of relationships in relation to values that the springboard for reform lies.

Essentially eight preconceptions have to be challenged since they prevent changes:

1. Knowledge being fragmented: Inter-disciplinary studies are needed, so that students can make sense of the whole.
2. Learning being time bound. Time dominates industrial schooling - time for learning, time for teaching. No longer, students and teachers should be involved only in marking time!
3. Learning being space bound. Education continues to take place in schools despite the fact that in an "Information Age", information is accessible in many different settings.
4. Teachers as 'curriculum conduits': Teacher are no longer the only source of knowledge. In fact they are learners like their students.
5. Students as absorbers of learning. Students need to be active learners, involved in 'deep learning, and creators of knowledge.
6. Education as economically rational
7. Formal education being just: All students are supposed to be given equal opportunity to succeed, in reality, very few from low-socio economic groups do. All students need to succeed.
8. Learning being credentials bound: At present, the real purpose of credentials is to limit the number of people entering a given profession. The power of credentials has to be reviewed. The true purpose of credentials is to keep incompetent people out of a job.
The emotional aspect of changes needs to be recognised. Changing is not linear, it involves ‘dancing’ with many different elements.

Change results in loss and calls life’s meaning into question... We need instead to move ahead without losing our roots, to transform old forms and practices into new ones without jeopardising individual or collective meaning. How to do this is one of the most significant challenges of our century.

(Deal, 1990, quoted in Mulford, 1994, p.28)

This ability to maintain traditions while moving forward is what Tom Peters (1987, p. 395) calls “the core paradox... that all leaders at all levels must contend with... [that] is fostering internal stability in order to encourage the pursuit of constant change.”

Deal (1990) argues that it is essential to look at the symbolic aspect of change such as “rituals, social dramas and healing dances” in order to ‘restore the heart’ in schools. The metaphor of the dance is an excellent mental representation of the non linear, interrelated aspects of change.

Changing and managing are incompatible. But dancing and changing may be complementary: the change requires the dance... To lose heart is to lose confidence and meaning. For many teachers and administrators the rapid pace of change has torn the heart out of schools. Heart will not be restored by knowledge, it can be only restored by dancing and healing”

(Deal, 1990, quoted in Mulford, 1994, pp. 29-30).

Mulford therefore questions the value of a rational approach to managing change and points out that the most important aspect of effective implementation is to obtain co-operation among teachers. He views co-operation as an aspect of the ‘healing dance’. But no one can force collaboration and time is necessary. Fullan and Hargreaves (1991) criticise what they call ‘contrived collegiality’, “Collaborative cultures do not mandate collegial support and partnership: they foster, they facilitate it or as Deal states it flows with the transition” (pp.58-59). For Fullan & Hargreaves (1991, p.xi), it is through interactive professionalism that ‘Total Schools’ can be achieved, and “improving teachers and schools is the key to improving students.”

Patrick Duignan (1997) also uses the metaphor of the ‘dance’ to describe the dynamic interrelationships of social systems. He advocates the need for teachers’ participation - dance in the change process. Leaders also have to learn ‘the dance of leadership’. Duignan presents a powerful comparison with the flocking of the starlings. He has noticed that the flock has a definite sense of direction, despite the evidence of chaos amongst the starlings.

Change is too often approached through restructuring or fiddling with external indicators... During restructuring or downsizing the shape of the flock is often mandated from above but individual members are not consulted and/or do not understand (or perhaps agree with) the new rules of the flocking .. The creative spirit of the individual can be protected even encouraged while still preserving the positive aspects of the flocking.

(Duignan, 1997, p.16)

•A solution: schools as ‘Learning organisations, organisations of continuous inquiry and improvement.

If our aim is to help students become life-long learners by cultivating a spirit of inquiry and the capacity for inquiry, then we must provide the same conditions for teachers. (Sergiovanni, 1996, quoted in Hord, 1997, p.27).
Shirley Hord (1997) develops Senge's concept of 'Learning organisation' in her book: *Professiona lCommunities, Communities of Inquiry and Improvement*. She explains she had the opportunity to work in such an environment and experienced "the nurturing culture that encouraged a high level of staff collaboration in the effort to understand and support educational change and improvement" (Hord, 1997, p.3). In such a community, teachers and administrators continuously share learning and act to improve their professional effectiveness; for them change becomes a way of life. These learning communities are characterised by supportive and shared leadership, shared values and vision and collective creativity, based on reflexive dialogues and inquiry:

As principals and teachers inquire together they create community. Inquiry helps them to overcome chasms caused by various specialisations... Inquiry forces debate among teachers about what is important. Inquiry promotes understanding and appreciation for the work of others... And inquiry helps principals and teachers create the ties that bind them together... Inquiry, in other words helps principals and teachers become a community of learners.

(Griffin, cited by Hord, 1997, p.9)

Supportive conditions both physical and human and shared professional practices are needed. The issue of how to make the most effective use of teacher's time is crucial. Hord (1997) points out that in Japan, teachers teach fewer classes but spend time in planning, discussing with colleagues, visiting other classes and are involved in numerous professional development activities.

Hord gives only suggestions on how to initiate learning communities. She acknowledges that so far, researchers have not given us much guidance for implementation.

Let's conclude this section with some ideas suggested by the guru of 'educational changes', Michael Pullan. These are his eight basic lessons for those wishing to implement change:

1) You can't mandate what matters. (The more complex the change, the less you can force it.)
2) Change is a journey, not a blue print. (Change is non linear, loaded with uncertainty and excitement, sometimes perverse.)
3) Problems are our friends. (They are inevitable. You can’t learn without them)
4) Vision and strategic planning come later. (Premature visions and planning blind.) Action should come before vision. A change agent should reject immediate large scale strategic planning and instead should begin with a few readiness principles. ‘Ready-fire-aim’ is the approach to be taken.
5) Individualism and collectivism must have equal power. (There are no one-sided solutions to isolation and group think.)
6) Neither centralisation nor decentralisation works. (Both top-down and bottom-up strategies are necessary.)
7) Connection with the wider environment is critical for success. (The best organisations learn externally as well as internally.)
8) Every person is a change agent. (Change is too important to leave to the experts. Personal mind set and mastery are the ultimate protection.)

(Fullan, 1993, p.22)

It is only by raising our consciousness and insights about the totality of educational change that we can do something about it... It is not possible to solve the 'change problem' but we can learn to live with it more proactively and more productively.

(Fullan, 1993, p. 22)
Some innovations in the USA:

It is valuable to look at initiatives in the USA, one at system level - The Charter Schools movement, and one at the school level - A success story in New York City: Central Park East.

- Charter Schools in USA:
Are they going to bring a breakthrough for the success of educational reforms?

