Futures in Education

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ABOUT THE AUSTRALIAN FORESIGHT INSTITUTE

The Australian Foresight Institute (AFI) is situated in Swinburne University of Technology, Melbourne, Australia. AFI is a specialised research and postgraduate teaching unit. It was established in 1999 to develop an innovative set of postgraduate programs and research in the area of applied foresight. Apart from supporting the University in developing its own forward-looking strategies, its main aims are to:

- provide a global resource centre for strategic foresight
- create and deliver world class professional programs
- carry out original research into the nature and uses of foresight
- focus on the implementation of foresight in organisations
- work toward the emergence of social foresight in Australia.

AFI is intensively networked around the world with leading futures/foresight organisations and practitioners. These include World Future Society and the World Futures Studies Federation. In 2001, the Director of AFI was elected as President, World Futures Studies Federation. AFI therefore, has access to leading international expertise in the field.

AFI also offers a nested suite of postgraduate programs. Based on coursework, the programs are offered through the Australian Graduate School of Entrepreneurship at the University.

Overall AFI aims to set new standards internationally and to facilitate the emergence of a new generation of foresight practitioners in Australia. It offers a challenging, stimulating and innovative work environment and exceptionally productive programs for its students who come from many different types of organisations.

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COVER ART – *In Fractal Cycles We Go Round*

Designed by Dr Cameron Jones, Chancellery Research Fellow,
School of Mathematical Sciences.

These images were generated as part of The Molecular Media Project, that is concerned with science-driven art and design. This work is a meditation on space and time, and how events are partitioned across many different scales: real, imaginary and complex.

Futures in Education:
Principles, practice and potential

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RICHARD A SLAUGHTER

INTRODUCTION

The notion of teaching and learning explicitly about futures in education is not new. It is well over thirty years since the first school and college classes were held. Since then many hundreds of school based innovations have subjected these initial ideas and practices to a variety of iterations and tests. What they collectively tell us is that young people are passionately interested in their own futures, and that of the society in which they live. They universally 'jump at the chance' to study something with such intrinsic interest that also intersects with their own life interests in so many ways. Will I get a job? Will the environment collapse? Will machines overrun us? These are some of the starting questions that often arise and, moreover, they are reinforced and answered (not always in useful or accessible ways) in popular culture. A common result is that young people become discouraged from even considering such questions; they rapidly fall into the 'too hard' basket.

For teachers and schools, on the other hand, teaching about futures can either be deeply inspiring or profoundly threatening. Many would-be innovations have foundered on the rocks of 'there's no text book'; 'how can you teach it if it (the future) doesn't exist?'; 'there's no room in a crowded syllabus' and 'where will I get

long-term professional support?' The most enduring innovations tend to occur in locations where such questions are posed and then answered – at least for a time. School principals, curriculum coordinators and the occasional enlightened local authority rep can help ensure that such work is properly engaged and supported.

The paradox is this. Over recent decades very many people have seen and experienced first hand just how inspiring, innovative and profoundly useful futures approaches in education can be. Yet over time such innovations remain remarkably rare. You can explain this by factors that account for some of the internal constraints that educators work under, and there is some mileage in that approach. But I think the main reasons for this lack of progress lie elsewhere.

Many innovations that I have known of, or been involved in, worked very well at the school level. But as soon as one moves beyond to the system level everything changes. Here futures in education initiatives seem to vanish like smoke on a windy day and are seen no more. A central reason for this is that school systems are governed, in turn, by two powerful sets of forces that have no interest in education or, indeed, our collective future. Those forces are politics and economics. The other factor is that education, politics and economics are themselves mediated through an ideological framework that has become hegemonic over recent decades.[1] This managerialist, market oriented, growth-addicted approach has actively worked to de-focus and hold back many useful social innovations, including this one. The result is that teachers in schools (and let us not forget, teachers and learners in very many other locations) have been undermined by background forces that all-too-often lie out of sight and unregarded.[2] Bringing futures work in education back into focus and to freshly comprehend its individual and cultural value will not be an easy task. Yet it is a vital step toward a worthwhile future for humankind.

The two pieces of work presented in this monograph were commissioned or supported by the Australian Foresight Institute with the assistance of the Pratt Foundation. They are part of a larger research project into 'Creating and Sustaining Social Foresight'. [3] The AFI was established for a number of purposes, and the pursuit of social foresight is its central over-arching goal.

As other monographs in this series make clear, foresight is a human capacity that allows human beings to order their priorities, navigate a complex 'present' and, furthermore, actively deal with the 'not here' and the 'not yet'. Yet as we move from the individual level to that of organisations, and from there to the social level, so applied foresight becomes increasingly rare. This makes no sense at all in a period of continuing rapid change (some of which is clearly dysfunctional) and a well-known set of serious global problems. In order to make sensible decisions 'we' (i.e., 'we' as individuals, 'we' as

members of organisations and 'we' as members of societies and the world) need to understand and consciously deal with the emerging near-future world. While no small task, it is precisely this that is enabled by high quality foresight work.

It is not possible to move directly from a near-complete lack of social foresight to what might be called an 'effectively installed operating capacity'. So AFI's research program involves four phases, each of which corresponds to a 'layer of capability', as follows.

– Foresight in everyday life.
– Futures concepts and tools.
– Futures methodologies.
– Institutions and applications of foresight.

The work reported here is centrally involved in helping to define what we mean by 'futures or foresight literacy' in schools. One of the keys to creating the foundations of a society-wide foresight capacity is for young people across the board to become familiar with, and use, a range of futures concepts and tools. This creates the capacity for a futures discourse. Equipped with the latter 'the future' ceases to be an abstraction and becomes an active social category brimming with human and social implications.

Jennifer Gidley has had long experience of working with young people in the areas of empowerment and futures. She is also the co-editor of one of the most useful and well-received books in the field, as well as a number of other publications. [4] Her main brief was to review 'what we already know' about futures in education. She has fulfilled the brief to distinction including, for example, quite new insights from an 'Integral Futures' perspective. In so doing she has provided us with an up-to-date overview and reality check regarding this vital work. Drawing on examples and research from many countries she provides us with new insights, as well as vital questions for further work. The bibliography she has assembled is the most complete and up-to-date one currently available.

Caroline Smith and Debra Bateman took a different approach. Their task was to survey what was actually taking place 'on the ground', as it were, in Australian schools. They began by looking at the all-too-common use of implicit futures perspectives and then moved on to consider how futures are (or are not) reflected in curriculum framework documents. Next they considered a number of case studies of specific futures programs and summarised the results under several clear headings. Finally, and central to the whole project, they drew out their conclusions and recommendations for developing futures literacy.

Overall, therefore, the two contributions that comprise this monograph provide a fresh basis to reconsider the value and potential of this vital, yet overlooked, area. It is also a highly significant contribution to the AFI research program. I hope it will be read with diligence by all who care about the futures of education, young people and our world. Futures in education provide young people with essential motivation and a range of proactive skills. They provide teachers with vital new options and perspectives. They provide education systems with a chance to transcend mere managerialism, market forces and a common preoccupation with technology per se. These are significant gifts to a world that currently still remains locked into a short term modus operandi that puts all our futures at risk.

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Richard A Slaughter
Melbourne
May 2004

1 Futures/Foresight in Education at Primary and Secondary Levels:

A Literature Review and Research Task Analysis

JENNIFER M GIDLEY

INTRODUCTION

The scope of the 'futures in education' research to date includes three major areas:

- the research with young people (mostly in school settings) which explores their views and visions of the future,
- the actual teaching of futures concepts, tools and processes in school settings,
- the speculative research into transformative educational models and approaches which have futures/foresight thinking as part of their worldview

The first of these areas provides a context for how young people see themselves in regard to 'the future' and why 'futures' processes are so valuable for them. The second will include an analysis of the current 'state of play' in futures education in schools and also some examples of 'good practice' at the primary and secondary levels. The third area points to a possible future of futures education which goes beyond 'futures' as isolated lessons or subjects to where foresight is part of the meme rather than an 'add-on'.

The literature review summarises and discusses the research to date. This is followed by a task analysis which highlights areas of strength and weakness and point to gaps in the research corpus. The implications of the existing theory, research and practice

for developing foresight literacy in the future are then considered. Finally, there is an exploration of ways of conceptualising research in futures education, including the identification of some specific research tasks that could be undertaken in the short to medium term under the auspices of the Australian Foresight Institute.

KEY FUTURES CONCEPTS IN 'FUTURES IN EDUCATION'

Much of the foundational work on the development of futures concepts has been accomplished by Richard Slaughter.[1] He has continued to develop and extend this work over the past decade and any serious approach to futures in education needs to include a study of these sources.[2] It is beyond the scope of this literature review to discuss these in detail. The following list indicates the scope of the territory and the additional sources mentioned provide direction for further study:

- the futures field, consisting of futures research, Futures Studies and futures movements[3]
- prediction, forecasting and foresight[4]
- past, present and future and the extended (200-year) present[5]
- non-Western cultural conceptions of time (Western linear compared with cyclic and spiral)[6]
- creativity and imagination[7]
- alternative futures[8]
- the meta-problem[9]
- cultural editing and mapping[10]
- social futures[11]
- futures fluency (discussed further below).[12]

What follows will be a brief discussion of some additional key futures concepts that emerge strongly from the futures work with young people and in schools.

One future or many futures.

It is most common in everyday discourse to speak of 'the future' as if there were only one possible option as to how 'the future' might be. The encouragement to envision a plurality of 'futures' is a feature of the empowerment oriented Futures Studies research discussed below.

'Probable, possible, preferred and prospective futures'.

As early as 1982, educational futures researchers were identifying different orientations in the future views of young people. Johan Galtung identified three ways of approaching

the future, which he termed 'probable futures', 'possible futures' and desirable or 'preferred' futures all of which are described below.[13] Building on the work of Galtung, Ake Bjerstedt identified a fourth orientation or goal in preparing for the future, which he called preparedness to act, based on self-reliance and solidarity.[14] This 'readiness to act' identified by Bjerstedt is often referred to as 'prospective' futures capacity.

This research raised the possibility that much of the research reporting negative views of the future may be simply expressing young people's fears, despair and pessimism about what they see as the 'probable future'. Galtung and Bjerstedt's research argued for the necessity to provide the opportunity for young people to also explore 'alternative' futures (possible, preferred and even prospective). Following in Bjerstedt's footsteps, Hutchinson also suggested that research relying primarily on survey data may be underpinned by positivist, reductionist views serving actually to 'colonise' young people's views of the future with a pre-set 'one and only fearful future' view.[15] An exploration of how these four future orientations may be related to the types of Futures Studies, and their associated underpinning paradigms is demonstrated in Table One below.

Broad Approach	**Probable**	**Possible**	**Preferred**	**Prospective**
Description	Trend analysis – global, ecological	Imaginative, creative ideas, flexibility	Values position critical, ideological	Will to act, self-reliance, empowerment
Related Types of Futures Studies	Predictive, quantitative, trend is destiny (One future)	Cultural – interpretive, utopian (Many futures)	Critical, post-modernist, ideological (An 'other' future)	Integral, transformational, empowering, (Futuring)
Underpinning Paradigms	Positivist empirical, analytical	Constructivist, interpretive, hermeneutic	Critical, emancipatory	Paradigm shift, transformational, activist
Research Methods	Quantitative, forecasting surveys trend scenarios	Qualitative, dialogues collaborative creative visions	Text analysis, critique of media, cultural artifacts, visioning	Integral, visioning, action planning, action research
Goal	Generalisation extrapolation	Opening alternative possibilities	Critical awareness, deconstruction	Empowerment, change, transformation

Table One: Exploratory Typology of 'Futures in Education' with Young People[16]

The fourth approach attempts to move beyond a classical dualistic or even three paradigm approach to a holistic or integral approach which may increase the chances of empowering the participants. In a more comprehensive typology of Futures Studies as a whole, Slaughter has begun to identify an emerging fourth iteration of the field (Integral Futures) which draws on the Integral research of Ken Wilber and others.[17] The relationship between these frameworks will be discussed in the analysis section below.

Personal vs global futures

When speaking of young people's views of the future a distinction must be made between 'personal futures' and their future images for their country or the world. Since the earliest studies of young people's views of the future, in the seventies, a dissonance has been found between what young people expect in their own lives and how they see the future of their country or the planet.[18] This dissonance is believed by many futurists to result from the continual bombardment of young people's imaginations by the media's presentation of negative, fearful collective futures.[19]

The findings of Johnson's study of 600,000 American school children typifies the gap found between the often conventional, even conservative optimistic view of their personal futures, a rather more negative view of local or national futures, and a decidedly pessimistic and often frightening view of the future of the world from a majority (sixty per cent) of children studied.[20] These findings are supported by much of the Australian research described below.[21] Hicks claims that the more recent research indicates a closing of the gap between optimistic personal futures and pessimistic national/global futures yet his own research with 398 seven - eighteen year olds in the United Kingdom shows the same dissonance as found in earlier studies.[22] The above studies are primarily within the first category of the typology (Table One), with the exception of the work of Hicks and Wilson who take a more critical approach.

In a recent study with young people in Finland, Rubin finds the same personal/global dissonance to exist and takes a critical view of its implications. She describes the optimistic personal future views of the young people in her study who imagine a 'happy, prosperous, safe family life' as being tied to the 1950's and 1960's attitudes which Rubin links to the 'modern' time. She contrasts this with what she calls the 'postmodern' impact on their images of national and global futures, where the future becomes a 'frightening and shapeless entity'.[23] Rubin identifies an extreme dissonance of an unrealistically optimistic dreaming about personal futures that seem oblivious to the changes that are occurring, contrasted with global views that are equally unrealistic, overly pessimistic, consisting of fears, threats and anxieties.

