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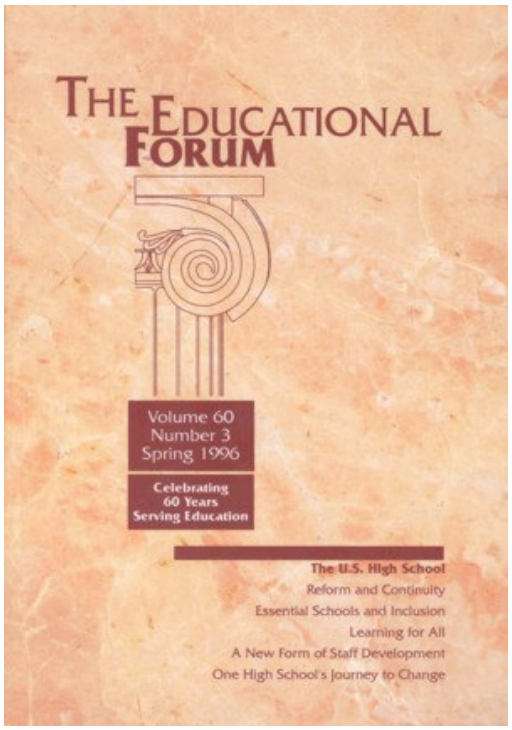
Educating for Life as It Is Lived

By Marion Brady

At my nearest supermarket, the milk is in the far right corner from the entrance. Bread is in the near left corner. To buy these two most-frequently purchased items, I have to walk the depth and breadth of the store.

This arrangement, of course, is intentional. The store isn't in business to serve my needs conveniently. It's in business to make money, and the management's assumption is that the longer I stay, and the more merchandise I see and smell and have the opportunity to touch, the more money I'll spend. The traffic pattern, the width of the aisles, the placement of goods on the shelves, the colors, the music, the special displays, the small items at the checkout counter—everything about the environment has been engineered in an attempt to separate me from the maximum amount of my money.



What's true in my local supermarket—that the environment has been deliberately designed to manipulate—is true in most supermarkets, department stores, restaurants, and other retail outlets. And, although the motive may not be to sell goods, the design of most public spaces similarly attempts to cause those within them to act or think in certain ways.

That how we act and think relates to the shape of the environment is everywhere evident. We arrange the furniture in our homes to make it easy to watch television, to stimulate conversation, or to achieve privacy. Students learn in school that the failure of the ancient Greek city-states to unite was in part because of the mountainous terrain, and that the historic confrontational relationship between France and Germany has been much affected by the lack of a defensible natural boundary between them.

However, like much else that we know, our understanding of the relationship between human behavior and the shape of the environment is rather vague and ill-formed. When the relationship is pointed out to us, we say, "Of course." But then we build split-plan houses without giving thought to their possible psychological impact on our children when they're small, and we arrange our offices in ways that send negative messages to those we want to impress positively. We exit department store escalators to confront high-markup goods without consciously steeling ourselves to resist impulse buying. We mourn the loss of neighborliness, but design subdivisions that discourage all but the most determined neighborly contact.

The Cost of Irrelevant Education

One might think that a matter affecting, minute by minute, every dimension of life—interpersonal relationships, commercial transactions, a sense of community, regional economies, ethnic and international relations, and much else—would merit a place in secondary curricula. Apparently, it doesn't. Nowhere in the traditional middle or high school curriculum is there formal study of the relationship between the shape of environments and the actions and ideas of those who occupy those environments.

There are countless matters we need to know about to live life sensibly and successfully that are ignored by the traditional secondary school curriculum. And, as anyone who has gone to school surely knows, much that's taught has no value at all. The hours available for formal schooling are limited. It's critically important that we sort through what's taught, decide what's mere ritual knowledge, and replace it with something that helps us solve our problems and exploit our potential.

Why We Take What's Taught For Granted

The popular press regularly explores just about every aspect of education. Discipline strategies, the length of school terms, alternative scheduling, the kinds and amounts of teacher training, appropriate levels of funding, programs for special students, standardized testing, the role of extracurricular activities, grading and evaluation techniques, the role of technology, parental involvement—all are discussed in magazine articles and newspaper feature stories.

Perhaps surprisingly, however, there's relatively little about the actual content of the curriculum. Other than some politicized complaining about two or three non-traditional programs, certain works of fiction, and the so-called "national standards" for American history, this most important aspect of schooling is largely ignored.