This movement started with only one school in 1992. Nearly 800 charter schools operated during the 1997-1998 school year. Teachers, parents and other community members can create new public schools or convert existing schools by authority of a charter which explains the way the school will operate and specifies accountability mechanisms. Students' improved learning is an essential requirement if a school is to have its charter renewed. Like public schools, charter schools are not allowed to charge tuition. As long as the school meets the terms of its charter and attracts sufficient students, it is freed from many rules and regulations covering traditional public schools; for example non certified teachers are allowed to teach in charter schools.

According to Cynthia Merrill (1997), Charter Schools are "creating hope and opportunity for American Education". They promote diversity and innovation. They develop a climate of parental choice and expand opportunities for students to succeed, particularly those who belong to the 'at risk' section of the student population. These schools emerge from the dreams of educators who are frustrated in their educational vision by bureaucracy and the culture of conventional schools.

However, Bierlein & Bateman (1996), who review the development of charter schools, identify opposing forces and present a "bleak picture for the long term future of charter schools." The inertia of many educators and the resistance of bureaucrats are preventing this movement from having a nation wide ripple-effect.

Reforms must fit within the current power structure of education: local school boards, state boards of education, state departments, legislators, the federal government and the unions. The current structure seeks to mould legislation to meet its needs, not necessarily the needs of students, and it is difficult to break down this ingrained system of power... Unless well co-ordinated efforts are undertaken to battle the many opposing forces, we predict that the charter school concept will simply not be strong enough medicine to become a broad based reform initiative.


Bill Kerr (1997) who presents a short summary on the charter school debate leaves us with an interesting message!

Our current system has become so centralised, ossified and moribund that anyone with a creative sparkle left has to be incredibly frustrated. Eventually something has to give, charters would be an improvement on what we have now... Yes, I have trouble with some of their rhetoric at the end... but then I have trouble with just about all political rhetoric these days, so what the hell.

(Kerr, 1997, p.1)
A ‘success story’ in New York City: Central Park East can be used as a ‘case of understanding’.

Deborah Meier (1995) presents a ‘success story’, which details the success of a group of three New York City primary schools and one high school (about 450 students), where 90 per cent of the students now graduate from high school and 90 per cent of those go to college, although a high percentage of the student body is from low socio-economic background. She started Central Park East (CPE) the first at the time:
- How could the natural ability of children to generate ideas be nurtured and extended by schools, despite constraints of poverty and racism?
- How do schools in so many subtle and unconscious ways manage to silence these ‘playground intellectuals’, that are children?
- Could different structures or approaches in schools make a difference?

Her conclusions after three decades of experience are very optimistic: Yes, public schools can make a huge difference if they create environments that can tap the ‘extraordinary’ capacities of children and teachers - the ‘Power of Their Ideas’. Accordingly, she is a strong advocate of public schooling as one way of controlling our future as a democratic society and breaking the cycle of poverty:

Giving up on public schooling as our accepted norm would mean leaving our nation’s children in the hands of unknown baby sitters with unknown agendas... If we abandon a system of common schools-through apathy or privatisation, we deprive everyone, not just the least advantaged, of the kind of clash of ideas that will make us all more powerful. (pp.11-13)

‘The Power of their ideas’ is inspiring. It is a book for hope. Schools with a different culture, different teaching and learning strategies, can make a difference. Students can excel if the expectations of parents, students and teachers are challenged. Let’s summarise the characteristics of this small group of schools and take also ‘some lessons from America’.
- The basis for teaching or learning at Central Park East is choice. Parents, students and teachers select the school. Teachers are volunteers, willing to try something new. They are practising what they believe in. As a result commitment is very high amongst all members of the school community.
- The schools are purposely small and highly personal and all resources are put into the classrooms.
- Teachers have high expectations, for themselves and for their students. They have “the passion of the amateur and the competence of the professional”. They work collaboratively. Strengths come also from traditions. They believe there is a need to root the new within the old.
- The curriculum is rich and interesting, both conceptual and tangible, able to maintain students’ natural love for learning.
“Adults remain in Piaget’s terms concrete thinkers’ (p.47) and learning at Central Park East is “an endless tension, a see-sawing back and forth between ‘coverage’ and making sense of things” (p.51).

Meier points out that high schools, in particular, have lessons to learn from early childhood teachers. “A good school for any one is a little like a kindergarten and a little like a good post graduate program” (p.48) where teachers are coaches. Cross curricular practices, co-operative learning, recognition of different learning styles and its application for pedagogy are key aspects of the school. Teachers, students and families work together in a climate of openness and accessibility. Parents’ input is crucial, but in an advisory capacity. Respect is a key value approach to whatever happens at school.
Giving both adolescents and their teachers greater responsibility for the development of their schools can't be by-passed. Without a radical departure from a more authoritarian model, one strips the key parties of the respect... they need to make schools work (p.36).

The focus for Central Park East is not content coverage but the development of five intellectual habits that should be internalised by every student to help them to develop critical thinking and problem solving skills. No matter what students are studying or doing there should be concerned for:

* Evidence (How do you know that?)
* View point (who said that and why?). One’s view point is only one of many.
* Cause and effect (what led to it, what else happened?)
* Hypothesising (what if, supposing that?)
* and finally the most important one: Does it really matter, who cares? (p 42).

Work organisation is different from arrangements in traditional schools in the following areas:

- The use of time, there, is characterised by two-hour interdisciplinary class periods; time allowance for presentations, seminars, group work, independent study, with built-in time for tutorials and coaching; four hours straight in the morning, late and longer lunch giving time for activities, advisory sessions after lunch; one morning per week spent in community service which allows for teacher planning time.
- The time table is organised in such a way that teachers can work as teams, in planning, discussion sessions (p.33).
- The grouping of students is done in such a way that teachers are responsible for small numbers of students they all know well. This caring environment based on respect, trust and powerful intellectual habits gives students what is often missing in their life: love and confidence in their worth and ability.

Deborah Meier is the first one to acknowledge that many of these approaches are not new but, as she points out, "the think-tankers' reform packages remain largely on paper - heard mostly by the same people who prepared the reports or who attended the conferences where they were discussed". What is unique in these 'Lessons for America, from a small school in Harlem' is not so much that the ideas are new to us but the book presents us with an example of how all these ideas can be put into practice, how a school can decisively break the traditional mould. The book is full of anecdotes, newsletters to parents, written like conversations, extracts from Meier' personal journal dealing with real students, real parents and concrete daily problems. This book is an inspiration. I recommend it for any educator's professional library!

Meier (1995) answers a question we obviously have at the back of our mind: Can this system be reproduced? Her response is a definite 'yes'

We've proven that these kinds of schools work over and over again with different directors, with different staff and without extra funds... the secret ingredient is wanting it badly enough. If what we have done is to have wider applicability, we need to look upon our story as an example, not a model and then make it easier-not harder- for others to do similar things in their own way. We need to insist that there cannot be just one right, perfectly crafted, expertly designed solution. Good schools, like good societies and good families celebrate and cherish diversity... After accepting some guiding principles and a firm direction, we must say "hurrah", not "alas" to the fact that there is no single way toward a better future (p.39).