> When these negative concepts of the future of Finland and of the world are placed alongside the positive view of a young person's personal future, confusion follows, and possibly the feeling that control of one's personal life is out of reach, and this can easily lead to growing alienation and indifference.[24]

Optimism and pessimism – problematic indicators

Before attempting to review the studies on youth views of the future it is also important to problematise the frequently used terms of optimism and pessimism about the future. The complexities of the optimism/pessimism dimension are highlighted in terms of the images of the future presented in schools. If the images of the future presented are either overly optimistic or overly pessimist they may lead to disempowerment.[25] It is argued by Eckersley and Hutchinson that the negative and colonising images of the future continually presented to young people through the media and educational artifacts, such as text books are potentially disempowering.[26] This paradox was first recognised and discussed by Slaughter in the first edition of his Futures Tools and Techniques:

> It is true that pessimism may lead to despair. However, it may also stimulate a person to search for effective solutions. On the other hand, optimism may leave an individual's energy free for constructive projects or it may encourage bland, unhelpful, business-as-usual attitudes. In both cases the human response is crucial. Optimism and pessimism can both inhibit and encourage effective responses.[27]

In a section of this book entitled 'Dealing with Fears', there are numerous strategies described for supporting young people in these difficult times. These include 'changing fears to motivation, exploring social innovations, surviving media manipulation, conceptualising more advanced forms of social and economic life', e.g. what would 'an economics of kindness or wisdom' look like?[28]

In Table Two Hutchinson, reflecting on these paradoxes, examines a two-dimensional approach to optimism and pessimism which explores them in relation to what he calls an actor-oriented dimension which incorporates inherent views on human agency (influence optimism) versus structural imperatives (influence pessimism).

Dimensions	Optimism	Pessimism
Broad Ontological Category	**Essence-optimism about the 'future'**	**Essence-pessimism about the 'future'**
	Assumptions of unitary progress from lower to higher forms	Assumptions of civilisational decline and devolution
	Example narratives: Enlightenment Project Classical Marxism Technocratic Dreaming Utopian visions	**Example narratives:** Eco-catastrophism Left-Nietzchean nihilism 'Colonised' images of a fearful future
Actor-oriented Dimension	**Influence-optimism** (Inherent human agency view) Assumptions of unfettered freedom of choice that leave invisible structural violence	**Influence-pessimism** (inherent structural limitations) Assumptions of human agency as marginal or doomed to ineffectualness
	Example narratives: Smithian free-market economies 'New Age' philosophies. Individual empowerment approaches	**Example narratives:** Teachers/students as 'authoritarian dupes or structural dopes' Corrosive cynicism about the value of democratic participation

Table Two: Pessimism and Optimism – a Two-dimensional Approach[29]

FUTURES IN SCHOOL EDUCATION – THE RESEARCH

A brief history of futures in education from a global perspective can be found in Slaughter's recent chapter 'From Rhetoric to Reality' which points to the first futures course in schools in the US in 1966, followed by several funded pilot projects. He then refers to some of the foundational work done in schools in the US by Kristen Druker in high schools, and Ted Dixen in primary schools, and the work of Paul Torrence through the Future Problem Solving Program, still operating today. Another major and continuing contribution to the field has been that of David Hicks in the UK who continues to offer courses for teachers and has developed a wealth of curriculum material which will be mentioned again below. The situation in Australia

has included several key innovative futures projects all of which appear to have foundered. Slaughter argues that in spite of its long history now spanning decades, futures in education is still marred by many obstacles not the least being that school systems are still 'quintessentially industrial era organisations' which are resistant to change.[30]

Much of the earlier (pre-1990) 'futures in education' research involved, or at least included, exploring young people's views and visions of the future. A discussion of this research also provides a background to the more specific teaching of futures in schools (and of course there is some overlap between these areas).

Young people's views and visions of the future

> The future of the earth depends on the attitude of the community (both local and global). At present the earth is going downhill, if nothing changes there could be trouble. Most likely is that we'll reach a point and realise something must change. The question is whether this point will be too late or not. – 'Joshua' – a Year 12 student.[31]

Research into young people's views of the future, in Australia in the 1980s and 90s, indicated deepening negativity and lack of hope and a sense of powerlessness.[32] The issues that loomed large as concerns for young people emerge in the more qualitative studies as being predominantly the environment, the economy, unemployment, health issues (drug abuse and AIDS).[33] This echoed what was being found in the US and Europe.[34] Youth futures research in the 'non-West' seems only to have begun with Sohail Inayatullah's studies referred to below.[35]

Wilson's major study reflected other findings about the negativity, fear and feelings of powerlessness. However, he also stressed two other key issues, indicating that although this was a quantitative survey, his own underpinning paradigm was critical and empowerment oriented rather than positivist. His recommendations stressed:

- the importance of giving students the opportunity to create alternative scenarios
- the necessity to work with empowerment of the youth to help them begin to feel that they can influence change in a positive way.[36]

The need for more and different forms of research with youth on these issues was stressed by Gough (1987):

> We have to be cautious about taking the survey results at face value. The children … may be telling themselves and the researchers stories about alternative futures, including futures they want to avoid. We need alternative

> research designs to get out the deeper, underlying attitudes. The results so far are only scratching the surface.[37]

Hutchinson's research although using a survey as part of the data collection, attempts to take youth futures research into the deeper levels called for by Gough.

In this respect it also fits the fourth category in the typology (Table One) as it is using mixed methodologies and is empowerment oriented, drawing on the work of Boulding.[38] His survey results were organised into three major perspectives:

- *young people's images of feared futures:* an uncompassionate world; a physically violent world; a divided world; a mechanised world; an environmentally unsustainable world; and a politically corrupt and deceitful world
- *young people's images of preferred futures:* technocratic dreaming (or technofix solutions) especially from the boys; greening of science and technology, more common among the girls; imagining intergenerational equity and making peace with people and planet
- *linking images of the world with action-planning.*[39]

Hutchinson's research supports the need to broaden literacies in schools through pro-social skills and affective/imaginative learning styles. He also found that young people struggled to find 'preferred futures' images yet were more fluid and extensive when it came to their fears about the future. This difficulty with creating fluid positive images of 'preferred futures' was not present with students educated in a more artistic, imaginative style, as discussed below.[40]

There was also a large discrepancy found in much of the research between what young people expect and their aspirations or 'preferred' futures.[41] Eckersley's more recent research takes a more critical stance than his earlier surveys and indicates a large discrepancy between what youth expect ('probable' future) and would wish to happen ('preferred' futures) in the future.[42] Most do not expect life in Australia to be better in 2010. Young people were asked to nominate which of two positive scenarios for Australia for 2010 came closer to the type of society they both expected and preferred. Almost two thirds (sixty three per cent) said they expected 'a fast-paced, internationally competitive society, with the emphasis on the individual, wealth generation and enjoying the good life'. However eight in ten (eighty one per cent) had the following values: 'a greener, more stable society, where the emphasis is on cooperation, community and family, more equal distribution of wealth, and greater economic self-sufficiency'.[43]

In regards to convergences and divergences found in the research, perhaps a point that needs to be made is that although there were fairly clear age differences and gender

differences in most of the research, none of the major studies found any differences based on socio-economic background.[44]

Effects of age differences on futures images

In the mid-nineties the Australian Commission for the Future undertook group discussions in three states with young people aged sixteen to twenty-five years. One of the more disturbing findings was that at fifteen many youth are optimistic and positive but by twenty five many have become disillusioned and rudderless.[45] The young people seemed apathetic about the future and felt powerless to change anything. This research concluded that their lack of ability to identify beliefs or values reflected a generation of youth in a spiritual vacuum.[46] This decrease in optimism with age has also been found in other studies, such as the ACER study into Schools and the Social Development of Young Australians.[47]

In the mid-nineties the Australian Commission for the Future undertook group discussions in three states with young people aged sixteen to twenty-five years. One of the more disturbing findings was that at fifteen many youth are optimistic and positive but by twenty five many have become disillusioned and rudderless.

In their major project in the UK with almost 400 children aged from seven to eighteen years from eight schools (four primary and four secondary), Hicks and Holden's research throws some light on how 'the optimism of the seven year old is transformed into the pessimism of the eighteen year old'.[48] In summary what they found in the various ages was:

- *Seven year olds.* They are the most optimistic that life for people all over the world will get better; they are ambivalent about whether poverty or pollution will be alleviated. They are the most optimistic of all age groups, feeling that life will be better for themselves and for others.

- *Eleven year olds.* Commitment to improving the environment and to learning about global issues seems highest at this age. Although they are less optimistic than the younger children that social conditions will improve, they nevertheless hold a naïve belief that everyone is concerned about improving the planet and they would like to be a part of this.

- *Fourteen year olds.* They are less optimistic than eleven year olds about world conditions improving and are ambivalent about whether they can do anything themselves to help make the world a better place.

> – *Eighteen year olds*. Eighteen year olds are the least positive about conditions improving either locally or globally... Although some eighteen year olds gave examples of action they take to effect change, many are sceptical of the influence they can have. They are aware of a system 'out there' which influences people's lives but do not see themselves as part of that process.[49]

This negativity and cynicism of older adolescents was in contrast to research with Steiner-educated students who expressed very positive, salient visions of preferred futures as well as a strong sense of activism in creating them.[50] Their images seemed able to reflect the strong emphasis in this educational approach on the positive, creative processes of life, including substantial role-modelling of positive human achievement through stories.[51]

At the other end of the age spectrum, Jane Page found that very young children already possess many of the qualities that futurists try to impart through futures education tools and processes, in her ground breaking work exploring futures education and early childhood education. Speaking of the four and five year olds that she researched, Page found:

> Their flexibility of thought, their positive and constructive outlook on life, their sense of the continuity of time, their creativity and imagination, and their sense of personal connection with time and the future are all qualities which Futures Studies strives to re-instil in adults and older children.[52]

Gender issues

> Women are better adapted for the change from the industrial society to a new society…because women are not carriers of the values of the preceding industrial society. As they were not the builders of the future in the preceding society, they may become the builders of the future in a different society. As they were invisible in the industrial society, they may become visible and constructive in a post-industrial society
>
> Eleanora Masini[53]

Some rather marked gender differences were found in Hicks and Holden's research in the UK. They found that in their preferred futures scenarios, forty per cent of boys were attracted to a future dominated by technology, compared to only nineteen per cent of girls. This applied to all age categories of children in their study except for seven year olds where the proportions were slightly reversed.[54] Hutchinson also found that boys' images of the 'preferred future' fell largely into images of 'passive hope' with technology being the 'magical helper'. The girls were more able to envisage a

'greening of science'.[55] Interestingly, gender differences in preferred futures visions were not found in a study with Steiner-educated adolescents. Both males and females were somewhat anti-technology as a solution to future problems and more focused on human agency-based social, ecological and spiritual futures. There was also no gender difference found in the richness and fluidity of their creative images of positive preferred futures. I believe these findings are a result of the conscious effort found in Steiner education to overcome the limitations of narrow gender stereotyping.[56]

Hicks and Holden also found that girls of all ages express more interest than boys in their own future, the futures of the community and the world. They found that twice as many secondary school girls feel that they can do something to make a difference. On the other hand, they found that eighteen year old boys are the most cynical.[57] The researchers point out that this finding runs somewhat counter to the arguments of feminist writers who still maintain that girls are disadvantaged by the educational system. Supporting Hicks and Holden's point, recent research in Australia suggests that many boys are not thriving in the existing education system with only sixty one per cent currently completing secondary schooling.[58] The youth suicide statistics in Australia further indicate that boys and young men are the most disempowered by hopelessness about current cultural conditions.[59] The potential for reversing this disturbing phenomenon through futures visioning processes is discussed below under 'psychological implications', where it is shown that positive futures visioning can lower feelings of hopelessness, especially in boys.[60]

Cultural diversity of views and visions

If the wealthier East Asian nations are a sign of the future, then a shift to a communicative-inclusive or partnership future is a possibility, since these nations' youth are already tiring of development.[61]

In addition to the major research discussed above which is primarily from Australia, the US and the UK, studies have also been undertaken into youth views and visions of the future in a range of other countries and cultures. The most comprehensive coverage of this material can be found in the recent book, which includes research in Japan, Finland, Singapore, Hungary, Norway, Germany, Taiwan and Pakistan, as well as youth essays from Australia, Pakistan and the Philippines.[62] Further to this, a study of the future views and values of Spanish youth was undertaken by Enric Bas.[63] In his overall research with non-Western youth futures, Inayatullah suggests that the non-West is mirroring the West. He found that in Pakistan, the fatigue was not with development (as in the West) but with feudalism and state control, resulting in a desire to escape to high-income areas (Middle Eastern or OECD countries). Those who can not escape have to make the 'best of it', which tends to mean high heroin addiction.[64]

He also found that although the 'official discourse is religion, the unofficial is escape from religion and the chase for all things Western (T-Shirts, cigarettes, and rock music). Ivana Milojevic's recent doctoral research on Futures of Education makes a vital contribution to the exploration of educational futures beyond the mainstream cultural discourse. Apart from broadening the concept of a single utopian vs dystopian duality, she embraces the movement towards heterotopias and eutopias, which include a number of dissenting futures. These alternative educational futures include feminist, indigenous and spiritual.[65]

'Futures in education' – research and practice

Any act of teaching and learning occurs primarily to achieve ends in the future: personal, professional and social. The whole educational enterprise is intended to contribute towards the further development of the society as a whole. These are true futures concerns.[66]

Much of the initiative to keep futures in education on the Futures Studies agenda has been driven by Richard Slaughter. What he meant by futures in education was quite comprehensive, going far beyond a few isolated lessons. The ideal picture of futures in education from Slaughter's perspective would be:

- Introduce futures concepts and tools throughout the curriculum.
- Integrate futures thinking into teacher training and professional development.
- Relate curriculum frameworks to their wider, long-term context.
- Use futures methods on strategic planning for schools and school systems.
- Revise the concept of educational leadership to include a proactive element.[67]

