

International Overview of Futures in Education

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Introduction

Futures education is a direct and creative response to change and uncertainty. It incorporates a recognition that there are problems, dangers and choices ahead which have few historical precedents. When change was slow, technologies primitive and human populations small, the past provided reliable guidelines for the future. Today that is no longer the case. We are living through a series of multiple transformations, the final outcomes of which are unpredictable and unknowable. But the future is not an empty space, and the study of futures is no more difficult or problematic than the study of the past. It is *different* because the future has not happened yet. That is precisely why it is worthy of attention. Futures have been taught in schools, colleges and universities for more than 25 years. Over this time there have also developed a number of wider, futures-related broadly educational processes. So futures education is not a radically new, untested departure. It embraces a significant body of practical knowledge and experience. This, in turn, is backed by the wider, multi-disciplinary futures field, with its many organisations, its substantial and varied literature.

This paper begins by considering the *substantive* character of futures study because it provides a sound foundation, but is often overlooked. It continues with a brief account of the origins of futures in education. A summary of rationales is provided, followed by a synoptic overview of different types of futures education. This includes an outline of futures concepts and methods. An attempt is made to distinguish some of the underlying *purposes* of future-oriented education and its global distribution. The latent demand for this work is noted. Finally, reference is made in the conclusion to policy implications and further work needed.

Substance of futures study

Much discussion about futures begs the question of what is being studied. This raises genuine concern since in crude empirical terms it has sometimes been suggested that "the future" does not exist. How, therefore, may one study it? When this line of argument is raised at least three comments arise. First, empiricist approaches tend to focus on the tangible and the measurable. Second, that the argument overlooks the primacy of ideas, values and meanings that are in no way diminished by their non-material status. Third, that there is more than one meaning to the word 'future.' In one restricted sense it can stand for that which is beyond, out of reach, yet to come. But instead of stressing notions of separateness, distance and the problematic aspects of futures, it is more useful to consider the way that futures concerns permeate the present. *The underlying purpose of futures study and teaching is not to predict but to enrich the present.*

There are numerous "strands" or approaches to futures study. Two are of particular importance in this context. One examines *perceptions of futures*. The other attempts to come to grips with *processes of continuity and change*. Futures study draws on a wide range of human capacities and deploys a number of specific concepts and methodologies in pursuit of these and other types of understanding. The results of such activities give rise to a wide range of issues, themes and applications - including futures in education.

The combination of concepts and capacities helps to create a *forward-looking perceptual field* that shapes the futures enterprise and provides part of its subject matter. Methodologies arise from each of the above and permit the active development of futures concerns at all levels. These methodologies focus on the past, present and possible future states of systems and processes. Frequently the concern is with change: social, economic, technical, environmental and, less frequently, value change. However, continuities (of language, tradition, meaning) are equally important.

The attention paid to processes lends futures study and research a necessary *empirical* dimension. In practice this means that they cannot be dismissed as "mere speculation." In order to say anything of value about the possible future states of dynamic systems it is necessary to know a great deal about their past and present. This is fascinating and demanding work. It partly explains why futures has sometimes been characterised as a 'summarising discipline.' It necessarily draws on a very wide range of sources. Finally, the whole structure as I have described it gives rise to a number of characteristic issues, themes and applications.

The major implications for futures education are two-fold. First, the futures field is a serious field of enquiry that can, and does, stand up to the most exacting and rigorous investigation. It therefore provides a sound and secure basis for educational work. Given the usual obstacles to innovation, this is essential. Second, the value of the field to education (in terms of its symbolic and methodological contribution) is considerable. The concepts and methods involved are capable of much wider application and use than they have yet received. In other words, the opportunities to take up and apply this material are virtually unlimited.

Origins of futures in education

Futures *per se* have ancient cultural roots. The earliest makers of stone tools carried a clear image in their minds of the purpose that the tools would fulfill and this guided their work. The earliest dwellings and villages were constructed according to plans that reflected present and future communal needs. Agriculture only became practicable when the changes of the seasons could be understood and predicted with assurance. The person who plants seeds must feel that it is likely he or she will reap a subsequent crop. Otherwise it is not worth the effort and, moreover, the family could starve.

In other words, the future (as a dimension of human experience) is organically bound up with everyday life. Or, to put it differently, we can say that *futures are constitutive of the present*. They literally bring it into being, make it livable. A thought experiment to remove the futures dimension suggests that what remains would not be worth living in. This is so because one would have removed the 'space' needed for plans, purposes, goals, meanings, intentions and so on. *People require a future (or futures) in order to live*. This may be demonstrated by asking a group to imagine they are planning a foreign trip. Items to be covered include climate, clothing, transport schedules, money, insurance, maps and so on. Bearing this in mind one may then turn to educational processes and the ways these embody forward-looking purposes and meanings. Usually such concerns take the form of aims, objectives, goals and, perhaps, some notion of how present-day teaching and learning contribute to social change and development. All, of course, are true futures concerns. It follows that *educational institutions are already in the futures business*, though not all of them realise it yet.

The first school courses with an explicit futures label were taught in the USA and Canada in the mid-1960s. They drew upon the wider field of futures research that had itself developed in other

contexts. Even today, when futures study and research is a global concern, the USA remains the heartland of futures work. It has more forecasters, consultants, futures researchers, marketing analysts and science fiction writers per head than any other country. So when the first school course was taught there in 1966 it was because people had already seen dramatic changes and knew that the future could no longer simply be assumed. Whereas once it extended unproblematically ahead, now there were more and more possibilities, some of them not particularly pleasant. As Schell has noted, "formerly the future was given to us...now it must be achieved." (Schell, 1982) This is a disturbing assertion - but it happens to be true.

In many other countries groups of innovators based in schools, colleges, universities and elsewhere began to learn from each other and to perceive that they were part of a wider shift. It was a shift away from immersion in a taken-for-granted past and present toward a conscious evaluation of possible, probable and preferable futures. Many people took up these themes and developed them. Today on a global scale there are thousands of teachers, lecturers and researchers working in futures education. In ten years time there will be many more.