We teach what we think is important. But our assumptions about what's important are based on what we were taught. It's a closed loop, and no one has been pointing out its circularity. What gets taught, with minor variations, is what was taught last year. What was taught last year was what was taught the year before. The decades roll on, without even a suggestion that perhaps the whole matter needs to be rethought. The traditional fields of study—biology, government, chemistry, history, and so on—have been locked in place for so long, and are so taken for granted, alternatives can hardly be imagined.

But alternatives need to be imagined. There are serious problems with the content and organization of the traditional secondary level curriculum.

Consider, for example, the inability of the present curriculum to deal with even very ordinary cause-effect sequences: Automobiles generate exhaust emissions, exhaust emissions contribute to the greenhouse effect, the greenhouse effect alters climates, climates determine rainfall and growing seasons, rainfall and growing seasons effect water tables and sea levels, water tables and sea levels effect the economy, the economy effects political stability, and political stability effects who lives and who dies.

To study that sequence of fairly straightforward cause-effect relationships, it's necessary to combine, at the very least, the subjects of math, geology, chemistry, physics, meteorology, agriculture, economics and political science. In traditional schooling, this combining of fields of

study just isn't done. Students are given a little of this subject and a little of that, but are never shown how it all fits together. In the real world, everything relates to everything. In school, almost nothing relates to anything, except perhaps occasionally and incidentally. Even when we recognize the problem and deliberately attempt to deal with it, the relationships we point out to students tend to be random and superficial.

What's Being Done?

The general lack of dialogue about the secondary curriculum notwithstanding, many educators accept that there are serious problems with what's being taught. Most school systems have committees working on curriculum improvement. Thus far, however, it seems fair to say that nothing much of consequence is happening. Some schools are experimenting with interdisciplinary instruction—mixing and matching the old subjects in new ways. Others advocate organizing instruction around social problems, or student needs, or the recommendations of Mortimer Adler. In the late '80s, after the publication of C. H. Hirsch, Jr.'s list of "5,000 things that everyone ought to know," a few schools around the country adopted a curriculum based on his book, Cultural Literacy. Still other schools ignore the issue as they concentrate reform efforts on acquiring high-tech information delivery systems, altering organizational structures, adopting novel schedules, pushing magnet programs, or engaging in other experiments that shuffle the traditional courses and subjects but leave their content pretty much intact.

The current curricular fad in education is "theme-based instruction." Teachers organize instruction around the rainforest, crime, a local lake or river, or something else hyped by the media or of possible interest to students. Because, to study the theme, it's necessary to pull information from many fields, it's believed that the problem of fragmented learning is solved. Often these fields aren't mentioned by name, but they're still there in the teacher's mind, artificially compartmentalizing thinking. The topic may be the rainforest, but it's the rainforest viewed from a biological perspective, an economics perspective, a political science perspective, a meteorological perspective, a sociological perspective. Underneath all the "new" approaches is the assumption that, whatever aspect of the world is being studied, the best way to understand it, finally, is to look at it through the eyes of the traditional disciplines.

Problems with the Status Quo

Educational fads come and go, but the familiar fragmented fields of study remain the backbone of the secondary level instruction. As long as that's the case, the curriculum will continue to be fundamentally flawed. Nostalgic recollections of older generations notwithstanding (recollections that drive periodic demands that schools "get back to the basics"), the curriculum wasn't any better 25, 50, or 75 years ago than it is today. It was poor back when many remember it as being good, it's poor now, and it will continue to be poor as long as it's made up of random, unrelated, specialized studies. Here are some (but by no means all) of the problems with the status quo:

- A curriculum based on the traditional fields of study ignores extremely important knowledge. What falls between the cracks, and therefore isn't taught, equals or exceeds in importance what's taught.