Thank you, Deborah, for giving us hope.

•  •  •
Design of the study

"To understand is to invent" (Piaget).

I had set myself these aims:

- 1) To gain a broad understanding of the latest research on “Education beyond the 20th century” and translate the complex findings from this body of information into a simple, clear summary for teachers, parents and students.

- 2) To suggest some options in order to change high schools within the new framework from the Northern Territory Department of Education and to propose some practical guidelines to bringing about these changes. These options could be used as a starting point for reflection, discussion and ultimately action.

My aim was really to ‘rediscover’ teaching in a ‘post industrial age’, to be able to transform schools and systems into ‘communities of inquiry and continuous learning’ in which all students feel valued, empowered and free, become highly competent and develop personal mastery and ultimately wisdom.

As a teacher and as a leader, I wanted to understand “the currents, the winds that are shaping tomorrow’s Education”, to use Bill Mulford’s (1994) metaphors. We are in a time of ‘turbulence’. Lack of understanding leads to frustration, fatalism and fatigue.

While the future we will actually inherit is being shaped by many things beyond the control of any individual or group or institution, it is also to a greater or lesser extent being shaped by human enterprise or the lack of it... Vision, hope, energy and wisdom will have to win out over resignation, frustration, despair and divisiveness. (A. Gilbert, 1991, quoted in Mulford, 1994, p.41).

I needed to tackle the issues from a broad perspective, to gain a sense of the whole and look at interactions, connections rather than focusing on the specific. I wanted my study to be a learning journey for myself and hopefully also for others. Because of the complexity of the problem I decided to tackle, it was not my intention to claim that I had reviewed all the research about the topic. I did not have the time nor the power to do so. In a journey around the world, I would not expect to stop in all the villages and towns, let alone all the capital cities, nor would I intend to write the numerous ‘Lonely Planet Guides’ that would be needed for such stays. However I should be able to say: “Paris is fantastic. Don’t miss it! Darwin, worth a detour! or Belgrade, definitely don’t go there, too risky!”

My guidelines for changes should not be a recipe book either. As researchers have repeatedly pointed out, recipes simply do not work.

No two schools are the same... Schools have much to learn from each other, but there is no fixed menu for success. Attempts to construct one... are necessary stated in such general terms as to be of little practical help. (Ashenden & Milligan, 1993, p.80)

Ashenden & Millikan prefer the ‘tool kit’ metaphor for assisting with changes in schools. Beare, Caldwell and Millikan (1989) indicate that we should be cautious about ‘a recipe’ approach, as if there was one best way of doing things.
Beare (1993, pp. 57-59) claims that we should change our attitude about modern science. We need to accept new ways of knowing. We have to move away from the concept that the universe is a mechanical system composed of elementary building blocks and that the sum of the parts equals the whole. "It is not that science is wrong, but rather it should not and cannot exert a universal and exclusive claim on the generation and validation of knowledge" (Beare, 1993, p. 59). As a strategy for providing quality answers to questions, he uses a 'journey' metaphor. He views that journey as simultaneously a process of self-discovery and one of external exploration. Self-discovery requires listening and reflecting. The external exploration involves a search for materials, resources, concepts and understanding through which to make sense of the problems. He summarises the process by suggesting the following steps: Focus on specific questions; research the problems/questions. At what level can they be addressed / understood? Consider a range of solutions. Focusing on solutions is important in itself as it is a creative process. "First a sketch... is produced, next a provisional structure is created, the structure is then tested, redefined and completed" (Beare, 1993, p. 151). I therefore used a qualitative approach for this study following the type of methodology outlined by Hedley Beare.

A) Collection of information
In order to understand and present the broad picture, I needed to read extensively, reflect on my experience, discuss ideas with colleagues, friends and youths, trying to make connections between the research and the practice. This project involved simultaneous approaches. I reviewed relevant literature on a number of key issues and questions. A few areas were highlighted for particular consideration. For example:
- The present: How do we feel as individuals, as youths, and essentially as educators in this society in transition? What are our fears, our pains and our hopes?
- The Future: What are the social trends shaping that future? What are the skills needed by students and by teachers? What is the purpose of schooling in a changing society?
- The Government / Departments of Education: What is their response to these trends? What are the various initiatives?
- The Research: What are the characteristics of good schools? How can changes be best implemented? How can schools be made more effective? What is the role of information technology in schools?

I also interviewed a number of key educators and policy makers and engaged in "conversations" with colleagues, family members, parents and students.

B) Findings
Drawing on the data collected from the literature, interviews and conversations, this paper considers the various implications for policies and practices and suggest some priorities and a few guidelines for action. I tested some generalisations with 'Key people' in the field. I wanted to ensure I was not missing out on any major issue or approach.

C) Action plan, ‘guidelines’ for improvement.
My focus is the context I know best: high schools. My guide is presenting possible ‘sign posts’ for action, that could be used by a school, an individual who wish to embark in a journey of understanding and improvement. Priorities for action are directed to students, teachers, leaders, parents, policy makers.

D) Presentation
The language used in this project is purposely simple in order to reach a wider audience. Considering the requirements of the Master of Education, the presentation of this project is traditional as a text, with chapters, linear and sequential in approach. However it is important to emphasise that all sections are interrelated and could be presented very differently.
Chapter 4

Action

The Northern Territory Department of Education is presently involved in a major restructuring exercise. System administrators make very clear that they are supporting schools' and teachers' initiatives: "All Departmental services are geared to support schools. All possible education resources should be directed to schools" (NTDE, A3 chart, 1999)³

This situation presents an ideal opportunity for schools to change.

What should be our priorities?
(“integrated and clear priorities”)⁴

Let’s make sense of the research findings. The priorities I am proposing are the result of my personal reflection on these findings and twenty five years of practical experience as a teacher and a leader in Northern Territory High schools.

The focus is on processes as well as actions. It is about renewal as well as reforms. "Renewal is not about a point in time... it is about continuous inquiry into current practices and principled innovations that might improve education (Sirotnik, 1999, p.1). The goal is to create a new style of school: a ‘learning community’, a ‘community of continuous inquiry and improvement’, that will be flexible enough to prepare youths for a fulfilling life in the 21st century.

(1) We need to challenge old ‘mental models’ about learning and pedagogy. We have to focus on changes at the classroom level and ‘authentic’ pedagogy.
(“Deliver high quality and relevant student learning - Schools focusing on the nature of learning in the context of an information oriented world”).

Mental models about learning
Teachers, at the classroom level, need to reflect on their practice. Many are locked into an outmoded mind set and cling to the past. They need to challenge their own assumptions about learning. They need to be involved in an on going process of inquiry and move away from the industrial way of thinking about learning, teaching and schooling.