Elements of a rationale

In order to bring about innovation and change it is necessary to offer persuasive arguments, identify examples of good practice, gather resources and personnel, and find an appropriate location. So those promoting futures education have given careful thought to underlying rationales. The following are among the most commonly cited.

1. Rapid change means that many past assumptions, meanings and purposes are no longer valid and self-evident. In this context, past knowledge, and earlier modes and methods of representing knowledge do not command automatic support. Past experience becomes less and less reliable.
2. Actions and decisions have consequences. In a world that is physically and socially interconnected, many consequences are displaced in space and time (for example, acid rain, ozone depletion and terrorism). Futures thinking therefore becomes *a strategic imperative*.
3. 'Preaction' or careful forward thinking is preferable to crisis management. *It represents a saving of the energy that would otherwise be expended clearing up the mess*. This is one of the chief benefits of appropriate and successful foresight.
4. Images of futures condition the present. Both positive and negative images return to the present and affect what people consider worth doing. These images are being continuously negotiated at all levels of society, though often in implicit, hidden, ways (for example through advertising). Many images are ambiguous and it is the human response to the image that is crucial, rather than the image itself.
5. Futures are not the abstractions they have sometimes been represented to be. Since they cannot be measured they have been illegitimately dismissed by empiricist frameworks of enquiry. But *the future* (as a category) *is a principle of present action*. Without it we could not act at all. The human capacity to articulate plans, purposes, goals, intentions and meanings relies upon an open and undetermined future.
6. The taken-for-granted present does not indicate a specific period of time because the mental present has no firm boundaries. Aspects of past and future are enfolded within the present and

educators of all kinds can be much more explicit about what this involves for teaching and learning.

7. Educational institutions and processes have strong roots in the past. Yet they cannot simply try to reproduce the past. They require credible future alternatives in order to make sense of the present and to establish appropriate strategies and directions.

8. It is not possible to change the past (though the past is continuously re-interpreted because we never stand at the end of history). Our relation to the future is different. We necessarily exert our will and intentionality upon it, and attempt to shape it according to perceptions and needs. This is a much more active stance than we can adopt in relation to the past. Hence, futures are not an 'optional extra.' They are a primary human concern that can, and should, be addressed explicitly through educational processes.

9. The implicit model of personhood applied to education affects the way we view futures. If people are viewed as interpreters of culture and makers of meaning (agents) there is a direct connection between futures and the curriculum. This connection is obscured in more instrumental views.

10. Most young people are already interested in futures. Students do not need to be coerced into considering it. They are naturally interested in the unfolding of their own lives. Many have fears about such threats as unemployment, pollution and nuclear war. It is responsible to help students channel the energies that support these fears into strategies that address the source of the fear.

Types of futures education

A narrow definition of futures education would confine it to formal curricula that are taught in established educational institutions such as schools, colleges and universities. This alone is a fascinating and productive growth area. Yet such a definition is too restrictive. While formal institutions do have important and continuing roles, it is clear that much futures work - including education - takes place in other contexts. Given the interaction of technical and cultural processes now occurring (e.g. the spread of information technology, de-centralisation and the diffusion of educational functions to other organisations and contexts) it seems clear that this trend (toward the diffusion of educational provision) will continue.

A broad definition would have to include all the social learning processes now taking place that have some bearing upon the future. While capturing many fascinating, non-standard activities, such a definition would make a synoptic overview unmanageable. It is therefore helpful to adopt a middle course. *For the purposes of this review "futures education" or "future-oriented education" refers to a sample of intentionally created educational processes that are oriented toward cultural change and futures.* This makes it possible to include the work of futures-related Non-Governmental Organisations (NGOs), special projects, conferences, symposia and courses, workshops etc. as well as futures education in formal institutions.

Such a review is bound to be biased in various ways. It is affected by the background, culture and location of the author as well as by the availability of material. Given that the global information system is dominated by a few powerful actors, material from the Third World is particularly difficult to obtain. Rather than ignoring these biases and attempting to be 'objective,' they can be declared openly. Due allowance for these factors can then be made in the analysis and conclusions that follow.

Overview of types

In keeping with the focus adopted above, this section provides an overview of some of the main types or components of futures education. Five categories are adopted, though they are not mutually exclusive. They are as follows.

- * Futures-related curriculum offerings in schools etc.
- * The work of NGOs.
- * Special educational projects.
- * Conferences, symposia and special courses.
- * Futures workshops.

1. Futures-related curricula

It is extremely difficult to provide an overview of futures-related curricula since, with the recent exception of Prep 21 (see below), no method of registering or recording such courses has been developed or applied. This is clearly a priority for future work. What is known tends to have been produced intermittently by researchers and scholars in Western countries at comparable stages of development. So what follows is certainly incomplete and will need to be supplemented by more rigorous surveys and analysis.

A number of futures programs can be found in various countries. Here are some examples from the university sector. Typically, they offer electives and Masters programs, often leading on to Ph. D. work.

In the USA the University of Houston at Clear Lake City has offered a comprehensive Masters program for some years. Similarly, the Department of Political Science at the University of Hawaii has housed a long-running futures program, affiliated with the Hawaii Research Centre for Futures Studies. California State University at Dominguez Hills has a well-established undergraduate minor in Future Policy Studies. The Sociology Department at Yale has several futures courses. In Britain the Science Policy Research Unit at the University of Sussex in the UK has a team of researchers responsible for various science, and futures-related, studies. Mention should also be made of the Open University's Man-Made Futures course that, though no longer being offered, provides a useful model and exceptional course materials. In Italy a more culturally oriented program has been developed over many years at the Gregorian University in Rome.

This is an impressive list, but it is by no means complete. For example a report from India mentions that there are at least ten universities that have started the one-year post-graduate M-Tech or M-Phil course in futures study. At Chungbuk National University in the Republic of Korea there is a course on *Man, Peace and the Future*. The University of Paris VI has introduced a master's level program in *Sciences, Technologies and the World Problematique*. Elsewhere in Europe, members of the WFSF teach in institutions of higher education in England, Italy, Romania, the Netherlands, Finland, Sweden, Austria and Germany. In Australia there are futures-related courses taught at at least six colleges or universities: Monash University, Melbourne University, Victoria College, and the universities of Wollongong, Newcastle and Griffith. Perhaps later surveys will make this picture clearer and fill in some of the many gaps.