Hand in hand with Slaughter's ongoing conceptual contribution, has been the consistent application of this work in practice by David Hicks in the UK. His work really provides the benchmark for the practical application of futures work in schools. He has also developed numerous resources for the actual practice of futures in education.[68]

Slaughter also pointed to the different potential levels of implementation of futures in education, for example:

- Pre-school
  - An *emphasis* on teacher preparation, curriculum development. For more comprehensive research on this level see Jane Page's book.[69]

– Primary
  - A *perspective* in teacher preparation and curriculum design: simple futures tools, exercises and concepts. In particular David Hicks' resources for teachers are most valuable.[70]

– Secondary
  - *Disciplinary perspective* and *subject*: introduction to the knowledge base, futures discourse, methods, social applications. There are numerous resources that could be drawn on here.[71]

– Tertiary
  - *Scholarly discipline*: advanced discourse, research, discipline-building, social implementation.[72]

The following list indicates the scope of the tools and methodologies that are available for teaching futures in schools and the additional sources mentioned provide direction for further study:

– Timelines are probably the simplest and yet one of the most effective futures tools for use with children.[73]

– Futures wheels are also stimulating and effective.[74]

– Visioning of preferred futures is one of the foremost futures tools among futurists working with children and adolescents. A useful discussion of the background to futures visioning can be found in Jones based on the formative work of Jungk, Boulding and Zeigler.[75] For more information specifically on visioning work with children see Hicks and Holden, [76] and adolescents, refer to Hutchinson and Gidley.[77]

– Scenario-building is also commonly used with children and adolescents, often with the aid of pictures of a range of alternatives.[78]

– Backcasting (Future history) is a crucial part of visioning and scenario work as it links the processes back to the present and to an action component.[79]

– T-Cycle, previously referred to as the change cycle.[80]

– Creative methods such as promoting imagination, brainstorming, drawing, jokes, cartoons and symbols, council of all beings, science fiction, social inventions.[81]

– Sources of hope are also a resource for teachers and futures researchers developed by Hicks.[82]

– Specific tools most suitable for the nine to fourteen age range can be found in Hicks.[83]

– Some tools for use in early childhood education are also being developed by Jane Page.[84]

Curriculum innovations, including Futures Studies lessons and units

As a result of this foundational work there have been numerous cases of futures in education being applied across the globe, in particular in the UK, the US and Australia. David Hicks' work in curriculum innovation in the UK has been prolific and can be studied through his collection of written works much of which is directly aimed at teachers for use in the classroom.[85] The more recent development of his work has taken futures into the new curriculum area of citizenship education – a national focus in the UK curriculum. One of the major futures oriented projects in the US has been Paul Torrence's Future Problem Solving Program, still operating today. By the mid-nineties an estimated 200,000 students in all fifty states were using the program's material.[86] The influence of this program has also extended to other countries including Australia where it is operating at Deakin University. A critique of this project would be that it strongly extols a 'technofuture'. The work of Cole Jackson in a major K to 12 schools project in Florida, grew into the technologically based 'Creating Preferred Futures Project' discussed under technology below. In addition, there is the Futures Institute, Rio Salado College, Arizona. The work being undertaken there initiated by Thomas Lombardo seems to take the broadest and most integrated approach to futures education in the US. Lombardo's work seems to go well beyond the limitations of much of the futures work in the US (with its strong business/corporate futures orientation), and beyond the limitations of narrowly defined techno-futures, to embrace social, ecological, cultural and spiritual futures.[87]

Although a number of futures based curriculum innovations have been introduced in schools in Australia and New Zealand, most have faltered through lack of systemic support for teachers in their schools. The most significant and initially most successful was developed in Queensland, by Kathleen Rundell and Richard Slaughter for the Board of Senior Secondary School Studies. They developed an innovative four-semester program in futures for years eleven and twelve.[88] Although early evaluations confirmed this to be a highly effective model for senior secondary students, it has only been used in a limited way and was dropped after its pilot phase, perhaps waiting to be rediscovered?

At a presentation in 2003 to teachers at an Australian Foresight Institute Forum, Caroline Smith gave an overview of 'futures-oriented' innovations in Australian education. (See following paper in this monograph). These included:

– Some NSW schools engaged in scenario planning (but purely economic focus)
– Some sustainable futures projects in WA
– The new SA syllabus with its five 'essential learnings' (one of these being 'futures')
– Similar developments in Tasmania with 'essential learnings' (including futures)
– Several Catholic schools integrating futures thinking into other curriculum areas.[89]

The appropriation of futures terminology – a fashion in mainstream education.

> A common symptom of the token use of futures concepts is the uncritical reiteration of clichés and stereotypes.[90]

The use of the word 'future' or 'futures' is beginning to become more common in educational discourse.

Caroline Smith also noted that the use of the word 'future' or 'futures' is beginning to become more common in educational discourse. However, she expressed concerns that it seems that much of this may be just a superficial appropriation of the futures terminology without recourse to the research and knowledge base of Futures Studies. This 'fashion statement' futures gives the illusion that futures issues are being addressed by educators, when in fact it is only the most cursory tokenism. These same concerns were expressed over ten years ago by Noel Gough in a critical examination of ways in which futures were conceptualised at that time in the language of Australian education.[91] Gough spoke of three main ways that futures had entered educational discourse:

– *Tacit futures* – by this he refers to the 'temporal asymmetry' of educational discourse whereby 'the temporal categories of past and present receive far more frequent and explicit attention' (even in documents purporting to be about 'Future Directions in …Education').

– *Token futures* – referring to 'the invocation of futures concepts and terminology for purposes which are chiefly *rhetorical* or where they are part of a *rationalisation* of choices, decisions or judgements which may, in fact, have been made on other grounds.' He cites Victorian curriculum documents which use 'Education for the Future' in their titles but whose only references to the future are in fact 'cliché-ridden superfluities'… 'a kind of tokenism – a rhetorical boost to economic rationalism'.

– *Taken-for-granted futures.* The major recurring themes that Gough noted to be part of the futures discourse of this time (even within the futures movement itself) were exemplified by a major information kit compiled by the Australia's Commission for the Future. Titled, *Future Options*, Gough's critique is that it didn't inform Australians about all possible options but only those options presented by scientific and technological development. Gough demonstrated how much of the other rhetoric at that time concerning futures in Australian education 'took for granted' the prospect (and the desirability) of an education-led economic recovery.[92]

As futurists of the early Twenty First Century we must question whether any of this has changed very much. While there seems to be a new interest in futures in education in Australia, unless this interested is married to the vast body of research and knowledge that the futures field has been developing for decades, it will be of little if any transformative value for education of the future.

Empowerment issues

> At the moment things seem to be getting steadily worse and we all know a change is needed. We – everybody – have the opportunity to determine the direction that the change takes us in. The more we take part in the change the more benefits there will be for society and the world. – 'Maree', Year 12.[93]

The research on young people's future views and visions, discussed earlier, shows that young people sense a spiritual vacuum in their society (though only some are able to articulate it). They are deeply concerned about what they see as a lack of values and ethics in politics and the corporate business world.[94] Young people are idealistic when given a chance to express themselves. They want a clean, green world with ethics and meaning, a world where everyone is treated fairly. They want work that is meaningful and where they are treated with respect and valued. Yet they expect the future to be full of their fears. How can this be transformed? It has been shown that young people's sense of disempowerment and pessimism about global issues can be addressed by innovative educational styles and processes, discussed below, to increase their sense of agency.

The youth futures research often refers to young people's negativity towards the future and disempowerment as if the two were inextricably tied together. Yet some international studies have suggested that social and political activism can both lessen feelings of powerless in the face of global problems and also increase enthusiasm about personal prospects for the future.[95]

An Australian study with students educated in the Steiner education system found that the students' negative expectations about the 'probable future' did not seem to

disempower them, in contrast with the findings of most other futures research.[96] In spite of identifying many of the same global problems of environmental destruction, social injustice and threats of war, that concern mainstream youth, most of the Steiner students seemed undaunted in terms of their own will to do something to create their 'preferred future'. Their preparedness to act to solve the problems suggests they were empowered by their style of education.[97] This research and its implications will be further discussed below under Integral Education. It would be interesting to know whether similar findings would occur in research with students educated in non-Steiner 'alternative' schools (such as Montessori, Ananda Marga Gurukul, Christian community, etc).

Futures Studies techniques can be extremely valuable in countering the fears that many young people have about the future.

Empowerment and futures education

> Youth are part of the solution; they must have an education that empowers them to feel this. … Many students in the study, changed their attitudes to issues of ecology and the future as they began to see the connection between their attitudes and their actions.[98]

Futures Studies techniques can be extremely valuable in countering the fears that many young people have about the future. A number of Australian studies have engaged young people in working through their fears and beginning to activate their imaginations to envision their 'preferred futures'.[99] The findings all indicate that this type of 'futures in education' can be very rewarding and even empowering for the participants.

In the Re-Imagining Your Neighborhood (RYN) project students were encouraged to imagine what a healthy neighborhood could look and feel like. They then identified what was needed to create this neighborhood by talking with local government, conducting interviews, community art, tree plantings and the design of public spaces. The findings indicate that RYN was effective in helping students develop a greater sense of hope and possibility.[100]

In another futures study, in a rural Queensland school, a block of social science lessons was used to introduce futures work. The students were asked to develop an individual and then a collective vision of a preferable 2030. The process involved exploring everyone's individual vision and then deciding on those that had everyone's support. The developed visions give a picture of these young people's broad values and aspirations. Similar to the findings of other futures research, they want a world

with 'less pollution, violence … and weapons, greater protection for endangered species and wilderness areas, greater equality between all humans and more emphasis on health'.[101] However, the next and most crucial stage of the research involved students brainstorming actions that could be done as a class, now and in the future. This part of the project empowers the students – without it futures research with young people may have a depressing effect, because they can't see how their dreams can become reality.

Futures education is not just a cognitive process, but also moves the hearts and souls of those who enter into it.

Another recent Australian youth futures visioning project, partnered by the Futures Foundation, was also found to have a positive outcome for the youth involved. After some initial difficulties, the youth were able to move from their local and somewhat cynical focus on 'lack of entertainment and shortage of places to hang around'. Their aspirations developed into thinking of their community as one where citizens could 'think, plan, dream and play'. After four workshops their final vision was one which portrayed in some detail 'a welcoming society, a sustaining environment, and an enterprising economy'.[102]

Psychological implications of futures processes

> It seems rather obvious to say that the first step is to acknowledge the fact that learning about global issues and alternative futures involves emotions and soul searching.[103]

Although futures work with young people has been going on for decades there has only been limited research into the psychological implications, both positive and negative, of these processes. Martha Rogers appears to have been the first futures researcher to enter this territory.[104] Her research, which although not technically about futures in school education, has been included here because of the absence of other research and the importance of the issues involved. Based on the findings from her research with both adults and graduate students she stressed the importance of recognising that futures education is not just a cognitive process, but also moves the hearts and souls of those who enter into it. She reported that many students in the initial stages of learning about futures underwent considerable cognitive dissonance, confusion and discomfort. This led to the stirring of emotions which for some became a 'roller coaster' ranging from anger, depression, guilt and fear, to elation. She also noted that these emotions were a part of a grief response to losing their previously held personal worldviews, often followed by a new heart-felt caring for the world and others. The next stage Rogers noted was that there was a soul awakening where the person's whole being became engaged in a search for new meaning and purpose. At each of these stages some self-helping skills were needed to bring back balance in order to move

on. Finally, she noted that finding a path to action was a crucial stage in bringing about a return to calm and certainty. Once students had embarked on a path to action, they reported feelings of personal power and renewed hope.[105]

A recent study in a rural Australian high school provided some ground-work for the development of a new theoretical approach to primary prevention of suicide in adolescents by using futures processes to target hopelessness. The study made links between the extensive psychological literature which has linked hopelessness with depression and suicide risk for decades, and the youth futures research which correlates rising youth suicide rates with growing fears and negativity of young people towards the future. The research explored the possibility that the futures processes might reduce clinical levels of hopelessness in young people.[106] A four session intervention program, called 'Creating Positive Futures', targeted the negative images of the future among the students and attempted to promote more positive images. The program succeeded, since the young people's images of the future did become significantly more positive after the intervention. There was also a marked improvement in the hopelessness scores of the males. Although only a pilot study, this has important implications given that suicide among young males is four times that of young women and also that adolescent boys are perceived as being a difficult group to influence. However, a note of caution needs to be sounded here in that some of the girls actually became more hopeless, and also some of the students who were already clinically depressed became more depressed initially and needed individual debriefing sessions. More research is needed to further test these findings.

Technology and futures in education

Futures in education is sometimes understood to mean futuristic schools (which in turn is usually understood to mean high-tech input into education). In a study of technology-based learning in the US, Sandra Ramos Miller identified three types of schools that had incorporated technology in a way that was instrumental in changing the old paradigms of instruction. She discussed:

- wealthy, technology-rich 'cutting edge' schools
- what she called 'forward-looking' schools, with limited financial support, trying to transform themselves for the future
- 'trailblazing schools', highly resourced, and high-tech, such as the 'Apple classrooms of tomorrow'.

Overall, she argued that introducing technology into schools is a catalyst for change.[107]

Extending the futures and technology idea even further, an actual online futures project for young people has been initiated by Cole Jackson in the US. The 'Creating Preferred Futures Project'[108] is an interdisciplinary, Web-based concept that links students from around the globe in an interactive futures education forum.[109] It is the only online futures education program of its kind in the world specifically geared to K-12 students.