- School subjects “slice” the world around us, the world we’re trying to understand, in awkward, artificial ways. Many educators assume that the various fields of study began life as products of a thoughtful parceling out of responsibility for the study of various parts of reality. That’s not true
- Secondary level students arrive at school with an incredibly complex, integrated network of ideas about how the world is organized and how it usually works. To make useful sense and be remembered, new knowledge must either mesh with this network, or the network must be changed to accommodate the new knowledge. The fragmented nature of the traditional curriculum makes such meshing impossible.
- Schooling based on the familiar fields of study has no universal, overarching goal. Within the educational establishment there’s no shortage of grand statements of purpose (“Prepare students for meaningful, satisfying work,” “Create democratic citizens,” “Solve social problems,” “Realize personal potential,” etc.), but such statements have little or nothing to do with what’s actually taught. Lacking a clear goal, educators can’t track progress. The vacuum is filled primarily with standardized examinations of the student’s ability to remember mundane, transient, largely insignificant information
- A secondary level curriculum based on a random mix of school subjects is bulky, time-consuming, and inefficient. Certainly, because the world grows more complicated by the hour, specialized knowledge is essential. At the same time, however, the need to understand the whole of experience in order to put narrow aspects of it in perspective increases. Right now, specialized and general study are on a collision course. If something isn’t done, “practical” education with its promise of short-term payoffs will push aside general education, with its subtle, but in the long run more important, benefits. We’ll know what to do, but not why we should do it.
- A secondary level curriculum made up of separate subjects disregards basic principles of learning. Students are flooded with information presented at a rate and in a form that assures little of it will make useful sense, and even less of it will be remembered. Generally, the goal is to “cover the material,” a goal that has little or nothing to do with effective instruction. What students need are big, powerful ideas that help them organize what they already know, and guide their search for new knowledge
- A curriculum based on the traditional subjects puts students in passive, information-storing, rather than information-creating, roles. As a study of typical final examinations will show, the only thinking skill demanded in most classes is recall. Rarely are students required to hypothesize, generalize, classify, synthesize, or engage in other thought processes they need in order to survive in the real world. Those mental skills, if they’re learned at all, have to be picked up on the street.
- Much of what’s now taught is irrelevant. Formal schooling serves many purposes. Unfortunately, teaching knowledge of immediate usefulness (the only kind that gets remembered long enough to be worth the trouble) isn’t one of them. “Better learn this, “ the teacher says, “because you’ll need it sometime.” If “sometime” ever comes, it’s usually in another school course equally irrelevant to life as it’s lived.
- Like every other human institution, education has an inherent tendency to turn means into ends. For many educators, teaching his or her subject has become more important than teaching about that part of the real world the subject is supposed to help the student understand

That these problems add up to failure on a massive scale should be obvious. No wonder that for so many, education is dead. Students come to school propelled by one of the deepest of human drives—the desire to explore, to learn, to know. But along about third or fourth grade—about the time the traditional subject matter boundaries kick in—they discover that understanding the world around them isn't what schooling is all about. From then on they have to be pushed and pulled along with threats and promises. That rigid discipline policies, mandatory attendance laws, and external motivators such as grading systems are necessary to keep the system going is strong evidence of fundamental flaws in present practice.

Any one of the dozen or so problems noted above would be reason enough to send students home from school until a solution is found. At the very least, solving the problems should be the most important item on the educational establishment's agenda. If H. G. Wells was right when he said, "Human history becomes, more and more, a race between education and catastrophe," solving the problems should be the most important item not only on the secondary schools' agenda, but on America's agenda.

At the heart of the problem with the status quo is the assumption that today's courses and subjects can provide both a specialized and a general education. They can't.

A New (But Very Old) Organizer of Knowledge

Alongside the present subjects and courses that pull reality apart into unrelated pieces, there needs to be a course of study that recognizes reality's wholeness, and constantly demonstrates that that wholeness is far greater than the sum of its parts.

Such a course can be created. The raw materials are at hand—so familiar, so commonplace, so simple, so straightforward, we've overlooked them.

It isn't possible, in a few pages, to describe what a new, multi-year course of general study would include. But it is possible to briefly describe the kinds of knowledge such a course of study would embrace, and suggest its general system of organization.

When we look at the world around us and try to understand some aspect of it, we seek just five kinds of information. We want to know the who, what, when, where, and why of a particular experience. We make sense of whatever it is we're trying to understand by fixing it in time and space, identifying the participating actors or objects, describing the action, and giving reasons for that action. In describing or analyzing anything—a chemical reaction in a test tube, a shopping trip, a crime, the eruption of a volcano, the performance of a symphony orchestra, a love affair, a world war, the decline and fall of the Roman Empire, or anything else in fact or in imagination—the five are sufficient.

Time. Place. Actors. Action. Cause. These are the basic elements that organize our collective unconscious, the elements we use to construct our perceptions of reality. All knowledge lies within their boundaries, and the purpose of symbol systems such as mathematics, language, and art, is to model them. Everything now taught—indeed, everything we know—can be described by elaborating the five in various ways. Everything we'll learn in the future will come through the discovery of presently unrecognized relationships between them.