Teachers need to familiarise themselves with the developments in cognitive sciences in order to understand the more recent findings on how learning takes place. They should investigate and experience new ways of learning (Refer to appendix 2), apply them to teaching and share them with colleagues. They need to practise appropriate ‘authentic’ pedagogy.

³Schools... Our Focus, Shaping Territory Education, Northern Territory Of Education, 1999.
⁴All references to the NTDE A3 poster will be presented in italics and in brackets. The purpose is to link the NTDE guidelines to my action plan.
Mental models about teaching. ‘Authentic pedagogy’

("Need for professional educators who are adept at teaching through instruction, student experience and the range of all available technologies").

Teachers should be concerned with the intellectual quality of students’ learning rather than being interested in just covering content. The focus should not be on ‘seat time’ but on students’ active learning: learning for understanding, learning in context. Beside educating students to be knowledgeable, teachers want to be able to develop in their students certain habits of mind, to form creative thinkers that will be able to avoid dependence.

Teachers should no longer be ‘telling’, lecturing, imparting knowledge but, following a ‘constructivist’ perspective, with their students they should be creators of knowledge. Active learning is not to be used as a cop-out either, with complete avoidance of direct instruction. We can’t wait for children to discover everything on their own! There is a need for balance.

Teachers need to plan and should be using many different teaching strategies, ensuring that all students experience success. The ‘Multiple Intelligences theory’ could serve as a basis for planning these strategies. The use of Information Technology must be a major strategy for improving learning outcomes. I believe that with strategic planning and teachers’ professional development, computers are going to revolutionise learning and teaching (Refer to appendix 3).

Practical applications should be integrated with learning as far as feasible. For example, students could make products, provide services that are sold to the community; e.g.: making wooden tables; preparing food; training the community in computer skills; gardening etc. They could be paid for working through the school and even for the school, instead of working for Woolworths or McDonalds!

Changing the curriculum

("rationalise and prioritise curriculum material - Review assessment procedures")

The curriculum has to be reviewed in terms of content, connections as well as assessment procedures. It has to be more relevant to the needs of the different groups. Curriculum content has to be reduced to relevant purposeful elements of knowledge. Students need to learn what is important in life, “what’s matters”, to remember Deborah Meier’s lessons. Curriculum documents need to be simplified in order to be readily understandable to teachers.

There is a need for teaching for corrections, balance and for developing the skills youths need for the future (Refer to section 1). There is a need to ensure all students are successful, to give them faith in themselves and their abilities and provide them with the belief they have the power to create their own future and that they have the power to contribute more generally. We need to give them hope.

We claim to be giving students key skills and knowledge and yet we deny them the one thing that is essential for their survival: something to live for. All the curriculum units in drug awareness, gang prevention and mental health together are not worth that single hopeful thing. (Ayers, 1993, pp. 15-18).
We need to change the culture of schools.

Schools should become 'learning communities', 'communities of continuous inquiry and improvement'. Our focus should be changing people, before structures. We need to motivate, inspire, push and support people to change.

("Students and teachers as life long learners" - "Schools preparing children for life long learning").

Reforms cannot succeed when implemented within a conservative framework. The more we push and the more the system pushes back. The best possible innovations will fail when implemented in the old environment.

From bureaucracies and hierarchies to 'learning communities'

Schools need flexibility to operate so they can adjust to changes, create changes, love changes. Peter Senge (1992), Shirley Hord (1996) and others have provided us with information on what learning organisations look like and what spectacular results they can achieve. Central Park East is an example of such a learning community.

We cannot have 'learning' students without 'learning' teachers. Both 'inner' and 'outer learning' need to be developed (Fullan, 1994). 'Inner learning' refers to personal reflection, what Senge calls 'personal mastery', or intra personal sense making. 'Outer learning' refers to learning from others through collaboration, teamwork, modelling, and of course traditional inservices and formal studies. This involves a new concept of teachers' professional development.

The role of the principal is central to changing the culture of the school, to build a learning organisation where people are in a learning mode, trying to understand complexities, clarifying their visions, improving their knowledge and skills. Leaders should be "designers, stewards and teachers" (Senge, 1992). ("Structure of the Department of Education: Devolved - Based on responsibility and trust - Co-operative with shared vision and values")

-As designers, leaders have to keep the general direction of the organisation while at the same time allowing freedom and initiative to all members of the organisation. Patrick Duignan (1997) refers to 'the dance of leadership'. They need to provide pressure as well as support, since without pressure, nothing happens, is very slow to happen or is not maintained. They have to manage that organisation. They have to make the organisation work in practice.

-As stewards, they need to always refer to the bigger picture and have the ability to reconcile different opinions, divergent agendas.

-As teachers, they help others to learn. They are mentors and coaches. They can conceptualise their views and enable others to challenge these views and collaboratively improve the organisation. They have to share power.

Good leaders are no longer characterised by their brilliance, eloquence, the status, but by their depth of understanding, their commitment to values, their visions for the school, their persuasiveness, the high level of their expectations from all members of staff, their persistence in achieving the goals of the school and their openness. Leaders are not on a pedestal. They are learners too - but they have already developed a fair amount of personal mastery and as such can help others to grow. Essentially, they need to have strong intra-personal and inter-personal skills, not only academic credentials!
We need to facilitate the change process. We need to ‘maximise and reorganise energies’ (Ashenden, 1994), changing structures and re-organising the work place.

The goal is to ‘work smarter not harder’. Again both pressure and support are needed. One has to accept that the process will be slow, but it should not be too slow! What is important is to develop and maintain the continuous spirit of inquiry and improvement we have just described. Procedures and policies that facilitate this type of spirit must be put in place. Working in teams for example is an absolute necessity: working together means including students, parents, teachers, policy makers, researchers, administrators.

We have learned from the research (remember the efforts of the National School Network) (1) that changing schools structures cannot be done in isolation from other factors for improvement, like ‘authentic learning’, ‘authentic pedagogy’ and change of school culture. (2) It has to be done progressively. (3) Resistance is very strong particularly when changes start to affect teachers personally: e.g. by altering the mix and deployment of staff.

**Changing Time arrangements and students’ grouping**

Time is the most important resource for students and teachers. Teachers need time for reflection, for collaborative planning, for professional development. Time is essential if teachers are to develop interactive professionalism and to be involved in continuous learning and improvement. Students need time for doing different types of activities: extra curricular/ tutorials/ outside school involvement, etc. Therefore school administrators should view changing time arrangements as a priority. Taking action can start by looking at areas of least resistance. Major innovations will have to be considered by the whole school community through the process of inquiry and improvement.

Students’ groupings

This is probably an area where the most innovations have taken place: e.g. vertical time tabling, pastoral care groups and sub -schools.