Recent research suggests, however, that some caution needs to be exercised in rushing into the high tech end of school education for children. There is as yet little research done on the long-term effects of over exposure to television and computers, but new research is quite alarming. A number of studies in the US have begun to question the benefits and even explore potential psychological and even physical damage to children, from long exposure to screen images.[110] Further to this, a current study being undertaken at Sydney University in Australia, by Professor Paul Mitchell and Dr Kathryn Rose, is finding links between the recent rapid increases in the vision disorder myopia, and the over-use of screen input (from television and computers). Perhaps these are also areas of potential research for educational futurists.

Multi-cultural educational futures issues

Some of the foremost work in educational futures on what he calls 'deep multiculturalism' has been undertaken by Sohail Inayatullah. Although most of his work has been done at the tertiary level, it is included here because of the lack of research and practice into these issues at the school level.[111] Likewise Ivana Milojevic's research into women's and indigenous educational futures makes a major contribution to this area.[112] Other significant futurists whose work needs to be studied if educators are to seriously enter the terrain of the 'cultural other' with full authenticity are the works of Ashis Nandi, Zia Sardar, and Susanthe Goonatilake.[113] Also David Wright's research on Japanese youth, and that of Alfred Oerlers on young people in Singapore, gives some additional insights into non-Western ways of viewing educational futures.[114] Finally, some fresh perspectives from non-Western youth themselves can be found in the essays by Bilal Aslam from Pakistan and Michael Guanco from the Philippines. [115]

Futures fluency

> Imagination is by necessity a foundation of futures research: *there are no future facts.* What information we do have about the future comes from our records of the past, our observations of the present, and our imaginative ability to ask, 'What if'?[116]

The work of Wendy Shultz in the area of 'futures fluency' is also of vital interest in enriching futures in education programs. Futures fluency is defined as 'proficiency

and delight in creative, critical and constructive uses of rigorously imaginative speculation'.[117] Shultz speaks of five cornerstone activities and discusses the relevant futures tools that underpin each of them:

- *Identifying and monitoring change* which is best developed through emerging issues analysis (also known as environmental scanning).
- *Critiquing the impacts of change*, which relies on the futures tool known as impact analysis.
- *Imagining alternative futures* which involves incasting (the deductive forecasting of alternative possible futures).
- *Envisioning preferred futures* or ideals which involves visioning (an imaginative, idealistic or normative process which aids people in explicitly articulating their preferred future).
- *Planning and implementing/achievement phase* involves backcasting which bridges the gap between events in a possible future (usually a preferred future) and the extended present.[118]

Finally, after the five stages are complete, there is a return to the beginning, to identify, review and monitor any change that has occurred. Although Shultz's work has mostly been in the adult/corporate sector the concept of futures fluency and the methods used to enhance it could equally be used in school settings.

Futures analysis of problems in education

A relatively under-utilised area of futures in education research is the use of futures methodologies to analyse educational (and other social, cultural or psychological) problems or issues. Sohail Inayatullah has built on the work of other futurists to develop the Causal Layered Analysis (CLA) as a multi-layered methodology for analysing complex social, political and cultural issues.[119] He is currently completing the editing of a collection of essays demonstrating the multiple uses of CLA as a methodological tool for both diagnostic analysis and solution-based action.[120] Using the CLA methodology I recently analysed the issue of youth suicide among young people.[121] This methodology has also been used in research by other youth and educational futurists.[122] For futurists wanting to include both a diversity of worldviews (by broadening the horizontal element) and a vertical layering of reality (inherent in many spiritual paths) CLA can embrace them all.[123] It provides a way of moving beyond both the empirical analysis (with its fragmented, culturally narrow oversimplifications) and the relativism of the post-structuralist analysis (which avoids taking a moral stand on issues).

In an attempt to take an even broader sweep at integrating not just the horizontal and vertical dimensions of life, Slaughter has begun to examine the place in Futures Studies for an approach that includes all quadrants and all levels. Based on the voluminous and numinous work of Ken Wilber,[124] who developed the all quadrants, all levels (AQAL) approach to analysing and solving complex Twenty First Century problems, Slaughter is developing an Integral Futures methodology and practice.[125] There is still much scope for extension in the Futures Studies field to continue to embrace deeper and wider levels of existence as will be further shown in the task analysis to follow, which also draws on the AQAL model.

DEVELOPMENT OF 'FORESIGHT FOSTERING' EDUCATIONAL APPROACHES

> Perhaps we ought to consider the notion that the purpose of education be reconceptualised as the facilitation of people's search for meaning, wholeness, transcendence and an understanding of our individual roles in the human evolutionary journey.[126]

Critical speculation about education for the future

Over the past decade a number of key educational futurists have developed a critical approach to what they see as the pedagogical implications of the disturbing responses of western youth to their futures. Critical speculation about alternative forms of education make some clear recommendations about better preparing youth for a rapidly changing and uncertain future, while also considering the needs of future generations. These futures researchers recommend more holistic, integrated teaching methods using imagination, visualisation, pro-social skills and specific futures methodologies.[127]

In a comprehensive conceptual review of current global dimensions of change and consciousness shifts required to prepare young people for the Twenty First Century, Australian educational futures researchers Hedley Beare and Richard Slaughter list a number of educational features (See Table Three) that they recommend schools incorporate to better prepare young people for the future.[128]

Table Three: Educational Futures Research – Guidelines for Teaching and Preparing Young People for the Twenty First Century

*	1. *Appropriate Imagery* – choosing metaphors with care and imagination
*	2. *Teach for Wholeness and Balance* – holistic paradigm
*	3. *Teach Identification, Connectedness, Integration* – epistemological interconnectedness
*	4. *Develop Individual Values* – value the individual
*	5. *Teach Visualisation* – development of the picturing imagination
	6. *Cultivate Visions of the Future* – cultivate images and visions of futures
*	7. *Empowerment through active hope* – distinguish between faith and hope
*	8. *Tell Stories* – use story telling and mythology as powerful teaching tool
*	9. *Teach and Learn how to Celebrate* – celebrate festivals
	10. *Teach Futures Tools* – encourage and use futures tools and methods

Source: Beare and Slaughter.[129]

* *The asterisked points all refer to important features of Steiner Education.*

As yet the suggestions and guidelines put forward by Beare and Slaughter have not been applied by educational futures researchers in an integrated fashion in an educational setting which could then be studied. However, these ten educational features listed in Table Three above are remarkably consistent with the Steiner approach with at least eight of the ten points being key features of Steiner education. So in effect, the guidelines suggested by Beare and Slaughter, with the exception of the specific futures methods and tools, are already being implemented in Steiner schools around the world. Not surprisingly, this speculation of futures researchers was born out in research with Steiner-educated students, where it was found that this holistic, artistic, imaginative approach to education did facilitate a more confident, proactive and hopeful futures outlook in young people.[130] More detailed findings are discussed below.

Integral approaches to education

> "Integral" means "inclusive, balanced, comprehensive"…The integral approach does not advocate one particular value system over another, but simply helps leaders assemble the most comprehensive overview available, so that they can more adequately and sanely address the pressing issues now facing all of us.[131]

In parallel with the growing concerns of educational futurists about the need to transform school education in the ways discussed above, a broader movement is sweeping

through the 'growing tip' of world ideas. The use of the term 'integral' or 'integrative' has become quite common in the cutting edge approaches to many disciplines, starting with social sciences (psychology, education) but ostensibly now moving into the 'hard sciences' as well.[132] Several centres of integral studies have emerged just in the last decade or so in the US, the highest profile of these being Ken Wilber's Integral Institute.[133]

The Integral movement with its various currents and facets carries within it the potential for the most transformative development in human consciousness since the European Enlightenment. Its implications for educational futures (and futures in education) cannot be overlooked.

The basis of the idea in its varied forms is that the complexity of the present times, globally, require higher-order forms of thinking that go beyond the narrow specialisations of reductionist, rational thinking. The Integral approach includes multiples ways of knowing, being and acting in the world.

The application of Integral thinking to the futures discipline is in its infancy.[134] It is essential that Futures Studies as a field keeps up with (and indeed ahead of) the currents of 'new thinking' in the world, or it will not be able to live up to its name. The Integral movement with its various currents and facets carries within it the potential for the most transformative development in human consciousness since the European Enlightenment. Its implications for educational futures (and futures in education) cannot be overlooked. In terms of school education, the importance of going beyond the intellectually based factory model of schooling to more integral, artistic and spiritually based approaches was already foreseen a century ago by Rudolf Steiner (and others) in Europe[135] and by Sri Aurobindo Ghose in India (who actually coined the term 'integral education').[136] While it is beyond the scope of this literature review to further investigate the educational approach of Sri Aurobindo, the research with Steiner-educated students discussed below is the only known research demonstrating how an integral approach to education actually fosters foresight.

Research findings from an existing integral approach to education

> Part of the soul work of learning is the development of images of desired futures; images that may be expressed in music, art, words or other aesthetic venues.[137]

Since Steiner education is one of the few (if not only) fully integral educational approach in the Western educational arena, research findings can throw light on what a more integral approach to mainstream education can hope to achieve. In a study of senior

secondary students in the three largest Steiner schools in Australia, it was found that Steiner students were able to develop richer and more detailed images of their 'preferred futures' than mainstream students.[138] About three-quarters of the Steiner students were able to envision positive changes with regard to the environment and human development and almost two-thirds were able to imagine positive changes in the socio-economic area. In much of the other research young people had general ideas about positive things they would like to see happen, but were unable to translate them into concrete detail. As discussed earlier it was also found that the Steiner educated students were not disempowered, like many young people, by their realistically negative views of the 'probable' future, but rather had a strong sense of activism that they could change things for the better.[139]

In addition, when the Steiner students came to envisioning futures without war, the content of their visions primarily related to improvements in human relationships and communication, through dialogue and conflict resolution, rather than a 'passive peace' image. Furthermore, seventy five per cent of the Steiner students came up with many ideas on what aspects of human development (including their own personal development) needed to be changed so that their aspirations for the future could be fulfilled. These included more activism, changes in values, spirituality, future care and better education.[140] Finally, this study appears to be the only one with young people where social futures has emerged so strongly as a way to solve problems, as compared with the more commonly occurring 'technofix' solutions.

Sustainability in education and active citizenship

> Education, including formal education, public awareness and training, should be recognised as a process by which human beings and societies can reach their fullest potential. Education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues. … To be effective, environment and development education should deal with the dynamics of both the physical/biological and socio-economic environment and human (which may include spiritual) development; should be integrated in all disciplines; and should employ formal and non-formal methods and effective means of communication.
>
> Agenda 21, Earth Summit[141]

Another important movement that has gathered momentum over the past decade is the 'Education for Sustainability' or 'Sustainable Education' movement. Related to this and often incorporated under its banner is the 'citizenship education' focus. This sustainability in education movement was primarily initiated as a response by educators to the Earth Summit (The UN Conference on Environment and

Development in Rio de Janeiro, Brazil in June 1992.) Initially it was referred to as 'education for a sustainable future' and now goes under a variety of, mostly similar, names. Although it is a new evolving concept, it is also embedded in indigenous approaches to education.

This movement has also been fruitful in joining together existing groups of educational innovators (environmental educators such as David Orr, Stephen Sterling and John Fien)[142] and educational futurists (such as David Hicks, Frank Hutchinson and others)[143]. In a wonderful collaborative achievement, under the auspices of UNESCO, John Fien from Griffith University in Queensland, Australia, produced a very important professional development resource for teachers. It includes twenty five modules, the first five of which (Curriculum Rationale) include:

– Exploring global realities

– Understanding sustainable development

– A futures perspective in the curriculum

– Reorienting education for a sustainable future

– Accepting the challenge

This multi-media CD-ROM titled Teaching and Learning for a Sustainable Future, deserves to be more widely known and used.[144]

Included among many other treasures in this resource, is what could perhaps best be seen as a rallying cry to teachers, from Peter Garrett, lead singer from Midnight Oil (shortened):

> The task for the teacher at this moment is the same as it has always been, only now it seems more urgent, more important. We seem to be in tidal wave times and the issues that bedevil and threaten us are understood but do not seem capable of being solved. So the task of helping us understand a little more about ourselves is critical. We need to glimpse how we came to be in our present state. We need to dive into the big questions about the nature of humans and their condition. And, most importantly, we need to explore the kind of common ground we might jointly seek to cultivate in order to sustain creation.
>
> Thus, teachers face the most formidable of challenges: reconciling hope and history, making sense of the nonsense. Delving into the world of traffic jams and oxygen masks, space stations and tent cities, the teacher might offer us some signposts, or create wondrous lessons that inspire us and teach us about ourselves

> … The pop star, the prophet of emotions, provides a facile but constantly rhythmic heartbeat for their dreams and inspirations. Family, church and community have receded as the setters of values, replaced by the dream-weavers of the new age of consumption…
>
> The fast-forward generation is being shaped by audio-visual stimuli, not by literature. 'Fast-forward' means not only moving ahead quickly, but also skipping past things that are too complex, too depressing or too boring ... I propose nothing new, only that teachers should expose the myths of progress and prosperity that are holding up the house of cards. They must bring into focus a vision which does not gloss over the facts behind the nightmare but which manages to engender enthusiasm about the potential of the human spirit despite the bleak circumstances. At the moment the young, especially, have no faith in the future, and so are unwilling to deal with the present except to try and make it as bearable as possible. ... we need teachers to remind us of our potential to exercise reason, make choices and sacrifices but above all, to participate in the great struggle of hope, renewal and a shared home.[145]

In addition to this multi-faceted resource, environmental educationist and consultant Stephen Sterling has written several volumes, his most recent would be a valuable pre-service teaching text.[146] Finally, many of the key features of the sustainable education approach have been incorporated into the work of David Hicks and Cathie Holden. They have extended the sustainable education territory and their futures work into the citizenship education focus in the national curriculum of the UK.[147]

FUTURES IN EDUCATION – TASK ANALYSIS

Conceptualising 'futures in education' – past, present and future

There are a number of ways in which we could analyse the progress of futures in education over the past four decades. First I will briefly examine how the major contributions could be analysed according to my own typology presented in Table One. I will demonstrate as we go along how this framework links with Slaughter's discussion of the four main phases of futures work as a whole.[148] Then, based on Slaughter's emerging Integral Futures model, I will attempt to analyse the state of play in futures in education today according to the all quadrants, all levels (AQAL) Integral scheme developed by Ken Wilber.[149]

Since much of the early futures in education work was concerned with survey studies of young people's probable views of the future, it sits within the empirical tradition referred to by Slaughter as having been strongly developed within the US. The next

wave of futures in education work incorporates the bulk of the work to this day. Much of the teaching about futures (concepts, methodologies and tools) included in futures courses and syllabi is related to moving beyond the idea of the 'probable future' to include consideration of the 'possible' (imaginative, creative, alternative) and the 'preferred' (critical, ideological, values based). The latter relates to Slaughter's second phase of the futures field, which he sees as originating in Europe and evolving into the critical futures tradition. Hicks' work is strongly grounded in this approach. The 'possible futures' area in my typology is also strongly featured in Hicks and other educational futurists' work. One of the limitations of this aspect is that most of the futures in education work has been undertaken in the US, the UK and Australia, and is thereby very biased by its 'Anglo-Saxon Westernness'. So, even though working with 'possible futures' is meant to be a very open, creative, imaginative, flexible process, much of the work as yet is limited by Western paradigm metaphors.

