

# Teaching the Future

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The essential problem is as old as education itself. How do we prepare a child to live in a world that doesn't exist yet? The compounding variable is as new as the mid-20th century. The rate of change has accelerated so much that the future bears ever less resemblance to the present. So long as educators could assume a high degree of continuity, a recognizable background against which to set the new, then the future posed no particular challenge. Ground the young well in fundamentals, and let them cope with the unpredictable tomorrows as they come. But in an era in which five years of technological and social development can produce as much change as occurred in half a century, the future is much more insistent.

Even so, schools have been slow to come to grips with the problem. Prior to 1970 one would have had to look long and hard to find an American school that included study of the future as an identifiable part of its curriculum. Whatever opportunity students had to consider tomorrow was haphazard and sporadic, tied to the personal interests of a particular teacher or the discussion of utopian literature or science fiction. It wasn't until the early 1970s, when Toffler's *Future Shock* made the impact of change a national topic of discussion and the OPEC oil cartel made it a conscious reality, that schools responded with programs of future studies. By 1978 at least 200 high schools were listing futures semester electives in their curricula.

It now appears that the movement toward futures studies is again gaining momentum, impelled this time not by a book or a boycott, but by a chip. The

microprocessor, which didn't even exist when Toffler wrote *Future Shock*, now has the entire nation thinking and talking about computers and realizing that tomorrow will bear little resemblance to today. In a bit of Orwellian irony, 1984 may be the year American education begins to take the future seriously.

Incorporating futures studies in the curriculum poses some special problems. Because this is a relatively new form of inquiry, not normally associated with any traditional academic subject, there is the question of where to put it. Then there is the problem of content. How do we study what hasn't happened



*Spaceship Earth, an 18-story geodesic sphere, forms the entrance of Epcot Center, Walt Disney World's exhibition of technologies of the future.*

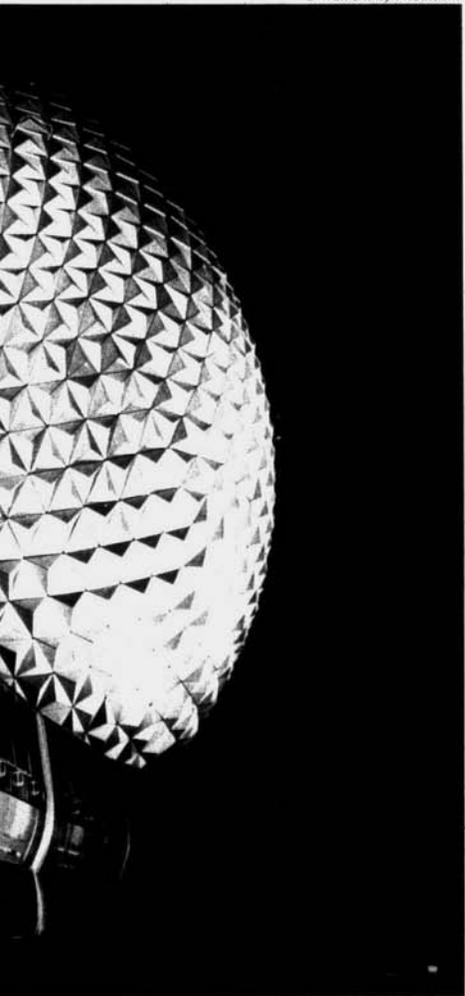
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In schools across the nation, futures courses are helping students clarify values, weigh alternatives, and accept responsibility for their own futures.

yet? What kind of organization? A course? A unit? How is the study best approached?

The best way to answer these questions is to take a look at some successful programs—programs that illustrate a variety of approaches and represent different methods of organization, and then

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examine them to see what they have in common—what principles, goals, assumptions they share that may serve as hallmarks of success.

In the senior high school (where the vast majority of programs exist) the most popular approach to futures studies has been by means of one-semester elective courses, typically offered in the area of social studies. Two of the more successful and influential programs of this type are at Burnsville High School, Burnsville, Minnesota, and Jericho High School, Jericho, New York.

