

## Single Discipline Schooling

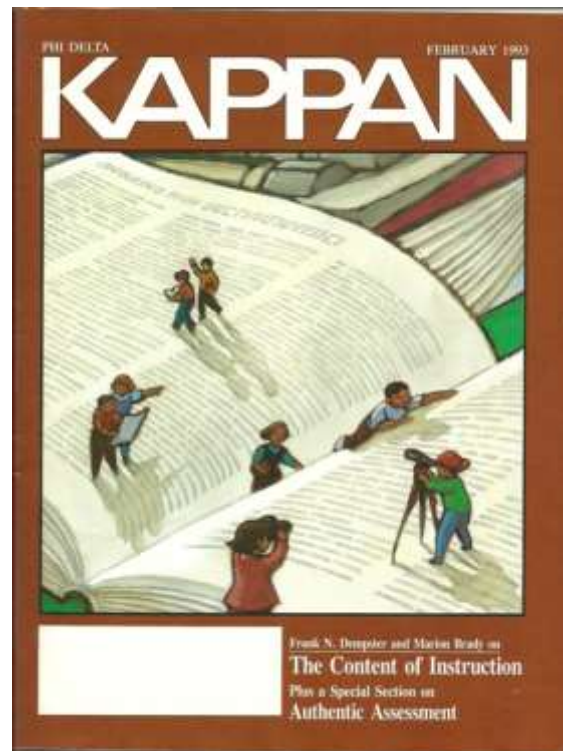
Marion Brady

In human affairs, means tend to become ends. Running-the-hospital activity (a means) gradually replaces helping sick people (an end) as the hospital's main goal. *"Wake up. It's time to take your sleeping pill."* Running the post office (a means) becomes more important than delivering the mail (an end). *"Letters with incorrect zip codes will not be delivered."* Running the army (a means) eventually replaces defense (an end) as the military's primary objective. *"Fill out this form in triplicate and present it to the duty officer for first approval. Then report to . . ."*

The sick require care. The mail must go through. The enemy must be kept at bay. Disturbers of the peace must be punished or isolated. God must be pleased. To these ends, humans create problem-solving procedures. But a strange thing happens. Maintaining the procedures soon becomes more important than solving the problems. In *The Evolution of Civilizations*, Carroll Quigley argues convincingly that this process, sometimes called institutionalization, is a major factor in the decline and disappearance of whole civilizations. People who have had extensive dealings with bureaucracies are not likely to be surprised by Quigley's contention.

The confusing of means with ends plagues education no less than other institutions--most insidiously in the area of curriculum. At some time during the elementary years, probably not far beyond the crayons and scissors stage, the curriculum begins to take its form not from a thoughtful analysis of what the young need to know, but from the traditional academic disciplines. The content of instruction may not at first be formally labeled as biology, political science, physics, or economics, but it is from specialized studies such as these that the content is derived.

The disciplines began as means, and they have become ends. Now, in most classrooms, the reality the disciplines were designed to illuminate is of less consequence than the history, vocabulary, methodology, and procedures of the disciplines themselves. Even those who are most aware of the inadequacies of specialized studies—the interdisciplinarians—do not reject them. They know that human experience is ill-served by attempts to make it fit within the boundaries of isolated studies. However, instead of going back to human experience (the real thing) to look for fresh approaches to its description and analysis, they continue to tinker with the disciplines, convinced that there must be some way to bolt them together to make them do what they are supposed to do.



Despite their nearly universal use as organizers of education, the traditional disciplines are not the best available tools for teaching about reality. If we looked at them critically, we would see that they are poor material from which to build a general education curriculum. They ignore vast and important areas of knowledge. They give instruction no overarching aim. They have nothing to say about the relative importance of various kinds of knowledge. They do not give students a mental framework for organizing and relating what they are taught. Because they cannot be made to integrate with each other, they fail to disclose the systemic nature of reality. In the workplace and in certain other contexts, the benefits of specialization are demonstrable. In general education, the specialization necessitated by a slavish reliance on the disciplines is counterproductive. In fact, “discipline-based general education” is an oxymoron.

I will point out an alternative to the disciplines as a basis for organizing general education. (I say “point out” rather than “propose” because we already know about and use the alternative. However, we are not generally conscious of our everyday approach to categorizing experience and therefore have not taken formal steps to systematize it.) What I will be describing is simple--so simple that many will consider it foolish--yet it can provide students with a comprehensive model of reality, allow them to organize their thinking about themselves and the world around them thoughtfully and deliberately, and give them ways to deal successfully with matters far more complex than can be dealt with when reality is marked off according to the familiar disciplines.

