

HUNTER COLLEGE READING/WRITING CENTER
WRITING ACROSS THE CURRICULUM
The CUNY Proficiency Examination: Task 1 Practice Readings 1
(with sample question)

I. Sample Reading A

The Difficulties Posed by Schools (excerpt)

by Howard Gardner

Going beyond simple literacy, a further mission of the schools is to transmit concepts, networks of concepts, conceptual frameworks, and disciplinary forms of reasoning to their students. These topics generally bear some relation to the areas in which students are ordinarily interested and about which they have already developed intuitive theories, schemes, and kindred explanatory constructs; after all, science treats the natural world, even as history relates the story of one's group and of other relevant friendly or hostile groups.

To the extent that these materials are presented simply as lists or definitions to be memorized, they can usually be mastered by students who apply themselves to the task at hand. The curriculum of school ought to go beyond a rehearsal of facts, however, and introduce students to the ways of thinking used in different disciplines. Such an introduction would involve exposing students to new ways of conceptualizing familiar or unfamiliar entities, be they the laws that govern objects in the physical world or the ways in which events are conceptualized by historians.

The content of the various disciplines is typically encountered in forms quite remote from the conceptions the student brings to the class. The student learns about the laws of physics or the causes of war by reading a textbook or by hearing the teacher lecture. Hence the challenge for the educator is threefold: (1) to introduce these often difficult or counterintuitive notions to the students; (2) to make sure that this new knowledge is ultimately synthesized with earlier ideas, if they are congruent with one another; (3) to ensure that the newer disciplinary content supplants previously held conceptions or stereotypes that would in some way collide with or undermine the new forms of knowledge.

At last we can confront directly the primary reasons why school is difficult. It is difficult, first, because much of the material presented in school strikes many students as alien, if not pointless, and the kinds of supporting context provided for pupils in earlier generations has become weakened. It is difficult, second, because some of these notational systems, concepts, frameworks, and epistemic forms are not readily mastered, particularly by students whose intellectual strengths may lie in other areas or approaches. Thus, for example, students with strengths in the spatial, musical, or personal spheres may find school far more demanding than students who happen to possess the "text-friendly" blend of

linguistic and logical intelligences. And it is difficult, in a more profound sense, because these scholastic forms of knowing may actually collide with the earlier, extremely robust forms of sensorimotor and symbolic knowing, which have already evolved to a high degree even before a child enters school.

Education for understanding can come about only if students somehow become able to integrate the prescholastic with the scholastic and disciplinary ways of knowing and, when such integration does not prove possible, to suspend or replace the prescholastic ways of knowing in favor of the scholastic forms of knowing. Finally, students need to be able to appreciate when a prescholastic form of knowing may harbor a different or even a deeper form of understanding than the discipline-related form of knowing learned in school.

Up to this point I have spoken of the difficulties of school primarily in terms of the problems experienced by students as they are asked to think in new kinds of ways about new kinds of concepts and forms. Even in the happiest scholastic environment, such a regimen may pose problems. Yet, human constraints on learning are magnified by the equally burdensome constraints under which schools themselves must operate. Although it would be desirable for teachers to work directly with small and well-motivated groups of students, most schools are burdened with large classes, onerous rules and regulations, disruptive demands for accountability, and students who have many personal problems. It is not surprising that an education geared toward understanding is a low priority in such schools; by their nature, bureaucratized institutions have difficulty in dealing with ends that cannot be readily quantified.

In fact, what seems to have evolved in most parts of the scholastic world is an uneasy kind of detente. Teachers require students to answer preset kinds of problems, to master lists of terms, and to memorize and then feed back definitions upon request. They do not ask students to try to reconcile their earlier, partial forms of understanding with the notations and concepts of school; instead they deal only with the latter forms of knowing, hoping that students can later develop the reconciliations on their own. Nor do teachers pose challenging problems that will force their students to stretch in new ways and that will risk failures that might make both students and teacher look bad.

As I have come to express it, neither teachers nor students are willing to undertake “risks for understanding”; instead, they content themselves with safer “correct-answer compromises.” Under such compromises, both teachers and students consider the education to be a success if students are able to provide answers that have been sanctioned as correct. Of course, in the long run, such a compromise is not a happy one, for genuine understanding cannot come about so long as one accepts ritualized, rote, or conventionalized performances.

II. Sample Reading B

To Err Is Human

by Lewis Thomas

from *The Medusa and the Snail*, Viking Penguin, 1976.