#### **Burnsville: Thinking About Tomorrow**

The Burnsville program, under the direction of Penny Damlo, began in 1973 as a cooperative, federally funded project with nearby Richfield High School. At the outset, the course ran all year long, two hours a day, and enrolled 25 students. When funding ended in 1976 the project continued, gradually losing its experimental focus and evolving into general course offerings. Currently, there are two trimester (12-week) courses available to 11th and 12th graders—"Futures: Thinking About Tomorrow" and "Futures: Issues." Demand for these electives now requires 12 to 15 sections per year, and enrollments are increasing.

"Thinking About Tomorrow" asks students to "create and evaluate alternative images of themselves and the worlds in which they might live." It is a broad look at the future from a personal perspective using works of major futurists as source material. "Issues" focuses on nine topics: science fiction, energy, biotechnology, megatrends, education, space, terrorism, ecology, and avant-garde thinkers. Both courses are built around individual and group projects as well as reading, debate, and discussion.

The movement at Burnsville is to continue teaching these electives while "seeding" a futures perspective in other social studies courses.

#### **Jericho: Evaluating Alternatives**

The program at Jericho High School, in contrast, has consisted of a single elective course since its inception in 1971. Beginning with one section of 15 students, it currently enrolls well over 100 each year. Robert Hoffman, creator and director of the program, stresses process—the evaluation of alternatives—rather than specific content. Recently emphasis has been on the nature of change, using concepts developed by George Land (*Grow or Die*) and John Naisbitt (*Megatrends*), and on the creative problem-solving process developed by Alex Osborne and Sidney Parnes.

The objective is to get students to engage the future actively through a variety of techniques. Hoffman uses computer simulation, in which students try to devise ways of keeping a world model from collapsing under the weight of unchecked growth of population, pollution, and consumption. Research-oriented projects involve activities such as videotaping a newscast for the year 2076, which requires extensive background investigation in areas ranging from weather to sports.

A recent extension of this "hands-on" approach has been a collaborative arrangement with the new Epcot Center in Florida. Forty students in the futures program spent a week at Epcot attending lectures and seminars conducted by the engineers, architects, and futurists who conceived and constructed it. Students are given an extensive "behind-the-scenes" look at the center's concepts of future communications, energy systems, agricultural techniques, housing, and urban planning. In a total group exercise, students design a resort using problem-solving techniques. The venture is being viewed by Epcot as a prototype for other schools that visit the center.

The semester elective has lost some popularity in recent years, however, partly as a result of the general shift

**Figure 1. Units and Concepts Stressed in the Maple Heights, Ohio, Curriculum.**

Required Courses	Concepts	Units
Global Studies	Global interdependence	Japan: Past, Present, Future
World History	Interrelatedness of past, present, future	Problems/Possibilities for the Global Community
U.S. History	Structure in flux	The American Dream
U.S. Government	Interrelated nature of systems	People, Law, and the Future
America: 1945 to the Present	Interrelatedness of past, present, and future Alternative futures	History of the Futures Movement  America in the Year 2000
Economics	Holistic approach to problem solving	Alternative Economic Futures
Environmental Studies	Appropriate technologies	Future of the Environment
Family Living	Alternative futures	Future of the Family
Introduction to Social Studies	Forecasting the future	Futures Forecasting Methodologies
Psychology and Human Relations	Future-focused role-image	Personal Futures

away from electives, and partly as a result of a growing desire to broaden the role of futures studies in the curriculum. The history of the program at Maple Heights High School, Maple Heights, Ohio, illustrates this trend.

