DREAMS AND EXPECTATIONS

Young people's expected and preferred futures and their significance for education

Richard Eckersley

A recent Australian study sought to obtain a better understanding of what young people expect and want of their country in 2010, and to assess the value of scenarios as an investigative tool. The study had two components: a series of eight scenario-development workshops involving a total of 150 young people, most aged between 15 and 24 and from a variety of backgrounds; and a national opinion poll of 800 Australians in this age group. The study suggests there is a wide gap between young Australians' expected and preferred futures. Most do not expect life to be better in 2010, either nationally or globally, but foresee a continuation, and even worsening, of today's problems. Their dreams for Australia are of a society that places less emphasis on the individual, material wealth and competition, and more on community and family, the environment and cooperation.

Introduction

There are two, quite different, perspectives on the future that are nicely encapsulated in a couple of Woody Allen quotes, taken from different graduation addresses:

> It is clear the future holds great opportunities. It also holds pitfalls. The trick is to avoid the pitfalls, seize the opportunities and get back home by 6 o'clock.

> More than any other time in history, mankind faces a crossroads. One path leads to despair and utter hopelessness. The other to total extinction. Let us pray we have the wisdom to choose correctly.

The first perspective is pragmatic and personal, dealing with down-to-earth issues of getting ahead in life; the second is more universal, even philosophical. Most public debate is firmly anchored in the former. In the case of education, for example, most discussion revolves around practical issues of structures, curriculums, budgets and technology - of how, for example, we best equip young people with the skills they need in the rapidly changing world of work. But we also need to examine education from the second perspective, and address issues that are broader, deeper and less tangible, that have to do with meaning and purpose, values and visions.

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Any consideration of education must take into account the whole person - his or her outlook on life, expectations of the future, and values and attitudes. These qualities will shape a person's approach to all aspects of life, including education, work, citizenship and personal relationships. If young people believe in themselves (not just as individuals but also in their ability to contribute to society), and have faith in the future, anything is possible. If they lack these qualities, as the evidence suggests many do, no amount of conventional policy adjustment will deliver the results we seek.

Yet we continue to neglect the significance of these factors, while expending huge amounts of political energy in attempting to get the policy settings right. This emphasis on policy, and especially on the financial bottom line (whether for education or the nation), not only ignores questions of morale and inspiration, it can contribute to the erosion of these important cultural attributes. The consequences of this oversight are serious enough even in terms of narrow goals like improving employability or economic competitiveness. They become even more costly in the context of the much greater task of building more equitable and sustainable societies.

How young people perceive the future – whether with hope or trepidation – matters, to them and to society. In this paper, I describe an Australian study that sought to assess young people's dreams and expectations of the future of their country.[1] I proposed, planned and participated in the study, which was one of several 'partnership' studies carried out under the auspices of the Australian Science, Technology and Engineering Council (ASTEC) as part of its larger *Future Needs 2010* foresight program.[2] The Council is a statutory advisory body, attached to the Department of Prime Minister and Cabinet.

The study 'partners' included national scientific, educational and youth organisations, which were represented on a steering committee established to oversee the project and chaired by a member of the Council. The study sought to obtain a better understanding of what young Australians expect and want of Australia in 2010, and to draw out, from these perspectives, the key issues shaping the nation's future, including the role of science and technology. The study also sought to assess the value of scenario techniques as a tool to investigate young people's views about the future (and, as it turned out, to influence their thinking).

Thus the youth partnership study had a 'content' objective and a 'process' objective. These twin aims were consistent with the objectives of the overall ASTEC *Future Needs 2010* program. These included: identifying the key social, economic and environmental issues Australia is likely to face in 2010 and the role of science and technology in addressing these issues; and assessing the effectiveness of various foresight techniques for doing this.

Methods

The ASTEC youth partnership study had two components: a series of eight scenario-development workshops involving a total of 150 young people, most aged between 15 and 24 and from a variety of backgrounds; and a national opinion poll of 800 Australians in this age group.

The scenario process used in the study was developed as a corporate strategic planning tool by Shell and later developed and promoted by a futures group, the Global Business Network (GBN). The objective is not to try to forecast or predict the future, but to develop scenarios for several possible or plausible futures, and so allow corporations to plan and be better prepared for whatever future eventuates. Scenarios allow planners to incorporate a wide range of possibilities in rich detail, and in a form people can readily grasp.

For these purposes scenarios are not usually developed in terms of what is 'expected' or 'preferred'. In the youth partnership study, the scenario planning process was modified to produce probable and preferred scenarios of Australia's future, and simplified to suit the age of the participants and time constraints. Skilled facilitators conducted the workshops. Six of the eight were conducted over two days, one over one day, and one over three double periods on separate days. The groups, of about 20 people, included school students (metropolitan and rural), university students, long-term unemployed and indigenous youth. Notes were taken of discussions and outcomes at each stage of the process, usually on butcher's paper. An outline of the scenario process is given in Box 1.