First, let me offer some preliminary observations. I have said that the alternative to the traditional disciplines is simple. For that very reason, some scholars will refuse to take it seriously, believing that nothing so straightforward could be worthwhile. Others may find the alternative so familiar they will be unable to think of it as a structure for disciplined study. Still others may see in the approach a threat to the disciplinary specialization they find so comfortable and useful. (I remind them that what I am describing is a basis for a **general** education curriculum--a comprehensive guide to reality. The validity of the traditional disciplines is neither being threatened nor questioned. Specialized study will always play an important role in education, just as more detailed regional maps are useful in conjunction with those providing a global perspective.)

As I noted above, one consequence of the attempt to build a curriculum from fragments of the disciplines is the lack of an agreed-upon, overarching aim. I propose such an aim: survival. **Let us select what is to be taught by measuring its probable contribution to human survival.**

Is the study of the origin of the universe essential to human survival? No. Is the study of ancient Mesopotamia essential to human survival? I think not. Should algebra be part of the human survival curriculum? Again, no. I am not arguing that quantum physics, ancient history and algebra are not important or that they should not be taught. I am saying that these specializations, the other specializations presently being taught, and the many others yet to be discovered do not belong in the general education curriculum.

Perceptive scholars in all fields can point out ways in which their disciplines contribute to human survival. But mere contribution is not enough. With so much to do, with so little time in which to do it, and with so much at stake, we surely have no alternative but to make the core of the curriculum that which is **essential** to survival. All else should be elective, to be pursued by those with aptitude and interest.

What do we need to know in order to survive? There are five kinds of essential information.

First, we need to know about our physical environment. The world that sustains us, both natural and human made, must be understood--not everything about it, but that which without question bears on survival. The list of topics to consider might look like this: Location, configuration, climate, resources, constructions, wealth, tools, clothing, symbols, toxins, sounds and smells, and art and artifacts.

This component of a general education discipline could be assembled by geographers, biologists, geologists, linguists, historians, meteorologists, technologists, physicists, architects and educators. These matters should be studied, year after year, at ever-increasing levels of complexity. Students should explore them in the contexts of their classrooms, schools, neighborhoods, and regions; in the context of their native society as it once was, is now, and as it could become; and in the contexts of other societies near and far whose actions could bear on their fate.

Language, mathematics and graphics skills should be developed and used as they are needed. They should not be treated, as they often are now, as mere games having little to do with the real world.

Second, we need to know about the humans who occupy these physical environments—not about their acquired cultural traits, but about their inherent characteristics and capabilities. This aspect of the discipline could be designed by physical anthropologists, demographers, physiologists, biologists, psychologists, and educators. The curriculum should include population figures, age distribution, sex ratios, and inherent characteristics and potentials.

Once again, students should study these matters at ever-increasing levels of complexity, examining them in terms of those who occupy their classrooms, schools, neighborhoods, and regions; in terms of members of their native societies as they once were, are now, and as they could become; and in terms of other societies near and far whose actions could bear on their fate. Once again, skill development should be an integral part of instruction, flowing naturally from the task at hand.

Third, we need to know what states of mind underlie human action. This aspect of study is concerned with ideas, beliefs, values and assumptions about matters such as time, space, nature, causation, physical reality, the supernatural, self, others, the good life, acceptable action, the purpose of existence, and directions of change. This component of the curriculum could be assembled by intellectual historians, cultural anthropologists, philosophers, linguists, artists, theologians, psychologists, sociologists, and educators.

These kinds of ideas—cultural assumptions—are the adhesives that hold societies together. Nothing we can know about ourselves or other humans—indeed, nothing we can know—is more important. Ideas, beliefs and values are the wellsprings of action, the foundations of all cultures, the drivers of all histories. Whereas traditional general education may include the other curricular components thus far described, it all but ignores the study of the deep-seated ideas that bind together groups of humans, explaining their histories, their present actions, and their probable future directions.

Fourth, we need to know how assumptions and beliefs manifest themselves in human behavior, particularly in patterns for work, worship, education, making decisions, owning,

communicating, controlling behavior, exchanging wealth, socializing, play, residency, status, defense and aggression, maintaining societal boundaries, expressing emotion, maintaining population, aesthetic expression, social service, and distributing goods/services. Sociologists, economists, cultural anthropologists, political scientists, social psychologists, educators, linguists, and historians could cooperate in selecting and organizing the content of this aspect of the curriculum.

These four lists suggest about 50 instructional emphases. Each of these, in turn, can be broken down into any number of subtopics. For example, in the component of the curriculum having to do with assumptions and beliefs underlying human action, one focus of study is “the self.” Of course, this single subject includes many topics, the study of any one of which could occupy students indefinitely. Consider the following series of questions.