Mistakes are at the very base of human thought, embedded there, feeding the structure like root nodules. If we were not provided with the knack of being wrong, we could never get anything useful done. We think our way along by choosing between right and wrong alternatives, and the wrong choices have to be made as frequently as the right ones. We get along in life this way. We are built to make mistakes, coded for error.

We learn, as we say, by “trial and error.” Why do we always say that? Why not “trial and rightness” or “trial and triumph”? The old phrase puts it that way because that is, in real life, the way it is done.

A good laboratory, like a good bank or a corporation or government, has to run like a computer. Almost everything is done flawlessly, by the book, and all the numbers add up to the predicted sums. The days go by. And then, if it is a lucky day, and a lucky laboratory, somebody makes a mistake: the wrong buffer, something in one of the blanks, a decimal misplaced in reading counts, the warm room off by a degree and a half, a mouse out of his box, or just a misreading of the day’s protocol. Whatever, when the results come in, something is obviously screwed up, and then the action can begin.

The misreading is not the important error: it opens the way. The next step is the crucial one. If the investigator can bring himself to say, “But even so, look at that!” then the new finding, whatever it is, is ready for snatching. What is needed, for progress to be made, is the move based on the error.

Whenever new kinds of thinking are about to be accomplished, or new varieties of music, there has to be an argument beforehand. With two sides debating in the same mind, haranguing, there is an amiable understanding that one is right and the other wrong. Sooner or later the thing is settled, but there can be no action at all if there are not the two sides, and the argument. The hope is in the faculty of wrongness, the tendency toward error. The capacity to leap across mountains of information to land lightly on the wrong side represents the highest of human endowments.

It may be that this is a uniquely human gift, perhaps even stipulated in our genetic instructions. Other creatures do not seem to have DNA sequences for making mistakes as a routine part of daily living, certainly not for programmed error as a guide for action.

We are at our human finest, dancing with our minds, when there are more choices than two. Sometimes there are ten, even twenty different ways to go, all but one bound to be the wrong, and the richness of selection in such situations can lift us onto totally new ground. This process is called

exploration and is based on human fallibility. If we had only a single center in our brains, capable of responding only when a correct decision was to be made, instead of the jumble of different credulous, easily conned clusters of neurons that provide for being flung off into blind alleys, up trees, down dead ends, out into blue sky, along wrong turnings, around bends, we could only stay the way we are today, stuck fast.

The lower animals do not have this splendid freedom. They are limited most of them, to absolute infallibility. Cats, for all their good side, never make mistakes. I have never seen a maladroit, clumsy, or blundering cat. Dogs are sometimes fallible, occasionally able to make charming minor mistakes, but they get this way by trying to mimic their masters. Fish are flawless in everything they do. Individual cells in a tissue are mindless machines, perfect in their performance, as absolutely inhuman as bees.

We should have this in mind as we become dependent on more complex computers for the arrangement of our affairs. Give the computers their heads, I say; let them go their way. If we can learn to do this, turning our heads to one side and wincing while the work proceeds, the possibilities for the future of mankind, and computerkind, are limitless. Your average good computer can make calculations in an instant which would take a lifetime of slide rules for any of us. Think of what we could gain from the near infinity of precise, machine-made miscomputation which is now so easily within our grasp. We would begin the solving of some of our hardest problems. How, for instance, should we go about organizing ourselves for social living on a planetary scale, now that we have become, as a plain fact of life, a single community? We can assume, as a working hypothesis, that all the right ways of doing this are unworkable. What we need, then, for moving ahead, is a set of wrong alternatives much longer and more interesting than the short list of mistaken courses that any of us can think up right now. We need, in fact, an infinite list, and when it is printed out we need the computer to turn on itself and select, at random, the next way to go. If it is a big enough mistake, we could find ourselves on a new level, stunned, out in the clear, ready to move again.

III. Sample Writing Assignment

With these reading selections by Howard Gardner and Lewis Thomas in mind, write an essay in which you discuss error and learning. In your essay summarize Howard Gardner's criticism of the schools. Draw a relationship between Gardner's ideas and what you have just read about the value and utility of error. In light of the reading selections, describe your own experience or observations of learning, either in school or out. Discuss the degree to which your experience does or does not reflect the ideas of Gardner or Thomas or both. You may address these points in any order, but be careful to respond to all parts of the assignment and to connect your thoughts into a single, clearly-organized essay. Make specific references to the readings to support your ideas.