Mention should also be made here of the work of Ake Bjerstedt from the Malmo school of Education at the University of Lund, Sweden. For some years Professor Bjerstedt interviewed many leading futures educators as part of the Preparedness for the Future project. This work is little documented elsewhere so it was, and remains, a rare and useful attempt to gather relevant information about futures teaching and futures teachers. (Bjerstedt, 1982)

Information is harder to obtain for work at the levels of primary and secondary schooling (K-12). In the USA it is clear that the foundation laid down the early pioneers continues through the work of people such as Kristen Druker, Ted Dixon and David E. Smith. One of the strong continuities in this field is that established by Paul Torrence's work (initially with gifted children). From this emerged the Future Problem Solving Program. According to a recent flyer an estimated 200,000 students in all fifty states and numerous foreign countries are using the program's materials. No other country has yet been able to sustain this level of success or continuity in futures-related school curricula. There are indications of activity from New Zealand. There, as in Australia, teachers can take courses that inspire them but then they return to schools to innovate *in situ* with very little else in the way of support. This is also the case in Britain where the Global Futures Project is developing futures-related curricula for primary and secondary use. (Hicks, 1991)

Futures programs at the Primary level are widespread, but they are not well documented. Many assume that "you can't teach futures" to young children. However, the work of the Montclair futures school (New Jersey, USA) and people like Cathy Holden (UK) and Jane Page (Australia) makes it clear that a great deal can be achieved at this stage (Holden, 1989; Page 1990). Given that the age and developmental stages of children are taken fully into account, futures can be, and are, taught at the primary level, and even earlier. At least one Australian researcher is presently investigating this option. (Page, 1990)

Futures concepts and methodologies

Futures concepts and methods are the most important tools for teaching futures. They are not used merely to forecast or predict 'what will happen' (a self-contradictory enterprise which rules out the active role of humans in creating their history) but, rather, *to elaborate our understanding of futures in the present*. This is a more interesting and educationally productive task. Here are a number of futures concepts and methods in wide use.

The futures field

It's useful to begin with some kind of 'map' to provide an overview of the field. Figures 1 and 2 provide examples. Using such maps as starting points, one can begin to locate some of the methodologies, processes and, most importantly, the *people* who work in the field. The work of outstanding individuals represents a legitimate way of introducing futures to students. Clearly this is a multi-disciplinary area so it can take a little time to feel 'at home.' Yet this broad structure gives access to a very wide range of conceptual, intellectual, practical and human resources.

Alternatives and choices

These are two key concepts of the field. They suggest that there is no single, deterministic future, but rather a range of options and possibilities that invite a range of human responses. How can one conceptualise alternatives? They emerge from engaging with the subject matter

over a period of time, from looking beyond the obvious, from examining assumptions and, perhaps, using some of the major futures techniques, e.g. environmental scanning, the cross-impact matrix, cultural critique and the analysis of cycles of change. Since each can be approached at a range of levels, they can all be adapted for educational use. Understanding alternatives creates a *decision context* for considering choices.

Attitudes to futures / dealing with fears

Attitudes to futures are more complex and ambiguous than they might at first seem. There is a strong tendency to focus upon whether a person is either optimistic or pessimistic. However, this is too simple. The point is that both can be helpful or inhibiting, depending on how they are used. As noted below, *it is the human response that is crucial*. This is one of the keys to productive futures work in schools and elsewhere.

Many young people have a range of fears about futures. While some of the fears may be exaggerated, most are rational and well founded. They arise from the nature of our present cultural transition out of industrialism and are true causes for concern. However, it's important to utilise the fear as a springboard or motive force for considering responses. These can be explored via a simple matrix (Slaughter, 1991). Having considered a range of responses, the focus should then shift to *what might be meant by a high-quality response*. This moves the discussion in a very productive and helpful direction: high-quality responses are always more effective. They tend to be creative, drawing on the deepest sources of human insight and inspiration.

Creating futures

The central point of teaching about futures is to show that we are all involved, all capable of pursuing ends and purposes which lead away from some outcomes and toward others. It is to help individuals feel able to contribute to ends that matter and not to feel intimidated by the vast collectivities of power, prestige and profit that may sometimes seem (but are not) overwhelming.

Futures are scanned routinely and informally by everyone. Futures are scanned routinely and systematically by forecasters and strategic planners. Futures are created or avoided by the sum total of formal and informal processes by which important social decisions are made and acted upon. All these processes can be clarified, studied, subjected to careful and informed analysis. Moreover, *individuals are free to participate in them*. A careful review of the work of citizen action movements shows that governments are often the last to know when a major shift is underway. Many such shifts developed, grew and gained legitimacy because people cared enough to get on with the necessary work. Hence, *there is a notion of active and responsible citizenship at the centre of futures teaching*. It is realised, in part, through simple teaching methodologies, several of which are outlined below.

Environmental scanning

One of the keys to implementing foresight is to be sure that one is receiving the right messages from the environment. This means being alert to information about relevant matters. Students can be assigned the task of monitoring specific areas over a period and begin to develop the necessary skills. Clearly there is a tie-up here with other curriculum areas: philosophy, English, media studies and so on. Environmental scanning is an activity which need not remain the province of large organisations. Individuals too can learn some of the skills involved: being alert

for precursors (or early signals); sorting information from propaganda; discerning trends; summarising data and keeping it organised in an accessible and usable form. These skills can all be taught and learned in schools and other contexts.