Ivana Milojevic's research makes a major contribution here, particularly in its consideration of indigenous educational futures.[150] This relates to Slaughter's third wave of futures work, which he describes as still developing and as being 'more diffuse, international, and multicultural'.[151] An attempt has been made to address the gap in the literature on this multi-cultural area of futures in education, in the book Youth Futures[152]. However, this was mainly focussed on the youth views and visions aspect of futures with less focus on teaching futures. Some of Inayatullah's work begins to touch on this area of how to teach futures in education using concepts and tools and metaphors which are viable in a range of alternative cultural settings.[153] Much more needs to be done in this area.

The empowerment-oriented educational futures work (prospective futures) is the fourth area in my typology. In mainstream futures literature it is rarely considered an area in its own right. While Slaughter's voice was the strongest in developing the futures field beyond the empirical – to include the critical, Inayatullah's voice is probably the strongest in developing the futures field into its third iteration which he calls the cultural.[154] In the typology (Table One) I developed in 1997, I was influenced by the work of Bjerstedt, who introduced Berger's term 'prospective' into the futures work with young people. I was also influenced by Wildman's use of the term 'futuring' which involved adding a proactive, activist component to the futures field which he had critiqued as being too theoretical.[155] At the same time I was aware of the research work of Hutchinson, drawing on Boulding, and other Australian researchers who were beginning to focus on the empowerment aspect of futures research.

In my own research I have continued to pursue this interest in futures in education as an empowerment process.[156] It seems to me that emphasis on this aspect may be

the special contribution of Australia to the futures in education field. In my view this is the area where futures in education and youth futures research overlap, particularly if they are undertaken by empowerment oriented teachers/researchers. It is interesting to note that Inayatullah's most recent work also includes a fourth 'action research' dimension to his futures framework.[157] How does this action-based empowerment oriented component in my typology relate to Slaughter's fourth phase of futures, the Integral Futures model? While there are some integral aspects to the empowerment oriented model they are not the same. It seems to me that the Futures Studies field needs to develop very rapidly now in order to keep up with developments in other fields that are growing exponentially. I propose that there are actually *two new perspectives* that 'old school futurists' need to take on board:

This placing of 'Integral Futures' as the fifth iteration of Futures Studies more soundly connects it with other frameworks which use the idea of 'integral' thinking, including the seminal work of cultural historian Jean Gebser who coined the term.

– the empowerment-oriented, action research component which has been lying dormant since the mid-nineties and only just taking off

– the Integral Futures model which is newly emerging.

In this framework, the empowerment/action research futures would be the fourth iteration and Integral Futures would be the fifth. This placing of 'Integral Futures' as the fifth iteration of Futures Studies more soundly connects it with other frameworks which use the idea of 'integral' thinking, including the seminal work of cultural historian Jean Gebser who coined the term.[158] In his framework, human consciousness has developed historically through five structures of consciousness – the archaic, magical, mythic, mental-rational and integral (being developed at the present time). Epistemologically, this also ties in with the current work of neo-Piagetian developmental psychologists Kieran Egan and Robert Kegan.[159] Robert Kegan's models of fourth and fifth order (integral) consciousness are based on the Integral Psychology frameworks of Wilber.[160]

An 'all quadrants, all levels' (AQAL) analysis of futures in education

> To be successful, integral futures practitioners will seek to understand the nature, structure and limitations of their own futures.[161]

While Ken Wilber's Integral system of analysis and problem solving (referred to as AQAL)[162] can be critiqued as being too complex to be useful, it can be used in a

relatively simple form to try to get an overview of all possible aspects of a problem or issue. In its simplest form the four quadrants represent the inner and outer dimensions of individual and collective perspectives:

- Upper Left – Inner aspect of individual (intentional, psychological)
- Upper Right – Outer aspect of individual (behavioural, physical)
- Lower Left – Inner aspect of collective (meaning systems, culture)
- Lower Right – Outer aspect of collective (social systems, society)

It is, however, also important to recognise that there are developmental levels within each of these quadrants (ie in the UL there is individual cognitive and psychological development; in the LL there is cultural evolution; in the UR there is the more scientific view of physical evolution, and in the LR there is the development of society and civilizational history). Part of the integral nature of the theory underlying Wilber's system is that there is a correspondence at the different levels between the quadrants. Wilber argues that this needs to harmonise if the whole system is to remain in balance: 'An increase in exterior or social development can only be sustained with a corresponding increase in interior development of consciousness and culture'.[163] Wilber also claims (along with many other integral theorists) that at the present time there is emerging a major transition in culture and consciousness (the Left-Hand quadrants), related to what has been referred to as the emergence of an integral age, as discussed in the previous section. And yet many key social institutions such as schools and many workplaces (and the key stakeholders in them) are not transforming sufficiently to keep a balance within the system as a whole.

The question remains for this paper – how does futures in education in schools fit into this picture and how will it keep up?

The most obvious thing that emerges for me when I examine the futures in education work to date, is that most of it has been working within the upper two quadrants. It is primarily about introducing concepts and tools which will increase an individual's knowledge base (UL) and ideally their behaviour as well (UR). Although much of the work is done in classes and small groups, it is still primarily focussed on the development of the individual. Indeed, the continuing problems with getting sufficient support from school systems to keep initiatives going may stem primarily from the lack of work to date within the collective quadrants – cultural (LL) and social (LR) systems. How this could be done will be part of the research focus below. In addition, the Upper Left quadrant (inner and developmental aspect of individual) lends itself to much greater extension by the futures in education field. Analysis will begin with this quadrant.

1. Although much of the work in teaching futures is concerned with the Upper Left quadrant – the domain of the psychological, virtually no research has been done into what psychological processes we are dealing with when we are teaching futures. Apart from Martha Rogers drawing our attention to the fact that futures work involves the heart and soul, and my own small pilot study which looked at the impact of futures visioning on clinical hopelessness and depression, there has been nothing that has consciously linked futures processes and psychological processes. Yet the two are obviously intimately related. In this sense even the best futures work has been largely unconscious of its own processes and thereby ignoring the development of its own UL quadrant. Peter Hayward's current research is crucial in beginning to explore this terrain.[164]

   While the empowerment-oriented research is clearly involved in bringing what is learned from futures lessons (UL) into some unity with the individual's outer behaviour and actions (UR), we have not really studied how this comes about.

2. Still in the Upper Left quadrant there is the question of ways of knowing. The emphasis in all school education (and also to a large degree in 'futures in education') has been with developing the cognitive faculties. This is only one way of knowing. Latest developments in psychology indicate that there are multiple ways of knowing and that all are important to a balanced education.[165] So, more attention to different lines or ways of knowing (artistic, contemplative, practical, etc) will be another area of potential development for futures in education.

3. There is also a need to consider the developmental aspect of an Integral vision. Within the Upper Left quadrant, for instance, a lot of the leading edge developmental psychology and consciousness research indicates that human nature as a whole (and thereby many individuals) is moving beyond the intellectual, rational, mental mode of operating into a new trans-rational, integral (and more spiritual) way of thinking and perceiving, as discussed earlier. The implications of this are enormous for education as a whole and futures in education specifically. Within this developmental aspect it is also interesting to distinguish between what Wilber calls the 'leading edge' of humanity and the 'centre of gravity' of humanity.[166] 'With less than two per cent of the population at second-tier thinking, second-tier consciousness is relatively rare because it is now the 'leading edge' of collective human evolution'.[167] As futurists we need to ask ourselves where we sit within such a framework.

4. Another aspect of the whole integral picture is the issue of different lines or streams flowing through each quadrant. In respect of the cultural quadrant, which is fairly underrepresented in futures work anyway, it is even more remiss when it comes

to considering whose culture is being represented in the material we are using. For example, what do we – educational futurists in Australia – know about how our indigenous children and youth frame the future? What metaphors would they use? Are the materials we use suitable or do we need new ones? Apart from Milojevic's and Inayatullah's work, and a few other studies which look at young people's future visions in a range of countries, there is very limited futures in education work that has been recorded in non-Western settings.[168]

5. A further point in regards to the cultural quadrant relates to the lack of development of actual cultural resources or artefacts from within the futures field. Although significant work has been done by futures educators within the broader educational arena (LL) the purpose and achievement of much of this work has actually been more to impact the cognitive development of individuals (UL) within the educational setting than to directly impact the cultural sphere itself (LL). How many movies, songs, plays, art shows have arisen from the Futures Studies field? While it is true that there are plenty of science fiction movies and books, most of this is dystopian material. From the perspective of normative, culturally positive futures, the cultural vacuum here must fall back on the futures field itself to fill.

If futures in education is ever to have a bigger impact on young people than 'just another social science lesson', we need to enter the youth culture arena through music and film.

   If futures in education is ever to have a bigger impact on young people than 'just another social science lesson', we need to enter the youth culture arena through music and film and we need to inspire young people to help with that. If we want to include 'high tech' culture, then the computer game model may be an ideal way of introducing futures concepts. We cannot hope to achieve cultural transformation with an approach that avoids direct cultural input.

6. Another area that has been largely ignored in futures research is social futures. This is really the more inner, culturally based aspect of social futures, concerned with how people relate to each other, how we connect with each other (LL). Galtung pointed out some years ago that when we hear the term future we seem only able to think of technological futures. There is much scope for development in this quadrant. This could go hand in hand also with more emphasis on developing an ethically-based, values-focused cultural component to education.

7. In addition, (and of course there are bound to be more), there is the Lower Right (LR) quadrant which again has been largely overlooked in much of the futures in education work. To what extent have educational futurists working in schools

attempted to work with 'the nature and dynamics of the relevant societal structure and systems?'[169] including the school and education system itself (eg. analysis of classroom dynamics, school internal politics etc.)

And if we keep the four quadrants in mind, this will also include as Slaughter points out:

- the specific ways that the various stakeholders construct meaning and significance (UL)
- culturally derived perspectives, rules and systems of meaning (LL)
- people's concrete skills, behaviours and actions (UR)

Perhaps it has not been for want of trying that this has not occurred. However, the beauty of an Integral model (such as this) is that it makes the gaps more obvious. If this latter omission could be addressed, it may become possible to encourage schools and education departments to make use of existing futures resources (knowledge base, personnel) to enrich their current 'fashion-statement' futures interests.

The beauty of an Integral model (such as this) is that it makes the gaps more obvious.

Finally, even in the most innovative of areas of educational change and transformation on the planet today, there is a tendency toward division rather than inclusion. There are different schools of 'progressive' educational thought which are not necessarily even informed about each other let alone joining forces. In other words it can be a bit like 'Mirror, mirror, on the wall, which is the most foresight fostering of them all?' Is it futures education? Steiner education? Sustainable education? In our little camps we would like to each stake our claims. What is it that holds us to the divisiveness of the fragmented view?

What is meant by 'truly integral consciousness' is still at an early stage of human understanding but certainly something with which futures educators need to concern themselves.

Jean Gebser would see it as being the deficient part of the mental mode of thinking.[170] In many ways we, even futurists, are caught in our own chicken and egg conundrum. Even as we try to think ourselves forward, our own intellects trip us up. The rational intellect is not a good bridge-builder. Until we have developed truly integral consciousness we will be forever limiting our own (individual and cultural – inner and outer) 'forward views'. The challenge for us all is how do we move beyond this conundrum? What is meant by 'truly integral consciousness' is still at an early stage of human understanding but certainly something with which futures educators need to concern themselves. From the struggle of futurists to stretch

our own foresight capacities to understand where human consciousness is going in the future, will arise insights into how to transform education so it better prepares youth to create a more truly integral future. Hopefully the following section will be 'food for foresight' or at least show some starting points to begin the journey.

Implications for the development of foresight literacy

There are a number of implications for the development of foresight literacy. The above analysis indicates that when you take an integral view of a field of work such as futures in education it starts to become clearer as to why it has not had the impact or the holding power that futures researchers have expected. Because most of the work has been focused on a limited number of quadrants and also a limited range of levels and streams within these, no matter how good the work is it will have limited overall impact on the education system as a whole, let alone society and culture. Because of this foresight literacy as a field or branch of education has been held back.

Based on the themes that have arisen from the literature review, the gaps that are evident, and perspectives from the meta-analysis, a number of research focus areas, including specific questions as to how they may be researched, will now be highlighted. Where possible relevant linkages and/or possible funding sources have been cited.

