

TEACHING TOMORROW TODAY

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There are many things we accept without question. Like: sky is blue. Airplanes fly. Dogs have four legs but humans two. The earth is round. Sticky rice is sticky. And progress is better than no progress.

But somethings get changed. For example, once it was thought that the earth was flat. And until the beginning of this century, airplanes didn't exist.

Education is the same way. It is accepted without question that we should teach history, that students should have a comprehensive knowledge of the past. But the thesis of this article is that things have changed. In addition to teaching history, we must also teach the future.

Would you?

Let us begin by considering some questions.

1. What if you could travel forward in time to live in the year 2080, skipping all the years between now and then? Would you?

2. What if you could carry with you a device that would give you immediate access to all the information in a library, that would allow you to make voice-picture contact with any other person on earth carrying a similar device, and that would always beat you in a game of chess? Would you?

3. What if you could live in a pollution free city of one million people called Colony III that was located in space equidistant from the earth and the moon? Would you?

All three of these questions represent future possibilities that serious people are working on now to bring into reality. Behind each of them is a challenge to an assumption that has heretofore been unquestioned.

The challenge of assumptions

In the case of question number one the assumption being challenged is that living means the experience of consecutive years between birth and death. But what if it was possible for humans to travel through time by the medical means of cold storage via either hibernation or suspended animation? Animals hibernate, seeds lie dormant; why not humans? If I found that I had a life threatening disease incurable by today's knowledge, why should I not "sleep" for 50 or more years until knowledge advances and a cure is found? What would it be like to travel in our sleep to eras and cultures not yet designed or dreamed? Why live just one segment of history? Why not dip into two or three or maybe a dozen? Why shouldn't we learn to skip through time like a flat rock thrown on water, coming down for 20-30 years of life at a time? Or even make skips of a century or two?

For question number two the basic assumption is that humans have the best mental ability on the planet. But what about computers? What about machines that can remember more and longer than humans and which seem to be developing in the direction of one day soon demonstrating abilities of thinking and creativity that are consistently "better" than what humans can do? Why shouldn't we use our human mental ability to create machine mental systems that have

more diverse and more powerful attributes than the ones who built the machines? We can build machines that can lift more than we can; why not build some that can think better than we can?

For question number three the basic assumption is that human activity must be confined to the surface of the earth. But men have walked on the moon; why should we stop there? Detailed engineering plans are being prepared that would allow for the creation of a city in space made from materials gathered from the moon and from asteroids. Why shouldn't we use our ability to learn to travel and live off the planet that has given us birth?

Change

These three examples are only a few of the many possibilities that, if developed, would shatter some basic human assumptions. We might inwardly laugh at those a few centuries ago who thought that the earth was flat. But "who" will laugh at us as those who did not live nonconsecutive lifespans, who did not have computers as companions, and who never left the planet earth?

Change has become an accepted fact of life. It is the expected result of what we call progress and development. And though *we* might not want to choose the options of hibernation, computer companions, or space living, why should we doubt that tomorrow's men and women will find them natural and meaningful because of their familiarity with changes that are strange to us.

Study of the future

So what does all this have to do with teaching tomorrow today in the Philippines? History can be viewed as perspective in the direction of the past. It is a study of what has been that

tries to make sense out of it so we can develop a perspective of wisdom as to where we have been. The future can be viewed as perspective in a forward direction. It is a study of what could be that tries to make sense out of it so we can develop a perspective of wisdom as to where we are going. History and future represent the two directions of time from the present, and until recently it has been sufficient for education to be concerned mainly with the perspective of history. But the acceleration of change underway now in the world is challenging us to give more time to the future. Change is making tomorrow unrecognizable from yesterday.

The study of the future is not an attempt to combine guesses, opinions, and crystal ball gazing into a catalog of predictions for which we will wait to see if we were right. Unlike for the study of the past, there are no future facts for the simple reason that the future hasn't happened yet! Nevertheless, by the diligent application of the creative interplay of imagination, aspiration, and intuition with the realities of the past and present, we can shape meaningful images of the future.

As Alvin Toffler has put it: 1

The ultimate purpose of futurism in education is not to create elegantly complex, well-ordered, accurate images of the future, but to help learners cope with real-life crises, opportunities and perils. It is to strengthen the individual's practical ability to anticipate and adapt to change, whether through invention, informed acquiescence, or through intelligent resistance.