Futures wheels

Futures wheels are one of the most flexible and useful tools available. Students begin with a large sheet of blank paper. They ask a ‘what if’ question: ‘What if cars were banned? What if the human life span doubled? What if wars ended?’ etc. This possible future event is placed at the centre of the paper. The next question is ‘If this happens, what would happen next?’ In this way, a ring of immediate consequences is placed around the original event. The ring can be extended by considering secondary consequences. And so on. The result is *a pattern of judgements*. The pattern is not ‘right’ and it is not ‘wrong.’ It incorporates assumptions, both positive and negative which dictate how the pattern could develop. The futures wheel can be "re-run" according to different assumptions. It can be regarded as an end in its own right, or as a starting point for further work. Often the outer edges of the pattern throw up fresh ideas. They can be created with students of any age and level of sophistication. With very young children teachers can write responses on a wallboard. With older people the exercise can be developed and extended in various ways.

Critique

The dominant Western/industrial worldview has at least two kinds of major systemic defects of concern to futures educators. One is that underlying assumptions (about technology, growth, progress, the environment etc.) are proving to be wide of the mark. The other is that a number of core meanings and commitments are breaking down. This suggests that attention be paid to major shifts in areas such as: work, leisure, health, defence and, indeed, education. Careful futures work in each of these areas reveals both a loss of coherence and a number of alternative interpretations vying for attention. Careful attention to what is happening here reveals the grounds of informed optimism via the outlines of a renewed worldview. As this becomes clearer and better understood, so it will be realised that *no teacher or pupil need ever feel helpless*. In other words, *critical worldview analysis and positive critique leads directly toward empowerment*. This is an important principle.

Acting

One of the commonest responses to futures work is a feeling that the problems of the world are too great to be addressed by individuals. Pupils may see the point of something but they will often respond by saying something like ‘OK, but what can *I* do?’ That’s a legitimate question and every teacher should be able to answer it. Students can begin by locating information sources and finding out more. The teacher's instructions can follow this general pattern.

‘Take time to research the topic, map it and evolve provisional questions which need answering. Take the early conclusions or questions to someone with expert knowledge of the area and ask for their considered response. Note down their answers carefully. Explore a range of creative responses. Prioritise these and try to discern action contexts within which they might fit. Evolve and present an innovation or proposal to someone who may be interested in it. If rebuffed, don't lose heart. Re-examine the proposal and see if it can be improved. Take it elsewhere. Keep it in circulation until it is picked up. Persistence pays. If the idea is good it will be eventually adopted.’

If there is a single answer to dealing with the problems of a world in transition then it is this - learning to act effectively and to persist until constructive changes are achieved. So one answer to the question 'What can I do?' is to reply 'the answer is a journey.' It is a journey of inner discovery as individuals come to know their own capacities and purposes. It is also a journey of exploration, research and action in the wider world. This twin journey identifies a central purpose of education at any level.

Underlying purposes

Futures education is still in process of development, so hard and fast rules about its underlying purposes should be avoided. However, three suggestions seem to emerge. In the first place, futures education seems to be about *providing the means to think (dream, vision) ahead*. This involves valuing the human capacities which enable us to move out of the here-and-now and developing them to new levels. For example, foresight at the individual level is an instinctual capacity that is used routinely in daily life. However, foresight at the social level is a very different matter. The scanning involved is different; specific methodologies are needed, along with institutional locations and sufficient resources. Moving from the individual to the collective level is a demanding and difficult task. Similarly, imaging futures, understanding alternatives, developing consistent and powerful critiques can all be developed by individuals and groups using human capacities to the full. Futures education clearly provides opportunities for such capacities to be extended in these ways.

Secondly, *futures education seeks to provide facilitating contexts*. That is, places where people can go and safely hone their futures-imaging, futures-shaping skills. Such contexts can be within the halls of Academe, in simple community workshops or other locations. All are important. From these contexts spring the frameworks of support that unite people from different cultures in their search for a new world order.

At a deeper level futures education appears to be about *the re-negotiation of certain fundamental meanings and assumptions*. As noted below, critical futures study suggests that some of the most productive options involve diagnosis and reconstruction at the heart of the worldview. That implies close, critical attention to presuppositions, core values and constitutive meanings. These may well be hidden, but they are no less powerful for that. They are not immutable since, to some extent, they are refashioned by, and for, each generation. However, the processes of 'social programming' or 'cultural editing' are powerfully defended, and this may be one basic source of resistance to futures work.

Implementation

There are basically three approaches to school-based implementation.

1. The introduction of discrete futures units or modules into an existing curriculum program.
2. The introduction of futures as a dimension of existing subjects and curriculum foci.
3. The reconceptualisation of a school's *modus operandi* according to futures concepts and methods.

Approach three is the most ambitious and it has not been tried in many places. However, examples such as the Montclair Futures School in New Jersey show that it is a viable option where resources, staffing and support are available. It does presuppose that adequate training, materials and leadership are present locally, and this is clearly not often the case at present.

Approach two requires that a 'prime mover' such as a head teacher or curriculum director, take on the task of facilitating a school-wide shift in content and process. Given the right environment and support it represents a viable way forward. When teachers are given the time to familiarise themselves with futures concepts and approaches, most tend to change what they do in small but significant ways. Since futures is a cross-curricular dimension it can be approached in this way. Schools and colleges are therefore increasingly using devices such as futures weeks and professional development forums for this purpose.

The first approach is the commonest one since it means that highly motivated individuals can innovate in their own classrooms without disturbing established procedures elsewhere. It is becoming increasingly common for general studies, social and life skills, careers, domestic science, languages, drama and design to include an explicit futures component. Elective courses in futures per se will become more common as suitable course materials become available. Whichever approach is adopted, innovators may find it helpful to refer to a model futures curriculum at the design stage (see below). This indicates some of the range of work as shown by surveys. It is one starting point for the organisation of content.