[Insert Box 1 on scenario process bout here]

The national opinion poll was commissioned from a market research company, AMR:Quantum Harris, using a questionnaire that drew on the issues identified in the workshops. Interviews were conducted by telephone in July 1995 with 800 people aged 15-24. There were equal quotas of males and females; the number of interviews in each state capital and non-metropolitan state areas reflected the distribution of the Australian youth population; and results were weighted by gender and age, based on 1991 census data. The 95% confidence interval is plus or minus 5% for sample sizes of 400 (the gender sub-groups), and plus or minus 7% for sample sizes of 200 (the smallest of the age sub-groups).

Overview of results

The future most young Australians want is neither the future they expect, nor the future they are promised. Most do not expect life in Australia to be better in 2010. They see a society driven by greed; they want one motivated by generosity. Their dreams for Australia are of a society that places less emphasis on the individual, material wealth and competition, and more on community and family, the environment and cooperation.

The workshops suggest most young people see the future mainly in terms of a continuation or worsening of today's global and national problems and difficulties, although they also expect some improvements, even in problem areas. Major concerns included: pollution and environmental destruction, including the impact of growing populations; the gulf between rich and poor; high unemployment, including the effect of automation and immigration; conflict, crime and alienation; family problems and breakdown; discrimination and prejudice; and economic difficulties, including the level of foreign debt. In areas such as health and education, opinions were more equally divided between improvement and deterioration. In the preferred

future, the problems have been overcome. There are: a clean environment, global peace, social harmony and equity, jobs for all, happy families (although not necessarily traditional families), better education and health.

Two 'representative' scenarios of expected and preferred futures, written by a group of university science communication students and drawing on the workshop discussions and outcomes, are included in Box 2. They capture, in a fictional and imaginative form (which clearly exaggerates the amount of change), many of the key elements of the participants' expectations and dreams.

[Insert Box 2 on scenarios here about here]

The national poll allowed the issues and perceptions identified in the workshops to be put to a representative sample of young Australians. The poll indicated optimism was more common among young people than the workshops suggested, with respect to both overall quality of life and specific issues such as social equality and family life. Nevertheless, the belief that life would improve, globally and nationally, remained a minority position. In no area did a clear majority expect things to get better.

Asked to choose which of two statements more closely reflected their view of the world in the 21st century, more than half (55%) chose: 'More people, environmental destruction, new diseases and ethnic and regional conflict mean the world is heading for a bad time of crisis and trouble'. Four in ten (41%) chose: 'By continuing on its current path of economic and technological development, humanity will overcome the obstacles it faces and enter a new age of peace and prosperity'.

About a third (35%) believed Australia's quality of life would be better in 2010 than it was now, with 34% saying it would be worse and 29% that it would be about the same. Their views on a range of nine specific aspects of Australia's future are given in Table 1. Three quarters (74%) did not believe that Australia would be involved in a major war that directly threatened the country between now and 2010; 18% believed it would.

[Insert Table 1 on aspects of Australia's QoL about here]

There were interesting demographic differences. Although these may not be statistically significant in each particular instance, they were often consistent across a range of questions. Generally speaking, pessimism increased with age, with those in their twenties more negative than those in their teens. Only 38% of those aged 22 to 24 opted for global 'peace and prosperity', compared to 47% of those 15 to 17; and only 27% of the older group thought Australia's quality of life would improve, compared to 39% of the younger group.

Older youth were more pessimistic on all but one of the nine specific aspects of Australia's future quality of life. Some of the shifts were pronounced: for example, the proportion believing the unemployment situation would improve dropped by almost half, from 43% of 15-17 year-olds to 22% of 22-24 year-olds. The exception was the environment, where the proportion believing it would improve rose from 20% of those aged 15 to17 to 34% of those 22 to 24.

Students tended to be the most positive and the unemployed the least positive about the future of both Australia and the world, although this could also reflect an age effect (white-collar workers were about as negative as the unemployed about Australia's future). Overall, the results suggest young people become less optimistic as they leave the relative security of school and home to venture out into the wider world of adulthood and independence.

Males were more optimistic than females about Australia's future, with 40% opting for a better quality of life in 2010, compared to 29% of females, while 29% of males and 39% of females thought the quality of life would be worse. More females than males felt things would get worse in all but one of the nine specific issues, although the differences were mostly not great. Males were also slightly more optimistic about the world in the 21st century, with 43% choosing 'peace and prosperity' and 53% 'a bad time of crisis and trouble', compared with, respectively, 40% and 58% of females.

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 (63%) 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 (81%) said they would prefer ' a "greener", more stable society, where the emphasis is on cooperation, community and family, more equal distribution of wealth, and greater economic self-sufficiency' (the full scenarios used in the poll are given in Box 3). About a third (35%) expected the 'green' scenario, and 16% preferred the 'growth' scenario. There were no significant age differences in responses to this question. Females were slightly more inclined than males to prefer the 'green' scenario: 84% preferred this scenario and 13% the 'growth' scenario, compared to, respectively, 78% and 19% of males.