And sociologist Wendel Bell: 2

Futuristics involves clarification and evaluation of values and goals, as well as description of trends, and it includes projections of alternative futures, as well as explana-

tions of existing routines of interdependencies.

Futuristics, or the study of the future, can thus be viewed as a study of change, alternatives and values.

Change, alternatives, and values

The study of change involves using the variety of established educational tools to gather and analyze information. The basic aim is to determine what is appearing and what is disappearing from the area of concern, whether it be a culture, a business, the environment, literature, legal systems, or a personal life. Circumstances change and thereby bring into existence conflicting forces of ideas and practices of what has been accepted and what is being tried.

The study of alternatives probes into the differences between the possible and the probable. It is concerned with the idea of direction: what ways are possible from here. Both the study of change and of alternatives are rooted in a knowledge of the past and present. In order to understand what choices are available, a great deal of information has to be assimilated concerning the realistic options that are being created by the activities of the present and the momentum of the past.

The study of values is the determination of the preferable. Which way *should* we go? What choices *ought* to be made? What decisions should we make in order to follow the direction of change and alternatives that takes us closest to the goals we want to achieve. Therefore, we need to learn how our image of what is good and desirable fits into the arena of actual choice and decision making.

The study-combination of change, alternatives, and values means an expansion of the traditional orientation

of education towards presenting a body of knowledge about the past and present. The goals of futuristics are to help students develop skills which will add to and round out that knowledge. Skills like: understanding relationships between disciplines, wholistic thinking, broadening perspectives beyond one's course of study, assessing the impact of decisions, and blending creativity, imagination, and fact.

In sum, the aim of futuristics is to help students discover direction — what is worth doing and having as individuals and in communities. In a world of accelerating change understanding direction is as valuable as information. The study of future is grounded in the past and present, but its major goal is to create an image of the whole, which not yet in being, might come into being.

Filipino education

The Philippines is in the category of the developing nations of the world. Implicit in such terminology is the idea of "catching-up." Thus, there must exist an image of what it means to be developed: progress of what, for what? In other words, changes are to be made in infrastructure, investment incentives, labor and industries, import-export balances, systems of decision making, educational opportunities, services of health care and sanitation, housing, literature, the arts, agriculture, energy, etc., so that all the changes come together in a coherent way to result in a progress that represents an increased welfare for Filipinos and their island-ocean environment.

But not everything can be done or done at once. Resources and people have limitations. Development is a process that takes time. Therefore, alternatives have to be outlined, priorities determined, and choices made on the basis of turning what is possible into what

is preferred. Consequently, there has to be a value determination of what kind of progress is to be sought and what it means to be developed.

In sum, to develop as a nation, the Philippines can follow the very lines of the study of the future. Change, alternatives, and values can be the key factors in determining the direction of the Filipino future. This reason alone should give futuristics a place as a key ingredient in the improvement of the Filipino educational system so that it can provide a growing base of talented, knowledgeable, and imaginative citizens to guide the expression of progress and development.

It is widely accepted that two major future orientations in Filipino culture are *bahala na* (what will be will be) and *mañana* (tomorrow is good enough). Either orientation is successful under conditions of little or no change. But a nation in development is a nation desiring and planning for change. Therefore, instead of activity and knowledge being passed on that has worked in the past, the emphasis is shifted to activity and knowledge that needs to be discovered so that directions can be explored. *Bahala na* and *mañana* are adequate for situations in which nothing changes from grandparent to grandchild. But that is no longer true, and thus one of the elements of Filipino development must be the creation of a new future orientation. To this, education should be expected to make a major contribution.

Filipino Futuristics

The examples of hibernation, computer companions, and space living given at the beginning of this article are not relevant to the immediate choices for Filipino development. They were chosen to represent the cutting edge of possibilities, things that when they happen will make radical changes

in human conceptions of possibility and identity. Such possibility should not be ignored for they represent the image of the distant future of some day after tomorrow. But what about the near future? What about tomorrow?

Future oriented topics are often mentioned or included in regular, discipline oriented courses. But a study of the future means taking topics farther than a graph of population growth or dire predictions of environmental doom or the year when we will run out of oil. Futuristics means generating models, scenarios, and consequences for choices other than those being made in the present. It is a serious, disciplined study of *what if?*

What if population growth continued so that there were twice as many Filipinos in the year 2000 than now? How can we understand today the consequences of crowding, demand for jobs, pollution, and food availability for such a number?