Figure 1 - Model Futures Curriculum

1. INTRODUCTION AND RATIONALE
2. FUTURES CONCEPTS AND METAPHORS. EG. History and futures. Notions of past, present and future. The extended present. Time and temporalities. Images of the future. The history of the future.
3. PEOPLE, THEORIES AND PERSPECTIVES. Major poles of futures field: future research, future study, futures movements. Outline of the world futures debate. Post-industrialism and alternatives to it (e.g. a wisdom culture). Key theorists and their contributions. Rationality and vision. Mental maps and reality domains.
4. IMAGINATION, CREATIVITY AND SPECULATIVE WRITING. Representative sources and themes (including time travel and alternative worlds). Sources of human creativity and insight. Theme bank. SF novels and short stories.
5. TECHNIQUES AND METHODS OF FUTURES STUDY. Forecasting methods and their uses/drawbacks. Scenarios, Delphi, futures wheels, cross-impact etc.. Systemic and holistic approaches. Harnessing intuitive sources. Environmental scanning, futures files. Imaging processes. The uses and methods of foresight.
6. MAJOR CONTEMPORARY ISSUES AND DIMENSIONS OF CHANGE. Issue bank. Processes of continuity and change. Sample studies and exercises.
7. MAKING CONNECTIONS WITH THE WIDER WORLD. Project bank and strategies (e.g. in relation to energy, resources, the Third World, social options, technical choices, etc.). Sources and resources. Linkages with other subjects, enterprises and fields of knowledge.
8. PEOPLE, VALUES, FUTURES. Optimism and pessimism, dealing with negative images of futures. Values and futures, notions of personhood. Values and 'Spaceship Earth'.

9. REVIEW AND OVERVIEW OF THE UNIT/COURSE

10. EVALUATION AND FEEDBACK.

2. The work of non-government organisations (NGOs)

Of the many NGOs in existence, several hundred are fully or partly interested in futures (though their interests are not always explicitly defined). A small proportion of these are the institutional members of the World Futures Studies Federation. They are based in 33 countries: Argentina, Austria, Belgium, Brazil, China, Czechoslovakia, England, France, Finland, Ghana, Hungary, India, Ivory Coast, Japan, Kenya, Korea (north and south), Kuwait, Morocco, the Netherlands, Norway, Pakistan, Poland, the Phillipines, Romania, Spain, Sweden, Switzerland, Tanzania, the United Arab Emirates, Upper Volta, the USA and the USSR. Many are national entities focusing on the futures of their countries or region. Others have a more international focus. Typically, they hold meetings, organise conferences, publish futures-related material and attempt to act as catalysts for change. *It follows that collectively they represent a very significant multi-cultural, trans-disciplinary and global learning process.* All deserve to be documented and studied more thoroughly than to date.

In countries where there has been long-term wealth, political stability and high educational standards - that is to say, mainly in Europe, North America and the Antipodes - some NGOs have developed an enviable tradition of research and a variety of outreach activities. For example, the Swedish Secretariat for Futures Studies has created sufficient 'cultural space' to carry out substantive research into futures theories and methodologies, and a range of culturally significant projects. The latter include: an examination of *Bio-Society*, *Chemical and Recirculation Society* and *Future Social Movements*.

Pakistan and the Philippines are two non-European nations with an institutional presence in the field. For example, the Pakistan Futuristics Foundation and Institute hosts conferences and offers a postgraduate Certificate in Futuristics. The Phillipine Futuristics Society has published two volumes of *Futuristics*, containing papers from its regular meetings. Similarly, the Phillipine Institute of Alternative Futures publishes a magazine-format journal *Alternative Futures* and has hosted a series of *Kabuuan* values seminars. The problems of working in a developing country context are well illustrated by CITGUA (Ciencia Y Tecnologia Para Guatemala). This is a newly formed 'society composed of scientists and specialists who feel anxiety for the future of Guatemala.' With high rates of illiteracy, unemployment, high infant mortality, inadequate technology and political uncertainty, the future can look bleak. CITGUA is a society 'which aims at having peace in order to resolve the great problems of the country.'

At the international level there are a number of key actors among the NGOs. These include the US-based World Future Society, the World Futures Studies Federation, Futuribles (Paris) and the International Library for Futures Research (Salzburg, Austria). The WFS and the WFSF memberships differ greatly in size (about 25,000 for the WFS and only about 500 for the WFSF). The former has a range of general and more specialised members, while the latter is comprised mainly of active workers in futures and related fields. The four organisations named have recently co-operated to form a UNESCO clearinghouse for futures studies. Three products are expected:

- * An international bibliographical database;
- * An international directory of institutions, research centres and individual specialists

competent in futures; and

* A bibliographic bulletin (based on the pattern created by *Future Survey*).

It seems likely that the new clearinghouse (called FUTURESCO) will initiate a significant step forward in the effectiveness and range of futures work internationally. Two other organisations with a strong international brief are the Institute for 21st Century Studies (USA) and the Network for Future Generations (Malta). The former provides training and support for national 21st Century studies around the world. Such studies are those that ‘examine alternative national futures, are broadly multi-sectoral and long-term in perspective, and focus on environmentally, economically and socially sustainable strategies.’ (Garrett, 1989) It has built up an enviable body of practical and useful expertise, such that national teams of researchers can carry out their work in the clear knowledge of previous experience. This is facilitative futures work at its best. It means that pitfalls can be avoided and wheels do not need to be continuously re-invented. Synoptic overviews of a number of national studies provide valuable material for the global community of futures workers and researchers.

The Network for Future Generations is also facilitative, though in a different way. It is supported by UNESCO and carries out a regular program of networking, research and publishing. Its aims are: (1) to discover, develop, and present facts and insights on the problem of the protection of the interests of future generations; and (2) to stimulate the world community to act in specific ways to promote those interests explicitly and actively. The network publishes a regular, high-quality, journal, monitors a number of critical issues and runs a Future Generations Research Exchange.

An organisation with a similar mission is Britain's Council for Posterity, a product of the Institute for Social Inventions. It organises a variety of social and cultural events to publicise the rights of posterity. Once again, the cumulative impacts of well-founded, properly organised and intelligently run public policy NGOs of this kind are likely to be considerable. They have the power to place new items on the social and cultural agenda and to facilitate wide-ranging shifts of opinion and understanding on a wide range of futures concerns. Options for cultural innovation and change are by no means restricted to western countries. The recently created Institute of Islam Futurology had its first conference in Algiers in 1990. It produced a fascinating *Alger Manifesto about the Future of Islam* that Western futurists should take very seriously indeed. Finally, mention should be made of The Club of Rome and the World Watch Institute. The former has some 26 associations around the world and has been responsible for publishing major works including *The Limits to Growth* (1972) and *No Limits to Learning* (1979). Over the same period the World Watch Institute has issued a wide range of low-cost pamphlets on futures-related issues and produced the increasingly authoritative *State of the World* reports.