The review of time and students grouping involve time-table changes. Some further alternatives involve teaching teams, learning centres, learning projects, tutorials, extended lessons and regrouping more academic learning to morning sessions etc. Documentation is quite extensive so I will not expand any further on the topic. Central Park East, in New York City, is a good example of flexible use of time and groupings.

**New roles in schools**

We need to empower students, teachers and parents and to maximise energies within the school.

**Empowering Students**

Students should play a major role in changing schools. They are probably the one that are the most receptive to change; their mental models are not as strongly internalised that those of adults. I view them as the most effective change agents, if they are given the power to do so. We have seen how they should be empowered at the classroom level. They should also have a say in many aspects of the school organisation. We have to model at school the way we would like students to operate as adults. We have to train them for the skills they will need in the future.
Students need to be able to question their school’s structure, mode of operation and work towards its improvement in collaboration with all members of the school community.

**Empowering teachers** ("Teachers feel valued and respected")
Teachers must be able to undertake new leadership roles according to their abilities and interests. It is the responsibility of the principal to use his or her staff’s strengths for the best of the school. They must be involved in decision making and their professional development should be viewed as a form of empowerment. Professional Development is therefore a priority and resources should be channelled in that direction.

**Empowering parents** ("Parents are essential partners in education")
A number of parents have skills and knowledge in their own specialisation equal or superior to those of teachers and as parents they are educators, on a daily basis. Of course they will be the first ones to acknowledge teachers’ expertise but they must be given power in order to become effective partners in the education of their children. At present, they have the legislative power but not the ‘real’ power. This must change. Obviously meeting two hours, once a month, at Council Meetings is not the ideal situation for action. More regular meetings are needed and I recommend that parents be paid for their involvement.

Empowering students, teachers and parents brings about the issue of decision making processes. I do not suggest a culture of teenagers who are doing what they want, without a framework of responsibilities. In the same fashion, I do not favour constant decision making in the hands of teachers, as this can lead to mediocrity and group think. Consensus is not always possible nor desirable. The responsibility for final decision remains with the Principal.

**Need to change the staffing profile.**
The staffing profile in schools should be different. **Para-professionals** should be used for tasks that do not require the same level of specialisation that teaching requires. They should also assist with skills that do not belong to the traditional teacher training. As a result teachers could focus on the more essential professional duties such as giving time to teachers for collaborative involvement and professional development. Schools could become more like hospitals, where assistant teachers like nurses assist highly qualified, well paid professionals.

This type of change has received the most resistance, in the past. The unsuccessful attempts of the National School Project are an example of that resistance. Teachers’ attitude to change is linked to the way change affects them personally. No doubt, teachers and unions have opposed and will continue to oppose this type of approach because they feel threatened in their jobs. Action needs to be taken, though! A teacher shortage, nation wide, could be a trigger.

**A two-way movement between teaching and business / industry.** ("Schools working in partnership with community and business")
Teachers should be given more opportunities to work in industry, in the same way people in industry may wish to spend some time in schools.

Changing jobs is going to be a characteristic of the post-industrial age. Charles Handy (1989) describes the concept of the portfolio occupational pattern. "In this version, one’s occupation is ‘a collection of bits and pieces of work for different clients’ (Handy, cited in Hargreaves, 1994, p.26). ‘Portfolio teachers’, with their wealth of experience, would contribute positively to the life of schools.
Other aspects of the school climate require attention.

Attention needs to be given to the ‘school morale’. Schools need to be more interesting and fulfilling places for both teachers and learners. There is a link between teachers’ lack of job satisfaction and students’ lack of interest in schools. I strongly believe that there cannot be happy children, in unhappy families. In the same way, we cannot have successful, balanced students, in dysfunctional schools. In the ‘Schools of the Future’ in Victoria, the regular measurement of staff and students’ morale is part the accountability mechanisms put in place at the departmental level. This the way to go.

As previously mentioned, emotional well being is crucial for learning. Students and staff need to work in a safe environment where they feel valued and respected. Principals have a major role to play in promoting quality relationships within the school. When relationships break down, the unity and purpose of the group disappear.

The physical lay-out of the school, the school size, the facilities are also factors contributing to the well-being of the school community, and I am sure there are others, which I am not mentioning here.

Where to start?
How to implement priorities? Some guidelines.

A blue-print for action would be inappropriate. As the research has pointed out, big master plans, mandated from the top, do not work.

No one has the answer... Education is a collegial collaborative enterprise and no one person, group, organisation or government has the answer (Mulford, p.38).

What is frightening about the research sometimes, is that it can prevent action! However, someone, somehow, has to start and pursue the process! This someone, most likely, will be in a leadership position - the principal or a vice-principal. But teachers are leaders too, so really anyone or any group who feel a sense of urgency and has faith in the future could start a change process. In that case, the principal must be supportive.

We need to merge the big picture, the search for purpose, meaning, understanding and ‘Monday morning’! Each school context is different. So Monday morning in school X is different from Monday morning in school Y, and individuals, groups are at different stages of understanding and development. Sometimes, circumstances can provide an excellent trigger: For example, a school in real crisis with falling enrolments, or with major behaviour problems or catastrophic results. Of course, the need to find the best way to implement the new guidelines from the Northern Territory Department of Education can be a good start. The NTDE can push for changes and can require evidence that changes are actually taking place in schools.

Although presented in a linear fashion, the steps suggested for action should be integrated. There is a need to work simultaneously on individual and institutional development to ‘dance’ with ‘various forces’, contradictions, possibilities.

The goal is to change the culture of the school as well as restructuring, to create a learning community where inquiry and improvement are inbuilt in the daily life of the school and where the focus is on learning, teaching and improved students outcomes.
Professional development (“Professional Development devolved and focused on school based model”)

Professional Development (PD) needs to be placed at the top of the agenda but this is a new type of P.D., one which motivates people to inquire, to learn, to develop ‘personal mastery’. This will lead to group mastery and a cultural change. The focus is on changing mindsets, challenging assumptions, particularly about learning and pedagogy.

Leaders need to communicate what they feel, think, know and believe. They should promote discussion, reflection, and invite others within the school or outside the school to do the same.

- They should motivate staff by creating a sense of urgency and by appealing to people deep need for moral purpose.
- They need to "heal the heart"! People need to understand that others experience the same uncertainties, perhaps distress as themselves.
- Personal purpose and vision have to be developed. This will lead ultimately to shared vision. How can this be achieved? A leader can mobilise the energies of teachers who wanted to do things differently and get them talking together about things that matter. Leaders need to stimulate reflection on the purpose of teaching, by asking questions such as “Why did I decide to teach? What difference can I make in the life of students?”
- Leaders need to develop understanding. Systems are complex but strength comes from understanding. Teachers need a deeper understanding of the forces that are surrounding them, to visualise the big picture in order to rediscover meaning and purpose. New cases of understanding that challenge their mind sets could be brought to their attention:
  * New theories about authentic learning and authentic pedagogy.
  * Forces that are shaping our future.
  * Skills needed for students.
  * Research findings on school effectiveness, school improvement, the change process.