What if an awareness of heritage, language, literature, music, cultural diversity, etc. created a Republic of the Philippines with a unique identity of Filipino, Asian, and Earth citizenship? What different paths could bring about such an awareness?

What if the Philippines developed a solar energy system so that it did not have to pay for the importation of oil or nuclear technology, using instead the free, non-polluting fuel of the sun? What would be the consequences on quality of life, balance of payments, and development of local resources?

In all of these *What if?* questions the idea of the study of the future is to challenge the activities of the present and the momentum of the past. The purpose is not to reject them out of hand but to analyse the forces of change, to devise a series of alterna-

tives, and to clarify values into guidelines for the choice of an improved direction.

To fully educate students in today's world means to give them experience in dialogue between subject areas. Problems to be solved, whether personal, societal, or global, rarely fit into the category of information, methods, and outlooks of a single academic discipline. Pollution, for example is as much a political problem as scientific, not to mention the moral, economic, health, psychological, geographical, historical, and spiritual dimensions. If educators fail to help their students see this, then they are contributing to their students' failure in the future.

How do you teach the future?

There are no standard curriculum guides or textbooks for futuristics because it is an ever evolving, ever varying combination of elements of information and people. The goal of futuristics is wholistic understanding and because there are an endless variety of ways to put elements together into a whole, the organization and expression for teaching the future depends on the imagination, interests, and ability of the teachers and students involved.

Future oriented education is by nature organized around issues and topics with the focus on analysis and values clarification rather than didactic methodology. Information is essential, though it is how it is inter-related that is important, instead of its memorization. To illustrate some approaches to teaching the future a variety of topics and questions are listed below. A necessary ingredient to this exploration is a wide range of reading resources.

Development:³ "If we talk of promoting development, what have we in mind—goods or people? If it is people—which particular people? Who are

they? Where are they? Why do they need help? If they cannot get on without help, what, precisely, is the help they need? How do we communicate with them?"

Machines: Are there some things we can do as humans that we should not turn over to machines? Should machines make children? Mother or father children? Be counselors? Be judges and juries? Be ministers or priests? Be doctors?

Inventions: The development of technology is a source of numerous inventions: e.g., pocket size calculators, new energy sources, stereo players, satellite tv, etc. But what about social inventions? What should be invented in terms of relationships between people? What social inventions could improve the family, religious activities, athletics, celebrations, Asian communication, etc?

Cloning:⁴ "Man, say the scientists, could one day clone (from the Greek word for *throng*), or asexually reproduce himself, in the same way, creating thousands of virtually identical twins from a test tube full of cells carried through gestation by donor mothers or hatched in an artificial womb." Should we?

Others: Extension of humans: symbiosis with computers.
Utopian communities.
The future of minorities.
Growth of multinational corporations.
Education in 2002.
Alternatives to war.
Human hibernation: sleeptravel through time.
Close Encounters of the Third Kind.
Biblical prophets and tomorrow.
Living in space or in oceans.
Rural life in 1999.
Renewable energy sources: sun,

wind, water, biomass.

Futuristics can be taught using methods already established for the traditional disciplines: questionnaires, interviews, graphs, forecasts, case studies, games, values clarification exercises, data gathering and analysis, etc. One method especially suited to futuristics is the scenario, an imaginative history of the future. In a scenario an attempt is made to act or map out imagined consequences. The comparison of alternative scenarios is a very fruitful way to understand the implication of different directions. The aim of it all is develop an image of the future that helps maturing individuals guide and adapt to change.

Four suggestions as to how to introduce the study of the future are: (1) as a topic in an existing course (just extend its time boundaries to include past, present, and future), (2) as a new interdisciplinary course (experimentation in education is a *sine qua non* for its improvement), (3) hold seminars on the future with government, business, religious, educational, and agricultural leaders, and (4) begin conversation with colleagues and students (perhaps a discussion group will result).

But Why?

Why try to teach about tomorrow today?

Why questions can often be answered best with a story. In this case, I shall turn to a story, not from Asia or the West, but from the Sufi tradition of the Middle-East.⁵

Mulla Nasrudin sometime took people for trips in his boat. One day a fussy pedagogue hired him to ferry him across a very wide river. As soon as they were afloat the scholar asked whether it was going to be rough.