3. Educational projects

It is clear from the above that very many projects emerge from the work of countless individuals and organisations. Here, however, the focus is on futures education, so it is useful to outline three specifically educational projects. They are Simon Nicholson's Community Participation by Children in Futures project (CPCF), the Australian Bicentennial Futures Education project (BFEP) and the Prep 21 (Preparing for the 21st Century) project. Children in Futures ran for a number of years out of Oxford, UK, where Simon Nicholson was based. It began, in part, from the view that children suffered from a ‘communication backlash’ in that they were denied access to tools of communication and therefore marginalised, made to feel helpless. Nicholson's inspired method was to provide some of these tools in a safe space for children to use in a

creative and minimally structured way. The results were spectacular. As Nicholson's frequent collaborator wrote, 'for the past ten years Simon had traveled frequently to all the globe's corners...activating the participation of many thousands of children in imaging the future...' Despite his premature death, the work of this project seems likely to have lasting impacts both upon the participants and also upon colleagues and students who experienced his other work at the Open University on the Art and Environment course. There is much to learn from this work, so a critical, but caring overview is certainly needed.

The BFEP was a two-year government-funded curriculum project initiated in Australia by the Bicentennial Authority and the Commission for the Future from 1986 to 1988. A range of curriculum materials was produced and distributed to twelve 'lighthouse schools' in different states. A number of in-service functions were held and the schools clearly thrived on the opportunity to develop new curriculum offerings on futures. The project culminated with a conference in Adelaide at which many of the participants were present. There were workshops, papers, discussions, even a 'hypothetical' (a structured 'let's pretend' exercise based on a successful TV version). Soon afterward an anthology of readings was produced and distributed throughout the country (Slaughter, 1989). The project clearly raised considerable interest, put futures on the educational agenda and produced a range of teaching strategies and materials. Yet financial control was lacking and evaluation and long-term support were not secured. Three years later the situation is paradoxical. The *latent* demand for futures work in schools remains high (see below), but the work of the BFEP has been allowed to lapse. Clearly there is a need for more durable support structures.

Prep 21 presents an altogether different picture. Initially the idea of Michael Marien (editor of Future Survey), it may develop into a much-needed international network. Early activities included national surveys of college and university futures-related teaching and preliminary meetings of interested persons. An early newsletter suggests that 'perhaps 5,000 people worldwide may be teaching futures studies in institutions of higher learning, and other postsecondary settings such as corporations, military colleges and adult education courses...' While not that many have yet appeared (perhaps due to patchy coverage) the results of the first national surveys were collected and collated by Gary Gappert at the University of Akron, USA. They showed a diversity of views and a certain incongruity of content of futures courses. Since then Prep 21 has been co-ordinated by Howard Didsbury out of the World Future Society office in Bethesda, Maryland. The first Prep 21 Bulletin was produced late in 1990. A number of regional meetings have been held in a number of countries.

The overall aims of Prep 21 are to 'assist...in the identification of model courses and programs; develop teaching aids; seek effective strategies for establishing courses....conduct futures workshops....publish select futures course syllabi; hold regional, national and international conferences; and develop a knowledge base of futures studies.' (Prep 21, 1990) It is evident that the project has taken several years to emerge, and these are still early days. If all goes well, it could become a true support network for practitioners world-wide. In the past, many innovations in teaching futures have occurred in isolation. But this isolation may be coming to an end.

4. Conferences, symposia and courses

There is not space in a short review to detail all the many important futures conferences and symposia. However, they are undoubtedly very significant in providing locations for the exchange of views, for learning about different cultures, for teaching and learning with, and from, leading figures in the field, and for developing all-important personal and cross-cultural

contacts. Of particular interest is the series of international conferences on the future of higher education, organised by Rolf Homann. These are held every year or so in different countries. They provide valuable opportunities for teachers and others to meet and consider the futures-related aspects of their work. The World Future Society and the World Futures Studies Federation have, between them, hosted about 20 or so world-class conferences. The main WFS meetings are held within the continental USA and are attended by mostly American delegates from business, industry, academia, alternative lifestyles and so on. The WFSF meetings are held in different countries and attract a wider range of delegates from a rich variety of cultures and nations. Both organisations provide opportunities for meeting practitioners, academics and officials of various kinds. The WFS has held several seminars on 'Government With Foresight' which has focused attention on the growing expertise in this field. Some of this work deserves to be known internationally. (Grant, 1988)

One of the most successful initiatives of the WFSF is the annual course on futures at Dubrovnik. About 30 or so young people are invited to attend, along with a number of facilitators. The intention is to provide "something in between a graduate level university course and an academic seminar", though with the difference of a preference for interactive modes of teaching/learning. The evaluation of the 1990 course found that financing and marketing had been the weakest points. However, the courses have clearly been a huge success from a facilitative viewpoint, so the news that UNESCO will help support future courses is welcome. A similar course has been proposed for Australia, but this requires further work before it becomes a reality.

5. Futures workshops

Futures workshops provide a flexible way of dealing with futures concerns, nurturing images, and exploring their implications in a small group context. Some workshops are exploratory and open-ended, some are more highly structured. Some combine both approaches. Among the most highly structured are those developed by Elise Boulding and Warren Ziegler. (Boulding, 1988 (b)) Similar in philosophy, but not in approach, are those developed over a number of years by Robert Jungk (Jungk & Mullert, 1989). These workshops can be run in a day, a weekend or longer. They deliberately intertwine rational-logical and intuitive-emotional strands. They are intended to provide forums in which people can reflect on issues of concern to them and from there produce a plan for action which may result in a social innovation or other creative change. They have been held in a number of countries with evident success.