Leaders should present what they value, their own vision, introduce research findings and challenge staff to discuss, generate input and clarify their own vision. The goal is to develop personal mastery, challenge mind sets and improve professionalism. Teachers need to understand the deep reasons why they should be involved in changes, like their students they need to be involved with “things that matters” (Meier, 1993).

At the same time, there is a need to start by acting to model learning to become a community of continuous inquiry and improvement in context, by promoting 'work in teams'.

We need to start with small manageable initiatives that can produce concrete results that will sustain the change process. Isolated pockets of action through small projects modelling new behaviours can lead to new thinking and eventually greater changes. Trial and error comes before ideology. Group vision and strategic planning are essential but come later, not in a too late future though! The focus should be on learning and pedagogy (e.g.: Questioning and reviewing existing learning or assessment policies).

The focus should be on a change of culture, the development of a ‘Learning community’. Continuous action is needed. For example:

- The promotion of interactive professionalism.
- The review of decision making processes where students, parents and teachers are involved in making decisions.
- The organisation of priorities for action with the members of the school community linked to the school development plan.
- The agreement on a common vision.
The vision and the plan must be simple - a few guiding principles - therefore in everybody’s mind rather than in the principal’s office handbook! However, more detailed, well documented planning is necessary.

Re-culturing will lead eventually to restructuring. Efforts will be contagious. Change cannot be mandated, but leaders can push ‘hard’ for change.

(4) It is necessary to build on existing strengths, needs and to use platforms for changes, points of high leverage for change. This is the key for changing schools. Then, we can slowly start shifting towards more flexible organisational structures.

Structures and cultures are hard to change and have incredible capacities to maintain the status quo, to reproduce themselves despite surface change. Looking for ‘points of high leverage’ (Senge, 1992) is a key strategy to bring about changes.

I recommend the following:
- Students and parents’ involvement
- School specialisation
- Use of Information Technology
- Use of flexible delivery services for education beside the home school
- The use of a coming teachers’ shortage.

- Active Students’ and parents’ involvement
Students and parents can be key change agents if they are given power to participate in the improvement effort. As a result they will counteract teachers’ resistance to change.

- Specialisation of schools and increased parental choice
School specialisation should be promoted; Curriculum or ideological specialisation. I am not suggesting the end of the comprehensive principle based on access to common curriculum by all children. We should not go back to the old model of differentiation between grammar schools, technical schools, ‘modern’ high schools where the selection was done according to academic ability at the start of high school and where students not accepted into grammar schools viewed themselves as failure. Anyway, the National curriculum will continue to support breadth and balance in the curriculum.

Specialised schools could attract students with special types of interests and motivation. These schools with more staff in the selected area could become centres of innovations in curriculum and pedagogy. They could be centres for the professional development of other teachers in the field. More importantly, they could start contracting out their services to other educational institutions and the community by at first having students coming to their location and later on offering ‘virtual’ teaching delivery. This in one way to break the traditional mould! This is a step toward a new type of school.

This would give choice to parents, students but also to teachers. Teachers’ choice of school is important as it increases commitment and assist the promotion of a common vision for the school. Deborah Meier’s Central Park East had an ideological specialisation based on five learning and teaching principles and all teachers were volunteers.

Such an attempt was promoted in Darwin by the NTDE, when some Junior High schools regained the senior component of their school. Unfortunately the specialisations remained largely on paper! More pressure at the Departmental level was needed to ensure schools’ commitment and accountability. The charter model approach
of the Schools of the Future in Victoria, which involves regular review and evaluation mechanisms seems to be the way to go. I believe school specialisation can be achieved.

• Information Technology
The potential of I.T. in schools is enormous, not only as a new tool for learning but as a change agent for ways things are done in schools (For further information, please refer to appendix 3).

At present this potential has yet to be realised. Either there are not enough computers to make a difference, or teachers don’t know how to use the new tool and I.T. is used in ways that reinforce old practices!
- I.T. has the power to motivate students. It can make learning more enjoyable, in a less judgmental environment for all students and particularly for those at ‘at risk’, teachers find so difficult to motivate.
- With I.T., individual needs and interests can be met.
- I.T. offers potential for effective group work and promotes co-operative learning
- I.T. presents students with immediate access to a rich source of materials. Students become active learners. They can have access to information independently of their teachers. Teachers are no longer the main transmitters of knowledge. They have more time, now, to focus on how information can be processed by students and transformed into knowledge and understanding.
- I.T. enables students to correspond at a distance with peers, teachers, tutors.
- I.T. can enable students to work in other locations than the school.

Not everyone agrees, of course, with the potential of the new tool. But I remember the same attitude towards change when the biro started to replace the pen and ink approach to writing! I believe that I.T. is going to be a powerful change platform in schools, if implemented adequately and in association with other change agents.

• Flexibility of education delivery: Role of Vocational Education, Distance Education and Specialist schools like ‘The School of Languages’.

At present, with the development of vocational education students spend some of their time off site. Another move towards breaking the mould! This is very positive for students. No longer do they belong to a teenager culture in schools. Access to the world of work not only provides them with specific training, but allows them to interact with adults.

It is quite outrageous to still find in high schools, teachers responsible for ‘classes’ of five or eight students, on the grounds that students have selected a subject offered by the school, but now this subject attracts small enrolment! The concept of teachers teaching classes has to be replaced by one of teachers monitoring the learning of a substantial number of students. In fact one day Teachers may be lecturing one hundred, two hundred students through a virtual class room. Small groups of students wishing to pursue specialised courses (e.g., Advanced Mathematics, LOTE) can enrol already at present through distance Education and The School of Languages. These service providers are going to be a platform for change as education will be forced off campus. This will empower students and break the mould of control schools continue to impose on students. New policies and procedures have to be created to address these new needs. Another force teachers and schools cannot resist!
• **Issue of teacher’s shortage.**
This is another current that is going to push for changes, despite the resistance of teachers’ unions. New forms of entry to teaching, school based teacher training, part time teachers, ‘portfolio teachers’, use of para-professionals will provide an answer.

5) Progress needs to be assessed regularly. **Evaluation and accountability mechanisms must be put in place.**

Delegation, empowerment do not mean full freedom. It means freedom within a serious accountability framework, not one which serves just as a facade! **Ultimately, leaders are responsible for the actions of those to whom they delegate.** Evaluation is also essential, especially when there is a need to assess changes and their effectiveness.
Recommendations to System Administrators:

As already outlined in the previous section, many suggestions for action are matching the present vision, goals and action plan from the NTDE. However, further recommendations are now presented as well as a summary for action. The support of the Department in these areas is essential if real changes are to take place in schools.

(1) Need to push for changes in the areas that schools can use as platforms for change.