[Include Box 3 on poll scenarios about here]

Science and technology are a common feature of futures scenarios. It is often said that young people are comfortable with new technologies and adapted to the fast pace of technological change.[3] However, the study found that, while they acknowledged the potential of science and technology as a powerful tool in achieving a preferred future, young people generally did not believe in technical fixes to social and global problems, and were very concerned about some future impacts of scientific and technological advances.

A key finding of the study was the extent to which views on science and technology were embedded in a wider social context. The role young people saw for science and technology – and hence their impacts – changed markedly between the expected and preferred futures (as evident in the workshop scenarios and reflected in the poll scenarios).

Asked in the poll about the role and impacts of science and technology, just over a third (38%) believed they had had more benefits than disadvantages, with 51% believing they have had equal benefits and disadvantages and 9% more disadvantages than benefits. Responses to specific statements about science and technology showed that (see Table 2 for the full statements and responses):

- Young people believed science and technology offered the best hope for meeting the challenges ahead (69%), but also that they were alienating and isolating people from each other and nature (53%).
- They believed that computers and robots were taking over jobs and increasing unemployment (58%), and a significant minority that they would eventually take over the world (35%).
- They were more likely to think that governments would use new technologies to watch and control people (78%) than they were that new technologies would strengthen democracy and empower people (43%).
- They expected science to conquer new diseases (87%), but not that it would find ways to feed the growing world population (39%), or solve environmental problems without the need to change lifestyles (45%).

[Insert Table 2 on S&T attitudes about here]

As with the future in general, females tended to be more negative than males about science and technology. For example, they were less likely to think that science and technology had more benefits than disadvantages (34% vs 42%), or that they offered the best hope for meeting future challenges (64% vs 74%). Not surprisingly, those who were optimistic about the Australia's future were more likely to be optimistic about science and technology. Half (51%) of those who believed Australia's quality of life would improve, but only 27% of those who believed it would get worse, believed science and technology had had more benefits than disadvantages. The optimists were also more positive in their responses to the specific statements about science and technology.

Discussion

Did the scenario process work?

As indicated in Box 1, there were some difficulties with the scenario-planning process used in the study. A critical feature of scenarios is achieving a balance between having enough structure in the process to achieve the objective - completed scenarios - and not constraining or leading the participants' thinking and discussions; there must be room for surprises, for the unexpected. Ideally, the process continues over several months, even years, with constant reiteration and a considerable amount of research and analysis.

One- or two-day workshops did not allow enough time for whole groups to complete the process. This meant that rather than producing a series of scenarios that reflected the views of participants at each workshop, the study introduced an additional step: a separate group of young people - university students studying for a postgraduate diploma in science communication - assessed and summarised the material produced in the workshops and wrote two 'representative' scenarios. This was a difficult task because the material, while providing a lot of data, was incomplete and could not properly reflect the richness of the workshop discussions.

The success of the exercise varied from workshop to workshop, depending on factors such as the participants' age and background and the techniques used (different techniques were used, especially to draw out the key issues, as part of exploring what

worked best). The outcomes suggest, for example, that the process is not suitable for students below Year 10 (age about 15), especially with boys, who tend to be less mature than girls at this age; they find the task too difficult and demanding.

It was recognised that asking workshop participants to think in terms of probable (or expected) and preferred futures could bias the expected towards the negative view. The workshop facilitators emphasised that the two need not be very different, or different in every respect (a suggestion met with derisive laughter in one workshop). In the event, the opposite was true: the initial discussions about the future were the most pessimistic (one participant, reflecting on the previous day's opening discussion, commented, 'it was all so negative'). As participants considered preferred futures and became more aware of what could be changed, this appeared to influence the expected future.

With these qualifications, the study has produced valuable information about young Australians' views. However, what was most gratifying to those of us who ran the workshops was the response of most of the participants, who tackled the exercise with enthusiasm and energy. Many said they had enjoyed the experience; they clearly would like more of their schooling to be like this. They also valued the opportunity to think about the future in more than just personal terms. They said that thinking about preferred futures had made them more aware of the positive changes that could be made and their personal responsibility to contribute to these changes. It is important to note, however, that while making many more optimistic, the exercise did not turn the participants into optimists (and it made some even more painfully aware of the gap between wishes and expectations and their sense of powerlessness to close that gap).

The outcomes of the study indicate scenario planning could be more widely used in schools to educate young people about futures issues, and even as a vehicle for teaching other, curriculum subjects. I believe that the scenario process could be modified to allow finished scenarios to be produced in two days, perhaps even one, given the central objective is not their quality as a strategic planning tool but the benefit the students derive from the exercise. Such exercises would have to be carefully evaluated to ensure the positive impact observed in the study was not just a short-lived response to the workshop exercise itself. Unless young people feel empowered to do something about their concerns, the experience could deepen their disillusionment.

However, it would be preferable, I think, to extend the process over a longer time, so linking the exercise more closely to students' lives and schoolwork. The outcomes of another recent Australian project, which engaged Year 11 students in a 15-week exercise of imagining a socially and ecologically sustainable future for their region and community, support the case for doing this.[4] The project produced a marked improvement in the students' expectations of the future. Both studies suggest that young people would benefit from being given more opportunity to think through and challenge their feelings of pessimism and impotence about the world and its future, feelings reinforced by the negative imagery that pervade the news and entertainment media.