A different approach is to use a guided fantasy to elicit images of futures. Noel Wilson of South Australia uses this method with teenagers in Australia and the U.K. He works from a prepared script to take the participants through several stages. First, there is a relaxation stage. Next, a journey into the clouds. Finally participants return to earth in some future time and draw what they see. It's clear from this work and that of many others that young people tend to have very negative views of their likely futures. The question is, how can teachers and others help them to move away from the pain and anguish involved and explore other options? Are there ways of moving out of the depression and learning to *respond* to the fears? Joanna Macy is a leading practitioner in this area. While she would not call herself a futurist as such, her work offers some very useful insights. Her book *Despair and Personal Empowerment in the Nuclear Age* (Macy, 1983) offers a rich compendium of strategies which deal directly with feelings of helplessness, anger, grief and so on. She articulates five principles:

1. Feelings of pain for our world are natural and healthy.
2. This pain is morbid only if denied.

3. Information alone is not enough.
4. Unblocking repressed feelings releases energy, clears the mind.
5. Unblocking our pain for the world reconnects us with the larger web of life.

Much of her work takes place in workshops and retreats in locations around the world. These workshops can be very powerful since they elicit human responses at fairly profound levels. This occurs not simply because of her grasp of group processes, but, more importantly, because she herself has explored some of the richest grounds for cultural innovation and the recovery of meaning. She is a practicing Buddhist and draws on this (and other traditions) for insight and understanding. Hence, *Macy's workshops are based on more than technique*. They are founded on a deep understanding of the human predicament, on a substantial involvement with the theory and practice of deep ecology and on a vision of an interconnected and indivisible world. Such an approach must be deployed with care and sensitivity. Yet when it is done well it has the effect of re-framing issues and concerns and then *linking* the human response to powerful cultural resources at the levels necessary for insights and resolutions to occur. With this in mind, two further principles can be outlined:

6. The critical factor in dealing with fears is *the nature of the human response* to the situation(s) from which the fears derive. A group context means that a wider range of potential responses is available.
7. The resources deployed to deal with fears must be adequate to the task. *They will therefore tend to be grounded primarily in cultural and spiritual traditions, and only secondarily in technique or psychology*. This helps to explain why more instrumental, goal-oriented approaches can be less productive.

The key point is that fears and concerns about futures depend upon human perception and understanding. As such, *the locus of power resides not in a disembodied vision but within the individuals who give it life*. This, perhaps, is the unifying principle of all futures workshops; they are a means to an end, and the end is an increase in human capacity to create and affirm the visions of futures people want. When the nature of those wants, or needs, is reflected upon with clarity (rather than simply assumed in a commonsensical way which merely reinforces the status quo) visioning becomes a precursor to social and cultural innovation.

Global distribution of futures education

The picture that emerges from this synoptic overview is that futures-oriented education takes place in a number of modes, but it is essentially provided by pioneering individuals and the organisations they work in or have created. In the absence of comprehensive surveys it is impossible to come to firm conclusions. However, it seems likely that the sum total of non-academic activity is as important as formal school and university programs. It would include futures-related teaching/learning in corporations, the military, public-interest groups and other institutions. Moreover, a positive dialectic may well be taking place between them with numerous NGOs and volunteers of many kinds taking a wide range of initiatives, while academics and teachers look for - and in some cases find - more durable methods and models of futures work. Practical innovations and academic groundwork should not, therefore, be seen in opposition, but as complementary and mutually necessary.

In looking at the overall global pattern four features stand out.

1. The very uneven spread of futures work, with the developed nations owning the bulk of the personal and institutional expertise.
2. The decentralised pattern of innovation, with widely-scattered practitioners often working in isolation, sometimes re-inventing various wheels.
3. The lack of hard data about who does what, where, and how successful it was.
4. The dramatic contrast between the structural need for well-grounded futures education and the actual, relatively modest, levels of provision so far achieved.

Clearly, the futures education process has reached a stage when it requires a more globally-equitable, co-operating and empirically verifiable framework of support.

Latent demand

The present *actual* demand for futures education is very much less than it would be if it were more widely understood. The latent demand is much greater. How can we know this? Partly it is intuitive. But the responses of students to courses and the reactions of audiences to presentations can reveal a lot. A frequent response is ‘Why didn't someone introduce this before?’ When presentations are carefully organised and taught they can provide important validation for this type of work. Written evaluations are particularly valuable for documenting success (which is important for legitimisation within an institution or system), as well as providing feedback for future course design. When feedback of this type is collated over a period and made available in an appropriate manner, a positive cycle of proven success can become established.

People tend to find futures courses, meetings, etc. demanding, invigorating, challenging and empowering. But it is evident that they allow people to make new connections and to review their lives in a new light. Many comment on early difficulties, followed by deepening insight. Thus, in order to activate the latent demand, futures work needs to be of the highest standard, and promoted much more effectively. Specific strategies should be developed in each learning environment to help individuals over the threshold difficulties. If these conditions are met, futures education can develop and grow much more rapidly than in the past.

Challenges for futures education

By way of a summarising overview it is probably true to say that futures education is an idea which has made steady progress over the last quarter century, but its time is yet to come. It still has some way to go before it is universally regarded as a legitimate part of mainstream education. The potential of educational futures has been appreciated for at least 20 years (Marien & Ziegler, 1972). So it is important to understand the gap between aspiration and reality. Marien, one of the earliest on the scene, and indeed, one of its keenest critics, has suggested four factors which may help explain this gap.

1. Academic institutions favour vertical depth over horizontal breadth, retain ancient boundaries and have few resources for experimentation.
2. Futures organisations have declined in membership, or simply failed to grow. Organisations like the Club of Rome have lost visibility and impact.
3. The future can seem too difficult to study and there is evidence that time-horizons are shrinking.
4. The above factors are exacerbated by ‘infoglut’; i.e. information overload and the fragmentation it encourages (Marien, 1988).

To this can be added the following.