- **School's specialisation.** (Refer to p. 49).
  Specialisation is not to be only on paper, in a school handbook or an annual report, it has to be real. Schools need to actively demonstrate their area of specialisation to the community, the Department through specific policies, organisational structure, budget commitments, results.

- **Information Technology.** (Refer to p. 50 and appendix 3)
  The new tool must be used to do things differently, not to reinforce old practices.

- **Off campus teaching delivery.** (Refer to p. 50)
  It should be promoted to start with in the Senior school. Classes of three or five should not be allowed to run! The feasibility of having virtual classrooms needs urgent attention.

- **Active students and parents' involvement.** Real involvement. Parents could be paid for their involvement.

- **Teachers' shortage:** Use of para-professionals, ‘portfolio’ teachers. (Refer to p. 46).

(2) Need to enhance the status of teachers in the community, by raising standards and performance levels for both teachers and students

Teachers are widely criticised by the public, by the students. Very few of our high school leavers are now interested in a teaching career. We all know the cliche: ‘Those who can, do - those who can’t, teach!’. This is unfair for many of my colleagues who are ‘top’ professionals, but in a sense educators have brought this attitude upon themselves by failing to change, failing to meet the needs of many students and parents.

- There is a need for **fewer professionals, well paid, under contract, assisted by a number of para-professionals.** These new style of professionals should regain the respect they deserve. Schools staffing could be organised like in hospitals (Refer to p. 31).
The problem of ineffective Principals and ineffective teachers needs to be addressed openly and urgently. In the past this issue has been placed in the 'hard basket'! Radical action must be taken. Strategies must be found. Despite encouragement, support, professional development, a small but powerful group of ineffective principals or teachers have found a niche within the system. They have a great negative impact on the system, greater than non school staff may realise. Their departure would improve overall performance in a big way. These comments are not made lightly. After many years of experience trying to support, change a few people, I cannot but conclude sadly: Some people just do not change!

All teachers should be on five-years renewable contracts and performance related salary. For leaders, the contract should be much shorter. Performance needs to be assessed regularly.

Effective accountability mechanisms must be put in place:
- For schools: The approach taken by Victoria with the 'Schools of the Future' seems to be the way to go (Refer to pp. 22-23).
- For Principals: There is a need for evidence of adequate skills and performance in leading the change process. e.g.: Creating a community of continuous inquiry and improvement - Empowering students, parents, teachers. (Refer to p. 44).
- For Teachers: There must be evidence that 'authentic learning' and 'authentic pedagogy' are taking place.

Peer Assessment should be reviewed. In a community as small as the N.T., this system promotes a mateship approach! If maintained, Peer Assessment should represent only one aspect of the assessment of teachers' performance. For recruitment, promotional positions, independent recruitment agencies could be used.

(3) Professional Development is a priority (Refer to p. 48)

Learning communities, communities of inquiry and improvement can have an in-built, on campus approach to P.D. However, time for P.D must be integrated in teachers' professional duties, besides teaching. Time must be set aside for that purpose. Part of a teacher's contract should include participation to PD activities with reports and evidence of impact - not only time off face to face teaching! The effectiveness of P.D. needs to be measured in some way.

(4) Need to review the curriculum, in terms of content, relevance, connections in order to provide students with the skills needed for the future. (Refer to pp.42-43).

(5) Need to review students groupings and the school time-table. (Refer to p. 45).
Conclusion

Well, now I have finished an important lap in my journey, that journey of understanding and self discovery. I have managed to make some sense of all these forces, relationships, interactions, connections, processes. I "can see the forest and I can see the trees". I can visualise some directions for the future and I can see many options for the present. And this is giving me a lot of strength and hope.

Schools need to change, urgently. Reforms have failed time and time again! Is this going to continue for twenty more years - another generation?

Researchers tend to promote a balanced approach between the past and the future. They talk about balance, tension between top-down and bottom-up changes, leadership from the centre... Of course, I tend to understand. But as a leader, I believe we should realise that such approach is static. We have to dance with contradictions, oppositions, but somehow we also have to put pressure, we have to force the change process despite all the groups that are resisting it. We have to put our weight on the side of the future. Only then we will get thing moving. We cannot waste another generation!

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Appendix 1

A new style of enterprise - applications to schools:

Osborne and Gaebler (1983) propose 10 points as a set of suggestions for administrators and leaders:

- Steering rather than rowing. Make things happen rather than carry out the function itself. The central office is a facilitating agent. Instead of controlling, it coordinates and deals with strategic decisions for the whole, long range planning, articulation of the system, global budget. It organises quality controls, staff development and manages the company's culture.

- Empowering rather than serving. Power is devolved to schools (with adequate controls).

- Injecting competition into service delivery. Schools in this system should be different from each other: "Competition implies choice and choice implies variety".

- Mission driven government. School communities are to select their mission, define their goals in a sort of 'charter'.

- Results-oriented government. The school is driven by outcomes. Providing these outcomes are met, the means used are irrelevant. External audits measure the degree of success.

- Satisfy the customer, not the bureaucracy. School councils should have real governance power.

- Earning rather than spending: hiring out facilities, selling staff's expertise in consultancies, inventing new uses for and services within the school resources.

- Prevention rather than cure. Long-term planning is essential instead of short-term management which very often turns into crisis management.

- Decentralised government. "The authoritarian controlling military-discipline principal has no place in the system". Emphasis is on team work, professionalism, participation, sharing power and responsibility.

- Market oriented schooling. Schools no longer have their enrolment guaranteed, from one year to the next. The notion of 'zoning' has disappeared and parents 'shop around' to choose the 'best school.'
Theories about learning

I refer to an interesting article from Marchese (1998) who summarises research findings.

• The potential to learn is innate in all humans. All children can learn and learning should be enjoyable. Unfortunately,

> every child, on the first day he sets foot in a school building, is smarter, more curious, less afraid of what he does not know, better at finding and figuring things out, more confident, resourceful, persistent and independent that he will ever again be in his schooling.

(Holt, 1971, quoted in Middleton & Hill, 1996, p.40)

• The capacity to learn is not fixed and learning takes place all life long. The brain is remarkably plastic across the life span and is therefore able to realise new capacities in response to new experiences. The more stimulation we get, the more we can learn.

> There is absolutely no doubt that culture changes brains... and that children's mind are changing... Whatever they are learning, as those nerves are getting input, they are sending out dendrite branches. As long as stimuli comes in a certain area, you get more branching; if you lose the stimuli, they stop branching. It is the pattern of branching that differentiates among us. The cortex is changing all the time - I call it the dance of the neurones.

(Diamond, 1990, quoted in Middleman & Hill, 1996, p.85)

• Learning takes place in context:

> Important knowledge cannot be abstracted from the situations in which it is learned and used, knowledge is ever a part of a particular activity, context and culture... activity and perception [are placed] before conceptual representation - not the other way around, as it is in the classroom.