Within various human societies, what is the perceived value of the individual self? In what sense, if any, are individuals of equal value? If they are not of equal value, what is the assumed range of variation? What is the structure of the self? Is it, as many Americans think, made up of four relatively autonomous parts—physical, mental, emotional, spiritual? What is the nature of the relationship between “parts” of the self? What are the stages of development of each self? What behavior is considered appropriate for each stage? What are the perceived physical and psychic boundaries of the self? What are its rhythms and cycles? What are considered its potential nature and powers?

The useful questions which can be raised about each of the 50 or so curriculum components expands to several hundred the list of matters appropriate for study. But these are not themselves the end of study. Human knowledge expands through the exploration of relationships **between** aspects of reality—the fifth essential kind of information students need. When all potential elements of such relationships are included in the curriculum, students acquire the necessary materials for a lifetime of exploration of questions such as these: Within a particular society, how are concepts of self related to the design of the tools in use? What have been the relationships between population growth and beliefs about the good life? How do patterns for decision-making relate to assumptions about the supernatural? How do they relate to the quality of the goods produced? What is the relationship between language and differing perceptions of reality?

Because our present approach does not help students build formal, comprehensive models of reality with identifiable components, students never acquire the means for thinking deliberately about **relationships between** those components. As a consequence, most academic work in general studies fails to provide students with the basic tools by means of which human knowledge grows.

This fifth curricular component welds the other four into a single discipline. With several hundred topics already identified as appropriate content for the general education curriculum, the possible relationships between curricular components provide an inexhaustible source of subject matter. From a theoretical perspective, everything within human knowledge lies inside the boundaries of such a curriculum, is conceptually ordered, and can be logically connected.

Which present-day disciplines could be called on to organize and systematize the exploration of relationships between aspects of reality? None. While it is true that every discipline is interested in relationships “around its edges,” none now attempts to study relationships between any and all aspects of reality. The one discipline that can integrate all

human experience is history, but the traditional stories neglect so much of significance that historical study usually does not even begin to realize its potential.

The power of a curriculum built around the five components I have identified as a basis for selecting, organizing and integrating what is taught will not be immediately apparent. The strength of the approach lies in the fact that it reflects Western culture's "natural" way of viewing human experience. We routinely employ the five categories to describe reality in our history books, news stories, novels, and other accounts and models of reality. Even in the most casual conversation--"Jimmy and I like to ride our bikes in the park"--we note place, participants, motives and behavior, as well as the relationships between these elements. A curriculum growing out of these categories of reality will be rooted in our deepest-level assumptions. By any theoretical or practical measure, it will be superior to a discipline-based curriculum.

A general education curriculum that is free of nearly every problem now plaguing the curriculum can be created, and it can be done with the materials at hand. Achieving that end requires no new invention, no new theoretical construct, no new research, no additional expenditure of funds. We need only to recognize our "natural" approach to organizing experience, systematize that approach, and develop increasingly disciplined means for its study.

There is no standardized test which will demonstrate the differences in performance between students completing the traditional curriculum and those who would emerge from a comprehensive, logically integrated, single discipline general education. However, I have for several years conducted an experiment that convinces me that the latter is incomparably superior. At the beginning of a one-semester course for high school and college students, I ask a single question. The queries I use are always broad, touching on the human quest for life, liberty, security, and happiness. Although very general, the questions demand specific responses, responses that can be counted. Here are some examples.

*"Some scholars think that average, typical Americans--people like you and me--have a somewhat poorer self-image than members of many other societies. Assume that this is true. In separate, numbered paragraphs, identify and explain as many different possible reasons as you can."*

*"Last term, I asked students to identify the number of people other than family members that they could call for help at 3:00 a.m. if they had car trouble 30 miles away. The average number listed for Americans in the class was three. The average for five students from three different foreign societies--if they had been in their native countries--was approximately forty-five. Suggest as many different explanations for the variation in responses as you can."*

*"Some climatologists think the average temperature in this area will increase by at least three degrees Celsius during your lifetime. Identify as many different, locally-important, probable short- and long-term consequences of this change as you can."*

I give students as much time as they need to respond, and I encourage them to exhaust themselves on the subject. It is not unusual, however, for students to turn in a blank paper. The average number of responses is about four. Whatever the question asked, when the assignment is completed it is never thereafter discussed in class, and I discourage research on the subject. (Most students need little encouragement to stay out of the library.)

At the end of the semester, after less than 50 hours of work devoted entirely to helping students develop a version of the five-part discipline I have described above, I give students the original question again as a final exam. The average number of responses is about 25, but it is not unusual for students to submit 50 or 60 plausible hypotheses. I occasionally receive more than a hundred.