FUTURES IN EDUCATION: RESEARCH FOCUS AREAS

Specific research questions/options to progress the goals of futures education

1. Psychological dimensions of futures in education

virtually no research has been done into what psychological processes we are dealing with when we are teaching futures

There are several topics here that could be developed into research questions, clustering under some key areas:

Futures Processes and Empowerment

i. Can it be established through research that futures processes actually empower young people?

ii. Empowerment issues could be further researched. Why are Steiner students more empowered towards creating their preferred futures than mainstream youth?

iii. Are young people educated in non-Steiner alternative schools also more positive and empowered?

iv. Psychological implications of futures processes on clinical depression and hopelessness in young people needs to be further explored. The pilot project described above could be replicated on a larger scale.

Gender issues in futures views

v. Why do Australian boys seem more susceptible than girls to the kind of clinical levels of hopelessness that lead to risk-taking and suicide and can positive futures visioning actually help to reverse this?

vi. Additional gender-based questions could include 'why are boys more passive and technologically oriented in their preferred futures images?'

Impact of age in relation to pessimism

vii. Further research is also needed on the implications of the correlation between age of children/adolescents and increasing pessimism.

What is foresight from a psychological perspective?

viii. Further general psychological research is also needed into futures thinking/foresight.

2. Diverse ways of knowing

The emphasis in all school education (and also to a large degree in 'futures in education') has been with developing the cognitive faculties.

Although futures processes do engage other ways of knowing apart from the cognitive (eg imagining, visioning, etc), the primary mode is still mainly cognitive. We need to research what other ways of knowing could be included in futures in education work and how they could be introduced (eg contemplative, musical, dramatic). Some of this could be accessed through diverse cultural ways of knowing.

i. What are the lines of development other than cognitive?

ii. How can futures in education help to keep non-cognitive lines open (through the development of imagination, visioning etc)?

iii. How could music be used a futures tool?

iv. Is there a place for contemplative practices in futures in education?

v. What are the implications of David Tacey's 'Spirituality Revolution' on futures in education?[171]

vi. Is there a place for more poetry, dance, theatre in futures in education?

3. Developing integral consciousness

a lot of the leading edge developmental psychology and consciousness research indicates that human nature as a whole (and thereby many individuals) is moving beyond the intellectual, rational, mental mode of operating into a new trans-rational, integral (and more spiritual) way of thinking and perceiving

Taking the above point even further, a truly Integral Futures in education approach needs to be more than just a cognitive framework. Developing integral consciousness means working on several developmental lines at once. If we are to take seriously the notion that human development needs to move beyond rational consciousness to integral consciousness, we need to research how this can be fostered.

i. What can be learned from educational systems such as Steiner's approach or Aurobindo's integral education? How can this inform futures in education approaches?
ii. If imagination (or vision-logic) is one of the steps towards integral consciousness how can imagination be fostered by futures in education?
iii. What existing research is available on the cultivation of imagination in education?[172]
iv. What other existing organisations or networks are working towards an integral education approach with or without a futures perspective?[173]
v. Is there a place for a Spiral Dynamics analysis of educational processes and how might this inform futures in education practices?

4. Socio-cultural diversity

In respect of the cultural quadrant, which is fairly underrepresented in futures work anyway, it is even more remiss when it comes to considering whose culture is being represented in the material we are using.

Possible areas for research:

i. How can AFI create networks with existing organisations who are doing 'futures-oriented' work which would greatly benefit from 'serious futures expertise'?[174]
ii. What kind of research could inform futures in education processes so that they could be more inclusive of non-Western cultural values (indigenous perspectives/futures, NESB perspectives/futures)?
iii. Exploring alternatives to hegemonic conceptions of education.[175]

5. Cultural resources

If futures in education is ever to have a bigger impact on young people than 'just another social science lesson', we need to enter the youth culture arena through music and film and we need to inspire young people to help with that.

Futures research with young people and teachers indicates that it is always a struggle to find cultural material (films, literature, music etc) that presents the future in a positive way as a counter balance to the negative and bleak picture generally presented by mainstream mass media. Futurists working in the educational field may inspire teachers who can then inspire young people about transformational possibilities for the future.

i. There is a need for a resource bank to be developed of what cultural material (movies, literature, music, computer games) already exists which presents positive futures.[176]
ii. Who will write the futures fiction of the future and does it have to be 'science fiction'?[177]
iii. How can young people be encouraged to write their own 'alternative futures fiction'?
iv. Is it possible to explore a popular form of expression of futures that appeals to student populations, for example through a competition?

6. Human/social futures

Galtung pointed out some years ago that when we hear the term future we seem only able to think of technological futures (and largely ignore social futures).

Most of the futures research indicates that people in general and young people in particular have great difficulty envisioning social futures, as opposed to technological futures. The Steiner education research was an exception to this generalisation and therefore could through some light on this.

i. Why do technology futures figure so strongly in youth futures research?
ii. What images of the human being in the future are being presented through the media?
iii. How can the stages of moral development of Kohlberg and Gilligan throw light on our framing of social futures?
iv. How can our understanding of social innovation counteract our 'over-technologised' futures?

v. How is it that Steiner students had such a strong emphasis on social futures?

vi. What needs to be developed in education through futures in education work that will widen and deepen young people's capacity to imagine different and better social futures?

vii. What are the emerging issues relating to over-use of technology in education? Scope existing research on the over-use of technology among children and its influence on the increase in behavioural (eg ADHD), social problems in schools.

viii. How might the recent research at Sydney University on increasing biological myopia, linked to high screen usage in young people, also reflect a more socio-cultural or 'metaphoric myopia'?

7. Tackling the social systems

To what extent have educational futurists working in schools attempted to work with 'the nature and dynamics of the relevant societal structure and systems', including the school and education system itself? (eg. analysis of classroom dynamics, school internal politics etc.)

i. School systems in some states in Australia contain futures in their frameworks. How can these starting points be developed and applied more systematically across these systems?

ii. Given that considering the 'future' is a current fashion in education, how can education systems be informed of the value of the knowledge base of Futures Studies for use as a resource?

iii. Can the futures field provide strategies to better support teachers who wish to use innovative approaches, and specifically futures processes?

iv. Who are the key power brokers in initiatives to develop a national curriculum? How can they be informed of Futures Studies resources?

v. How are futures methodologies currently being used in school systems and how could they be better used?

vi. How can futures better market itself?

8. Cultural foresight – some speculative 'big picture' research ideas

If there were to be a global shift in the 'foreseeable future' from the dominant Western worldview based on the rational materialistic mode of thinking to a (or many)worldview/s based on a more spiritually inspired integral consciousness, what would global culture look like?

i. Could a futures curriculum, informed by developmental understandings, be developed for use from Pre-school to PhD?
ii. What kind of speculative research could be undertaken into the cultural implications of a change in the dominant worldview from the rational to the transrational/integral/imaginal/visionary? We want to work towards this but as 'leading edge' futurists we need to vision how we might like this to look in a thousand years if we want it to arise.
iii. How can futures in education foster the co-existence of a tapestry of different cultures on a global scale?
iv. Does the capability of foresight arise from cultural evolution? Is a 'scientific' worldview antithetical to foresight?[178]
v. Are there any existing cross-cultural visionary worldviews based in an integral paradigm?
vi. In a spiritually inspired transrationally conscious, transparent, integral future, how would we write? How would we speak? Would we talk only through machines or would we sing to each other? What would gender look like? What would education, medicine, architecture, spirituality look like? etc. Could these stories be compiled into a 'futures fiction' book?

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Eds. (2000). *Deeper Dimensions: Culture, Youth and Mental Health.* Culture and Mental Health: Current Issues in Transcultural Mental Health. Parramatta, Transcultural Mental Health Centre.; Marian de Souza from the Australian Catholic University is doing some rather 'futures-oriented' research with youth from a variety of cultures on their 'spiritual identities';

The Shift Foundation (Melbourne) is a new group which sees itself as a *second-tier* organisation (in a Wilber sense) looking at global leadership initially with indigenous youth but intending to go international. http://www.shiftfoundation.org

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2 Futures Education in Australian Primary and Secondary Schools:

Mapping Current Principles and Practice

DEBRA BATEMAN AND CAROLINE SMITH

It is abundantly clear that education has a crucial role to play in the development of social foresight through the medium of a strong Futures Education (FE) approach.

SUMMARY

It is abundantly clear that education has a crucial role to play in the development of social foresight through the medium of a strong Futures Education (FE) approach. By embedding Futures thinking, tools, concepts and language as a given in students' and teachers' patterns of thinking, present and future generations are given powerful thinking and development tools to imagine, create and understand the future differently. FE opens up the imagination about what is possible and worth working towards. It resists and offers alternatives to the narrowing of the collective imagination. As such it provides a durable foundation for social foresight.

Yet in Australian Primary and Secondary schools explicit Futures Education, using the language, concepts and tools of Futures Studies, is currently in its infancy. It appears that few Curriculum Consultants have knowledge of FE, instead seeing 'futures' as implicit within particular areas of the curriculum.

While some new curriculum documents recognise the need for education for the future, indicating that futures thinking has entered some Departments of Education, not all

offer explicit ways of achieving this based in the knowledge base of Futures Studies. Rather, the notion of the future is not problematised and remains implicit within curriculum areas such a global education, civics and sustainability education. Those curricula that do recognise an explicit Futures Education perspective provide an exciting basis for adoption of Futures Education in schools.

Both Primary and Secondary schools are included in the small number adopting explicit Futures in their programs. They have done so in a variety of ways, within specific learning areas and as integrated approaches that in some cases have involved school-community links. Teachers of FE enthusiastically endorse its adoption in schools, believing that a FE approach is empowering for both themselves and their students in that it offers creative and open-ended ways of considering the future. The most commonly adopted Futures tool in schools is the notion of Possible, Probable and Preferable Futures (called the '3P's in one school).

With the impetus of new curriculum documents the stage is set for FE to be widely adopted within Australian education. A number of enabling mechanisms, however, need to be made available and these should be driven in part by those innovative teachers already practising FE. These mechanisms include teachers mentoring others, support of school leadership, the creation of a professional body for FE, teacher professional learning through conferences, school cluster development, creative partnerships with tertiary and community institutions, pre- and in-service teacher professional education and the development of teacher and student resource material.

As regards teacher education, with few exceptions, tertiary Faculties of Education have been slow to adopt FE in their teacher preparation courses. Initiatives need to be taken to promote FE and to enable teacher educators to develop FE units within their courses, possibly in creative partnerships with practising FE teachers in schools. The report concludes by offering nine concrete actions or recommendations for promoting FE in schools.

INTRODUCTION AND OVERVIEW

> Students learn that future paths, whether considered personally, locally or globally, are not fixed but are the result of actions and decisions taken now … putting a futures perspective....is an exciting perspective which appeals to both staff and students. It allows for creativity, critical thinking, analysis and synthesis of ideas: at the same time it is exploratory, proposing possible, probable and preferable futures.[1]

The Australian Foresight Institute has received support from the Pratt Foundation to initiate and develop a series of processes that will enable the development of social foresight (futures thinking and praxis) across a range of social and economic sectors. A key part of this agenda is the development of Futures literacy within the education sector. In order to achieve this, the status of current Futures Education in Australia needed to be documented. This report sets out to do this as well as to point to ways forward for the continued development of Futures Education in the sector, from which social foresight may emerge more strongly than at present.

This report begins with an audit of current State and Territory curriculum documents to determine if and how Futures Education (FE) is implicit or explicitly referred to. It includes brief information of particular Curriculum Consultant knowledge. The next section of the original report (which is not reproduced here) provided an overview of knowledge, programs and practices within five selected schools (three secondary and two primary) identified by key informants in the FE community as having FE to varying degrees within their programs. This was not a general survey of a broad range of schools but rather a documentation of current practice in FE where it was known to exist. Information was sought from teachers and students in the selected schools. This was collected by individual interviews of staff members and focus groups conducted with groups of students who were engaged in FE. Prior to this guide interview questions were circulated for expert review via the World Futures Studies Federation email discussion list, and revised where necessary. The data collected from the case study schools necessarily varied in quality and depth depending upon the availability of teachers and students to take part in the study. Part Two draws together key themes and conclusions from the study. Part Three provides actions/recommendations that may assist the further implementation of social foresight through FE in schools.

FUTURES IN EDUCATION IN AUSTRALIAN SCHOOLS

Curriculum consultants

Four senior curriculum consultants were interviewed about their understanding of FE. None had extensive knowledge of Futures Studies, but were aware of its existence and were keen to engage in professional learning in the area. The consultants were well aware that Futures was entering new curricula. Some consultants saw Futures in terms of creating a sustainable future and were directing their energies to enable schools to adopt this perspective.

Curriculum Documents

The view that one of the key roles of schools is to develop and prepare young people for 'the future' is a given, and rhetoric around this theme has long been a feature of curriculum. In response to the Education Act (1996), all states and territories in Australia have developed curricula based on eight Key Learning Areas derived from National Curriculum Statements and Profiles (1996). These are The Arts; English; Mathematics; Technology; Health and Physical Education; Science; Studies of Society and Environment (SOSE) and Languages other than English (LOTE). In addition, four of the states describe overarching frameworks that reflect their particular priorities:

– Queensland: *New Basics*

– Tasmania, South Australia: *Essential Learnings.*

– Northern Territory: *EsseNTial Learnings.*

– Australian Capital Territory: *Within Reach of us All*[2]

Within these curricula and their frameworks, education about the future appears in various guises that can be regarded as either implicit or explicit. Implicit FE is taken to mean the plethora of statements and curriculum outcomes that refer to the future, but frame it as taken for granted, uninformed by the FE literature as evidenced by the lack of explicit Futures literacy comprised of language, concepts and tools. Typical curriculum statements would be 'developing citizens of the future' (ACT) and 'personal and civic development of the person' (ACT, NT).