What the findings mean

What young people's perspectives on the future mean and what effect this outlook has on them personally and on society remain conjectural. The project did not explore young people's views about their personal futures. Other surveys suggest most are optimistic about what the future holds for them personally, although some recent research suggests this personal optimism also declines as adolescents grow into adulthood.[3]

The expectations of the future revealed by this and other research may not necessarily indicate what young people actually believe the future will be. They might also reflect:

- The group dynamics of the research processes which bias discussion towards strongly held and usually negative views.
- Young people's flair for the dramatic.
- Superficial and stereotyped images of the future picked up from films and television.
- Stories about alternative futures, including those young people want to avoid.
- Apocalyptic myths about 'the end of the world', which have always been part of human mythology, including most major religions (this relates especially to fears about global catastrophe such as a nuclear holocaust).
- Ways of expressing anxieties and concerns about the present (by projecting them into a fictional future, they can be described in more concrete terms).

Some will also dismiss young people's views as naive and ill-informed, and their preferences as mere 'motherhood' statements with which no-one would disagree. All of these factors may well come into play in shaping young people's visions of the future (although the 'motherhoods' are, in part, a product of distilling the findings into a few, broad statements, which do not do justice to the workshop discussions).

However, to disregard the study findings on these grounds would, I believe, be a mistake. The concerns of young people are understandable and often valid; some issues are part of their personal experience and all are being discussed and debated by experts and commentators. There is no compelling reason why they should not have these dreams and expectations about the world they will inherit. Indeed, theirs might well be a clearer, fresher view of the future that we would be foolish to ignore. Young people's preferred futures are undoubtedly idealised and utopian. Their significance lies in what they reveal about fundamental human needs and about the tension that exists between their dreams and both what they expect and what is being offered to them by world and national leaders.[5]

While popular science fiction – for example, films such as *Blade Runner* and *Terminator* - undoubtedly influences the *images* young people use in describing their fears for the future, these fears are not distant and detached, but are related to their perceptions of life today. As part of a recent project on measuring national progress, I commissioned a poll asking Australians whether they thought that overall quality of life – taking into account social, economic and environmental conditions and trends – was getting better, worse or staying about the same.[6]

Among those aged 18-24, only 15% thought life was getting better (all ages 13%), while 44% thought it was getting worse (all ages 52%) and 39% that it was staying about the same (all ages 33%). [The differences may not be statistically significant, but given young people's greater adaptation to modern life, that a significant proportion in this age group are not yet 'out there' making their own way in life, and their shorter frame of reference, it is perhaps surprising the differences are not greater.]

Thus, apart from reflecting legitimate concerns about the *future*, young people's fears for the future may also be a means of expressing their anxieties about the *present*. These anxieties may be ill-defined – especially when according to conventional measures of progress most of us are better off than ever before – but are nonetheless personal and deeply felt. However, if these concerns are projected into the future, they can be described in fictional, and more concrete, terms.

A vague sense of unease about the direction the world is going and people's impotence to change that course become, for many, visions of a world in which a growing gap between rich and poor has produced deeply divided and hostile communities; the arms race has resulted in nuclear warfare (still a concern despite the end of the Cold War); ever-expanding industrialisation and populations have plundered the environment; or the development of technologies with powers beyond our comprehension have ended in human obsolescence. This translation is most obvious in the future visions of children, who often relate very personally to global threats and problems, and depict them in apocalyptic terms (see Box 4).[7,8,9,10]

In other words, we need to take young people's views of the future seriously, but not necessarily literally.

[Insert Box 4 on children's poetry about here]

Another issue is the apparently different degrees of pessimism and optimism revealed in the workshops (and other qualitative surveys) and the poll. There was little evidence in the workshops, especially in the initial discussions, of the significant minority of young people who the poll suggests are optimistic about both the global and national future. While the group dynamics of the workshops may well have influenced outcomes, other studies in which young people worked or were interviewed individually have produced similarly pessimistic perceptions.[8,9,10]

The contrast between the workshops and poll becomes even sharper if we accept the interpretation of the poll results by some of the study partners. They argued that the 'get better' and 'remain the same' responses on Australia's future, taken together, indicated a fairly positive outlook among young Australians. On the other hand, I believe we can draw little comfort from the 'remain the same' responses for the following reasons: a belief in progress, in improvement, is central to Western culture; a dominant feature of political debate over the past 15 years has been that Australia has to go through a difficult period of structural adjustment that will lead to a better future - 'the pain before the gain'; surveys indicate considerable unease about conditions in Australia today; and many of the specific issues canvassed rank amongst the greatest *current* concerns of young people. Thus believing things will be much

the same in 2010 hardly signifies a great deal of faith in society and its governing institutions.