**Maple Heights: A Futures Curriculum**  
According to Betty Barclay Franks, initiator of the program, it has moved through three phases of development. The first futures course was introduced in 1971 as a social studies elective, aimed at helping students master strategies for coping with a rapidly changing world. After the energy crisis, the emphasis shifted to concepts of global interdependence and the interrelatedness of

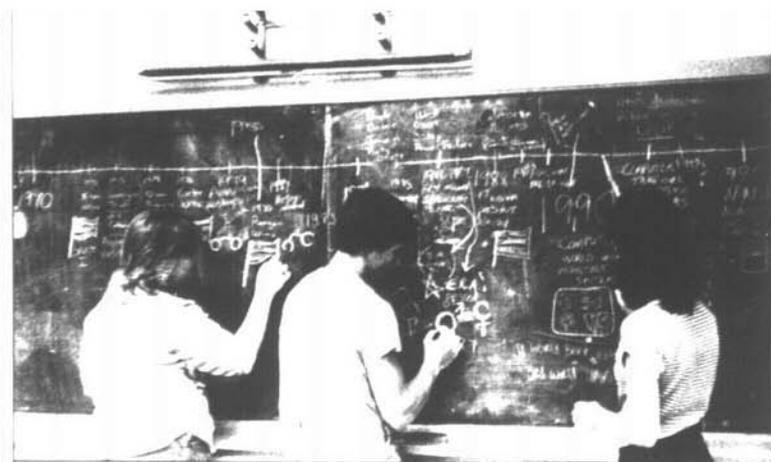
systems. Futures courses expanded to include criteria for evaluating various forecasting methodologies and examining alternative futures. The number of course offerings also expanded rapidly during the mid-1970s. With the decline of enrollments and financial support of the late '70s, the emphasis shifted to a both/and approach, maintaining electives while incorporating futures concepts throughout the social studies curriculum.

The fact that such a structural and organizational curriculum shift has received administrative and public support clearly indicates that a futures perspective is no longer a luxury but a necessity.

The second most popular home for high school futures courses is the English department, where they typically appear as science fiction electives. Because the range of science fiction is so wide, the approach to the future in these courses varies enormously from a close look at highly predictive works, such as Huxley's *Brave New World* to pure flights of fancy. Not all English electives are of this type, however.

#### **Manchester: Implications of Choices**

At Manchester High School, the English department has offered "Futuristics" since 1974. The one-semester elective developed by Leroy Hay and Sherrill Jamo, concentrates on the moral, ethical, and philosophical implications of the choices currently confronting the human race. Problems of growth, ecological balance, bioethics, and technological expansion are used as the basis for considering the consequences of choice and for developing operational definitions for abstractions such as "progress." Readings range from science fiction to research reports from think tanks. Because the improvement of personal expression and communications skills is a major concern, students are expected to do much more than read and listen, however. They write frequently and widely: research reports, scenarios, scripts, reviews; they role-play, debate, interview. The course is built largely around individual and group investigations of problems and issues, and considerable use is made of simulation and gaming.



To understand the concept of structure in flux, Maple Heights students create time lines from 1960 to 2000.



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*Lines of telecommunications linking cities, regions, and continents are displayed at Epcot Center's Spaceship Earth.*

Open to 11th and 12th graders, the course has been very popular since its inception and continues to require several sections each semester.

#### **Windsor: An Interdisciplinary Approach**

A few miles away, a planning team at Windsor High School took a somewhat different approach to the humanistic side of futures studies. Under the direction of Marie Mosbach of the English department, the interdepartmental team developed an interdisciplinary humanities elective built on the study of the future. Offered this fall for the first time, the course emphasizes the interrelatedness of science, social studies, literature, art, technology, and philosophy. Topics include ethics, life cycle, ecological balance, communications, and human rights among others. These topics are addressed from a futures perspective,

that is, through consideration of crucial choices currently facing society and examination of potential consequences of different alternatives. Although this is a humanities elective housed in the English department, it is a genuinely interdisciplinary course with substantial participation by teachers in all subjects.

A common avenue to teaching the future at the junior high/middle school level is through special programs for the gifted. In direct contrast to the universal approach gaining popularity at the senior high level, these programs target a very select group. While there is no clearly established reason for limiting futures studies to the gifted, the impression seems to be that most younger children simply lack the thinking skills needed to cope with the kinds of problems and issues contained in futures courses. Whatever the reason, there is no denying that the practice, while far from universal, is very common.