Explicit FE on the other hand, is still the missing dimension in education[3] as an overarching framework for curriculum work. Explicit FE is that which attempts to develop Futures literacy, drawing widely upon Futures Studies literature for processes and content, and expressed in curriculum statements and outcomes that clearly problematise the future. A number of Australian curriculum documents have incorporated an explicit FE perspective in innovative and creative ways, possibly making Australia a potential leader in FE in schools. In particular, an important point of departure from implicit futures is use of the cluster of thinking tools around possible, probable and preferable futures and consideration of the deep structures using an approach, such as Causal Layered Analysis, which encourages exploration of issues at the level of paradigms and worldviews.

Implicit Futures in Curriculum

Within the Key Learning Area; Science, SOSE, Environmental Education and Technology tend to be the main curriculum vehicles for an implicit futures focus. Much of this understanding is developed in relation to a topic of work. While offering

a range of important concepts and skills, the taken-for-granted future is often considered in terms of vocational orientation, civic responsibility and lifelong learning. Such approaches tend to be reactive in terms of the future, and more often than not will serve to enforce the status quo though an uncritical adoption of a taken-for granted future with a past unexamined in terms of worldview.

Implicit futures concepts include:

– Sustainability
– Technological futures
– Change and continuity
– Civic responsibility
– Globalisation
– Vocation and careers knowledge – the future of work
– Personal development

The descriptors of learning include:

– Life long learning
– Holistic learning
– Problem solving
– Cognitive skill development
– Preparation for a complex world
– Flexible learning
– Just in time learning

Curricula from Victoria, New South Wales and Western Australia include implicit FE. Victoria's Curriculum and Standards Framework is the oldest of current documents, and is being reviewed currently. The New South Wales Department of Education and Training has a very strong focus on sustainability, and has extended this in a novel way to include all practices and decisions undertaken by the Department.[4]

The ACT's *Within reach of us all*, the Northern Territory's *EsseNTial Learnings* and Queensland's *New Basics* all refer to the promotion of lifelong learning and the holistic development of citizens and people of the future. The ACT document specifically highlights six learning outcomes for developing such citizenry as mature, active and informed community, national and international citizens. These are that:

– Students develop the values and social capacity to exercise judgement and take responsibility.
– Students' critical thinking, problem solving and lifelong learning skills are expanded.
– Students have information communication skills for learning and work.
– Enterprise education opportunities for all students are increased.
– Students experience effective transition pathways to work.[5]

While the Northern Territory's *EsseNTial Learnings* does not embrace an explicit FE perspective, it does have some useful futures elements in place. The document focuses on 'connected lifelong learning, are essential in preparing students for complex future life roles' and in personal development from the perspective of four domains of the learner:

– The Inner Learner
– The Creative Learner
– The Collaborative Learner
– The Constructive Learner

The 'Inner Learner' develops 'an awareness of how past and present shape one's future, resilience and a strong sense of wellbeing'.[6] The 'Constructive Learner' focuses on the development of skills, which enable learners to contribute thoughtfully to their local and global communities. While these could be considered as elements that would form part of an explicit FE, the main focus is the psychological well being of the learner.

Explicit Futures in Curriculum

The curriculum documents of Tasmania, South Australia and Queensland all describe an explicit FE approach that seeks to develop futures thinking, skills and conceptual understandings in a number of ways. Each of these curricula uses 'curriculum organisers'; clusters of connected ideas linked to skills which enable development of futures concepts. These concepts relate to:

– personal futures
– social responsibility
– global futures

In personal futures, life pathways and social futures learning centres around students' life skills, such as cooperation, collaboration and considering possible worlds of work.

Through this it is anticipated that students will develop a sense of initiative and enterprise. Multiple literacies (multiliteracy) are used to encourage students to develop a range of communication skills, based on Gardner's multiple intelligences.

In developing social responsibility, students consider what it means to interact with others within inter-cultural perspectives. Here are some exciting developments in FE as students are encouraged to develop an awareness of local and global economies through CLA approaches. Students may consider the environment and technology as in an implicit FE approach, but they now include a variety of developmental models based on probable, possible and preferable futures scenarios (see Appendix One).

Queensland – *New Basics* Project

New Basics was the first Australian curriculum document to include FE, and as such it must be regarded as a FE pioneer, leading the way for others. The project encompasses a cyclical triad that includes New Basics (what is taught); Productive Pedagogies (how it is taught) and Rich Tasks (how students demonstrate learning). It attempts to develop a multidisciplinary approach to previously separate Key Learning Areas through curriculum organisers, and again contains some elements of FE. Table One relates *New Basics* curriculum organisers to questions that include a futures perspective:

Curriulum organisers	**Key FE questions**
Life Pathways and Social Futures	Who am I and where am I going?
Multiliteracies and communications media	How do I make sense of and communicate with the world?
Active citizenship	What are my rights and responsibilities in communities, cultures and economies?
Environments and technologies	How do I describe, analyse and shape the world around me?

Table One: Curriculum organisers and related key FE questions in *New Basics* (Queensland)

Tasmania – *Essential Learnings*

Essential Learnings is a creative, innovative and well-considered document. It notes that:

> communities see the curriculum as a means for creating the sort of future they want. Learners' sense of optimism is dependent on a belief in their capacity to shape the future and to pursue worthwhile individual and community goals.[7]

The five curriculum organisers which form the framework for the Essential Learnings are:

1. Thinking
2. Communicating
3. Social Responsibility
4. Personal Futures
5. World Futures

Across each of the Essential Learnings are woven the themes:

– Thinking and Communication
– Ethical Action
– Interdependence
– Futures

So Futures here is considered as both a specialised curriculum area as well as a theme across the Key Learning Areas. Within Futures students consider both Personal and World Futures. Personal Futures aims to provide young people with educational experiences that will enable them to engage successfully with current and future change with optimism and resilience. The key elements that enable these aims to be achieved are:

– Building and maintaining relationships
– Maintaining well being
– Being ethical, and
– Creating and pursuing goals.

The capacity to live fulfilling lives and shape futures, according to Essential Learnings, is based on the development of a strong sense of identity, maintenance of well-being, development of autonomy and a sense of life purpose and direction.[8]

World Futures involves investigating systems in the natural and constructed world and their interrelationships. Student learning focuses on the challenge of taking responsibility for long-term sustainability of global ecological systems. Key elements of the World Futures curriculum organiser involve:

– Investigating the natural and constructed world
– Understanding systems

– Designing and evaluating technological solutions

– Creating sustainable futures.

– Social Responsibility brings in FE through creating preferred futures[9]

South Australia – *South Australian Curriculum Standards and Accountability* (SACSA) and *Essential Learnings*

The SACSA document identifies as its foundation local and global change and the need to shape futures in these changing times: 'as educators, our challenge is to construct a curriculum response which meets the emerging and rapidly changing demands of a knowledge economy and society'.[10]

Driving *SACSA* are five foci for student learning:

1. Essential Learnings
2. Coherence
3. Enterprise and vocational education
4. Equity
5. Standards.

It is within the focus of 'Essential Learnings' that Futures is explicitly developed alongside identity, interdependence, thinking and communication. These 'Essential Learnings' are referred to as the resources 'which are drawn upon throughout life and enables people to productively engage with changing times as thoughtful, active, responsive and committed local, national and global citizens'.[11]

The Futures learning area focuses on developing flexibility in responding to change, and in developing connections between past and present (the notion of the extended present) in order to conceive a variety of scenarios and solutions for preferred futures. Like the Tasmanian document, this curriculum aims to nurture students' sense of optimism about their ability to contribute to shaping preferred futures. Based on constructivist pedagogy, the South Australian curriculum encourages students to critically reflect on, and take action in shaping preferred futures.

Appendix One provides a comparison of the State and Territory curriculum documents in their statements regarding FE. Appendix Two illustrates extra-curricular areas where FE may also be located.

SUMMARY AND IMPLICATIONS OF CASE STUDIES

Futures Education in Australian Curricula

The report raises a number of considerations regarding FE in Australian primary and secondary education. Historically the education sector has been slow to respond to changing world conditions, so it is certainly encouraging to note that the forward view is at last finding a place within State and Territory Curricula. Clearly curriculum developers have come to a realisation that consideration of future options and alternatives is vitally necessary in today's world. While beyond the scope of this report to explore the reasons for this change in perspective, it would appear that Twentieth Century issues of globalisation, sustainable development and the technoscience revolution are influencing educationalists in forming responses to education for the Twenty First Century. The influence of Futurists particularly the writings and seminar presentations by Richard Slaughter and Sohail Inayatullah (in Australia) and David Hicks (in the UK) has been a key element in consciousness raising. The curricula described above embody a recognition that education in the Century necessarily needs to depart from the more subject based approaches that have their origin in the knowledge divisions of the Nineteenth Century. While these curricula are certainly innovative in design, they differ in their understanding of what an education for the future might look like. In some curricula the forward view is implicit, located within themes such as global education, sustainability/environmental education, civics and so forth, though often cross-matrixed with personal and global futures. Here the future is taken for granted, a projection of the present and unproblematic.

Clearly curriculum developers have come to a realisation that consideration of future options and alternatives is vitally necessary in today's world.

Serious development of futures literacy in school students depends on the adoption of a fully explicit FE. Queensland's New Basics is apparently the first curriculum document to include a Futures perspective and serves as a foundation for explicit FE curricula. The best examples of this are those of Tasmania and South Australia, where curriculum developers have clearly been influenced by the language, concepts and tools of Futures Studies. Without these, futures literacy will necessarily remain underdeveloped.

While only a small number were approached, it would appear that knowledge of Futures Studies among sector curriculum consultants is limited. Those that have an interest in 'the future' tend to see it as meaning sustainability education, ie education for creating a sustainable future. While clearly a key consideration within Futures Studies,

sustainability education does not necessarily explicitly problematise the future, or explore alternative futures at the level of worldview. Others educationalists consider the future in specifics, such as the future of work, the future of technology of the implications of a given future as in Future Problem Solving. The overarching organisers offered by FE are absent, suggesting lack of knowledge of this literature.[12]

Futures Education in Australian Schools

Previous studies have indicated that explicit FE is almost unknown across Australian schools. The only Futures-related project has been the Futures Problem Solving. Useful as it is, this tends to reflect a closed view of the future in that it provides a given future problem to be discussed, rather than an open-ended imaginative futures approach. As Grant Ley at St. John's Grammar School noted: [Future Problem Solving] 'was a narrowing rather than divergent exercise'. This survey undertook to examine practices within those few schools known to us to have engaged with explicit FE in some way.

Futures Education in School Curricula

Within both secondary and primary schools, FE as an overarching framework, can be adopted in a variety of ways. These tend to reflect the influence of interested teachers and possibilities within the curriculum structures of the school. FE in secondary school curricula is offered variously as:

- a dimension within existing subject areas
- a stand alone subject
- an overarching framework for an integrated curriculum approach.

In the Primary sector with its emphasis on integrated curriculum, FE is easily adopted within an integrated approach. Whatever the approach, one tool stands out as being the most useful for education – possible, probable and preferable futures (or the '3Ps' as it has become known at St. John's Grammar School). The '3Ps' readily enables an open ended, flexible and challenging approach to Futures that is eminently accessible to students as young as year five and teachers alike. It is both simple and profound, immediately opening up the notion that there is not only one future and thus allowing an extraordinary level of exploration and deep thinking to take place. Overall, the Futures tools and concepts used in education represent the 'soft' end of Futures, consistent with constructivist pedagogies that encourage construction of meaning through questioning, exploring and valuing of students' ideas.

While all the approaches described above represent exciting and innovative approaches to FE, integrating approaches such as the Peace Education of St. Margaret's School,

Doom Gloom and Bloom at Kimberley Park Primary School and *Making Places* at Woodbridge State High School probably represent the most exciting and profound way in which FE can be used. While they differ in scope and specific purpose, these approaches have the potential to enable a futures perspective to be embedded into the lives of students so invoking Futures thinking becomes automatic.

Embedding FE in schools

Like any other innovation, the long term success of FE in schools depends on an embedding process so that the innovation does not depend on the enthusiasm and energy of a few individuals, only to disappear when key staff leave or become burnt out. A number of factors are crucial for the successful embedding of FE. These are:

– Leadership

  The leadership of a key staff member(s) who can introduce FE to staff is crucial to begin implementation of FE, as is support of the school leadership.

– Teacher Enthusiasm

  To maintain a successful FE program, teachers themselves need to be enthusiastic.

– Teacher Knowledge

  Supports and maintains teacher enthusiasm. Teacher professional learning is crucial to the development of a strong FE program. Here the ideal is the St. John's programme where 12 teachers undertook professional studies at the Masters level. This is unusual and unlikely to be replicated elsewhere easily. However both teacher content and teaching tools knowledge can be increased through other means such as professional development days, tertiary education, conferences and professional support bodies (see recommendations below).

– Wider Parent / Community Education

  Parent and community education is also important to provide a support base for students' work both at school and within the wider community. Students themselves can provide this education through public performance, art, simulations, working with local community groups and so on.

Teacher's Views of FE

For many teachers involved in FE, exposure to the field may precede implementation of FE in schools by up to several years. Without exception, all teachers working with FE expressed enthusiasm, seeing FE as providing a powerful way of empowering students to consider personal and collective futures, and talking about 'Big Ideas'. One teacher felt that the conceptual base of FE was challenging and more suited to able students. Others did not share this view. For many teachers, FE provides for themselves and their students hitherto unimagined choices as well as a language for considering futures. By using FE teachers themselves have developed a deeper understanding of Futures as well as extended their teaching repertoires.

Without exception, all teachers working with FE expressed enthusiasm, seeing FE as providing a powerful way of empowering students to consider personal and collective futures, and talking about 'Big Ideas'.