5. The US model of futures education at the school level did not travel well. It relied too heavily on pop futurism and carried unquestioned cultural assumptions that were not acceptable elsewhere (e.g. cultural superiority, urgent warning of perceived dangers, occasional paranoia about the USSR).
6. While many practical teaching tools and innovations were successfully developed in US schools and colleges, the US model of futures schooling was (and is?) a distinctive combination of practical achievement and theoretical inadequacy. The work actually carried out in classrooms was (and remains?) far superior to the accounts written of it. It was therefore possible for the "intellectual gatekeepers" in universities and elsewhere to sideline these innovations and to miss their significance.
7. Some of the early futures literature became a liability because its repetitious description of 'world problems' and 'solutions' missed the point in certain ways. *We now know that it is not possible to approach the great issues of the time without also considering the frameworks of value and meaning which created them in the first place.* (Slaughter, 1989 (b)) When a deeper analysis is overlooked, the prescriptions of futurists can be readily dismissed. It is therefore unsurprising that futurists were not particularly welcome when they tried to penetrate the advanced and interrogative discourses of higher learning.
8. People who begin to teach futures in isolation from other practitioners naturally tend to use what they find to hand. However, often this turns out to involve looking ahead and merely *extrapolating* from the present. This 'future of...' approach has drawbacks. It means that aspects of our present world become enlarged or exaggerated. The underlying assumption is of *a basically static frame of reference*. While exploring some superficial changes, the extrapolative approach often assumes that present ways of life possess more strength and durability than, in fact, they have. It misses the fact that there are major 'cracks in the foundations,' i.e. aspects of our present world which are not sustainable. However, these deeper shifts should not be overlooked.
9. A close look at numerous futures modules, curricula and projects suggests that *inadequate attention has been paid to evaluation*. This means that futures work can be seen as purely inspirational and marginalised on these spurious grounds. But *why* should it be marginalised?
10. It seems clear that futures education incorporates certain assumptions, values and ideas which stand in fundamental conflict with the dominant norms of growth-oriented, resource-intensive and habitually short-termist societies. *This hidden opposition of interests and agendas is, perhaps, the basic reason why futures education has not yet entered the educational mainstream*. It has confronted powerfully embedded cultural forces but, in lacking critical, countervailing power, it has engaged in a very unequal struggle.

If this analysis is correct, futures education will find it hard to achieve its full potential until it becomes securely grounded in more durable, penetrating methods and approaches. At minimum this may involve: providing a penetrating critique/diagnosis of industrial era psychology, epistemology and worldviews; utilising critical futures tools for re-negotiating deeply embedded cultural values and assumptions; and making the role of futures clearer to many more people than at present. Since these are by no means easy tasks, it follows that futures education will take longer to become fully established than many would wish.

In the meantime, innovators can certainly take heart: the underlying *impulses* driving futures work are growing steadily, along with the *structural* need for quality, well-founded futures work. The structural component provides futures education with a more socially viable and

durable role than would ever be possible from a merely individualistic or career-oriented viewpoint. Moreover, teachers and students alike tend to respond enthusiastically as they engage with the material. Since this is one of the most widely reported outcomes of futures work, it provides a basis for optimism, regardless of these difficulties.

Conclusion: implications, policy initiatives and further work

A number of conclusions emerge.

- * *It is important to view futures study and research as an essential adjunct to educational theory and practice at all levels.*
- * *Futures educators can be, and indeed, should be, well placed to explore the implications of foresight as a human capacity and find ways to apply it in educational organisations.*
- * *Futures education has great potential. It is pre-eminently equipped to look seriously, and in depth at all that is involved in the transition toward a sustainable society and culture.* The lives of all those now in schools will be played out in the context of that process. The notion of a *global agenda* is useful here. At minimum it may involve: clearing up the mess, implementing foresight, creating sustainable economies, and deciding what we want.
- * *Studies are needed of the work of futures-oriented NGOs. They clearly have influence, but the nature and consequences of that influence are poorly known.* In particular there is a need to understand how institutions and processes of foresight work at the social level. A body of knowledge and good practice is needed here similar to that emerging from 21st century studies.
- * *Innovations in futures education are too dependent upon particular circumstances and individuals. Many have been shown to be vulnerable to political changes and budgetary cuts. Some kind of framework of support is needed to nurture and protect culturally significant innovations of this kind.*
- * *An actual and potential global register of all futures-related courses and programs needs to be compiled.* The Prep 21 project is a start. But there is much more to be done at other levels. Perhaps a database of information about futures teaching, courses, projects etc can be initiated by the new UNESCO clearinghouse.
- * *This review has suggested that futures-oriented education is mainly (but not exclusively) available in developed countries. While it cannot be assumed that the same models and approaches will be suitable for implementation elsewhere, some means of making the best work available to other countries is certainly needed.* (The WFSF Dubrovnik course provides one such model, now being applied in the Asia/Pacific region.)

What is the overall significance of futures education?

Very occasionally a new insight or approach will illuminate the taken-for-granted world in a new way. This was true of the theory of evolution. It was true of quantum theory and the view back of the planet Earth from space. In a more modest way futures in education represents another paradigmatic shift of perception. The weaknesses of some early approaches are appreciated and a systematic basis for futures work in education now exists. This means that people can take up the available materials and integrate them into every aspect of their work.

Futures work has a vital and continuing role to play in formal institutions. But it cannot be limited to them. Nor can it be understood simply as another subject or curriculum focus entering into competition in an already overcrowded curriculum. Even at this relatively early stage it can, to a very significant extent, be regarded as *a true metaperspective grounded in a coherent body of theory and practice*. A thumbnail definition of futures sees it as the forward-looking equivalent of history. Far from being a distant abstraction the study of futures has now become indispensable within education, as elsewhere. To draw fully on this field of enquiry is to open up quite new options for innovation and development. It is to bring into schools and other contexts the means to participate fully in the process of social and cultural change.

All teaching and learning is *from* the past and *for* the future. The latter is the primary focus for education because *education is an inherently forward-looking enterprise* and the future looks increasingly different to the past. The prospect may be daunting, but there are undoubtedly grounds for informed optimism and many paths beyond every imaginable disaster. Moreover, there are no serious *pedagogic* barriers to teaching futures. It remains basically a question of picking up the available tools, adapting them and using them for a range of educational purposes.

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Note

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