Another consideration is that the workshop discussions began in a more open-ended way and tended to take a more global perspective, even though the focus was on Australia. In contrast, the poll began with specific questions about Australia's quality of life; the question about the world in the 21st century was the last question about the future. Many Australians still think of Australia as 'the lucky country', far away from global 'hot spots' and with more manageable problems than many other nations. However, they are aware that Australia is becoming ever more closely linked to the rest of the world, and that its destiny will be greatly influenced by what happens elsewhere. The workshops would have reflected better this global context to Australia's future. Also, the workshops represented, in most instances, two days of sustained discussion and thinking; the poll was a ten-minute telephone interlude that came out of the blue.

Another possible explanation for the difference between the workshop outcomes and the poll results lies in the wording of the questions, which can significantly influence the response. Results from an unpublished 1988 Commission for the Future poll of Australians aged 14 and over indicate that open questions about the future (which come closer to qualitative research) produce more pessimism than direct questions about whether people are optimistic or pessimistic.

Thus, 44% of those surveyed said they were optimistic or hopeful about the future of humanity, while 53% were pessimistic or concerned. However, when they were asked an open question (ie, they could respond in their own words) about *images* of the future of the world, and their responses grouped, only 26% described optimistic images, while 54% offered pessimistic images and 29% neutral images. Social decay, environmental destruction and global conflict dominated the negative images. When they were asked about their *feelings* about the future of the world, only 28% expressed positive feelings, while 63% expressed negative, and 16% ambivalent, feelings (the totals exceeds 100 per cent because more than one response was allowed).

Impacts and implications

Having concerns about the future is not the same as being fearful; young people may feel as often angry as worried. Nor does it necessarily indicate that they spend a lot of time actively thinking about these issues. However, this does not mean the outlook on life and expectations of the future revealed in this and other studies are not having an impact.

One researcher, Joanna Macy, has suggested that people's response to concerns of global catastrophes 'is not to cry out or ring alarms.' 'It is to go silent , go numb'.[11] She suggests this 'numbing of the psyche' takes a heavy toll, including an impoverishment of emotional and sensory life. Energy expended in suppressing despair 'is diverted from more creative uses, depleting resilience and imagination needed for fresh visions and strategies'.

Other researchers have warned that the pessimism among young people could produce cynicism, mistrust, anger, apathy and an approach to life based on instant gratification

rather than long-term goals or lasting commitment .[9] Surveys of youth attitudes and values show these traits are common among young people today.[10,12] It could also be contributing, along with other factors, to trends in social and psychological disorders among youth, including suicide and suicidal behaviour, drug abuse, depression, and delinquency.[9,10,12] Rates of these disorders have increased in almost all developed nations over the past 50 years.[13] The failure to provide a broad cultural framework of hope, meaning and purpose in young people's lives could be weakening their resilience, making them more vulnerable to these problems.

Pessimism about the future reflects real concerns, but it also suggests a failure of vision, an inability to conceive a future that is appealing and plausible and able to serve as a focus and a source of inspiration for both individuals and society. This failure is likely to affect young people's approach to key aspects of society, including citizenship, education, training and work, so jeopardising a nation's future performance. Societies can only meet the formidable economic, social and environmental challenges they face if they have the necessary social cohesion, will and vision.

If the issues raised in this and other studies are not addressed, then societies will, at best, perform far below the standard of which they are capable, in every sphere, domestically and internationally. At worst, they will see increasing evidence of social dysfunction, including extremism and unrest. The youth partnership study suggests that many young Australians already feel they owe little allegiance to society. Many may continue to work within 'the system', but they no longer believe in it, or are willing to serve it.

It might be argued that people have always had visions of an ideal world and these have always been beyond the reach of reality. What is important, however, is whether the gap between the ideal and the real is perceived to be widening or narrowing. A belief in progress demands that the gap should be closing; the findings of this and other studies indicate the dominant perception among young (and older) people is that the gap is getting wider.

The historian, Barbara Tuchman, in her book, *A distant mirror - the calamitous 14th century*, says that historians have avoided the century because it could not be made to fit into a pattern of human progress.[14] The Black Death, which killed a third of the population between Iceland and India, was only one of the century's problems. It was a violent, tormented, bewildered, suffering and disintegrating age - quite simply, a bad time for humanity. Tuchman notes that in Europe a gulf had opened up between Christian beliefs and the conduct of the Church, and between the ideal of chivalry and the behaviour of the nobility, and comments, 'when the gap between the ideal and real becomes too wide, the system breaks down.'

Conclusion

The ASTEC youth partnership study builds on a substantial body of other Australian and international research into young people's views of the future.[15] Its significance lies in its use of a structured process for developing scenarios of expected and preferred futures; the opportunity it provided for extended thought and discussion

over, in most cases, two days; and its linking of this qualitative work to a national poll to quantify the perceptions emerging from the workshops.

The results suggest, as does other research, that there is a tremendous challenge to the education sector to help young people create and work towards a new vision and a different way of life that reflect more closely their dreams of a more socially equitable and environmentally sustainable society. Much more should and could be done in schools to encourage in young people a greater sense of optimism about the future, a conviction that the future is theirs to shape, and the faith in themselves needed to tackle this task.