(Marchese, 1998, p.16)

Brown, Collins & Duguid refers to some sort of ‘cognitive apprenticeships’. They compare how new comers to a work place tend to refer to laws, textbooks knowledge, while experienced workers reason from stories. “There are a whole set of narratives at play in any work place that allow people to pass on information, share discoveries and know how things really get done” (Marchese, 1996, p.16).

• Learners do not simply absorb knowledge, they create knowledge according to their own past experiences, emotions and the elements they scan in the environment. The learner is an active agent in the learning process. Teachers facilitate learning. Marchese (1998, p.18) differentiates between ‘surface learning’ and ‘deep learning’. He prefers this terminology rather than the traditional ‘passive’ versus ‘active learning’. Deep learning involves understanding, search for meaning, while ‘surface learning’ deals with cramming facts, formulas and concepts without real engagement. Courses that promote ‘surface’ learning are concerned about coverage, students have little opportunity to study topics in depth, they have little choice on what and how to study.
Human beings have different types of intelligence. Howard Gardner in his theory of Multiple Intelligence propose seven forms of intelligence. He lists musical, spatial, bodily-kinaesthetic, intra-personal and inter personal intelligence beside the traditional linguistic and logical- mathematical intelligence which are at the centre of academic achievement. However, schools continue to operate with a narrow definition of ability and achievement. Academic success is viewed as the only type of success.

The theory of Multiple Intelligence can serve as a template in constructing strategies for student success.

(Armstrong, 1995)

People learn in different ways. Teachers need to accommodate different learning styles through different teaching strategies.

Emotional well-being is essential to intellectual functioning. Complex learning is enhanced by challenge and inhibited by threat. High expectations for all learners are important. “When we treat people as though they are capable of greatness... then they will tend to grow into greatness” (Middleton & Hill, 1996, p.91).

Relationships are crucial.
Appendix 3

Information Technology, the new tool for learning and teaching.

I. T. is going to be a powerful change platform in schools, if implemented adequately and in association with other change agents. For Papert (1993, p.21), reformers in education have failed because they did not have the right tool: "It was like if Leonardo da Vinci had tried to make an aeroplane out of oak and power it with a mule." I.T., we like it or not, is definitely the new tool.

• I.T. has the power to motivate students. It can make learning more enjoyable, in a less judgmental environment. Teachers have major difficulties in motivating the group of 'at risk' students who experience failure, in the traditional classroom.

    Computer games motivate and challenge, they do not lower their expectations because of the perceived background of the player. If the game is hard, the machine frustrates, but is far less likely than a teacher to humiliate.

    (Hargreaves, 1994, p.41)

    No longer do students refuse to start with pen and paper, knowing they can’t compete with their peers... and fear being exposed to their peers and as result display ‘bravado’ type of behaviours.
    It is cool to be using a computer. Only the computer knows when he makes a mistake.
    With sensitive coaching by a skilled teacher, technology becomes a valuable tool for students with learning difficulties whether those difficulties are cognitive or social or both.

    (Middleton & Hill, 1996, p.118)

By using computers, students feels important, and this feeling of importance is a motivation in itself. They can use a technology that sometimes their teachers are not familiar with! This is a head start!

• With I.T., individual needs and interests can be met. Students show higher levels of perseverance and a willingness to take risks. Students' level of success can be enhanced.

• I.T. offers potential for effective group work and promotes co-operative learning, the type of competency needed in the future.

• Computer Assisted Instruction is one aspect of the use of computers in schools. Here, the computer is viewed as an instructional tool. Software is developed to teach or re-develop certain skills.

• I.T. presents students with immediate access to a rich source of materials.

    Instead of formal learning being an aggregate of accumulated subject content, I.T. has the potential to develop learners who can think by themselves and who can make the type of integrated meaning from their learning which will allow them to act in an ambivalent world where the achievement of personal and national destinies requires insights beyond the ability to regurgitate information on demand or to mimic other people words.

    (Middleton & Hill, 1996, p.117)
Students become active learners. They look for information, they take the initiative. They are seekers of information rather than simply receivers. They can have access to information independently of their teacher. Teachers are no longer the main transmitters of knowledge. They have more time, now, to focus on how information can be processed by students and transformed into knowledge and understanding.

No better opportunity has existed for teachers to model learning together with their students. Technology can thus be an important and unique catalyst for a collaborative pedagogy.

( Middleton & Hill, 1996, p.118)

• I.T. enables students to correspond at a distance with peers, teachers, tutors. Interactive learning through networks is possible.

• There are new ways we can organise the classrooms and work stations. I.T. can enable students to work in other location than the school, for example from home. Still students can remain in touch with their teachers and fellow students.

Here are the seeds of a major challenge to teachers’ monopoly over teaching. They should respond to the challenge by ‘contracting out’ pedagogic activities and functions to a whole range of new agencies, some community based and others based in the world of work.

( Hargreaves, 1994, p.41)
Appendix 4

A mental image of what a school in the 21st century may look like

As Andy Hargreaves (1994. p.53) points out: “debating what schools should be like might influence what they will become”.

Schools for the next century should:

- be smaller, differentiated and specialised, giving more choice to students, parents and teachers.
- be independent institutions, financed on the basis of a national formula, accountable to parents.
- be committed ... for school improvement, to quality assurance and ‘total quality’ schemes in place of traditional school inspections.
- be staffed and managed in new ways by a wider range of personnel and by a richer variety of teachers.
- have a head teacher as professional but with a professional manager in charge of administration.
- have a core of full-time, highly trained professional teachers, on five year renewable contracts, supported by a range of assistant teachers and part-time teachers who also work in other fields.
- contract out substantial parts of their teaching function, so that secondary pupils spend less time at school.
- be permeable to their community, to business and the world of working adults so that the boundaries between school and the outside world weaken.
- be committed to civic education for a cohesive and pluralistic society.
- be guided in their policies and practice by substantially better research conducted by selected research centres in close association with schools.
- be better equipped with the new interactive technologies.

(Hargreaves, 1994, p.54)
Appendix 5

A few words to teachers

You did not have the opportunity to travel with me but my travelling journal, I hope, will help you to start your own journey and assist you in your quest for understanding.

I have organised some priorities and prepared a few guidelines for changes. All this, is now in your hands: students, parents, teachers and leaders. Now it is time to choose! The choice is yours, mine, ours. We can choose what we truly want. My journey continues with you, and I have still a lot to learn with you, from you.

To go back to Peter Senge (1992, p.360)

Whether it is an organisation of three or three thousand matters not. Only through choice does an individual come to be the steward of a larger vision... Being in a supportive environment can help, but it does not obviate the need for choice. Learning can be built only by individuals who put their life spirit into the task.

Now, what I really ask you to do, is to put 'your life spirit' into the task, with me. Our future, the future of our children is in our hands.

...