Students' Views of FE

Students of all abilities appeared to enjoy the perspectives offered by FE to a varying extent. Some students regarded FE as empowering them to have a say in their communities. Others, however, believed that they remained essentially powerless at the global level although FE assisted them to understand the global scene better. That FE potentially empowers students to engage in local actions gives students a voice that they may not have had previously. This, a highly desired outcome of FE, may depend on the degree to which students are allowed to interact and to be taken seriously by their communities. Success here requires a high degree of pre-planning and collaboration. Once collaborative projects are in place, however, they can be refined and built upon and become an integrated part of the school program. FE also enables a holistic view, allowing for previously unrelated events or concepts to be seen as connected. The issue of gender/equity and FE in schools needs further research. It seems that some girls may view the whole notion of the future as a masculinist project.

CONCLUSIONS AND RECOMMENDATIONS FOR DEVELOPING FUTURES LITERACY

The need for social foresight is urgent, and as noted above, new curricula are beginning to provide for a FE approach through the development of Futures literacy. For the education sector to become a powerful and central player in the emergence of social foresight, the following actions are recommended:

1. Schools already engaged in FE need to become leaders in the mentoring of others, to consolidate their own learning as well as assisting others. This could occur through network/cluster development that would need the support in tangible ways (time,

funding) of a committed school leadership. Schools are already leaders in implementing FE and should lead the way in promoting FE education given the paucity of FE in university based teacher education courses.

2. The excellent work described in this report already taking place in schools needs to be widely disseminated. There is an urgent need for a 'Futures in Education' conference where FE practitioners can present their work to others. An interest in conference participation has been expressed by a number of the teachers taking part in this study. Institutions engaged in FE may provide a leadership and enabling role here.

3. The creation of Nationwide and State professional bodies of FE, modelled on successful existing professional bodies would enable ongoing professional learning to take place through journals, conferences, networking, professional development and so on. Such a body could encourage participation in Futures through events similar to Future Problem solving, perhaps modelled on UN forums or local councils, but with a focus on problematising the future.

4. Collaboration between schools and local community is a powerful way of empowering students to feel hopeful and engaged in creating their futures. The Making Places model could well be adopted and extended to include collaboration between schools and a range of community/government/business arenas.

5. Universities that offer teacher education need to play a much more proactive role in exposing pore-service and post-graduate teacher to FE. This is in its infancy.

6. Creative partnerships between schools and Universities could provide a fast track to FE education for teachers. The model adopted by St. John's Grammar School in collaboration with the University of South Australia and Australian Catholic University could well be developed between school practising FE and tertiary intuitions offering Futures Studies. AFI could well become a leader in this regard.

7. There are few accessible FE resources for schools' use other than the excellent *Education for the Future*[13] and Slaughter's two volumes *Futures Concepts and Powerful Ideas* and *Futures Tools and Techniques.*[14] Most FE writing remains in the realm of academia, reflecting the lack of value placed by tertiary institution on staff producing school texts and other resources.

8. At the global level, the World Futures Studies Federation education project under the leadership of Professor David Hicks could invite FE teachers to be part of a continuing conversation on FE. A list similar to that operated by WFSF could enable this to take place globally.

9. Futurists themselves need to engage more closely with schools. A futurist-in-residence program and leading students and teachers in workshops and seminars are some of the ways this could take place.

The guiding framework for this report has been the development of social foresight. It is abundantly clear that education has a crucial role to play in this through the medium of a strong FE approach. By embedding Futures thinking, tools, concepts and language as a given in students and teachers' patterns of thinking, present and future generations are given powerful thinking and development tools to imagine, create and understand the future differently. FE opens up the imagination about what is possible and worth working towards. It resists and offers alternatives to the narrowing of the collective imagination. This is the basis of social foresight.

NOTES

[1] David Rawnsley, Curriculum Co-ordinator, St. John's Grammar School
[2] ACT Government Schools Plan 2002-2004
[3] Beare and Slaughter (1993)
[4] see www.det.nsw.edu.au/
[5] http://www.decs.act.gov.au/publicat/pdf/ACTSchoolPlan.pdf (Appendix)
[6] http://www.schools.nt.edu.au/curricbr/cf/pilotmats/CD/els/oview.htm , p18
[7] http://www.education.tas.gov.au/ocll/currcons/publications/answering.htm p12
[8] http://www.education.tas.gov.au/ocll/currcons/publications/answering.htm p25
[9] http://www.education.tas.gov.au/ocll/currcons/publications/answering.htm p35
[10] http://www2.nexus.edu.au/ems/sacsa/downloads/finaldraft/general_intro/page1.html
[11] http://www2.nexus.edu.au/ems/sacsa/downloads/finaldraft/general_intro/page1.html
[12] Smith (2003)
[13] Hicks (1996)
[14] Slaughter (1995a & b)

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Appendix One

Comparison of Futures Education statements in Australian State and Territory curriculum documents

Appendix Two

Extra-curricular areas that include Futures Education

Appendix Three

Summary of Futures Education in Case Study Schools Curricula – Secondary Schools

Appendix Four

Summary of Futures Education in Case Study Schools Curricula – Primary Schools

APPENDIX ONE
Comparison of Futures Education statements in Australian State and Territory curriculum documents

Location	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Department responsible	Department of Education, Youth & Family Services	Department of Education & Training	Department of Employment, Education and Training	Education Queensland And the Curriculum Council (QSCC)	Department for Education, Training and Employment	Department of Education	Department of Education and Training	Department of Education and Training and the Curriculum Council
Curriculum document	*ACT Curriculum Frameworks & Across Curriculum Perspectives Documents*	*Board of Studies K-6 Learning Outcomes 7-10 subject syllabus*	*Northern Territory Curriculum Frameworks (NTCF)*	*New Basics Project*	*South Australian Curriculum Standards and Accountability (SACSA)*	*Essential Learnings*	*Curriculum Standards and Framework 2 (CSF2)*	*Western Australian Curriculum Framework*
Learning Statement with futures focus	'Education is of strategic importance to Canberra and a key investment in our future. A well-educated community is the basis of what makes Canberra socially and economically healthy'[i]	'The key priority of public schools is to provide children and young people with the foundations for lifelong learning so that they become literate, numerate, well-educated citizens with the capabilities and confidence to make a positive contribution to our society'[ii]	'As we enter the 21st century, our learners face many complex, diverse and uncertain global and local social, economic, political and environmental issues. Rapid technological changes increasing cultural diversity and changing family and institutional structures all influence and are influenced by schooling'[iii]	'The New Basics Project is a bold and exciting undertaking by Education Queensland to prepare our students for the future. It deals with new student identities, new economies and workplaces, new technologies, diverse communities and complex cultures'[iv]	'As educators, our challenge is to construct a curriculum response which meets the emerging and rapidly changing demands of a knowledge economy and society'[v]	'Communities see the curriculum as a means for creating the sort of future they want. Learners' sense of optimism is dependent on a belief in their capacity to shape the future and to pursue worthwhile individual and community goals'[vi]	'The Curriculum and Standards Framework (CSF) describes what students should know and be able to do in eight key areas of learning … from the Preparatory year to Year 10. It provides sufficient detail for schools and the community to be clear about the major elements of the curriculum and the standards expected of successful learners'[vii]	'All Western Australian students need appropriate knowledge, understandings, skills and values to participate and prosper in a changing world and a new millennium'[viii]

APPENDIX TWO
Extra-curricular areas that include Futures Education

ACT	NSW	NT	QLD	SA	TAS	VIC	WA
'These cover those educational and societal issues considered of such significance that they should be applied to the whole curriculum'[ix] • Aboriginal Education and Torres Strait Islander Education • Australian Education • Environment Education • Gender Equity • Information Access • Language Understanding Across the Curriculum • Multicultural Education • Special Needs • Work Education	'Students are prepared for life outside of school through a range of programs that put learning in context, make it relevant and part of the culture of everyday school life' These include: • Aboriginal Education • Anti-Racism education • Career Education • Distance and Rural Education • Drug Education • Environmental Education • Gender Education • Gifted and Talented Education • Learning Technologies • Multicultural Education • Religious Education • School Libraries • School Sport • Vocational Education	'Future generations will require both the capacity and commitment to successfully negotiate and develop socially just, ethical and sustainable futures'[x] • EsseNtial Learnings • Learning Technology • Literacy • Numeracy • Learning Technology • Environmental • Indigenous Studies • Studies of Asia • Vocational Learning	'The New Basics Project is part of a reform agenda that espouses the view that educational outcomes should be futures-oriented – based on a philosophy of education committed to the preparation of students for new workplaces, technologies andcultures'[xi] • New Basics	'The SACSA Framework supports a futures-oriented curriculum while building in existing practices. In South Australia the curriculum of the future is not an artefact designed by a group of 'experts'; it builds from and on the daily work of educators'[xii] • Essential Learnings • Aboriginal & Torres Strait Islander peoples' perspectives • Multicultural perspectives • Gender perspectives • Socio-economic perspectives • Disability perspectives • Rural & Isolated perspectives	'The Essential Learnings Framework … provides a scaffold for curriculum selection and decision making. It focuses on the social and economic futures of young people and what kinds of competencies and understandings students will need for a successful future'xiii • Essential Learnings • Core Set of values	'Essential learning for each key learning area is defined as the knowledge and skills that students need in order to: • Operate effectively and competently at each stage of development and experience success • Progress to the next level • Develop the capacity to participate effectively and responsibly in society'[xiv] • Information and Communications Technology • Environmental Education • Civics & Citizenship Education • English as a Second Language (ESL) • Disabilities studies	'The Curriculum Framework is built upon a commitment to the philosophy that learning is continuous and that the essential purpose of schooling is to improve the learning of all students'[xv] • Core shared values
No	No	No	Yes	Yes	Yes	No	No

APPENDIX THREE

Summary of Futures Education in Case Study Schools Curricula

Secondary Schools

Learning area	Year levels	Topics/teaching approaches	FE tools/ concepts	Resources
Drama	9, 10	Play presentation,	'3Ps' poetry, music: The future of technology, education environment	Artist in Residence Scenario building Public Performance
English	8,9,10, 11	Short story reading and writing	'3Ps' Prequel writing	Literature/film with a Sci-Fi focus eg *Century, Dream of Stars, Children of the Dust*
Integrated Futures Studies	9	Ethical decision making	Ethical decision making around different futures. *Futures as a continuum from a recapitulation of the status quo to transformative worldviews,* recognising that futures scenarios arise out of specific worldviews Pop, problem centred and critical futures	
Home economics	11	Food and shopping. Major essay 'from humble beginnings to futures unknown'	Brainstorming Concept mapping Futures wheel 400 year present	*New Scientist* Interview older person
Indonesian	10	Endangered animals – Orang-utan	'3Ps' Webs of causation Role play	Australian Orang -utan Project
Mathematics	9	Graphs	Linear and exponential growth Extrapolation	Population statistics Environmental trends
RAVE	10	Natural environment	Values clarification Notion of progress	Australia 2020
SOSE/ Integrated curriculum	7, 9	Immigration Transport Water use: The Murray River	'3Ps'	Literature and film: *The Time Machine* *Bicentennial Man* *Links in the Curriculum* *World Feast Game* Chronicles of the future

Learning area	Year levels	Topics/teaching approaches	FE tools/ concepts	Resources
Integrated curriculum	10	Community-school links Health, safety and sustainability	'3Ps'	Making places: 'Making Places' funded by the State Government's Department of Housing project 'Community Renewal'
Integrated curriculum	10	Transport; The local environment; The school; Technology in the home; Entertainment; Health and designer babies; Population; Housing	'3Ps'	
Geography/ Integrated curriculum/ Art		Peace: local to global	'3Ps' Visioning	Conflict resolution Peer mediation UN Forum

APPENDIX FOUR

Summary of FE in Case Study Schools Curricula

Primary Schools

Learning area	Topics/teaching approaches	FE tools/concepts	Resources
Integrated curriculum: *Doom, Gloom or Boom – is ours a fascinating or frightening future?*	Enquiry questions: Superhumans – Mechanical humans or human machines? Will tiny machines rule the world? The technology revolution impacts on our world, but will it be sustainable?	Prediction or foresight? '3Ps'	Talking to Grandparents WFSF materials Public Summit simulation
Integrated curriculum: SOSE, Science, Technological Understandings, Drama	Changing community past, present and futures	'3Ps' Extended present	Public Performance
Mathematics	Probability	'3Ps'	Weather data, dice and spinners

NOTES

[i] http://www.decs.act.gov.au/publicat/pdf/gov_school.pdf
[ii] http://www.det.nsw.edu.au/aboutus/public.htm
[iii] http://www.schools.nt.ed.au/curricbr/cf/pilotmats/CD/intro/overview.htm p2
[iv] http://education.qld.gov.au/corporate/newbasics
[v] http://www2.nexus.edu.au/ems/sacsa/downloads/finaldraft/general_intro/page1.html
[vi] http://www2.education.tas.gov.au/el p12
[vii] http://vcaa.vic.edu.au
[viii] Minister for Education
http://www.curriculum.wa.edu.au/pages/framework/framework01.htm
[ix] http://www.decs.act.gov.au/publicat/acpframeworks.htm
[x] http://www.schools.nt.edu.au/curricbr/cf/pilotmats/CD/els.oview.htm p17
[xi] http://education.qld.edu.au/corporate/newbasics/html/trial/research
[xii] http://www2.nexus.edu.au/ems/sacsa/downloads/finaldraft/general_intro/page1.html
[xiii] http://www.education.tas.gov.au/ocll/currcons/publications/answering.htm
[xiv] http://www.vcaa.vic.edu.au/csf/GeneralInfo/csfII/overview.htm
[xv] http://www.curriculum.wa.edu.au/pages/framework/framework01.htm