This surely should be a fundamental task of education today. If children lack these qualities, everything else in education - whether it is providing basic literacy and numeracy, instilling a love of learning or developing vocational and life skills - becomes devalued and harder to achieve; we cannot provide a compelling answer to the question, 'for what?', except one based narrowly on self-interest. And, ultimately, this is not enough, for either individuals or society.

There is the scope to nurture these qualities, both outside and within the curriculum – in social and environmental studies, science and English, for example. The task presents a great opportunity to give teachers and educators a stronger sense of vocation and a clearer focus. Education needs a 'guiding story' – a social vision that engages young people in the task of building a better future. Without a vivid and vital context within which to operate, education cannot fulfil its highest purpose; it becomes merely instrumental and utilitarian, serving narrowly defined objectives.

The fundamental task of education today is not just to prepare students for the future, but to equip them to create a future they want to live in.

Notes and references

1. Australian Science, Technology and Engineering Council (ASTEC) 1996, *Developing long-term strategies for science and technology in Australia. Outcomes of the study: Matching science and technology to future needs 2010.* 1996.

2. Australian Science, Technology and Engineering Council (ASTEC). *Having our say about the future: Young people's dreams and expectations of Australia in 2010 and the role of science and technology.* Report of the ASTEC Youth Partnership Study, January 1996.

3. Eckersley, R., Portraits of youth: Understanding young people's relationship with the future. *Futures,* **29** (3), 243-249 (1997).

4. Stewart, C. *Re-imagining sunshine.* Imagine the Future Inc, Melbourne, Australia. 1997.

5. Academic researchers looking at youth futures might be surprised to learn the work can offend political sensibilities when conducted closer to government. The ASTEC youth partnership study received national press and television coverage when I discussed the findings, with ASTEC's knowledge, at a youth conference in late 1995, ahead of the release of the study report. The coverage caused outrage at the highest levels of the bureaucracy and within one Government Minister's office. The report, which had already been through some five drafts, was redrafted yet again and its release delayed until after the March 1996 Federal election. I subsequently learned, indirectly, that it was felt I had 'exceeded my brief'.

6. Eckersley, R., Perspectives on progress: Economic growth, quality of life and ecological sustainability. In Eckersley, R. (ed), *Measuring Progress: Is life getting better?,* CSIRO Publishing, Collingwood, Victoria, 1998.

7. Some years ago, my elder daughter, then about to turn nine, mentioned to the family at dinner that the school principal had told her class that scientists believed the world would end in 60 years. After explaining that he was probably talking about the greenhouse effect and that it did not mean the end of the world, I asked her what her reaction had been to what she'd heard. She replied: 'I thought: Oh no, I'll only be 69!'.

8. Eckersley, R., *Australian attitudes to science and technology and the future.* Australian Commission for the Future, Melbourne, August 1987.

9. Eckersley, R., *Casualties of change: The predicament of youth in Australia.* Australian Commission for the Future, Melbourne, July 1988.

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11. Macy, J., *Despair and personal power in the nuclear age*. New Society Publishers, Philadelphia, 1983.

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13. Rutter M. and Smith D.J. (eds), *Psychosocial disorders in young people: Time trends and their causes.* John Wiley and Sons, Chichester, for Academia Europaea, 1995.

14. Tuchman, B., *A distant mirror - the calamitous 14th century.* Papermac (1989), (foreword).

15. Recent discussions of this literature include: Eckersley, R., 1995 (op cit); Hutchinson, F., *Educating beyond violent futures.* Routledge, London, 1996; Hicks, D. A lesson for the future: Young people's hopes and fears for tomorrow. *Futures*, **28** (1), 1-13 (1996); Hicks, D. Retrieving the dream: How students envision their preferable futures. *Futures*, **28** (8), 741-749 (1996); Elkins, K. and Sanson, A. Children's views of the future: Concerns expressed in letters and questionnaires in the post cold war period. In Hagglund, S., Hakvoort, I. And Oppenheimer, L. (eds), *Research on children and peace: International perspectives.* Report No 1996:04, Department of Education and Education Research, Goteborg University.

Box 1

Scenario-planning process

1. Introduction
The facilitators were introduced to the participants and, if necessary, the participants to each other. The facilitators briefly outlined ASTEC's *Future Needs 2010* study, and explained the purpose, aims and methods of the youth partnership.

2. Identifying issues
The first task for participants was to identify key issues concerning Australia's future. Various techniques were tried in doing this. For example, several workshops employed an 'open space' technique, in which the participants recorded on post-it notes things they felt passionate, excited, or concerned about, and stuck these up on a wall - the 'market place'. Similar or related issues were then clustered, and the participants 'signed up' for those issues they were interested in discussing. They arranged a schedule of meetings to allow all participants to discuss all the issues they had signed up for.

In other workshops, there was an initial general discussion by the whole group, prompted by questions such as 'What excites or concerns you about the future?' or 'What comes to mind when you think about Australia in 2010?' Participants then broke up into groups of 4-5 to discuss these issues, including by interviewing each other. In one workshop, the participants were split into pairs, and asked to think of two key questions they would like to ask about the year 2010. They then formed groups of two pairs, and asked and answered each other's questions.