Think of the five as subjects to be taught, but as subjects so intimately related that they're always studied simultaneously, with a particular concern for the ways in which a change in one

triggers changes in the others. Think of the five also as "natural," as fitting exactly the way the brain sorts and stores information.

No way of organizing the secondary level curriculum yet proposed comes even close to this in intellectual richness or potential productiveness. The approach takes in all knowledge. It points out extremely important but presently neglected kinds of study. It pulls together everything known and makes it part of a single, logical framework of ideas. It's compact and efficient. It doesn't require the learning of a special jargon. Its basic system of organization is already in place in the minds of even small children. It allows the old, familiar fields of study to remain intact, just puts them in a larger context.

But more important than anything else, this way of organizing what students are taught allows them to achieve levels of understanding of themselves and the world around them that are simply not possible using the intellectual tools provided by the present curriculum.

Such benefits are unlikely to be immediately apparent. When Sir Isaac Newton "discovered" gravity in 1666 (something so obvious no one had ever noticed it), few would have guessed that the idea would revolutionize the physical sciences. Nothing evades our attention as persistently as that which is taken for granted. Organizing the general education curriculum using the five kinds of information considered basic by our culture will have the same long-term, revolutionary consequences.

A Course of Action

The standard QWERTY computer keyboard layout was developed in 1873 by an engineer named Christopher Sholes. Early typewriters had a tendency to jam, so Sholes solved the problem not by making mechanical improvements in the typewriter, but by deliberately arranging the keys so awkwardly that typists were forced to slow down. The Remington Sewing Machine Company then decided to use the QWERTY layout on a typewriter they were mass producing, and thousands of typists learned to use it. Now, change is out of the question. The status quo is locked in, and every one who uses a keyboard has to live with its awkwardness, taking longer to learn to type, typing more slowly, and making more mistakes than would be the case if an alternative design had been adopted.

An equally idiosyncratic, haphazard process gave us the present bits-and-pieces school curriculum, and it's now locked in as rigidly as the QWERTY keyboard. Just about every secondary level school in the country above the elementary level has a curriculum that's based on separate, isolated subjects or ideas. For many educators, any other approach is literally unthinkable. But an alternative approach has to start being "thinkable." We can survive an awkward computer keyboard, but we can't survive a curriculum that wastes student potential at the rate the present curriculum wastes it. Most of the courses now offered in school should continue to be taught, but they should be put in a holistic context.

Any major attempt to alter the traditional disciplinary content and the departmental organization which has a vested interest in that content will almost certainly fail. The course of action most likely to succeed simply walks around the existing bureaucratic rigidities. Secondary schools should establish autonomous general education departments. The single objective of these departments should be to help students tap into their society's natural way of organizing

knowledge, bring it to the surface, and use it to weld everything they learn in school and in life into a single framework of logically related ideas.

Helping students grasp the holistic, systemic nature of the world around them should be the central aim of every school. When the existing curriculum has built into it a bias against such a perception, as it does in magnet and other schools with high-profile, specialized programs, the need for a curriculum component that gives students a larger perspective and reminds them that they are more than mere means to some economic, political, or social end, is especially important.

Evidence of educational crisis is everywhere. Concern for the welfare of children is not presently a driving political force. Special interests pursue narrow agendas without regard for the impact of those agendas on the young. Commercial and business interest in education is often biased and self-serving. Political parties push simplistic reforms calculated to attract voters. Blind commitment to ideology shuts off debate about educational policy prematurely and makes compromise impossible. The gap between the rich and the poor continues to widen, with the haves often assuming that the have-nots are to blame for the situation in which they find themselves and therefore undeserving of special educational effort. And each level of government tries to shift as much responsibility for the status quo as possible elsewhere.

Traditional secondary level education isn't just irrelevant to much of present human experience, it's an active creator of the problems. Because it displays reality to students in isolated bits and pieces, it denies the essential oneness of all things. What students don't learn—what they can't learn from the present curriculum—is that everything is connected to everything. No course of study helps them grasp firmly what we know intuitively but dimly, that when we attack or exploit each other, or the environment, or any part of creation, we are attacking ourselves as surely as would be the case if we held an axe in one hand and used it to chop off our other hand.

The young deserve a truly basic education, an education that acquaints them with the essential oneness of all reality. Every middle and high school in America should have a comprehensive, integrating course of study in place alongside the specialized disciplines. At best, today's fragmented education helps students make a living. Only an education that teaches the connectedness of all things will help them make sense out of life.

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