#### **Milford, Ohio: The Gifted Cope with Change**

One of the oldest and most successful of these programs is the Milford Futurology Program at Milford Junior High School. Initiated by Ted Dixon, Geoff Fletcher, and Gary Woodell in 1974, the program continues to serve approximately 20 gifted students with courses at the fifth- and ninth-grade levels. In broad terms, these courses are designed to help students deal effectively with change. More specifically, the goals are to develop a futures perspective, futuring competencies, and self-actualization. A futures perspective is defined as seeing both the power of the future for the individual and the responsibility of the individual to that future, of looking at consequences in a holistic way. Futuring competencies are identified as forecasting, problem solving, and the ability to collect, evaluate, and synthesize data. Self-actualization involves a

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need for curiosity, perfection, justice, and the attempt to fulfill the range of one's potential being.

The course is organized in four interdisciplinary units, with English, social studies, science, and mathematics teachers participating. The first unit is a general introduction to the key concepts and ideas that make up a futures perspective and a survey of investigative techniques. The second unit focuses on medical/biological issues, the third on problems that seriously threaten the survival of human civilization, and the fourth an examination of social issues and lifestyle as students design a "habitat."

#### **San Bernardino: Computer Study of Futures**

The Riley Elementary School has taken a quite different approach to introducing children to the future. Under the direction of Principal Jerry Reece, the staff of 25 teachers and a computer specialist have built the entire curriculum around the study of the future.

Ordered by the state to desegregate, Reece seized upon futures studies as a way of turning Riley into a magnet school. He recruited staff members who were interested in this approach, set up a summer inservice training program for them, and opened the doors in September 1981 to 726 kids whose entire school year would be organized around futuristic topics.

The curriculum has three basic strands: values education, computer education, and investigation of futuristic topics. The initial pattern was to address a different topic each month, school-wide:

October: Outer Space  
November: Earth Science  
December: World Interdependence  
January: Oceanography  
February: Technology  
March: Economics  
April: Feeding the World  
May: Energy

The schedule proved too crowded, however, and beginning this school year, two months will be allotted to each topic and the sequence spread over two years.

In addition to subject instruction built around these topics, each child receives one hour of computer training each week. All instruction at Riley em-

phasizes critical thinking, creative thinking, and problem solving, primarily through the examination and evaluation of alternatives.

As a magnet school Riley currently attracts 80 students bused in from other areas; the number is limited by restricted space in the school, not by student interest.

#### **The Common Elements of All**

While these programs and courses obviously reflect a wide range of ways of going at the future, they also share a number of key elements and philosophical assumptions.

First, and probably most important, *they all treat the study of the future as an investigation of alternatives*. They presuppose a range of possible futures determined almost entirely by human choice and decision. These studies of the future attempt to project what *might* happen and to weigh the desirability of outcomes, not to predict what will happen.

Second, *the emphasis is always on process, not content*. Topics change from course to course and year to year, but the emphasis on problem solving, critical thinking, decision making, and investigation remains constant. These programs share the common assumption that there are more intelligent ways of sizing up the future than a wild guess or a shrug of the shoulders, and that some of the forecasting techniques developed by futurists are worth knowing how to use.

Third, *these programs all see futures studies as a form of values clarification*. As one investigates alternative futures, one invariably sees some as more desirable than others. In trying to determine *why* they prefer one future to another, students gain a greater understanding of their personal value systems.

Fourth, *there is a consistent concern with the development of a sense of consequence*, with getting students to view actions and decisions as part of a broad "if . . . then" sequence and to understand the individual's responsibility for the future.

Finally, (admitting many other commonalities not mentioned) all these programs assume that study of the future is vital, that to deny a child growing up in the last quarter of this century this opportunity is to deny that child a complete education. □

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