[Usually scenario planning would involve research, analysis and exploration of the identified issues, including attempting to look at things in novel ways. However, this was not attempted in this project.]

3. Identifying key drivers
Except in the case of the 'open space' technique, in which the clustering of issues had already been done, the participants worked as one group to cluster related issues into a manageable number. They then attempted to obtain a clearer and deeper understanding of the issues by identifying the key drivers or variables, including through determining underlying patterns and structures.

[Normally, scenario planning also involves ranking variables according to importance or impact and uncertainty or unpredictability, so that attention can be focused on those that are most important and most uncertain. This was not done in these workshops.]

4. Framing scenarios
Working in groups of 4-5, participants used the information from steps 2 and 3 to outline the expected and preferred outcomes for the major variables and issue clusters identified. This included developing story 'snippets' and timelines to explore possible changes in particular variables or issues. In some cases, where time permitted, small groups reported back to the whole group.

[Another scenario technique often used at this point is to work from a matrix of two of the key variables which are expressed as a dilemma or polarity (for example, social conflict/harmony and low/high economic growth) to sketch out several possible scenarios. Matrices were not used in the workshops.]

5. Developing scenarios
Participants, again working mainly in small groups, used the outlines, timelines and snippets to flesh out scenarios for their probable and preferred futures. Time did not permit this part of the exercise to be completed, except in the case of a few individuals.

6. Assessing implications
Participants used the scenarios to consider the implications for Australia today, especially in terms of what was required to achieve a preferred future rather than the expected future. Again time constraints, and the participants' tiredness at this stage of the process, meant that this session tended to be brief and not very productive.

Box 2

Scenario of the *expected* future:

Better Days?

I slowly drifted from the green landscaped dreams of my past, out of the anaesthetic, and reality hit me once again.

The Teflon-coated titanium stomach replacement operation was a success, considering the not-quite perfected technology. At last I could digest the synthetic food. Real food disappeared after the inappropriate agricultural practices of the '90s. It's been over a decade since I had that last apple.

As I left the hospital, I put on my UV-Outerz (cheaper than having skin cancers removed) and boarded the cramped bus for the ride home. The yuppies in their pretentious Petrol cars don't have to put up with computer-driven electric transport. The fare was registered to my account after the DNA analyser sampled my breath.

Peering out the window through the hazy atmosphere, the filthy, concrete monstrosities of the urban landscape filled me with sadness. Even the stumps of trees had been scavenged for the black market. Wood is the most valuable commodity now, used for open fires by the top executives at exclusive parties. Wood to burn – the irony!

We drove around the walled outskirts of the part of town inhabited by the information-rich. None of those smug Gen enhanced (genetically engineered people) ever have to put up with the conditions we suffer.

The slums, overpopulated streets of lonely and anonymous people, appeared on the left. Bored by their stagnant lives, they find solace in the heroin patches on their necks – escaping as I had earlier with the anaesthetic. The government overlooks the problem, putting profit before people.

The turning point was probably the Timor Gap oil war of '96, the catalyst for the Indonesian invasion of Australia. With finances being sucked up by the military technology, there was nothing left for alternate energy resources, greenhouse control or sustainable development. We may have won the war, but we lost the environment.

I was abruptly woken from my daydream to be ejected from the bus at my programmed destination. Seeking refuge from the incessant rain, I dodged the puddles below the acid-rain holes in the deteriorating awning. I walked into my building, caught the lift to the 182nd floor and entered my box of a room.

Greeted by my row of computers, I quickly logged the experience of my operation on the Internet. My local community was waiting to hear the results – we're very close in this part of town.

I flicked my terminal over to the news and went to try out my new stomach. As I prepared the meal, I could faintly hear the day's headline '…The President announced today that Australia would not follow France's lead in banning nuclear testing…'

An advertisement flash interrupting the news caught my attention. 'The lottery for the new intake of Leavers to Mars is about to be drawn…' Tomorrow could be a good day.

15

Scenario of the *preferred* future:

A Day in the Life…

Today we found out all about the new ozone blanket. My teacher says that in 1998 everyone drove their own petrol cars and wore gas masks all the time 'coz of huge smogs. Doesn't that sound silly? And guess what! I finally finished my Worldlink Internet project. I can now attend virtual classes with Selah and Bill in Rwanda once a week! Joanne and I are helping to build the solar generator for the community creche. Oh, and can you check the Compmail from school tonight – they want to know if we can help with the indigenous arts festival next Sunday.

I smiled as Chi enthusiastically recounted her morning at community school. Each day she emerged with a feast of newfound knowledge to share. Education today knows no bounds!

How strange it feels to have our children recall with such bewilderment the blind actions of the generations before mine. Today's young people can only muse over the global disharmony before the Great Panic of Year 2004, when things culminated at a crisis point. Global war was imminent, poverty was emerging as the calling of the majority and food, fuel and even clean air were becoming luxury resources. Say 'goodbye' to history…

Chi and I were making our way home from the weekly gathering of our local community unit where we meet to discuss the progress of the region's crops and report on emerging community needs. Things are going well. We have secured the local government's support for the region's latest hemp fibre processing plant and the new windpower instalment is a wild success.