What makes the difference? Students have begun to build, consciously and deliberately, comprehensive mental maps of reality. When they are asked a question relating to a point on those maps, it is not difficult for them to generate hypotheses about the possible relationship of that point to the many other points that their maps identify. In one of my classes, a work team was discussing the combat role of women in the Persian Gulf War, a role that would have been out of the question 50 years before. They wondered what might explain this changed attitude. Their discussion moved easily to a half dozen possibilities, including new kinds of weapons. The image of a woman involved in bayonet warfare, they said, differs greatly from the image of a woman seated at a control panel for a cruise missile.

Student performance is the best test of a curriculum, particularly if performance is measured several years after instruction. There is, however, a rather simple way to compare what I am advocating with the traditional curriculum that has been pieced together from parts of the disciplines. A model of reality made up of the components I have identified will not “fit inside” today’s general education curriculum. A great deal of demonstrably important subject matter is excluded. However, the traditional curriculum is easily accommodated by the model of reality I have outlined.

What would single discipline schooling look like at various stages of instruction? Its basic structure would remain constant from elementary school through college. A sound theory is a sound theory. The levels of instruction would be differentiated by the complexity of the data and the level of abstraction of the inferences required.

The very young would focus on the here and now. Within the bounds of beginning students’ immediate experience lie enough raw data related to the environment, demographics, patterns of action, and states of mind to keep them permanently and profitably engaged.

What is the cubic volume of the air in the classroom? What kinds of human interaction do the physical design of the school and its furnishings encourage and discourage? How does the pencil sharpener work? What are the average, mean and median heights of the students, and what are the differences in rate of growth by sex? What kind of organisms occupy the cooling or heating ducts in the building? What is the school’s annual rate of use of natural resources, and what happens to its waste? Who decides what will be taught? Where does the food served in the cafeteria come from, and what happens to it on the way? What proportion of the school day is spent in what kinds of activity? Who pays how much for what items to keep the school operating?

Elementary school students and teachers can generate these kinds of questions endlessly, and they can work on basic skills as they explore them. What better way to teach language, mathematics, and graphics than to tie them directly to the reality they model?

Teachers and students can find in immediate experience unsurpassed opportunities for intellectual growth. Before a major step in that direction can be taken, however, attitudes will have to change. The belief that students learn best when they are in their seats and facing front is

so firmly held that many teachers actually feel guilty when they take their students on field trips. Educators will have to learn to see and appreciate the richness and complexity of the commonplace. They will have to be convinced that a curriculum concerned with immediate experience need not neglect anything of real importance. They will have to recognize the systemic nature of what is going on around them. And they will have to learn what is probably the most difficult lesson of all--that the here and now is a more legitimate focus of study than is the textbook's, the television's, or the computer's shallow, shadow version of it.

Beyond the elementary level the basic five-part structure of the general education component of the curriculum would stay the same, but the sociocultural phenomena with which it dealt would expand in time, space and complexity. The general curriculum would also occupy less and less of the school day. The traditional disciplines would continue to be taught, but they would be recognized as specialized studies of interest and value to some students but inappropriate for (and therefore not required of) others.

Over time, the familiar disciplines would change. Since those students who enrolled in a specific discipline would do so because of their interest and aptitude, movement would be more rapid, and the work would advance to levels of complexity and sophistication hitherto unknown. And because students would bring from their general study a much broader background, new relationships between the disciplines and other aspects of reality would emerge.

Our preoccupation with the disciplines--with means that over the decades have become ends--is slowly but steadily isolating students from the knowledge and the skills they need in order to survive. Much of what is now taking place in classrooms across the country could most aptly be described as ritual--ritual performed by this generation for the next generation, in a form little different from that in which it was acquired from the previous generation. An idea is added here, a correction is made there, but mostly we teach what we were taught--narrow ideas within narrow disciplines. The students sense that much of it is a waste of time, and they generally react as normal, healthy humans should react. They do only what is necessary to get by.

If we are to survive as a society, we and our students need comprehensive answers to the question, What's going on here? We are not going to get those answers from the random, ethnocentric images of reality provided by the traditional disciplines. We need to look at reality freshly, and, if we are to put what we see in perspective, we need the means for seeing it whole. Embedded in our everyday way of organizing thinking about reality is the outline of a "discipline of the commonplace" that can do just that. If we develop that discipline, we can have a common learning curriculum driven by ends rather than means--a curriculum in which the task shapes the tools rather than vice versa.

We have the means to create a coherent, logically integrated, comprehensive curriculum for general education. Failure to put that curriculum in place is inexcusable. To send students out into the world without a conceptual framework for organizing experience is to fail them in the most fundamental sense possible.

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