"Don't ask me no nothing about it,"

said Nasrudin.

"Have you never studied grammar?" asked the teacher.

"No," said the Mulla.

"In that case, half your life has been wasted."

The Mulla said nothing.

Soon a terrible storm blew up, and the Mulla's crazy boat began to fill with water. He leaned over towards his companion.

"Have you ever learnt to swim?"

"No," said the teacher.

"In that case, schoolmaster, *ALL* your life is lost, for we are sinking."

Why teach tomorrow? Because in a rapidly changing world, if we don't, then all our education will be lost, for it will have nothing to do with the life we will live in a radically changed world.

Which brings us to now.

The future has a way of becoming the past. Today was tomorrow and will soon be yesterday. As H.G. Wells wrote in a novel: "We were making the future . . . and hardly any of us troubled to think what future we were making. And here it is." So even though the future always remains "out-there" and beyond reach, what counts is that it turns into "now." The present is the only place where dreams can be put into action, otherwise they remain only dreams.

Yet, today's students will live half their lives in the 21st century. And already in the 20th century the world has experienced unprecedented changes that are still coming faster than ever. In one lifetime we have developed the ability for instantaneous, global word and picture communication, for flying to the moon, and for transplanting

kidneys and hearts. What impossibilities will be possible in the 21st century, which is closer ahead than the Second World War is behind?

Will we help our students get an education *now* that equips them to anticipate and direct change? Someone has to invent the future: why not help our students learn how?

We teach history, why not also the future? Our progress now depends on it.

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We cannot discover new oceans unless we have the courage to lose sight of the shore.

(Gide)

FOOTNOTES

- 1 Alvin Toffler, editor, *Learning For Tomorrow: The Role Of The Future In Education* (New York: Random House, 1974), p. 13.
- 2 *Ibid.*, p. 82.
- 3 E. F. Schumacher, *Small Is Beautiful: Economics As If People Really Mattered* (New York: Harper and Row, 1973), p. 180.
- 4 Maxwell H. Norman, *Dimensions Of The Future* (New York: Holt, Rinehart and Winston, 1974), p. 45.
- 5 Modified from Idries Shah, *The Exploits Of The Incomparable Mulla Nasrudin* (New York: E. P. Dutton & Co., 1972), p. 18.

ADDITIONAL RESOURCES

Virtually any book or article, whether fact or fiction, can be future study material. The only limits are those of time to read and imagination as to what to put together for a topic or question. The sources listed here are good ones for leading to other sources.

Journals

The CoEvolution Quarterly. Published by The Whole Earth Catalog covering topics like soft technology, understanding whole systems, community, learning, and some you've never heard of \$12 per year from CoEvolution Quarterly, Box 428, Sausalito, CA 94965, USA. Inquire for international air rates.

The Futurist. A journal of forecasts, trends and ideas about the future. Published bi-monthly by the World Future Society, P. O. Box 30369, Bethesda Branch, Washington. D.C. 20014 U.S.A. \$15 per year with no additional charge for overseas postage.

Books

An Incomplete Guide To The Future. Willis W. Harman. San Francisco: San Francisco Book Co., 1976.

Five-year Philippines Development Plan, 1978-1982, Manila, Philippines, 1977.

Future Science: Life Energies And The Physics Of Paranormal Phenomena. New York: Doubleday, 1977.

Future Shock. Alvin Toffler. New York: Random House, 1970.

Images Of The Future: The Twenty-First Century And Beyond. Robert Bundy. Buffalo, New York: Prometheus Books, 1976.

Island. Aldous Huxley. New York: Harper & Row, 1972.

Mankind At The Turning Point: The Second Report To The Club Of Rome. Mihajlo Mesarovic and Eduard Pestal. New York: E. P. Dutton, 1974:

Soft Energy Paths: Toward A Durable Peace. Amory B. Lovins. England: Penguin Books, 1977.

The Filipino In The Seventies: An Ecumenical Perspective. Quezon City, Philippines: New Day Publishers, 1973.

The Gods Of Foxcroft. David Levy. London New English Library, 1972.
The Invisible Pyramid. Loren Eiseley. New York: Charles Scribner's Sons, 1970.

Who Should Play God? The Artificial Creation Of Life And What It Means For The Future Of The Human Race. Ted Howard and Jeremy Rifkin. New York: E. P. Dutton, 1974.

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