An electric bus rolled silently past us.

The beaming sun shared its warmth with the green, fruit-laden landscape of our street. The solar panels lining the curbs glistened and sparkled in appreciation of it's energy. After years of unpredictable weather and hazy skies it was comforting to feel assured that our world was slowly recovering from the environmental torture of the past.

Every fertile space was blooming with food for the region's consumption. We happily munched on the apples that we had picked from the street orchards. In anticipation of supper, I collected some beans, ripe and ready to eat, from a corner plot. Collective 'Yo' were preparing the street's meal today. The latest genetic strains of high nutrient, organic produce were always the most popular menu choice.

I too felt enthused by the day's activities. At home, I had spent a productive morning logged onto Compuwork. Jules, my jobshare partner, was thrilled at our progress. My body was feeling rejuvenated. The cancer which once plagued me, spawned by the carcinogens rampant during my childhood, had finally been eradicated by the new treatment.

At home, the members of our family unit were immersed in the latest interactive home entertainment offering – cyberparty. Chi outpoured her day's excitement to her other two guardians, Lola and Sadam, with undiminished pleasure.

As we sat down to eat, the Cyberreal news flashed on at our request. 'President Josephine commends the success of the Middle Eastern-USA agriculture project…and announces a breakthrough in the continuing dissolution of the North/South divide.'

16

Box 3

Australia in 2010 – two scenarios

'A fast-paced, internationally competitive society, with the emphasis on the individual, wealth generation and "enjoying the good life". Power has shifted to international organisations and business corporations. Technologically advanced, with the focus on economic growth and efficiency and the development of new consumer products.'

'A "greener", more stable society, where the emphasis is on cooperation, community and family, more equal distribution of wealth and greater economic self-sufficiency. An international outlook, but strong national and local orientation and control. Technologically advanced, with the focus on building communities living in harmony with the environment, including greater use of alternative and renewable resources.'

Box 4

Poetic visions of 2020

In 1992, a Canberra primary school published a collection of poetry and other works about the future by its 11-12-year-old pupils. It is called *The Spinning Tree*. The title poem reads:

'We are based upon one tree,
all my friends and me.
The wind is blowing strong,
I'm not lasting long, the dying tree is red,
it's spinning in my head.
Time is going fast.
I know I'll never last.'

Another is called *ZED st* :

'On the side of Z street, grey mould buildings on fire, children left on the bitumen cold,
the trees as naked as a flower stripped of its beauty.
Everyone is dying, everything is dying.
On Z street, there's a crystal ball in a fortune teller's hold.'

A third, called *Last....,* reads in part:

'I skim across the earth.
I see nothing left,
But one youth at birth.
It was hope of what I'd seen
in this infernal heat.
The youth was just a dream.
My dreams gone,
I've gone in this infernal heat.
Earth has lost its life,
We have lost our chance.
Earth has died so fast.
Our first chance was our last.'

Not every vision is black; some are frivolous, light-hearted, bright. And some of the more serious still express hope. Nevertheless, fear of what the future holds for them is a common theme in the children's work. *The Spinning Tree* was created by the students under the guidance of a young writer-in-residence, Craig Dent. He had asked them to close their eyes and imagine the year 2020; their poems and ideas could be as weird and wonderful as they wanted them to be. Dent says that what he found disturbing about the exercise was that the children wrote and worked on their own but a lot of their imagery was the same:

'What they're writing about is very apocalyptic. They're not sure about where they are going....I hadn't really noticed it. I mean just in everyday things around the school kids are kids - they're very happy - but I think this book will really shock a few people when they realise that this is really what the kids think....I think a lot of them are really afraid of what's going to happen to the earth.'

Table 1: Expectations of nine aspects of Australian life in the year 2010

Issue	Better than now (%)	Same as now (%)	Worse than now (%)	Don't know (%)
The national economy	31	28	36	5
The natural environment	27	15	57	1
Crime and violence	12	19	68	1
The gap between rich and poor	12	34	50	4
Family life	25	41	31	3
Physical and mental health	40	31	27	3
Racism	48	29	21	1
Justice, fairness and equality	39	40	18	3
Unemployment	34	23	41	2

Table 2: The opinions of young Australians on aspects of future role of science and technology

Issue	Agree (%)	Disagree (%)	Don't know (%)
Computers and robots are taking over jobs, increasing unemployment.	58	40	3
Advances in computers and other technologies will make democracy stronger, giving people more control over their own lives and governments.	43	51	6
Science will find ways to conquer the new diseases appearing in the world.	87	11	2
Governments will use computers and technology to watch and regulate people more.	78	20	3
Science and technology will find ways of solving environmental problems without the need to change our lifestyle.	45	52	3
Science and technology are alienating and isolating people from each other and from nature.	53	43	4
Computers and machines will eventually take over the world.	35	62	3
Science will find ways to produce enough food to feed the growing world population.	39	58	4
Science and technology offer the best hope for meeting the challenges ahead of us.	69	28	3